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A2
Dear Annual Meeting Attendee:

The American Association for Geriatric Psychiatry (AAGP) Annual Meeting is the premier educational program focused solely on late-life mental illness. The AAGP Annual Meeting provides the latest information on clinical care, research innovations, and models of care delivery.

This Supplement of the American Journal for Geriatric Psychiatry (AJGP) contains the abstracts of the scientific presentations that are scheduled for the 2017 Annual Meeting, “Integrated Geriatric Mental Health Care Through Innovation” including session and poster presentations. We hope you find it a useful resource for years to come.

We are pleased that we can provide this Supplement to those attending the AAGP Annual Meeting to maximize your attendance at the educational, research, and clinical presentations of interest to you, and also provide these abstracts, through on-line access (www.AJGPonline.org) to the subscribers of the AJGP, AAGP Annual Meeting website, and the AAGP Annual Meeting app.

Charles F. Reynolds, III, MD  Daniel Sewell, MD  Rajesh Tampi, MD, MS, DFAPA
Editor-In-Chief  President  2017 Program Chair
AJGP  AAGP  AAGP
2017 AAGP Annual Meeting

Notes

Session Abstracts

Within this supplement, session abstracts are organized by session number at the time this supplement was published.

Poster Abstracts

Within this supplement, poster abstracts are organized by poster session and poster number at the time this supplement was published. Poster abstracts are also listed alphabetically by title and by first author listed.

* All Session and Poster Abstracts appear as originally submitted to AAGP with only minor editing to conform to the style of this supplement.

* The abstracts in this supplement for The American Journal of Geriatric Psychiatry are not peer-reviewed. Information contained in these abstracts represents the opinions of the authors.
Session Abstracts

2016 HIGHLIGHTED PAPERS FOR THE PRACTICING GERIATRIC MENTAL HEALTH CLINICAL PROVIDER

Session 100
Laurel J. Bessey1; Joanna Lim2; Juan J. Young3; Lisa L. Boyle4

1University of Wisconsin Hospitals and Clinics, Madison, WI
2Georgetown University Hospital, Arlington, VA
3MetroHealth Medical Center, Cleveland, OH
4University of Wisconsin School of Medicine and Public Health, Middleton, WI

Abstract: In this session, Drs. Bessey, Lim and Young will present an overview of ten highlighted studies from the year 2016 relevant to geriatric psychiatry clinical practice. Studies for consideration will include recent advances in assessment or treatment of mental health within or applicable to the geriatric population, as well as recent advances published from other geriatric disciplines that would be helpful for a practicing geriatric psychiatrist or other mental health provider to be alerted. This symposium intends to feature highlights covering a broad range of recent topics in the clinical practice of geriatric psychiatry to promote efficient learning, critical thinking, and discussion among clinicians, researchers, and trainees present. Dr. Boyle will serve as faculty discussant.

Faculty Disclosures:
Laurel J. Bessey
Nothing to disclose

Joanna Lim
Nothing to disclose

Juan J. Young
Nothing to disclose

Lisa L. Boyle
Nothing to disclose

AGE-FRIENDLY AUSTIN: CREATING THE AGE-FRIENDLY ACTION PLAN

Session 101
Jessica Lemann; Erica C. Garcia-Pittman; Teresa Sansone; Ferguson

UT Austin Dell Medical School, Austin, TX

Abstract: Over the next 50 years, the number of Americans aged 65 and older is expected to more than double to 92 million; those 85 and older will likely triple to 18 million.1 The percentage of Americans in the senior set (65+) has risen from 12.4% to 14.1%, and their share of the population is projected to climb to 19.3% by 2030.2 Austin, Texas is also aging, demonstrated by rapid growth in the senior population amid a general population boom. Since 2000, the share of seniors in the metro area has expanded from 7.2% to 9.2%.2 The City of Austin’s overall population grew nearly 40% between 2000 and 2010, the number of adults 55 and older grew by 80%. These projections, as well as Austin’s changing demographics as seen in the 2010 U.S. Census, led to the formation of the Mayor’s Task Force on Aging. In 2012, Mayor Lee Leffingwell charged the Task Force with building public awareness, analyzing the current resources and opportunities for growth, and creating a set of strategic recommendations to accommodate Central Texas’ fast growing senior population. In its final report, the Task Force recommended that Austin be designated an “age-friendly” community under the AARP Network of Age-friendly Communities, an affiliate of the World Health Organization’s Age-friendly Cities and Communities Program. In September...
2017 AAGP Annual Meeting

2015, Austin’s Commission on Seniors formed a working group focused on creating the Age-Friendly Action Plan. This session will highlight the history of Age-Friendly Austin with a focus on the creation of the Age-Friendly Action Plan. We will discuss the AARP Network of Age-friendly Communities, an affiliate of the World Health Organization’s Age-friendly Cities and Communities Program. Additionally, we will review the 8 Domains of Livability and how they allow for successful aging. White House Conference on Aging, 2015 Forbes, October 2014 http://www.aarp.org/livable-communities/network-age-friendly-communities/ https://extranet.who.int/agefriendlyworld/

Faculty Disclosures:
Jessica Lemann
No Answer

Erica C. Garcia-Pittman
Nothing to disclose

Teresa Sansone Ferguson
No Answer

ETHICAL, LEGAL AND FORENSIC ISSUES IN GERIATRIC PSYCHIATRY

Session 102
Aarti Gupta1; Meera Balasubramaniam2

1Yale University School of Medicine, New Haven, CT
2NYU Langone Medical Center, New York, NY

Abstract: Physical and cognitive decline in old age often leads to dependence on others and puts the autonomy of older adults at risk. A comorbid neuropsychiatric disorder can further compound this problem making this population liable to abuse. Such situations raise serious ethical issues that may easily be overlooked if the caregivers are not sensitive to the rights of the older adults with mental health disorders. One of the most important issues encountered in care of older adults is loss of their decision-making capacity, which raises questions about a person’s ability to consent to medical treatment and need for a surrogate decision maker or conservatorship. Psychiatrists are often entrusted with the responsibility of making this determination through capacity assessment and must be educated to recognize the need for such an evaluation. In this session, we will first review the ethical and legal issues in geriatric age group including capacity assessment, informed consent and appointing a surrogate decision maker and discuss some tools that may be helpful in making these assessments. As a unique corollary to loss of decision-making capacity, we will discuss assessment of criminal responsibility and competence to stand trial in aging offenders in the latter part of our presentation. Geriatric forensics is a lesser discussed topic in geriatric psychiatry, but with an increase in geriatric offenders, specialized training to deal with issues specific to this population has become important. All of the above issues will be discussed with the help of a case presentation.

Faculty Disclosures:
Aarti Gupta
Nothing to disclose

Meera Balasubramaniam
Nothing to disclose

HOW TO SAVE THE GRANDMA?

Session 103
Tatyana Shteinlukht1; Jason Schillerstrom2; Karen Reimers3; Mark Rapoport4

1UMass Medical School, Worcester, MA
2UTHSCSA, San Antonio, TX
3www.psychmds.com, Minneapolis, MN
4Sunnybrook Health Sciences Centre, University of Toronto, Toronto, ON, Canada

S4 Am J Geriatr Psychiatry 25:3, Supplement 1
Abstract: Older women are at increased risk for personal and medical neglect and financial exploitation. Physicians are often called upon by protective services agencies to assess decisional capacity in alleged victims of these social traumas. Dr. Schillerstrom presentation will focus on the legal definitions of incapacity for persons being considered for guardianship. The processes of capacity assessment including the utility of bedside neuropsychological testing will be discussed. Methods for determining the timeframe for incapacity will be considered with an emphasis on functional, not cognitive, loss. Finally, least restrictive intervention recommendations for the court will be discussed. In our car driven society, driving is still the main mode of transportation for the majority of older adults. Dementia can pose significant problem for older drivers, family members, health professionals, and safety on the roads. Clinicians must balance patient autonomy and public safety. They may struggle to identify resources to aid in assessment of driving ability or capacity to make decisions. Dr. Reimers will identify tools to assist practicing clinicians in their daily decision making. She will review existing guidelines by public authorities and medical experts on interventions for driving cessation in adults with dementia; consider complicating factors including medical illness, psychiatric disorders, medications; summarize current recommendations and best practices for practicing clinicians; identify helpful websites and resources. Dr. Shteinlukht will chair the session and Dr. Rapoport will serve as a discussant.

Faculty Disclosures:
Tatyana Shteinlukht
Nothing to disclose

Jason Schillerstrom
Nothing to disclose

Karen Reimers
Nothing to disclose

Mark Rapoport
Nothing to disclose

MIND-BODY INTERVENTIONS FOR LATE-LIFE MENTAL HEALTH AND COGNITION
Session 104
Gabriela Torres-Platas¹; Soham Rej¹; Akshya Vasudev²; Helen Lavretsky³

¹McGill University, Montreal, QC, Canada
²Western University, London, ON, Canada
³UCLA, Los Angeles, CA

Abstract: Mind-body interventions, such as yoga, meditation, mindfulness, and tai-chi are becoming recognized as legitimate therapies in geriatric mental illness and cognitive disorders, as well as for promoting brain health. In this session, presenters will discuss new data examining how mind-body interventions can be helpful in treating and preventing a broad range of late-life mental and cognitive disorders. We will first learn about a recent meta-analysis of late-life mind-body interventions, and new data examining the effectiveness and neurobiological correlates of mindfulness-based cognitive therapy in geriatric primary care patients with anxiety and depression symptoms (Dr. Torres-Platas). We will then explore how automatic self-transcending meditation can improve depression, anxiety and autonomic disturbances in late-life depression (Dr. Vasudev). We will also learn about a pilot clinical trial of brief meditation in dialysis patients with depressive and anxiety symptoms (Dr. Rej). Following the presentations, there will be an interactive discussion led by Dr. Lavretsky about the clinical applications of mind-body interventions and future directions for research.

Faculty Disclosures:
Gabriela Torres-Platas
No Answer

Soham Rej
Nothing to disclose
PRODUCTIVE AGING AND CREATIVITY: THE LIVES AND ART OF GEORGIA O’KEEFE, PABLO PICASSO AND CLAUDE MONET

Session 105
Maria Llorente, Francisco C. Parra, Marsden McGuire

Abstract: Whether a lifelong interest, or a newly developed hobby, art can play a meaningful role in the life of an older adult. Art enables people to express themselves in unique ways and is an activity that can continue as the person ages, even in the presence of physical and chronic diseases, as well as neurocognitive disorders. Art also leads to intergenerational exchange of ideas and interests. Art can be done in group formats, or may be a solitary activity, which makes it a particularly useful pursuit for older adults who may be alone or isolated. Older adults can age productively through arts media. Several well-known artists serve as role models for this notion of Productive Aging through the Arts. This presentation will review the lives of three painters, Georgia O’Keefe, Pablo Picasso and Claude Monet, all of whom continued to paint into their senior years, despite facing significant physical and psychosocial stresses. The presenters will provide an overview of each painter’s upbringing, life experiences, and views and how these affected their perspectives on art, their own work, and their relationships. O’Keefe is best known for her depictions of flowers at close range and southwestern landscapes. In her later years, she was particularly prolific, and the year before her death she was awarded the National Medal of Arts from President Reagan. Picasso was a Spanish painter, sculptor, printmaker, poet and playwright who is known for developing the Cubist movement. He is regarded as one of the most influential artists of the 20th century. He continued to paint almost to his death at the age of 91. Monet changed the world of painting through his focus on form and light, rather than realism, sparking a new artistic movement known as “Impressionism”. Throughout his life, Monet struggled with depression, poverty and illness, but remained entirely focused on his work. He continued painting, despite failing eyesight and lung cancer, until his death at the age of 86.

Faculty Disclosures:
Maria Llorente
No Answer

Francisco C. Parra
No Answer

Marsden McGuire
No Answer

CREATIVE RESILIENCE & AGING: JOHNNY CASH—THE MAN IN BLACK FADES TO BLACK

Session 106
Jeffrey M. Lyness

Abstract: Johnny Cash (1932–2003) was among the century’s most-loved performers, spanning the musical genres of country, gospel, folk, blues, and rockabilly. This presentation will use the techniques of biography, illustrated by images, audio, and video, to describe Cash’s professional and personal arc toward the artistic triumphs of his last decade of life. After early success, his career faltered in the wake of drug addictions and relationship troubles. Bravely tackling his personal difficulties, and with the support of second wife June Carter, he enjoyed an even more impressive second wave of popularity in the late 1960s, burnishing his public image as a staunch champion of prisoners, Native Americans, and other oppressed or marginalized
people. Slowly, however, he watched his career slide into commercial irrelevance by the 1980s, and he faced recurrent struggles with addictions. Yet he staged a remarkable third-act comeback in the mid-1990s thanks to his unlikely pairing with hip hop producer Rick Rubin, tapping a rejuvenated wellspring of inspiration in a series of recordings that combined the musical forms of his past with contemporary topics and songwriters. Despite mounting health problems and physical limitations, he recorded some of his best work up until just a few months before his death. Cash’s story illuminates the potential for creativity in aging, and is testimony to the importance of personal and professional relationships as enablers of resilience in the face of adversity.

N.B. (not for publication) — I am aware that the content and format of this submission are different than many for the AAGP annual meeting. However, I have presented presentations on similar themes, based on other musicians, at AAGP (and other professional organizations) in past years, with extremely positive feedback and requests for more sessions in this vein. I appreciate your consideration very much.

Faculty Disclosures:
Jeffrey M. Lyness
Nothing to disclose

ADVANCES IN PHARMACOTHERAPY OF LATE-LIFE DEPRESSION
Session 107
John Kasckow; Marie Anne Gebara; Benoit H. Mulsant; Eric Lenze

1University of Pittsburgh Medical Center, Pittsburgh, PA
2VA Pittsburgh Healthcare System, Pittsburgh, PA
3University of Toronto, Toronto, ON, Canada

Abstract: Major depression in late life is a serious illness associated with comorbidity and increased rates of mortality. This symposium will include presentations on recent pharmacotherapeutic research in older patients with major depression. Dr. Kasckow will serve as chair. The topics will comprise presentations on: research examining characteristics of sleep profiles in older individuals who are treatment resistant (Dr. Kasckow); which baseline depressive symptoms predict remission in older patients who receive aripiprazole augmentation for depression treatment (Dr. Gebara); and a systematic approach to the treatment of late-life depression (Dr. Mulsant). Dr. Eric Lenze will serve as the symposium discussant and will examine how clinicians can use these findings in their practice when they treat older patients with major depression.

Faculty Disclosures:
John Kasckow
Other: Bosch Health Care—I received help with software and transmission costs associated with the research

Marie Anne Gebara
Nothing to disclose

Benoit H. Mulsant
Research Support: Bristol-Myers Squibb—Medications for a NIH-funded clinical trial
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Research Support: HAPPYneuron—Software used in study funded by CAMH Foundation
Shareholder: General Electric—Less than $5,000

Eric Lenze
Research Support: Lundbeck—co-funding for IISR
Research Support: Takeda—co-funding for IISR
AGING AND POST-INTENSIVE CARE SYNDROME (PICS): HOW CAN WE PROVIDE INTEGRATED, INNOVATIVE CARE FOR OLDER ADULTS SUFFERING FROM DELIRIUM, DEMENTIA, AND DEPRESSION?
Session 108
Sophia Wang1; Babar Khan2; Noll Campbell3

1Indiana University/Roudebush VAMC, Indianapolis, IN
2Indiana University School of Medicine, Indianapolis, IN
3Purdue University, Indianapolis, IN

Abstract: Due to the rapid improvements in ICU care, survivorship from critical illness is now the “defining challenge of critical care medicine.” One major reason for this challenge is that ICU survivors may develop long-term cognitive, psychological, and physical impairments from their critical illness. These long-term impairments are known as post-intensive care syndrome (PICS). Not surprisingly, PICS is more likely to affect older adults, although it can also affect certain populations of younger adults. Older adults are more likely to develop PICS for several reasons. First, the number of older adults with critical illness is rapidly increasing as the population ages. Patients 65 and over already account for 50% of ICU admissions. Patients 85 and over make up the fastest growing age group for ICU admissions. Second, over 70% of older adults hospitalized in the ICU develop delirium. Delirium is a major risk factor for developing PICS. Third, cognitive and functional impairment before an ICU hospitalization increases the likelihood of cognitive and functional decline afterwards. Finally, older adults who survive critical illness are more likely to have more depressive symptoms and rate themselves as having poorer mental health compared to younger adults. Despite growing recognition of the need to assess for and manage PICS, there are significant challenges to better understanding how to deliver optimal health care for this population. A recent Society of Critical Care Medicine communication described only two clinics in the US which were dedicated to treating ICU survivors. A quality improvement collaborative study about ICU survivors also supported the need for practice innovations and additional research to better address post-ICU survivorship concerns, such as the transitions of care to the primary care providers. In this symposium, we will review PICS, with a particular focus on neuropsychiatric sequelae and current gaps in assessment and treatment in neuropsychiatric disorders in older ICU survivors. We will then present information and data about the Critical Care Recovery Center, one of the first two ICU survivor clinics in the US based at Indiana University that delivers services for ICU survivors using an innovative collaborative care model. Finally, we will discuss psychotropic use in ICU survivors and the need to identify potentially inappropriate medications that are frequently continued in the post-ICU setting and put ICU-survivors at further risk of PICS complications.

Faculty Disclosures:
Sophia Wang
Nothing to disclose

Sophia Wang
Nothing to disclose

Babar Khan
Nothing to disclose

Noll Campbell
Nothing to disclose

SHAKEN NOT STIRRED: COLLABORATIVE EVALUATION AND MANAGEMENT OF NEUROPSYCHIATRIC SYMPTOMS IN OLDER ADULTS WITH PARKINSON DISEASE
Session 109
Rushiraj Laiwala1; Shilpa Chitnis1; Shilpa Srinivasan2

1UT Southwestern Medical Center, Dallas, TX
2University of South Carolina School of Medicine, Columbia, SC
Abstract: Parkinson Disease (PD), a neurodegenerative disorder characterized by tremor, rigidity, akinesia/bradykinesia, and postural instability is the second-most prevalent neurodegenerative disorder in the United States (US). Estimated prevalence rates range from 1–2% and 4–5% in older adults ages 65 and 85 respectively. Given the rising demographic of the older adult population in the US, the prevalence of PD in 2040 is projected to double from 630,000 affected individuals in 2010. Neuropsychiatric symptoms in PD are common, distressing, and contribute significantly not only to disease burden and healthcare costs, but also and perhaps most importantly, to health-related quality of life. Neuropsychiatric symptoms encountered in PD include depression, anxiety, apathy and psychosis. Of these, depression affects 30–40% and the prevalence of psychosis occurs in up to 50% of individuals with PD. Depressive symptoms in PD are characterized by low mood, loss of interest or pleasure in activities, sleep disturbance, apathy, and when associated with psychomotor slowing, can be difficult to distinguish from bradykinesia associated with the primary condition of PD. Serotonergic and adrenergic structures in the central nervous system including the raphe nuclei and locus coeruleus, areas often affected early on in the course of the disease, are implicated in depression with PD. Psychotic symptoms encountered in older adults with PD include hallucinations, illusions, delusions, and presence and passage phenomena. Cholinergic deficits, advanced disease stage, older age, and dopaminergic medications are implicated in the development of Parkinson Disease psychosis. Furthermore, psychosis in PD is associated with depression, dementia, earlier mortality and caregiver burden. Overall, depression, psychosis and other neuropsychiatric symptoms in individuals with PD negatively affect morbidity, mortality and daily functioning, are associated with increased caregiver burden, and increased risk for nursing home placement. It is therefore critical to accurately identify and appropriately manage these symptoms to optimize evidence-based approaches to the management of older adults with Parkinson Disease. In this symposium, geriatric psychiatrists and a movement-disorders trained neurologist will present an evidence-based overview of psychosis and mood disorders, common psychiatric symptoms in older adults with Parkinson Disease. A clinical case-based approach and evidence-based literature review will highlight the collaborative role of neurologists and geriatric psychiatrists in the evaluation and management of neuropsychiatric symptoms in older individuals with PD.

Faculty Disclosures:
Rushiraj Laiwala
No Answer

Shilpa Chitnis
Nothing to disclose

Shilpa Srinivasan
Nothing to disclose

WHAT’S TRENDING IN MEDICAL EDUCATION: IMPLICATIONS FOR GERIATRIC PSYCHIATRY
Session 110
Kirsten Wilkins1; Deborah Wagenaar2; William B. Brooks3

1Yale University School of Medicine, Milford, CT
2Michigan State University, Ada, MI
3University of South Alabama College of Medicine, Mobile, AL

Abstract: Across the country, medical schools have undergone sweeping changes in recent years. The traditional Flexnerian “2 + 2” model of undergraduate medical education (i.e., two years of basic science courses followed by two years of clinical rotations) has been critically reexamined as schools aim to prepare medical students for healthcare in the 21st century. Throughout this changing educational landscape, a number of trends have emerged, including a shortened pre-clerkship period, earlier clinical exposure, an increased emphasis on the integration of basic and clinical science, increased interdisciplinary and interprofessional integration, and the increased use of technology and active learning pedagogies. Given these trends, educators in geriatric psychiatry have identified several opportunities for and threats to geriatrics education. The trend of integration, for example, offers unique opportunities for cross-departmental collaboration and the dissolution of longstanding silos. On the other hand, educators may find themselves faced with a decrease in autonomy and control over curricular content, a loss of discipline-specific identity, greater challenge in tracking geriatric content across a four year integrated curriculum, and a lack of integrated clinical sites to meet the demands of these new educational models. This session will begin with an overview of curriculum reform and current trends in medical education (Dr. Wilkins), followed by a
discussion of implications of these trends for education in geriatric psychiatry (Dr. Wagenaar). We will then share strategies for successful navigation around these opportunities and threats as well as evidence-based strategies for successful integration of geriatrics content throughout the curriculum (Dr. Brooks).

Faculty Disclosures:
Kirsten Wilkins
Nothing to disclose

Deborah Wagenaar
Nothing to disclose

William B. Brooks
Nothing to disclose

DEVELOPING YOUR CLINICIAN/EDUCATOR CAREER
Session 200
Brandon Yarns1; Dennis M. Popeo2; Elizabeth J. Santos3; Alessandra Scalmati4; Lory E. Bright-Long5

1UCLA, West Hollywood, CA
2NYU School of Medicine, New York, NY
3University of Rochester School of Medicine and Dentistry, Rochester, NY
4Montefiore Medical Center, Bronx, NY
5Stony Brook Medicine, E. Setauket, NY

Abstract: Numerous members of the AAGP, specifically those involved in the teaching and training committee identified a need for the organization to better support members on the clinician / educator track (C/ET) in academic institutions. This is not surprising, as a general lack of support for those in the C/ET has been noted in the literature. (1) (2) In order to help meet this need, we propose a special 2 hour symposium entitled “Developing Your Clinician / Educator Career.” This matches a similar symposium currently geared towards members interested in a research career. In our symposium, we will present topics of interest to clinician educators including on creating effective, successful lectures; making better use of technology in teaching; present skills on giving feedback, taking feedback, successful self-promotion and allowing participants to practice them, while encouraging networking for support and scholarly collaboration. Dennis Popeo will introduce the program and discuss receiving difficult feedback from students and training students to give appropriate feedback. Elizabeth Santos will discuss self-promotion for clinician / educators. Allessandra Scalmati will give tips on creating exciting and engaging lectures. Brandon Yarns will discuss the effective use of Power Point and other technologies to improve teaching. Lory Bright-Long will present a review of methods of providing effective feedback.

Faculty Disclosures:
Brandon Yarns
Nothing to disclose

Dennis M. Popeo
Nothing to disclose

Elizabeth J. Santos
Nothing to disclose

Alessandra Scalmati
Nothing to disclose

Lory E. Bright-Long
Nothing to disclose
“MAXIMIZING INDEPENDENCE AT HOME” FOR PEOPLE WITH DEMENTIA AND THEIR CAREGIVERS: DEVELOPING, IMPLEMENTING, AND DISSEMINATING BEST PRACTICES
SESSION 201
Deirdre Johnson

Abstract: This panel will review the development of Maximizing Independence (MIND) at Home, incorporating the DICE approach to managing behavioral symptoms, the use of telehealth to support and coach non-clinical care coordinators in the field, and protocolizing reproducible, disseminatable models of multidimensional, home-based, person-centered dementia care.

Faculty Disclosures:
Deirdre Johnston
Nothing to Disclose

CONSULTATION LIAISON GERIATRIC PSYCHIATRY IN AN INTEGRATED HEALTHCARE MODEL: AN AAGP AND APM SYNERGY SYMPOSIUM
SESSION 202
Aarti Gupta1; Rajesh Tampi2; Kirsten Wilkins3; Iqbal Ahmed4

1Yale University School of Medicine, New Haven, CT
2Case Western Reserve University School of Medicine, Cleveland, OH
3Yale University School of Medicine, Milford, CT
4Tripler Army Medical Center, Honolulu, HI

Abstract: As the population of the United States ages, the number of older adults admitted to acute health care settings will increase. Available evidence indicates that over one-fifth of individuals with medical and/or surgical illnesses who are admitted to acute care have co-morbid psychiatric disorders. These individuals with co-morbid medical/surgical and psychiatric disorders have higher rates morbidity and mortality than individuals without the comorbidities. Additionally, the cost of care of individuals with comorbidities is significantly greater than the cost of care of individuals without the comorbidities. Given the available evidence it is important for older individuals with co-morbid medical/surgical and psychiatric disorders who receive services in acute care settings are provided appropriate follow-up from a geriatric psychiatric clinician. Furthermore, in the era of integrated healthcare the provision of comprehensive care to these high risk individuals is the expectation. In this symposium, we will first describe the data for comorbid medical and psychiatric disorders in older adults in acute care settings. Next, we will enumerate the evidence for a consultation liaison geriatric psychiatric service in the care of these individuals. Then we will discuss the role of telemedicine in the practice of consultation liaison geriatric psychiatry. We will also discuss the role of a geriatric psychiatry consultation liaison service in an integrated healthcare system. Lastly we will have a discussion chaired the President Elects of the two main national organizations representing geriatric and consultation liaison psychiatry; the AAGP and APM discuss the need for synergy between these two subspecialties to provide the highest quality of care in an evolving healthcare world.

Faculty Disclosures:
Aarti Gupta
Nothing to disclose
Rajesh Tampi
Nothing to disclose
Kirsten Wilkins
Nothing to disclose
Iqbal Ahmed
Nothing to disclose
CASE PRESENTATION 1: PHARMACOLOGY

Session 203
Allan Anderson¹; Andrea Iaboni²

¹Intergrace, Johns Hopkins University School of Medicine
²Toronto Rehab Institute, University of Toronto

Pharmacogenomic Psychotropic Case Study, Allan Anderson

Case of an 63 year old man with diagnoses of Parkinson’s Disease who has a history of major depression that has been resistant to pharmacotherapy due to intolerance to antidepressant medications. Pharmacogenomic testing demonstrated abnormalities in CYPp450 enzymes that were the likely cause of his problems with prior antidepressant trials. Through use of the Genesight pharmacogenomic testing we were able to identify an effective antidepressant treatment.

Pharmacogenomic Psychotropic Case Study II, Allan Anderson

Case of an 81 year old woman who has suffered from major depression and generalized anxiety disorder with failure of prior pharmacologic treatments in alleviating her suffering. She underwent pharmacogenomic testing and the results identified a significant abnormality with her CYP450 system that likely led to her lack of response in the past. Through the use of pharmacogenomic testing we were able to identify a medication that would likely be effective and once prescribed it did provide her with significant antidepressant benefit.

Clozapine for Treatment-Refractory, Severe Agitation in Dementia: a Case-Series, Andrea Iaboni

Clozapine is an atypical antipsychotic uncommonly used in older adults due to its risks and side effect profile. Its primary indications in older adults are for psychosis in Parkinson’s disease or in chronic schizophrenia. The use of clozapine in older adults for behavioural symptoms of dementia is off-label and under a black-box warning. There is a lack of evidence to guide its use in this population including little information on dosing, monitoring, tolerability and efficacy.

DEMENTIA AT THE END OF LIFE

Session 204
Jonathan T. Stewart; Inna Sheyner; Susan K. Schultz

University of South Florida College of Medicine, Tampa, FL

Abstract: There is little question that severe dementia is a terminal condition with a prognosis comparable to that of many advanced malignancies, yet a minority of patients with endstage dementia receive appropriate palliative or hospice care. Hospice programs are generally underserved by psychiatrists, yet the geriatric psychiatrist’s skills are optimally suited to the needs of the patient with endstage dementia and his or her family. This workshop will approach severe dementia as a terminal illness and will emphasize the role of the geriatric psychiatrist in the care of these patients. The workshop will provide an overview of endstage dementia and will teach skills in evaluating and managing behavioral problems, feeding problems and pain, assisting with management of comorbid medical illness, prognostication and working with the family.

Faculty Disclosures:
Jonathan T. Stewart
Nothing to disclose

Inna Sheyner
No Answer

Susan K. Schultz
No Answer
ADVANCES IN LATE-LIFE SCHIZOPHREНИA: A FOCUS ON FUNCTIONAL AND PHYSICAL ABILITIES
Session 205
Tarek K. Rajji¹; Anjana Muralidharan²; Heather Leutwyler³; John Kasckow³

¹University of Toronto, Toronto, ON, Canada
²UCSF, San Francisco, CA
³University of Pittsburgh Medical Center, Pittsburgh, PA

Abstract: As the general population ages, it is anticipated that the number and proportion of older patients with schizophrenia will continue to increase. Schizophrenia is associated with functional and physical disabilities that are likely to be exacerbated by aging-related declines in these domains. Dr. Rajji, who will Chair the symposium, will provide an overview on current knowledge of functional abilities and their determinants in older persons with schizophrenia and present new data on the relationship between antipsychotics and function in this population. Dr. Muralidharan will present novel data on physical activity and mobility function among frail and older veterans with psychosis. Dr. Leutwyler will present on a pilot study demonstrating the impact of a videogame-based physical activity program on walking speed and negative symptoms in older adults with schizophrenia. Dr. Kasckow, the Discusant of the symposium, will present on the feasibility and efficacy of using telehealth to monitor suicidal risk in older veterans and will discuss the above presentations.

Faculty Disclosures:
Tarek K. Rajji
Nothing to disclose

Anjana Muralidharan
No Answer

Heather Leutwyler
Nothing to disclose

John Kasckow
Other: Bosch Health Care—I received help with software and transmission costs associated with the research.

UPDATE ON GERIATRIC PSYCHIATRY MAINTENANCE OF CERTIFICATION PROGRAM
Session 206
Jeffrey M. Lyness¹; Lisa L. Boyle²

¹University of Rochester School of Medicine & Dentistry, Rochester, NY
²University of Wisconsin School of Medicine and Public Health, Middleton, WI

Abstract: Maintenance of Certification is a program required for continued board certification in geriatric psychiatry by the American Board of Psychiatry and Neurology. This symposium will provide AAGP meeting attendees with an update from a Psychiatry Director of the ABPN about its Maintenance of Certification (MOC) program (including recent changes in response to revised requirements issued by the American Board of Medical Specialties), information about how the AAGP can help support its members to maintain subspecialty certification, and an opportunity for participants to discuss issues related to maintaining ABPN subspecialty certification.

Faculty Disclosures:
Jeffrey M. Lyness
Nothing to disclose

Lisa L. Boyle
Nothing to disclose
WHO WILL TAKE CARE OF ME WHEN I AM OLD? ADDRESSING THE GERIATRIC WORKFORCE CRISIS

Session 209
Lalith Kumar K. Solai; Noll Campbell; Ellen M. Whyte

1University of Pittsburgh, Pittsburgh, PA
2Purdue University, Indianapolis, IN
3University of Pittsburgh School of Medicine, Pittsburgh, PA

Abstract: Americans 65 years old and over currently represent 13% of the US population and will grow to 20% of the population by 2050. Currently, there is a clear shortage of specialists to care for the elderly – there are approximately 3.8 geriatricians per 10,000 older Americans and roughly 1 geriatric trained psychiatrist for every 11,128 older Americans (American Geriatrics Society, 2011). These ratios will become even more inadequate over time because the number of older Americans is increasing and the number of physicians entering fellowships in either geriatric medicine or geriatric psychiatry is decreasing. As a result, most elderly will never be treated by a geriatric trained physician. As geriatric trained professionals, we frequently have opportunities to educate our non-geriatric trained colleagues, be it through collaboration with primary care, academic programs at medical schools, our administrative roles in which we influence the training of staff, or in our interaction with family-caregivers. This symposium will present several unique programs that aim to provide geriatric mental health training to a diverse array of clinicians including physicians, nurses, occupational and physical therapists, social workers, and direct caregivers. Strategies to be discussed include formal academic programs utilizing case based learning targeting an inter-professional audience, direct to primary care teaching that includes consultation on practice change, and caregiver education (both formal and informal caregivers) focusing on delivering easy to understand concepts and skills. This symposium will provide attendees insights into various educational approaches that will inform their abilities to educate their colleagues, be it through the creation of formal educational program, ongoing staff education or consultation with other professionals.

Faculty Disclosures:
Lalith Kumar K. Solai
Nothing to disclose

Noll Campbell
Nothing to disclose

Ellen M. Whyte
Nothing to disclose

WINDOWS INTO THE BRAIN: FUNCTIONAL NETWORKS INFORMING TREATMENT IN LATE-LIFE DEPRESSION

Session 210
Warren D. Taylor; Sara Weisenbach; Faith Gunning; Olu Ajilore

1Vanderbilt University, Nashville, TN
2University of Utah, Salt Lake City, UT
3Weill Cornell Medicine, White Plains, NY
4University of Illinois at Chicago, Chicago, IL

Abstract: There is a significant body of work associating late-life depression with a wide range of differences in brain morphology, white matter microstructure, and functional response to a range of stimuli. More recent work has focused on the intrinsic functional networks, geographically distinct brain regions that are functionally linked and work together to coordinate critical processes such as executive control, monitoring of internal and external stimuli, and memory function, amongst others. Using a variety of methods, this work has led to improved understanding of how altered functional connectivity within these networks and across these networks may influence the clinical presentation of late-life depression but also influence and change with treatment. Presentations will focus on two key intrinsic networks: the cognitive control network and default mode network. Across the presentations, we will discuss how connectivity within and between these networks are altered in late-life.
depression. Discussions will include overviews of these networks and information on image analysis methodology. The focus of the presentations will be on how network differences are related to clinical outcomes, including cognitive decline (Weisenbach), antidepressant medications (Gunning), and electroconvulsive therapy (Ajilore).

Faculty Disclosures:
Warren D. Taylor
Nothing to disclose

Sara Weisenbach
Nothing to disclose

Faith Gunning
Nothing to disclose

Olu Ajilore
Nothing to disclose

NEUROLOGY UPDATE: ESSENTIAL TREMOR, PARKINSON’S DISEASE, AND STROKE
Session 211
Cindy Marshall1; Veronica Santini2; Pravin Khemani2; Dion F. Graybeal3

1Baylor University Medical Center, Dallas, TX
2UT Southwestern, Dallas, TX
3Baylor University Medical Center at Dallas, Dallas, TX

Abstract: Tremor is the most prevalent movement disorder and Essential Tremor (ET) is the most common subtype of tremor. Although there is an autosomal dominant pattern of inheritance that can be recognized in families with ET, in clinical practice, singletons with ET are not uncommon. The classical definition of ET is an action tremor without accompanying neurological deficits, however, long-term epidemiological studies have demonstrated the presence of progressive gait and balance problems and hearing loss in ET cohorts. There can be marked heterogeneity in age of onset, appearance, progression and severity of ET. ET may have a rest-tremor component mimicking Parkinson disease (PD), and may resemble tardive tremors caused by medications such as antipsychotics. Since these conditions are treated differently, accurate diagnosis of tremor etiology is critical. Resemblance to other tremors, associated gait and balance impairment, and lack of universally effective medications can make diagnosis and treatment of ET challenging, especially in the older patient prone to medication side effects and in patients with medical comorbidities that may preclude the use of traditional ET medications. The objectives of this talk are to discuss diagnosis of ET, rational choice of pharmacological agents, and candidate selection for surgical treatment in refractory cases.

Parkinson disease (PD) is the second most common neurodegenerative disorder after Alzheimer’s disease. The prevalence is expected to significantly increase as our ageing population lives longer. Inadequate information about appropriate medication selection adds to disease burden. Age of onset, severity of disease, and presence of other comorbidities govern selection of PD medications. Knowledge of efficacy and side-effect profile of the various PD drugs is especially helpful in judicious selection of medications for in the elderly or late-onset PD patient (onset after age 70) who may have a higher comorbid burden than a younger patient with PD. The objective of this talk is an overview of medications available to treat motor symptoms of PD. Treatment of late-onset PD is especially challenging as there are few studies that have systematically looked at late-onset PD management. Most clinical trials in PD seem to exclude subjects over 80 years. Therefore, data available for treatment of late-onset PD are based on observational cohorts, case studies, and extrapolation of data from randomized trials of PD medications, especially the side-effect profile which governs medication selection.

As our general population ages and life-expectancy increases, it is expected that the prevalence of late-onset PD and PD overall will increase. Given the general observations that geriatric PD is more disabling than younger-age PD due to rapid progression, less potent options for medication treatment, and presence of comorbidities which impact treatment, it is imperative we become familiar with the effective management of these patients. The content of this talk is focused on maximizing treatment efficacy while being vigilant about potential side-effects of medications in the elderly PD patient.
Bio: As a movement disorders specialist, I treat a broad range of neurodegenerative disorders including Parkinson disease, Lewy body dementia, tremors, dystonia, Huntington disease, tics, ataxia and other conditions causing disorders of gait and balance. I believe in a multidisciplinary approach for the effective management of movement disorders utilizing pharmacological, surgical treatment (such as deep brain stimulation, when appropriate), and rehabilitative measures.

As stated above, the warning signs of stroke and the patient characteristics for intravenous and intra-arterial therapies will be discussed. Newly approved and emerging therapies for the hyper acute treatment of ischemic stroke will be discussed as well as evidence based criteria for patient selection and favorable outcomes.

Faculty Disclosures:
Cindy Marshall
Speakers Bureau: Allergan—namzaric speaker
Research Support: IDEAS—study site
Research Support: Avanir—agitation study for deuterated dextromethorphan

Veronica Santini
No Answer

Pravin Khemani
Nothing to disclose

Dion F. Graybeal
Nothing to disclose

**HOW DOES COGNITIVE AGING AFFECT CLINICAL COMPETENCE OF PHYSICIANS? CURRENT STATUS OF AGE-BASED MANDATORY COGNITIVE TESTING OF PHYSICIANS**

Session 212

Anothai Soonsawat¹; Iqbal Ahmed²; Marcia Lammando³

¹UCLA, Los Angeles, CA
²Tripler Army Medical Center, Honolulu, HI
³LifeGuard, Harrisburg, PA

Abstract: More than 120,000 practicing US physicians are 65 or older. Older physicians sustain professional activity into their later years for various reasons including dedication and fulfillment as well as financial pressures and constrained retirement plans. Out of concern for public safety that may be endangered as a result of age-associated cognitive impairment in physicians, several countries have enacted mandatory physician retirement laws or have instituted age-based mandatory performance evaluations. Such programs are not standard in the United States, but many institutions have adopted or tried to adopt age-based assessment programs. Furthermore, several programs available to physicians or to medical societies already offer comprehensive performance assessment of physicians referred for cause, with skilled evaluation of cognitive functioning. Such programs recognize normative effects of cognitive aging, distinguish performance-neutral cognitive changes from those that interfere with performance, and offer rehabilitative programs or other career planning options as appropriate to the findings of an individualized assessment. Whether physicians are referred to assessment for cause or asked to comply with age-based testing, a variety of ethical and legal concerns are invoked. This symposium will examine the features of normative and pathological cognitive aging, the effects of cognitive changes on performance, several approaches to age-based or cause-based assessment, and a variety of associated ethical/legal questions.

Faculty Disclosures:
Anothai Soonsawat
Nothing to disclose

Iqbal Ahmed
Nothing to disclose
PTSD FOR NON-VA CLINICIANS
Session 213
Marie DeWitt1; Sharon Gordon2

1John D Dingell VA Medical Center, Ypsilanti, MI
2Tennessee Valley VA Healthcare System, Murfreesboro, TN

Abstract: The DSM 5 diagnostic criteria for PTSD and changes from DSM IV-TR will be briefly reviewed as they pertain to clinical practice. Symptoms of PTSD in older adults, including those with cognitive impairment, will be presented with a brief (6 minute) video illustrating one case example. Treatments, including pharmacologic and non-pharmacologic, will be discussed with emphasis on nuances in treating older adults. Finally, cases will be used to encourage discussion and questions.

Faculty Disclosures:
Marie DeWitt
Nothing to disclose

Sharon Gordon
Nothing to disclose

ASSESSING THE OLDER ADULT WITH BIPOLAR DISORDER: REVIEW OF THE STATE OF THE FIELD AND RECOMMENDATIONS FOR THE CLINICIAN AND RESEARCHER
Session 300
Soham Rej1; Martha Sajatovic2; Brent Forester3; Lisa T. Eyler4

1McGill University, Montreal, QC, Canada
2Case Western Reserve University, Cleveland, OH
3McLean Hospital, Belmont, MA
4UC San Diego, La Jolla, CA

Abstract: The numbers of patients with bipolar disorder over the age of 65 are steadily growing. Clinicians and researchers need to be equipped with valid, reliable, and practical means of assessing older adults with bipolar disorder (OABD) in order to thoroughly and accurately characterize each patient and guide treatment and treatment development. The International Society for Bipolar Disorders’ OABD Task Force has undertaken a collaborative, multi-national project to review all recent studies that included OABD patients in order to survey the literature to understand the state of the field for assessing clinical characteristics, cognitive performance, biomarkers, and brain structure and function. In this session, we will present the framework and process for this review and overarching findings from the project. Then, for the clinical, cognitive, and brain imaging measures, we will present detailed information about which instruments or techniques are being used, the strengths and limitations of the most popular methods, and make recommendations for the clinician and for the researcher about incorporating these measures into their professional encounters with OABD patients. Finally, we will present information about novel, up-and-coming techniques and their potential role in treatment and research on OABD.

Faculty Disclosures:
Soham Rej
Nothing to disclose

Martha Sajatovic
Research Support: Pfizer, Merck, Ortho-McNeil Janssen, Janssen, Reuter Foundation, Woodruff Foundation, Reinberger Foundation, National Institute of Health (NIH), Centers for Disease Control and Prevention (CDC)—Research to my institution
CASE PRESENTATION 2: DEMENTIA DIAGNOSIS & PSYCHIATRIC DIAGNOSIS

Session 301

An Atypical Dementia Presentation, But Is This Also A Case Of Elder Abuse? Ebony Dix

This is a case of a 67 year-old male with a history of major depressive disorder with psychotic features, who presented for voluntary admission to the inpatient psychiatric hospital with the chief complaint of worsening depression and anxiety, leading to a decline in his level of functioning. The patient had experienced a 10-pound weight loss and an increased frequency of panic attacks accompanied by fluctuating bouts of hypophonia and dysphagia over the course of a few months. His outpatient psychiatrist was treating him with citalopram for depression and anxiety, ziprasidone and risperidone for auditory hallucinations in combination with benztropine for side effects related to the antipsychotics. He was also prescribed lorazepam for anxiety and panic attacks, and suvorexant nightly for insomnia. This patient’s symptoms of depression and anxiety were newly diagnosed within the last 2 years, which was thought to be a result of complicated bereavement following the passing of his significant other of 20 years.

Cerebral Amyloid Angiopathy related Inflammatory Process, Kasia Rothenberg

Cerebral Amyloid Angiopathy related inflammatory process (CAA-ri), a rare condition caused by an inflammatory reaction occurring within essential cerebral blood vessels against beta-amyloid deposits, leads to subclinical cognitive decline. Often misdiagnosed as dementia, this process can be treated through aggressive immunosuppression, thereby reversing much of the cognitive impairment.

A Case of Obsessive Compulsive Disorder (OCD) with Fear of Contamination of Percutaneous Endoscopic Gastrostomy (PEG) Tube, Ali Najafian Jazi

Mrs A is a 77-year-old married white female with long history of OCD who was admitted to the medical floor for malnutrition due to dysphagia. Although all medical work ups were negative patient had to be undergone endoscopic gastrostomy to place a PEG tube due to severe malnutrition and cachexia. She was initially stable on PEG tube and was discharged to a skilled nursing facility, but soon was readmitted as she developed obsessive thoughts about the PEG tube contamination.
COGNITIVE IMPAIRMENT IN LATE LIFE DEPRESSION

Session 302
Craig Nelson1; Scott Mackin2; Duygu Tosun3

1University of California San Francisco, San Francisco, CA
2University of California, San Francisco, CA
3University of California San Francisco, San Francisco, CA

Abstract: Late life depression is one of the most common mental health disorders with which older patients are afflicted. Late life depression is complicated by the common co-occurrence of cognitive impairment in the population and some estimates suggest as many as 50–60% of older depressed patients have cognitive deficits. As a consequence some of these patients will meet criteria for Mild Cognitive Impairment (MCI) and may have an increased risk for developing dementia. This session will examine the interplay between depression and cognitive impairment and will offer new brain imaging findings that help to inform this relationship. The use of multi-modal MRI imaging allows us to examine the brain using one scanning technology facet while controlling for pathology in other areas. For example, structural MRI imaging allows us to analyze cortical thickness while controlling for blood flow and evidence of vascular disease. In this session we will compare depressed older patients with normal controls and examine preliminary evidence of change in these parameters over time. Patients in this sample also received comprehensive neuropsychological assessments as well as resting state functional MRI which will be evaluated in relation to other neuroimaging findings. This data will allow us to investigate dysfunction in key neural networks of interest. To start the session, Dr. Nelson will be reviewing data regarding cognitive deficits in late life depression and will set the stage for a clinical audience by considering how these cognitive problems impact functioning and treatment response. Dr. Mackin will then present the data on cortical thickness, regional cerebral blood flow, amyloid deposition, and CSF biomarkers in older patients with depression and will relate these findings to the presence of cognitive deficits and longitudinal cognitive decline. Dr. Tosun will then present data on dysfunction in neural circuits in late life depressed patients and implications for treatment.

Faculty Disclosures:
Craig Nelson
Nothing to disclose

Scott Mackin
Nothing to disclose

Duygu Tosun
Nothing to disclose

DRIVING AND DEMENTIA—AN INTRODUCTION, EDUCATIONAL RESOURCES, AND INTERNATIONAL PERSPECTIVES

Session 303
Ali Asghar Ali1; Geri Adler2; Mark Rapoport2

1Baylor College of Medicine, Houston, DC
2Sunnybrook Health Sciences Centre, University of Toronto, Toronto, ON, Canada

Abstract: One of the most challenging issues clinicians must address when working with persons with dementia is a decline in driving skills. Approximately 30–45% of persons with dementia continue to drive, placing them at risk for becoming lost, crashing, and other adverse events. A knowledge gap regarding how to address diminished driving skills and decision-making for drivers with dementia has been identified. This workshop will address assessment of, and interventions for, driving in people with dementia. Participants will be presented a survey of online teaching tools for educators and family members. Presenters will review their development of an online educational training module and accompanying video. The workshop will conclude with the review of the creation of international guidelines to advise providers about approaches to the clinical management of driving and dementia.
HIV AND AIDS IN THE AGING POPULATION
Session 304
Marie DeWitt1; Ann Usitalo2; Stephanie Sims3

1John D Dingell VA Medical Center, Ypsilanti, MI
2John D Dingell VA Medical Center, Detroit, MI
3University of Florida, Jacksonville, FL

Abstract: A psychologist and psychiatrist with expertise in HIV/AIDS will discuss the changing demographics as well as the mental health and neurocognitive comorbidities associated with HIV/AIDS in the older adult population. Unique aspects of non-pharmacologic and pharmacologic treatment of mental health and neurocognitive comorbidities will also be reviewed.

INTEGRATED CARE: PRIVATE AND VA MODELS
Session 305
Paul D. Kirwin

Yale University School of Medicine, West Haven, CT

Abstract: Integration of mental health services into a primary care setting is one of the cutting edge efforts of mental health care delivery. VA has mandated this integration across all clinical sites across the country, and has taken the lead nationally in developing models of Integrated Care (Primary Care-Mental Health Integration PC-MHI). Integrated Care has now become a primary focus in the private sector. The APA recently published a white paper “Dissemination of Integrated Care within Adult Primary Care Settings” building on the VA blue print and decades of QI research to recommend implementation strategies for Integrate Care in the private sector.
PSYCHOTROPIC DRUGS AND FALLS IN OLDER ADULTS: AN UPDATE FOR THE GERIATRIC PSYCHIATRIST

Session 306
Dallas Seitz; Andrea Iaboni; Julia Kirkham

1 Queen’s University, Kingston, ON, Canada
2 Toronto Rehab Institute, University Health Network, Toronto, ON, Canada
3 Queen’s University, Kingston, ON, Canada

Abstract: Medication-related falls are a common and potentially catastrophic event in older adults. Psychotropic medications are the class with the strongest association with falls, particularly in the context of psychotropic polypharmacy. However, many psychotropic medications are an effective intervention for the treatment of mental disorders of late life, and there is a risk of under-treatment of suffering and distress. In this symposium, we will discuss some of the evidence linking psychotropic medication and falls, discuss the magnitude of the risk, and review the prevention of falls as a quality of care issue in geriatric psychiatry.

Faculty Disclosures:
Dallas Seitz
Nothing to disclose

Andrea Iaboni
Nothing to disclose

Julia Kirkham
Nothing to disclose

REVISITING THE 2012 IOM REPORT: A RENEWED CALL FOR ACTION

Session 307
Dennis M. Popeo; Mary C. Blazek; Susan W. Lehmann

1 NYU School of Medicine, New York, NY
2 University of Michigan, Ann Arbor, MI
3 Johns Hopkins University School of Medicine, Baltimore, MD

Abstract: With longer life expectancy and the aging of the Baby Boomer generation, the U.S. is already undergoing a dramatic change in demographics, as the population of adults over age 65 is rapidly increasing. Studies indicate that approximately 15% of older adults have significant mental health needs, and the number of older adults presenting for mental health care will increase significantly as a result of these demographic changes. In 2012 the Institute of Medicine (IOM) issued a report titled “The Mental Health and Substance Use Workforce for Older Adults: In Whose Hands?” The report called attention to the serious shortage of specialty-trained geriatric clinicians and lack of national focus on preparing the general healthcare workforce to treat the mental health needs of older adults. It called for development of national curricula and core competencies in geriatric mental health for all healthcare providers caring for older adults. Five years later, how have these recommendations been addressed by medical schools educating the next generation of physicians? In this symposium, Drs. Popeo, Blazek and Lehmann will provide an update on what has transpired nationally over the past 5 years since the IOM Report was issued in the area of medical student education. Dr. Popeo will explore reasons why national standards have not been created and will discuss the impact on geriatric mental health education. Dr. Blazek will summarize the efforts of a workgroup of the AAGP Teaching & Training Committee, including a survey of current practice and development of learning objectives in geriatric mental health appropriate for medical students. Dr. Lehmann will present a roadmap to address educational deficiencies and effect change in medical student geriatric mental health education.

Faculty Disclosures:
Dennis M. Popeo
Nothing to disclose
APPLYING THE INTEGRATED CARE APPROACH: SKILLS FOR THE CONSULTING PSYCHIATRIST
Session 308
Joel E. Streim
University of Pennsylvania, Philadelphia, PA

Abstract: In 2015, the American Psychiatric Association (APA) received a grant from the Centers for Medicare and Medicaid (CMS) to train 3,500 psychiatrists in the clinical and leadership skills needed to support primary care practices that are implementing integrated behavioral health programs. This half-day workshop will be led by one of six “master trainers” prepared by AIMS (Advancing Innovative Mental Health Solutions) Center at the University of Washington.

Faculty Disclosures:
Joel E. Streim
Nothing to disclose

DIVERSITY: OPPORTUNITIES, CHALLENGES AND SOLUTIONS.
Session 309
Tatyana Shteinlukht1; Iqbal Ahmed2; Rajesh Tampi3; Ali Asghar-Ali4

1UMass Medical School, Worcester, MA
2Tripler Army Medical Center, Honolulu, HI
3Case Western Reserve University School of Medicine, Cleveland, OH
4Baylor College of Medicine, Houston, DC

Abstract: The United States population, including the seniors, is growing increasingly diverse. Similarly the membership of AAGP is increasingly diverse. Diversity includes people of different ethnicity, cultural background, immigration status, gender, sexual orientation, and sexual identity. The focus of Dr. Ahmed’s presentation will be the ethnic minority elderly. New immigrant elderly are especially unlikely to seek mental health treatment, although the need may be greater, and family resources are limited. The presentation will examine some of these issues and suggest possible approaches to address this problem such cultural formulation in assessment, and increasing the diversity of the geriatric psychiatry workforce. Dr. Tampi will focus on the role of International Medical Graduates (IMGs) who constitute almost half of the geriatric psychiatry workforce. The IMGs have had successful career as clinicians, educators, academics and researchers in psychiatry and geriatric psychiatry are now attaining leadership positions in various national organizations like the AAGP and the APA. Dr. Tampi will also discuss how organizations like the AAGP can play a greater role in promoting IMGs to attain psychiatric leadership positions. Dr. Shteinlukht will chair the session and Dr. Asghar-Ali will serve as a discussant.

Faculty Disclosures:
Tatyana Shteinlukht
Nothing to disclose

Iqbal Ahmed
Nothing to disclose

Rajesh Tampi
Nothing to disclose
GAY AND GRAY VII: A MULTIDISCIPLINARY APPROACH TO TRANSGENDER AGING
Session 310
Brandon Yarns1; Janet Abrams2; Kevin Johnson3; Daniel D. Sewell4

1UCLA, West Hollywood, CA
2Sheppard Pratt Health Systems, Towson, MD
3Yale University, New Haven, CT
4University of California, San Diego, CA

Abstract: This presentation will start by defining key terms and discuss the evolution of the APA’s policy statements and DSM diagnoses related to transgender individuals throughout the years. This will be followed by a brief research update that will include the latest available data on demographics, medical and mental health disparities, and impacts of hormone therapy and gender-conformation surgery. An interview of an older transgender person will take place followed by a discussion of practical considerations for working with aging transgender individuals. This will include a list of resources for aging transgender communities and a discussion on how to draft referrals for gender confirmation surgery. The session will conclude with an opportunity for the audience to ask questions and/or share their experiences.

Faculty Disclosures:
Brandon Yarns
Nothing to disclose

Janet Abrams
Nothing to disclose

Kevin Johnson
Other: Trans Bodies Trans Selves—Board member of 501c3 non-profit organization

Daniel D. Sewell
Consultant: ActivCare Inc. - Compensated Member of the Medical Advisory Board
Research Support: HRSA GWEP Grant—I am associated with two HRSA GWEP Grants: one as a co-PI and one as an educator
Other: American Association for Geriatric Psychiatry—President

LATE-LIFE DEPRESSION AND FRAILTY: IS THERE A COMMON VULNERABILITY, AND HOW DOES THE PRESENCE OF FRAILTY CONTRIBUTE TO CLINICAL OUTCOMES OF GERIATRIC DEPRESSION?
Session 312
Briana Mezuk1; Patrick Brown2; Guy Potter3; David Steffens4

1Virginia Commonwealth University, Richmond, VA
2Columbia University, New York, NY
3Duke University Medical Center, Durham, NC
4UConn Health, Farmington, CT

Abstract: The occurrence of major depressive disorder in later-life (LLD) is associated with a number of adverse health outcomes that increase risks of disability, cognitive impairment, and mortality. Effective treatment of LLD has the significant public health benefit of reducing these adverse outcomes, but the effectiveness of treatment has been limited by failure to deconstruct the heterogeneity of LLD and its relationship to the pathophysiology of aging. One syndrome of aging that has been underrepresented in LLD research is frailty, which we define as a physical state of increased vulnerability and lack of
resilience to stressors. There is considerable emerging evidence that frailty often co-occurs with LLD, but also a gap in understanding the factors that drive this association, and their relationship to key clinical outcomes, such as treatment response, cognitive impairment, and functional disability. This session will highlight new research on frailty and LLD across three important themes: 1) conceptualization and measurement, 2) treatment response to antidepressant medication, and 3) longitudinal cognitive and functional outcomes. Dr. Briana Mezuk (Virginia Commonwealth University) will discuss how latent variable frameworks help disentangle questions regarding the measurement of depression and frailty from their phenotypic relationship. Drawing on data from large population-based studies, Dr. Mezuk will illustrate how the conceptualization and measurement of frailty and depression impact our understanding of the etiology and consequences of these conditions in later life. Dr. Patrick Brown (Columbia University) will explore how frailty interacts with depressive illness, based on data from an 8-week open-label trial of antidepressant medication among individuals with LLD and at least one characteristic of frailty. Dr. Brown will use these data to discuss how identifying endophenotypes of LLD associated with attenuated treatment response can lead to mechanistic insights and more personalized approaches to treatment. Dr. Guy Potter (Chair, Duke University) will examine the association of frailty to the persistence of cognitive and functional deficits in LLD. Presenting data from a prospective longitudinal study of LLD, Dr. Potter will discuss how the presence of frailty characteristics during an episode of acute depression in late-life contributes to persisting cognitive impairment and functional disability even with symptomatic improvement, and will present evidence for an underlying deficit of regional white matter integrity. Dr. David Steffens (University of Connecticut) will serve as discussant, and consistent with the conference theme, will present ideas for a research agenda that incorporates frailty and LLD into an integrated model of geriatric mental health care. The remainder of the session will be open to a moderated discussion of the clinical implications of frailty on the assessment and management of LLD.

Faculty Disclosures:
Briana Mezuk
Nothing to disclose

Patrick Brown
Nothing to disclose

Guy Potter
Nothing to disclose

David Steffens
Nothing to disclose

THE ART AND SCIENCE OF CREATIVE AGING
Session 313
Marc Agronin1; Wendy L. Miller2

1Miami Jewish Health Systems, Miami, FL
2Create Therapy Institute, Kensington, MD

Abstract: As the age span increases and more and more older adults are reaching post-retirement stages of life, the concept of creative aging as first developed by Gene Cohen becomes even more relevant. Cohen’s concept of creative aging is based on an acknowledgement and yet reversal of existing stage theories of aging which posit overall decline, as well as an evolution of concepts of successful and positive aging. Key concepts such as developmental intelligence and human potential phases enable us to conceive of an aging process which is both additive and creative, whereby losses are not merely buffered but transformed by age-emergent strengths.

Faculty Disclosures:
Marc Agronin
Nothing to disclose

Wendy L. Miller
Nothing to disclose
UPDATE ON NEW RESEARCH AND THE CLINICAL PRACTICE OF ECT IN THE ELDERLY

Session 314
William M. McDonald1; Adriana Hermida2; Georgios Petrides2; Charles Kellner3

1Emory University Medical School, Atlanta, GA
2The Zucker Hillside Hospital, Northshore LIJ Health System, Glen Oaks, NY
3Icahn School of Medicine at Mount Sinai, New York, NY

Abstract: This symposia will outline innovative new research in electroconvulsive therapy (ECT) that is directly related to the clinical practice of ECT in the elderly. Dr. McDonald will provide a brief update on the status of ECT devices and the proposed new FDA regulations which could significantly effect the practice of ECT. Dr. Hermida will present the evidence based prevention and management of side effects related to ECT including data on her Emory Cognitive Assessment scale. Dr. Petrides will outline the efficacy of ECT in the treatment of psychosis in the elderly from both mood disorders and primary psychosis. Dr. Kellner will present the most recent data from the multicenter NIMH sponsored PRIDE study (Prolonging Remission in Depressed Elderly) including the final analysis of a unique maintenance schedule for elderly patients with depression.

Faculty Disclosures:
William M. McDonald
Consultant: APA Council on Research—Represent ECT and neuromodulation devices including helping to draft the statement to the FDA from the APA on the changes in the guidance on ECT device regulations

Adriana Hermida
No Answer

Georgios Petrides
No Answer

Charles Kellner
Research Support: NIMH—grant
Other: UpToDate—honorarium
Other: Northwell Health—honorarium
Other: Psychiatric Times—honorarium
Other: Cambridge Univ. Press—royalties

COMING TOGETHER TO FIGHT DELIRIUM: HOW TO DELIVER TEAM-BASED, INTERDISCIPLINARY CARE TO PREVENT, DETECT, AND MANAGE DELIRIUM AND ITS LONG-TERM SEQUELAE

Session 315
Jeffrey N. Browndyke1; Sophia Wang2; Marie DeWitt3; Malaz Boustani4

1Duke University Medical Center, Durham, NC
2Indiana University/Roudebush VAMC, Indianapolis, IN
3John D Dingell VA Medical Center, Ypsilanti, MI
4Indiana University, Indianapolis, IN

Abstract: Delirium has been traditionally defined as an acute onset of fluctuating cognitive status, usually in the context of precipitating medical or surgical events. Recent data suggest, however, that delirium may be better conceptualized as a chronic disorder, with risk factors and a wide range of cognitive outcomes. About 40% of delirium cases are preventable. Well-recognized risk factors include advanced age, previous history of delirium, dementia, visual impairment, and hearing impairment. Potentially preventable risk factors may include polypharmacy, psychotropic drugs (particularly benzodiazepine use), physical restraints, and certain types of surgery. Although older adults who develop delirium during their hospitalization have about a 60% increased risk of death, clinicians frequently find the assessment of older adults challenging because of the
high prevalence of premorbid cognitive impairment. Furthermore, hypoactive delirium is frequently missed or misdiagnosed as depression or dementia. Long-term sequelae of delirium, particularly in older adults with premorbid cognitive impairment, include cognitive and functional decline. Despite growing recognition that delirium is associated with increased costs of care, increased length of stay, and higher mortality rates, some challenges to delivering clinical care for delirium include targeting a wide range of healthcare settings that are affected by delirium and the need to raise awareness of delirium in professions not traditionally focused on neurocognitive disorders in order to successfully build team-based care models. In this symposium, we will review risk factors for delirium, in-hospital assessment tools and clinical approaches for the detection of delirium, and the long-term consequences of delirium. We will also discuss various innovative, team-based models of care for the prevention, detection, and management of delirium and its sequelae, including Perioperative Optimization of Senior Health (POSH), Hospital Elder Life Program (HELP), and Critical Care Recovery Center (CCRC) model systems. Finally, we will have an audience-driven discussion about the potential challenges which geriatric mental health professionals may face as they try to educate medical and surgical professionals in various disciplines about delirium, and propose to implement similar clinic setups to target delirium in their own practice settings.

**Faculty Disclosures:**
Jeffrey N. Browndyke  
Nothing to disclose

Sophia Wang  
Nothing to disclose

Marie DeWitt  
Nothing to disclose

Malaz Boustani  
Nothing to disclose

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**THE ROLE OF INTERNATIONAL MEDICAL GRADUATES IN THE TREATMENT OF LATE LIFE PSYCHIATRIC PATIENTS**

**Session 316**

Amita Patel1; Oliver M. Glass2; Rajesh Tampi3

1Dayton Psychiatric Associates, Dayton, OH  
2East Carolina University, Greenville, NC  
3Case Western Reserve University School of Medicine, Cleveland, OH

**Abstract:** With the “baby boomers” increasing in age, and the overall improved average life expectancy in the United States, geriatric psychiatrists will undoubtedly be more needed than ever. By 2050 people over the age of 65 years will represent approximately 25% of the population. As IMGs provide nearly half of the work force for geriatric psychiatrists, their need will arguably be greater in the coming years. A concern is that the trend for IMGs matching in the U.S. does not match the increasing aging population. In the last five years, the psychiatry positions filled by IMGs has been gradually declining, while those filled by US seniors is increasing. In fact, in 2013 IMGs filled 47.7% of psychiatry residency positions, but in 2016 they only filled 37.8%. What is puzzling is that the amount of psychiatry residency programs has increased over the last five years, and so have the number of positions offered. The presenters of this symposium would like to present to the AAGP a concerning trend of data that may result in further unmet mental health care for patients over the age of 65 in the coming years.

**Faculty Disclosures:**
Amita Patel  
Nothing to disclose

Oliver M. Glass  
Nothing to disclose
A COMPLEX CLINICAL INTERSECTION: PALLIATIVE CARE IN PATIENTS WITH DEMENTIA
Session 318
Ellen Lee¹; Jeremy Hirst²; Steven Huege²

¹University of California, San Diego, CA
²UCSD, San Diego, CA

Abstract: With the growing aging population, dementia presents one of the most important problems for geriatric clinicians, with implications for physical and mental health as well as for caregivers and families. End-of-life care in people with dementia includes unique issues and demands specialized skills and knowledge. Ellen Lee, M.D. will provide an overview of palliative care and describe the literature on palliative and hospice needs in people with dementia. She will summarize the findings on assessment tools, intervention trials, and care delivery systems. Jeremy M. Hirst, M.D. will use a case study to highlight the importance of early introduction of palliative care for optimal support of the patient and their family throughout the disease trajectory. In particular he will focus on guidelines on leading conversations regarding advanced care planning, exploring issue of consent/capacity and surrogate decision-making, and the opportunity for palliative and hospice care to support patients and their families at the end of life. Steve Huege, M.D., M.S. Ed. will discuss clinical management of patients with dementia at end-of-life, including medication management and treatment goals. Steve Huege, M.D. will moderate and lead a discussion of the clinical and ethical issues facing this population.

Faculty Disclosures:
Ellen Lee
Nothing to disclose

Jeremy Hirst
No Answer

Steven Huege
Nothing to disclose

BRINGING THE RESOURCES OF THE ALZHEIMER’S ASSOCIATION TO THE CLINIC: A NEW REFERRAL MODEL
Session 319
Cindy Marshall¹; Linda Jersin²; Cyndy Cordell³

¹Baylor University Medical Center, Dallas, TX
²Baylor AT&T Memory Center, Dallas, TX
³Alzheimer’s Association, Chicago, IL

Abstract: This program will examine the role of an embedded Alzheimer’s Association Care and Support Specialist in the Baylor AT&T Memory Center. The Alzheimer’s Association is partnering with hospitals, medical clinics and healthcare professionals throughout the United States implementing new and innovative models to help meet the needs of the expanding patient population diagnosed with Alzheimer’s disease and other dementias. The role of the specialist will be discussed with specifics about the education and support provided to patients and their caregivers. Will examine logistics of current referrals and how this differs from past referrals to the Association. Unanticipated benefits and consequences will be reviewed as well. Other innovative program models addressing both patient and care-partner support needs will be described as well.

Faculty Disclosures:
Cindy Marshall
INAPPROPRIATE SEXUAL BEHAVIORS IN DEMENTIA: A REVIEW

Session 320
Kirsten Wilkins¹; Silpa Balachandran²; Pallavi Joshi³

¹Yale University School of Medicine, Milford, CT
²Metrohealth hospital- Case Western Reserve University, Broadview Heights, OH
³Western University of Health Sciences, Torrance, CA

Abstract: Behavioral disturbances are seen in over 80% of individuals with dementia. Although inappropriate sexual behaviors in dementia (ISBD) are not as common as some of the other behavioral symptoms in dementia, these behaviors can cause immense distress to all those affected by them. Currently, there are no randomized trials evaluating the effectiveness of management strategies for these behaviors, but the available data suggest efficacy for some commonly used treatment modalities. In this symposium, we will discuss the epidemiology, neurobiology and the differential diagnosis for ISBD. We will then provide an overview of the evidence based assessment and management of these behaviors. We will end by describing the role of multidisciplinary teams in the continuum of care for the optimum management of ISBD.

Faculty Disclosures:
Kirsten Wilkins
Nothing to disclose

Silpa Balachandran
Nothing to disclose

Pallavi Joshi
Nothing to disclose

SENIOR INVESTIGATOR WORKSHOP

Session 321
Helen Lavretsky

UCLA, Los Angeles, CA

Abstract: The Research Committee will organize this workshop in collaboration with program officers from the NIMH and NIA, who will serve as presenters (Jovier Evans, George Niederehe, and Molly Wagster are invited). The presenters will review program developments and transitions within the NIMH and NIA that are critical for investigators to hear about at meeting time, as well as current funding opportunities, including relevant RFAs or other opportunities made available through the NIH Common Fund or Neuroscience Blueprint. Among the topics for discussion will be the evolving landscape at NIH for interventions’ research, especially critical for those investigators involved in intervention development. Funding priorities for Alzheimer’s disease research will be presented. An update about the recent NIMH grant announcements and RDoC initiative and the use of dimensional constructs as compared to categorical diagnoses in psychopathology studies will be provided. The NIH staff will provide practical suggestions about the grant writing and application process, including points to consider
choosing among grant mechanisms. Potentially, this session will be best scheduled as a pre-meeting event to avoid interference with other events.

Faculty Disclosures:
Helen Lavretsky
Research Support: Forest Research Institute—research grant
Research Support: Alzheimer’s Research and Prevention foundation—research grant.

PUBLIC POLICY AND GERIATRIC MENTAL HEALTH
Session 322
Alexander W. Threlfall1; Ilse Wiechers2; Gary Epstein-Lubow3

1Santa Rosa Community Health Centers, Healdsburg, CA
2Yale University School of Medicine, New Haven, CT
3Butler Hospital, Providence, RI

Abstract: This workshop, sponsored by the Public Policy Caucus, will explore aging and mental health policy issues and help prepare participants to engage in effective advocacy for our patients and the field of geriatric psychiatry. Presentations will review the key current issues in aging and mental health policy, discuss effective strategies for engaging and communicating with policymakers, and provide an insider’s perspective into Congressional policy making.

Faculty Disclosures:
Alexander W. Threlfall
Nothing to disclose

Ilse Wiechers
Nothing to disclose

Gary Epstein-Lubow
Nothing to disclose

ALZHEIMER’S AND EMERGING TECHNOLOGIES
Session 400
Smita Varshney

Alzhacare, Rome, GA

Abstract: This session will cover various current and emerging technologies for Alzheimer’s. More specifically, how different technologies can support non-pharmacological interventions for dementia patients.

Faculty Disclosures:
Smita Varshney
Nothing to disclose

ALCOHOL, CANNABIS, OPIATES, COCAINE USE AND THE AGING BRAIN
Session 402
Marie DeWitt1; Daryl Shorter2

1John D Dingell VA Medical Center, Ypsilanti, MI
2Michael E DeBakey VA Medical Center, Houston, TX

Am J Geriatr Psychiatry 25:3, Supplement 1
Abstract: With the Baby Boomers aging, the misuse of substances has increased in frequency compared with previous cohorts of aging adults. Presenters will include addiction psychiatrists and geriatric psychiatrists who will discuss the demographic shifts in substance use among older adults as well as the physiological effects of commonly misused substances in the aging brain. The various pharmacologic options for the management of common substance use disorders will be covered, including possible treatments on the horizon. Potential contraindications to these pharmacologic agents in older adults will also be discussed.

Faculty Disclosures:
Marie DeWitt
Nothing to disclose

Daryl Shorter
Nothing to disclose

PHARMACOTHERAPY OF LATE-LIFE MENTAL DISORDERS: IS THERE ANYTHING NEW UNDER THE SUN?

Session 403
Benoit H. Mulsant1; Martha Sajatovic2; Eric Lenze3

1University of Toronto, Toronto, ON, Canada
2Case Western Reserve University, Cleveland, OH
3Washington University School of Medicine, St Louis, MO

Abstract: During the past decade, the traditional classification of psychotropic medications as antidepressants, antipsychotics, mood stabilizers, anxiolytics, and hypnotics has been questioned. Antipsychotics are commonly used as first-line treatment for late-life mood disorders or insomnia and antidepressants are used as first-line treatment for late-life anxiety disorders or psychosis associated with dementia. However, patients and their caregivers may be confused or distraught when they find out that they have been prescribed “a second-generation antipsychotic”, in the absence of psychotic symptoms or a serotonergic “antidepressant” in the absence of depressive symptoms. In 2014, a collaborative of five American, Asian, European, and international psychopharmacology societies proposed a new nomenclature for psychotropic drugs based on their pharmacodynamic properties rather than on target symptoms. Three presentations will review the rationale and evidence for and against using this new model in the pharmacotherapy of late-life mental disorders, based on the evidence supporting or challenging the use of these psychotropic medications for non-traditional indications. The first presentation will discuss drugs that are primarily monoamine agonists (“antidepressants” and “stimulants”); the second presentations will discuss dopamine blockers (“antipsychotics”) and second messenger modifiers (“mood stabilizers); the third presentations will discuss gabaergic agonists (“anxiolytics” or “hypnotics”). More than one-third of the symposium will be dedicated for discussion among the presenters and the audience.

Faculty Disclosures:
Benoit H. Mulsant
Research Support: Bristol-Myers Squibb—Medications for a NIH-funded clinical trial
Research Support: Eli Lilli—Medications for a NIH-funded clinical trial
Research Support: HAPPYneuron—Software used in study funded by CAMH Foundation
Shareholder: General Electric—Less than $5,000
Research Support: Pfizer—Medications for a NIH-funded clinical trial
Research Support: Capital Solution Design LLC—Software used in study funded by CAMH Foundation

Martha Sajatovic
Other: Springer Press, Johns Hopkins University Press, Oxford Press, UpToDate, Lexicomp—Royalties
Other: American Physician’s Institute, MCM Education, CMEology—CME activities
Research Support: Pfizer, Merck, Ortho-McNeil Janssen, Janssen, Reuter Foundation, Woodruff Foundation, Reinberger Foundation, National Institute of Health (NIH), Centers for Disease Control and Prevention (CDC)—Research to my institution
Consultant: Bracket, Prophase, Otsuka, Pfizer, Sunovion, Neurocrine—N/A
THE WE CARE ADVISOR™: A WEB-BASED TOOL TO HELP FAMILY CAREGIVERS MANAGE THE BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA
Session 404
Helen C. Kales1; Laura N. Gitlin2; Constantine G. Lyketsos2

1University of Michigan, Ann Arbor, MI
2Johns Hopkins Medicine, Baltimore, MD

Abstract: One of the biggest challenges in the day to day management of dementia is the behavioral symptoms that go hand and hand with the illness including agitation, anxiety, depression, aggression, sleep problems and socially inappropriate behaviors. These symptoms are associated with many of the negative outcomes of dementia including hospitalizations, increased placement in nursing homes, caregiver stress, depression lost income and decreased quality of life. The most common way to handle dementia-related behaviors is by using psychiatric medications like antipsychotics. There are often more effective and safer ways to manage behaviors, but caregivers lack access to learning these strategies. Family caregivers are in desperate need of help. While a good number of scientific trials have found that caregiver training is highly effective, most caregivers don’t have access to or time to attend such programs. Seeing this “translation gap”, Drs. Kales, Gitlin and Lyketsos spent more than a year in a National Institute of Nursing Research funded R01 working with family caregivers themselves to see what they wanted in a dementia care tool. The We Care Advisor™ uses the DICE approach, a systematic approach created by Kales, Gitlin and Lyketsos. The DICE approach is intended to guide caregivers through a reasoning process that determines the context of behaviors and then provides tailored strategies aimed at reducing problem behaviors like agitation, aggression, depression, anxiety, and wandering while also reducing caregiver stress. In this symposium, the investigators will present: 1) information describing the creation of the We Care Advisor™ tool; 2) results from the randomized controlled trial of 60 caregiver-person with dementia dyads; and 3) “lessons learned” to be used going forward in the next version of the tool.

Faculty Disclosures:
Helen C. Kales
Nothing to disclose

Laura N. Gitlin
No Answer

Constantine G. Lyketsos

FORENSICS IN GERIATRIC PSYCHIATRY FELLOWSHIP: EVOLUTION AND VALUE
Session 406
Stephen Read1; Aaron Kaufman2; Taya Varteresian3; Aviva Bobb3

1UCLA, San Pedro, CA
2LA County, Los Angeles, CA
3ARC, Los Angeles, CA
Abstract: As of 2015, there were approximately 47.8 million adults ages 65 or older in the United States and older adults represented 14.9% of the U.S. population (United States Census Bureau, 2016). Despite this growing population, there are small numbers of psychiatrists choosing to pursue subspecialty careers in geriatric psychiatry, with fewer than 60 individuals completing subspecialty training in geriatric psychiatry (ACGME, 2015). As forensic psychiatry fellowships do not have a geriatric focus, geriatric psychiatry fellowship is the ideal place to educate the future cohort of psychiatrists, who are serving the older population in forensic matters. ACGME has developed geriatric psychiatry milestones which have been designed to evaluate fellows in the context of their participation in their ACGME-accredited fellowship training program. However, individual training programs are left with the task of developing curricula to meet the training needs that will address the topic of forensics within geriatric psychiatry training programs, and as such, the teaching of forensic aspects of geriatric psychiatry varies across fellowship programs. UCLA has been developing a curriculum involving integrative encounters combining the education of geriatric psychiatry fellows with that of law students ending with the practical experience of a mock trial. Participants of this symposium will gain the knowledge necessary to create integrative educational experiences for geriatric psychiatry fellows which will develop the skills necessary to serve as an expert witness or provide testimony for probate conservatorship hearings. Reference: Read S, Kaufman A, Hackman D. Geriatric Forensic Psychiatry Training in Forensic and Geriatric Psychiatry Fellowships. In: Holzer JC, Kohn R, Ellison JM, Recupero PR, Eds. Textbook of Geriatric Forensic Psychiatry. London: Oxford University Press, in press.

Faculty Disclosures:
Stephen Read
Nothing to disclose
Aaron Kaufman
No Answer
Taya Varteresian
Nothing to disclose
Aviva Bobb
Nothing to disclose

ONE PATIENT, ONE CLINIC: INTEGRATED PRIMARY CARE FOR THE GEROPSYCHIATRIC PATIENT.

Session 407
Eve H. Byrd
Emory University, Atlanta, GA

Abstract: Integration of Geropsychiatry into Primary Care to Eliminate Mental Health Disparities Most older persons seek mental health care in primary care settings. Older persons in rural areas experience social determinants of mental health including poverty and limited access to quality mental health care. The 2012, the Institute of Medicine identified the shortage of mental health providers with the expertise in geropsychiatry. There is an increased need for primary care providers to develop an expert skill set in geropsychiatry to recognize geropsychiatric symptoms, screen, and treat mental illnesses. Now more than ever, interprofessional teams can contribute to a culture of mental health beyond what a single discipline can do. Advanced practice nurses play a leadership role as members of the interprofessional team in the care of marginalized older persons with mental illnesses. The Future of Nursing Report recognizes nurses as full partners with physicians and other members of the healthcare team to redesign health care. Integrated Memory Care Clinic: New Model of Primary Care for Persons Living with Dementia A mix of dementia and multiple chronic and acute medical conditions leads to higher healthcare utilization without improved outcomes for persons living with dementia (PLWD). Over-use, inappropriate and/or ineffective care, and poor outcomes underscores the need for interprofessional care models. The Integrated Memory Care Clinic (IMCC) is a patient-centered medical home for PLWD directed by advanced practice registered nurses (APRNs). The model incorporates the expertise of nursing, social work and APRNs from gerontology, palliative care and geriatric psychiatry who practice in collaboration with a gerontologist, neurologists and a geriatric psychiatrist. Unlike other dementia care programs (in which APRNs provide adjunctive or case management care), the APRNs provide comprehensive and coordinated primary care. The patient-centered medical home is embedded in the Cognitive Neurology Department clinic/ Emory University. The clinics’
RECENT ADVANCES IN PREVENTION, DIAGNOSIS AND MANAGEMENT OF DEMENTIA AND THE ASSOCIATED NEUROPSYCHIATRIC SYMPTOMS

Session 408
Zahinoor Ismail1; Tarek K. Rajji2; Sanjeev Kumar2; Amer Burhan3

1University of Toronto, Toronto, ON, Canada
2Centre for Addiction and Mental Health, Toronto, ON, Canada

Abstract: As per World Health Organization 47.5 million people worldwide have dementia and there are 7.7 million new cases every year. It is estimated that these numbers will double by the year 2030. Alzheimer’s disease (AD) and related disorders are the most common cause of dementia and constitute 60% - 70% of these cases. The challenges posed by these growing numbers are multifold. First, by the time dementia is diagnosed the brain has sustained substantial insult thereby limiting the efficacy of current interventions. Thus there is a need to identify and target high risk groups for early diagnosis and to develop preventive strategies. Secondly, there is a need to understand the underlying mechanisms responsible for cognitive dysfunction to develop targeted interventions. Thirdly, neuropsychiatric symptoms of dementia cause significant distress to patients and caregivers and pose a major management challenge. In this symposium we will discuss 1. The role of later life neuropsychiatric symptoms as an at risk state for cognitive decline and dementia. Then we will review cognitive screening instruments and their interpretation in assisting an early diagnosis of dementia. 2. Design of a large randomized controlled trial to study the efficacy of a preventive intervention using transcranial direct current stimulation and cognitive remediation for AD in high risk groups. 3. Findings from a study aimed at identification of underlying neurophysiological mechanisms and novel treatment targets in patients with AD using Transcranial magnetic stimulation and quantitative electroencephalography. 4. An evidence-based approach for assessment and management of neuropsychiatric symptoms of dementia to optimize treatment outcomes

Faculty Disclosures:
Zahinoor Ismail
No Answer

Tarek K. Rajji
Nothing to disclose

Sanjeev Kumar
Nothing to disclose

Amer Burhan
No Answer
2017 AAGP Annual Meeting

Abstract: Depression in older adults is frequently disabling and often requires more prolonged treatment trials than in younger adults. Currently, there is little neurobiological data to guide changing or augmenting antidepressant medications. While antidepressant clinical response may take up to 8 weeks, recent studies suggest that neurophysiologic signals, as measured with fMRI, precede and predict clinical response.

In this presentation, we review results from a recently completed multi-modal MRI study of treatment response in LLD (n = 60). We show the prediction of treatment response using perfusion fMRI, resting-state fMRI, and task-based fMRI. The presentation will place the new results in context of the literature on functional imaging of depression treatment. The accumulating evidence that functional imaging predicts treatment response supports the use of fMRI to complement traditional clinical measures in the assessment and management of LLD. We review the major challenges and opportunities in integrating fMRI into the management of LLD.

Faculty Disclosures:
Howard J. Aizenstein
No Answer

Carmen Andreescu
No Answer

Olu Ajilore
Nothing to disclose

Warren D. Taylor
Nothing to disclose

CASE PRESENTATION 3: DEMENTIA TREATMENT SESSION 410

Ali Najafian Jazi1; Tatyana Zharkova2; Smita Varshney3

1Carilion Clinic Virginia Tech School of Medicine, Roanoke, VA
2St. Elizabeth Medical Center, Brighton, MA
3Alzhacare, Rome, GA

Treatment of Hyper-sexuality in an Elderly Patient with Frontotemporal Dementia in Long-Term Care Setting, Ali Najafian Jazi

We present an 89-year-old single white male with frontotemporal dementia (FTD) who was admitted to the geriatric unit of a local hospital from a nursing home due to inappropriate sexual behaviors (ISB) including public masturbation, urinating on others, and inappropriately touching females. His behavior symptoms eventually became unmanageable and disruptive to the unit, causing much safety concerns toward other residents and staff.

Can Antipsychotics Be Used in Elderly Patients with Major Neurocognitive Disorder with Behavioral Disturbance and Stroke? Tatyana Zharkova

The elderly population is at increased risk of developing strokes. This risk may be exacerbated by the use of antipsychotic agents (AP), especially in those with major neurocognitive disorder (MNCD). A naturalistic n = 1 study allowed for the evaluation of the benefits and risks of the use of risperidone (R) in an 80 year old Caucasian woman diagnosed with MNCD due to Alzheimer’s disease who presented to an inpatient geropsychiatric unit.

Yes, I Want More Videos Managing Agitation in a PD Dementia Using a Social Media AlzhaTV, Smita Varshney

WS is an 87-year-old white male, a retired Internist, was admitted to nursing home due to increased agitation. WS was diagnosed with Parkinson’s disease 2 years ago. He had moderate cognitive and functioning impairments, and recurrent falls.
He had significant difficulty adjusting to nursing home environment. He had worsening of agitation when his wife left after visits. He reported to feel depressed because he was at the NH.

**ORAL PRESENTATION: AFFECTIVE DISORDERS**

Session 412  
Ryan Rajaram¹; Breno Diniz²; Ingmar Skoog³

¹Cleveland Clinic Foundation, Cleveland, OH  
²The University of Texas Health Science Center at Houston, Houston, TX  
³Institute of Neuroscience and Physiology, University of Gothenburg, Molndal, Sweden

*The Impact of Obsessive Compulsive Disorder on Neurocognitive Function in Later Life. Ryan Rajaram*

Obsessive Compulsive Disorder (OCD), a debilitating psychiatric disorder characterized by obsessive thoughts and/or compulsive behaviors, has been associated with dysfunction in the frontal lobes of the brain, particularly the orbito-frontal cortex.¹ Frontal lobe dysfunction characterizes OCD as well as dementia.² It is considered a core symptom of frontotemporal dementia behavioral variant (FTD-bv) but may be an element of cognitive impairment observed in Alzheimer’s disease (AD). It remains unclear if OCD increases the risk of developing dementias, as there is a lack of data to support this. Late onset geriatric OCD seems to be highly uncommon.³ Moreover, obsessive compulsive symptoms in geriatric population were occasionally reported as FTD prodrome or even clinical manifestation of stroke.⁴ To complicate diagnostic debate further, very little is known about natural course of OCD. It is highly probable that a comorbid neurodegenerative process may change a clinical presentation and complicate the management of OCD in the elderly population.

*Enhanced molecular aging in late-life depression: the Senescent Associated Secretory Phenotype, Breno Diniz*

his study aims to investigate whether a systemic molecular pattern associated with aging (senescent- associated secretory phenotype—SASP) is elevated in adults with late-life depression (LLD), compared to never-depressed elderly comparison participants.

*Late-life Depression in a Life-Course Perspective, Ingmar Skoog*

Retrospective information underestimates the life-time prevalence of depression, and may thus overestimate the proportion of late-life depression with onset in late life. We therefore examined late-life and late-onset depression in a population of women followed over 44 years.

Faculty Disclosures:
Ryan Rajaram, MD  
Nothing to disclose

Breno Diniz, MD, PhD  
Nothing to disclose

Ingmar Skoog, MD, PhD  
Nothing to disclose
SMART AND PERSONALIZED GERIATRIC PSYCHIATRY: HOW SENSORS, MOBILE DEVICES AND INFORMATICS MAY CHANGE THE WAY WE PRACTICE
Session 414
Mark Rapoport 1; Ghizlane Moussaoui 2; Karen L. Whiteman 3

1Sunnybrook Health Sciences Centre, University of Toronto, Toronto, ON, Canada
2Jewish General Hospital, McGill University, Montreal, QC, Canada
3Dartmouth Centers for Health and Aging, Lebanon, NH

Abstract: Over the past 5 years, there has been an explosion in the scope and availability of a variety of digital tools. Smartphones, tablets and wearable sensors are able to gather a broad range of data in real time on various aspects of behavior and function. Moreover, the extraordinary computing capabilities of these devices allow for real time analysis using sophisticated algorithms and instant data visualization. Leveraging the power of these technologies can provide clinicians and researchers with tools for behavior monitoring, that were not possible even 5 years ago, and can add an entirely new dimension to psychiatric care. This session will feature 3 talks that will present new data demonstrating how these tools can facilitate novel approaches to the assessment and care of older adults. Dr. Ipsit Vahia will serve as Chair and Discussant and outline the emerging area of deep digital behavioral phenotyping. Within this broad framework, the session will discuss three applications of technologies connected to personalized medicine. Dr. Mark Rapoport will present findings from ongoing studies at the University of Toronto on how sensor and GPS data are facilitating driving assessments for older adults. Dr Ghizlane Moussaoui will discuss how the use of tablet devices (iPads) can add a dimension to the administration of standardized clinical scales and facilitate real time analytics. Dr Karen Whiteman will present findings from an innovative personalized medicine-based approach using mobile devices to enhance peer-to-peer communication in patients with serious mental illness. Her talk will incorporate a discussion of user-centered design principles. As geriatric psychiatry begins to embrace these emerging fields for clinical care and research our session is designed to provide broad conceptual overviews as well as new research data to further the process.

Faculty Disclosures:
Mark Rapoport
Nothing to disclose

Ghizlane Moussaoui
Nothing to disclose

Karen L. Whiteman
Nothing to disclose

USE WHAT YOU HAVE, DO WHAT YOU CAN: INCORPORATING STANDARDIZED MEDICAID AND MEDICARE REGULATION ASSESSMENT TOOLS TO IDENTIFY HOME CARE PATIENTS WITH COGNITIVE IMPAIRMENT
Session 415
Gary Kennedy 1; Jerome Z. Korenblatt 2; Janice Korenblatt 1; Mirnova E. Ceïde 1

1Montefiore Medical Center, Bronx, NY
2Montefiore Medical Center, Yonkers, NY

Abstract: 40% of homebound elders have a psychiatric disorder. Mental disorders make the care of the homebound patients more complex and increase morbidity and mortality from medical illness. Dementia is the most common psychiatric disorder at about 29% of the homebound population. In our previous work, 66% of home care patients referred to our psychiatric program had a neurocognitive disorder. It was also the most common new diagnosis, highlighting poor recognition of cognitive impairment by primary care physicians. In a cross sectional study of primary care physicians, mild dementia was missed 90% of the time and moderate dementia was missed 50% of the time. Due to lack of required cognitive screening and failure of family or patient to report memory impairment, neurocognitive disorders often go unrecognized. Federal and State agencies have acknowledged the importance of screening for psychiatric symptoms including cognitive impairment; and screening questions
are now embedded into Medicaid Uniform Assessment System (UAS) and home care assessment tools like the Outcome and Assessment Information Set (OASIS). However while there is literature on the benefit of functional data there is a lack of literature describing the impact of standardized cognitive screening questions at the care management and home care nursing level. New York State has developed managed long term care programs (MLTC) for Medicaid recipients designed to enable this population to remain safely in their communities. The MLTC coordinates all medically necessary services and includes a multidisciplinary team of registered nurses, health care workers and other professionals in the community. UAS is used at assessment to evaluate needs and care managers use this information to establish a plan of care to keep patients in the community. UAS data has found that the most costly clients have a cognitive impairment. Certified Home Health Agencies (CHHA) utilize the OASIS at start of care, recertification and discharge. This tool is administered by the home care nurse and the findings are used to develop a treatment plan. At Montefiore Home Care, nurses can refer patients with cognitive impairment and psychosocial issues to the home care social worker for further assessment and referral to the Montefiore Home Care Geriatric Psychiatry Program (MHC-GPP) as needed. This program has been shown to successfully identify patients with cognitive impairment and develop comprehensive care plans in collaboration with home care nurses, social workers, PCP and MLTC care managers. This session will illustrate how care managers can successfully screen for cognitive impairment integrating the UAS data during assessment and utilize the information to guide interventions in the community by partnering with a CHHA and a colocated geriatric psychiatry program. This session will describe how home care nurses and social workers can use the OASIS to identify patients with cognitive and functional impairments and address theirs needs in the home. Finally, this session will illustrate how home based colocation can employ tools like the UAS and OASIS to initiate psychiatric evaluation and management. Presenters will use case examples to illustrate how care management, home care and psychiatry were able to collaborate across the health network to maintain homebound older adults safely in the community.

Faculty Disclosures:
Gary Kennedy
No Answer

Jerome Z. Korenblatt
No Answer

Janice Korenblatt
No Answer

Mirnova E. Ceïde
Nothing to disclose

CLINICAL RESEARCH INFORMATICS WITH SOLOMON AND BRAINWATCH FOR IMAGING THE NEURODEGENERATIVE DISORDERS

Session 416
Carl Taswell

UC San Diego, Ladera Ranch, CA

Abstract: This presentation will provide an introduction to and review of PET brain imaging and informatics for the neurodegenerative disorders. Current status of brain imaging for the amyloidopathies, tauopathies and synucleinopathies will be reviewed. Imaging informatics, including the use of SOLOMON and BrainWatch, will be reviewed as it pertains to clinical research for the dementias. SOLOMON has been introduced previously as an ontology for the sensory-onset language-onset and motor-onset dementias. BrainWatch has been introduced previously as a web application and resource registry relevant to brain imaging. An update will be provided on the current status of the Brain Health Alliance imaging informatics system from a clinician-scientist’s perspective by the presenter who is both ABPN certified in psychiatry & neurology, ABNM certified in nuclear medicine, and actively engaged in research associated with brain imaging clinical trials.

Faculty Disclosures:
Carl Taswell
Nothing to disclose
2017 AAGP Annual Meeting

Alphabetical List of Presenters at Education Sessions

Janet Abrams, MSW
Gay and Gray VII: A Multidisciplinary Approach to Transgender Aging

Geri Adler
Driving and Dementia - An Introduction, Educational Resources, and International Perspectives

Marc Agronin MD
The Art and Science of Creative Aging

Iqbal Ahmed, MD
Consultation Liaison Geriatric Psychiatry in an Integrated Healthcare Model: An AAGP and APM Synergy Symposium
Diversity: Opportunities, Challenges and Solutions.
How Does Cognitive Aging Affect Clinical Competence of Physicians?
Current Status of Age-Based Mandatory Cognitive Testing of Physicians

Howard Aizenstein, MD, PhD
Advances and Barriers for Clinical of Neuroimaging in Late-Life Mood and Anxiety Disorders

Olu Ajilore, MD, PhD
Advances and Barriers for Clinical of Neuroimaging in Late-Life Mood and Anxiety Disorders
Windows Into the Brain: Functional Networks Informing Treatment in Late-Life Depression

Safa Al Rubaye MD, MBChB
Early Investigator Poster Session

Allan Anderson MD, MMM, CMD
Case Presentation 1: Pharmacology

Loretta Anderson MA, MHS
New Research Poster Session

Carmen Andreescu MD
Advances and Barriers for Clinical of Neuroimaging in Late-Life Mood and Anxiety Disorders

Ashik Ansar MD PhD
Early Investigator Poster Session

Jacqueline Arenz MD
Early Investigator Poster Session

Ebenezer Asare MD
New Research Poster Session

Ali Asghar Ali MD
Diversity: Opportunities, Challenges and Solutions.
Driving and Dementia - An Introduction, Educational Resources, and International Perspectives
2017 AAGP Annual Meeting

Alireza Atri MD, PhD
New Research Poster Session

Laura B. Dunn, MD
*Physician-Assisted Suicide and End of Life Care: Legal, Ethical and Practical Dimensions*

Silpa Balachandran, MD
*Evidence-Based Management of Behavioral and Psychological Symptoms of Dementia Inappropriate Sexual Behaviors in Dementia: A Review*

Meera Balasubramaniam, MD, MPH
*Ethical, Legal and Forensic Issues in Geriatric Psychiatry*

Ali Bani Fatemi MSc
New Research Poster Session

Bruce Bassi, MD
*Digi…what? An overview of technology advances for dementia care.*

Laurel Bessey, MD
*2016 Highlighted Papers for the Practicing Geriatric Mental Health Clinical Provider*

Kathleen Bingham MD
*Early Investigator Poster Session*

Mary Blazek, MD, MEHP
*Revisiting the 2012 IOM report: A renewed call for action*

Aviva Bobb
*Forensics in Geriatric Psychiatry Fellowship: Evolution and Value*

Malaz Boustani MD
*Coming Together to Fight Delirium: How to Deliver Team-Based, Interdisciplinary Care to Prevent, Detect, and Manage Delirium and Its Long-Term Sequelae*

Lisa Boyle MD
*2016 Highlighted Papers for the Practicing Geriatric Mental Health Clinical Provider Update on Geriatric Psychiatry Maintenance of Certification Program*

Gretchen Brenes PhD
New Research Poster Session

Lory Bright-Long, MD
*Developing Your Clinician/Educator Career*

William Brooks, MD
*What's Trending in Medical Education: Implications for Geriatric Psychiatry*
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Patrick Brown, PhD
Late-Life Depression and Frailty: Is there a Common Vulnerability, and how does the Presence of Frailty Contribute to Clinical Outcomes of Geriatric Depression?

Jeffrey Browndyke, PhD
Coming Together to Fight Delirium: How to Deliver Team-Based, Interdisciplinary Care to Prevent, Detect, and Manage Delirium and Its Long-Term Sequelae

Maritza Buenaver, MD
Who will take care of me when I am old? Addressing the Geriatric Workforce Crisis

Dr. Amer Burhan
Recent Advances In Prevention, Diagnosis and Management Of Dementia And The Associated Neuropsychiatric Symptoms

Amy Byers PhD, MPH
New Research Poster Session

Eve Byrd, MSN, MHP, Doctoral Candidate
One Patient, One Clinic: Integrated Primary Care for the Geropsychiatric Patient.

Noll Campbell, PharmD
Aging and Post-Intensive Care Syndrome (PICS): How Can We Provide Integrated, Innovative Care for Older Adults Suffering from Delirium, Dementia, and Depression?

Erin Cassidy-Eagle PhD
New Research Poster Session

Angela Catic
Practical and Interdisciplinary Approaches to Avoiding and Minimizing Polypharmacy

Mirnova Ceïde, MD
Use What You Have, Do What You Can: Incorporating Standardized Medicaid and Medicare Regulation Assessment Tools to Identify Home Care Patients with Cognitive Impairment

Asa Cheesman MD
Early Investigator Poster Session

Shulin Chen MD, PhD
New Research Poster Session

Suneela Cherlopalle MD
New Research Poster Session

Shilpa Chitnis, MD PhD
SHAKEN NOT STIRRED: Collaborative Evaluation and Management of Neuropsychiatric Symptoms in Older Adults with Parkinson Disease

Jun Ku Chung HBSc
New Research Poster Session
Cyndy Cordell  
*Bringing the Resources of the Alzheimer’s Association to the Clinic: A New Referral Model*

Stephen D’Amico MD  
*New Research Poster Session*

Karina Davis MD  
*Early Investigator Poster Session*

Andrew Dentino MD  
*Palliative psychiatry experiences in residency training*

Marie DeWitt, MD  
*Coming Together to Fight Delirium: How to Deliver Team-Based, Interdisciplinary Care to Prevent, Detect, and Manage Delirium and its Long-Term Sequelae*

*Alcohol, Cannabis, Opiates, Cocaine Use and the Aging Brain*

*HIV and AIDS in the Aging Population*

*PTSD for Non-VA Clinicians*

*Practical and Interdisciplinary Approaches to Avoiding and Minimizing Polypharmacy*

Breno Diniz MD, PhD  
*Oral Presentation: Affective Disorders*

Ebony Dix MD  
*Case Presentation 2: Dementia Diagnosis & Psychiatric Diagnosis*

Susan Duffy MD  
*New Research Poster Session*

James Ellison MD MPH  
*How Does Cognitive Aging Affect Clinical Competence of Physicians? Current Status of Age-Based Mandatory Cognitive Testing of Physicians*

Gary Epstein-Lubow, MD  
*Public Policy and Geriatric Mental Health*

Lisa Eyler PhD  
*Assessing the Older Adult with Bipolar Disorder: Review of the State of the Field and Recommendations for the Clinician and Researcher*

Montserrat Fernández “psychogeriatrician”  
*Early Investigator Poster Session*

Brent Forester MD  
*Assessing the Older Adult with Bipolar Disorder: Review of the State of the Field and Recommendations for the Clinician and Researcher*

Ksenia Freeman MD  
*New Research Poster Session*
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Jane Gagliardi MD MHS  
*Bridging the Practice Gap in Delirium: Aligning Clinical Practice with Best Evidence*

Erica Garcia-Pittman MD  
*Age-Friendly Austin: Creating the Age-Friendly Action Plan*

Marie Anne Gebara MD  
*Advances in Pharmacotherapy of Late-Life Depression*  
*Early Investigator Poster Session*

Lauren Gerlach DO  
*Early Investigator Poster Session*

Philip Gerretsen MD, PhD  
*Early Investigator Poster Session*

Laura Gitlin  
*The WeCareAdvisor™: A Web-based tool to help family caregivers manage the behavioral and psychological symptoms of dementia*

Oliver Glass, MD  
*The role of International Medical Graduates in the treatment of late life psychiatric patients*  
*Early Investigator Poster Session*

Juliet Glover, MD  
*Sorting through Hoarding Disorder in Older Adults: Presentation, Assessment, and Interventions*

Angela Golas MD, FRCPC  
*Early Investigator Poster Session*

Nathalie Gomez MD  
*Early Investigator Poster Session*

Victor Gonzalez MD  
*Early Investigator Poster Session*

Sharon Gordon PsyD  
*PTSD for Non-VA Clinicians*

Dion Graybeal MD  
*Neurology Update: Essential Tremor, Parkinson's Disease, and Stroke*

Faith Gunning PhD  
*Windows Into the Brain: Functional Networks Informing Treatment in Late-Life Depression*

Aarti Gupta MD  
*Consultation Liaison Geriatric Psychiatry in an Integrated Healthcare Model: An AAGP and APM Synergy Symposium*  
*Preparing For the Next Silver Tsunami: Managing Substance Use disorders in late life*  
*Ethical, Legal and Forensic Issues in Geriatric Psychiatry*
Erika Heard MD  
*Early Investigator Poster Session*

Adriana Hermida MD  
*Update on New Research and the Clinical Practice of ECT in the Elderly*

Jeremy Hirst  
*A complex clinical intersection: Palliative Care in patients with Dementia*

Steven Huege  
*A complex clinical intersection: Palliative Care in patients with Dementia*

Andrea Iaboni MD DPhil  
*Case Presentation 1: Pharmacology*  
*New Research Poster Session*  
*Psychotropic Drugs and Falls in Older Adults: an Update for the Geriatric Psychiatrist*

Zahinoor Ismail MD  
*Recent Advances In Prevention, Diagnosis and Management Of Dementia And The Associated Neuropsychiatric Symptoms*

Jennifer Jacobson MD  
*Early Investigator Poster Session*

Linda Jersin  
*Bringing the Resources of the Alzheimer’s Association to the Clinic: A New Referral Model*

Daniel Jimenez PhD  
*New Research Poster Session*

Kevin Johnson MD  
*Gay and Gray VII: A Multidisciplinary Approach to Transgender Aging*

Kim Johnson MD  
*Bridging the Practice Gap in Delirium: Aligning Clinical Practice with Best Evidence*

Deirdre Johnston MB BCh  
*“Maximizing Independence at Home” for people with dementia and their caregivers: developing, implementing, and disseminating best practices.*

Pallavi Joshi MA  
*Evidence-Based Management of Behavioral and Psychological Symptoms of Dementia*  
*Inappropriate Sexual Behaviors in Dementia: A Review*

Helen Kales MD  
*The WeCareAdvisor™: A Web-based tool to help family caregivers manage the behavioral and psychological symptoms of dementia*

Jordan Karp MD  
*To Fast Track or Not to Fast Track: The Future of Geriatric Psychiatry Training During Residency*
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John Kasckow MD PhD
Advances in Late-Life Schizophrenia: A Focus on Functional and Physical Abilities
Advances in Pharmacotherapy of Late-Life Depression
New Research Poster Session

Aaron Kaufman MD
Forensics in Geriatric Psychiatry Fellowship: Evolution and Value

Charles Kellner MD
Update on New Research and the Clinical Practice of ECT in the Elderly

Gary Kennedy MD
Use What You Have, Do What You Can: Incorporating Standardized Medicaid and Medicare Regulation Assessment Tools to Identify Home Care Patients with Cognitive Impairment

Rachel Kester DO
Early Investigator Poster Session

Babar Khan MD
Aging and Post-Intensive Care Syndrome (PICS): How Can We Provide Integrated, Innovative Care for Older Adults Suffering from Delirium, Dementia, and Depression?

Pravin Khemani MD
Neurology Update: Essential Tremor, Parkinson's Disease, and Stroke

Julia Kirkham MD, MSc
Early Investigator Poster Session
Psychotropic Drugs and Falls in Older Adults: an Update for the Geriatric Psychiatrist

Paul Kirwin MD
Integrated Care: Private and VA models

Sarah Kleinfeld MD
Early Investigator Poster Session

Mancia Ko PharmD, MBA
New Research Poster Session

Janice Korenblatt LCSW, MSW
Use What You Have, Do What You Can: Incorporating Standardized Medicaid and Medicare Regulation Assessment Tools to Identify Home Care Patients with Cognitive Impairment

Jerome Korenblatt LCSW
Use What You Have, Do What You Can: Incorporating Standardized Medicaid and Medicare Regulation Assessment Tools to Identify Home Care Patients with Cognitive Impairment

Seon Kum MD
Early Investigator Poster Session
Sanjeev Kumar MBBS
Recent Advances In Prevention, Diagnosis and Management Of Dementia And The Associated Neuropsychiatric Symptoms

Rushiraj Laiwala MD
Early Investigator Poster Session
SHAKEN NOT STIRRED: Collaborative Evaluation and Management of Neuropsychiatric Symptoms in Older Adults with Parkinson Disease

Marcia Lammando BSN MHSA
How Does Cognitive Aging Affect Clinical Competence of Physicians?
Current Status of Age-Based Mandatory Cognitive Testing of Physicians

Melinda Lantz MD
Early Investigator Poster Session

Maria Lapid MD
Physician-Assisted Suicide and End of Life Care: Legal, Ethical and Practical Dimensions

Helen Lavretsky MD
Mind-Body Interventions for Late-Life Mental Health and Cognition
Senior Investigator Workshop

Ellen Lee MD
A complex clinical intersection: Palliative Care in patients with Dementia

Susan Lehmann MD
Revisiting the 2012 IOM report: A renewed call for action

Shuang Lei BA (medical student)
Early Investigator Poster Session

Jessica Lemann MD
Age-Friendly Austin: Creating the Age-Friendly Action Plan

Eric Lenze MD
Advances in Pharmacotherapy of Late-Life Depression
Pharmacotherapy of Late-Life Mental Disorders: Is There Anything New Under the Sun?

Heather Leutwyler
Advances in Late-Life Schizophrenia: A Focus on Functional and Physical Abilities

Joanna Lim
2016 Highlighted Papers for the Practicing Geriatric Mental Health Clinical Provider

Maria Llorente MD
Productive Aging and Creativity: The Lives and Art of Georgia O’Keefe, Pablo Picasso and Claude Monet
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Constantine Lyketsos MD MHS
*The WeCareAdvisor™: A Web-based tool to help family caregivers manage the behavioral and psychological symptoms of dementia*

Jeffrey Lyness MD
*Creative Resilience & Aging: Johnny Cash — The Man in Black Fades to Black*
*Update on Geriatric Psychiatry Maintenance of Certification Program*

Etuini Ma'u MBCHB, FRANZCP
*New Research Poster Session*

Scott Mackin PhD
*Cognitive Impairment in Late Life Depression*

Kari Malwitz MD
*Early Investigator Poster Session*

Anup Mani DO
*New Research Poster Session*

Kevin Manning PhD
*New Research Poster Session*

Cindy Marshall MD
*Bringing the Resources of the Alzheimer’s Association to the Clinic: A New Referral Model*
*Neurology Update: Essential Tremor, Parkinson’s Disease, and Stroke*

Donovan Maust MD MS
*New Research Poster Session*

Mark Mayhew PhD
*New Research Poster Session*

Mridul Mazumder
*Sorting through Hoarding Disorder in Older Adults: Presentation, Assessment, and Interventions*

William McDonald MD
*Update on New Research and the Clinical Practice of ECT in the Elderly*

Marsden McGuire
*Productive Aging and Creativity: The Lives and Art of Georgia O’Keefe, Pablo Picasso and Claude Monet*

Adam Mecca MD, PhD
*Early Investigator Poster Session*

Nisha Mehta-Naik MD
*Early Investigator Poster Session*
Isaura Menzies MD MPH
A Collaborative Approach to Address Mental Health Needs of Patients in Subacute Care in Skilled Nursing Facilities (SNFs)

Briana Mezuk PhD
Late-Life Depression and Frailty: Is there a Common Vulnerability, and how does the Presence of Frailty Contribute to Clinical Outcomes of Geriatric Depression?

Lisa Miller
Practical and Interdisciplinary Approaches to Avoiding and Minimizing Polypharmacy

Wendy Miller PhD
The Art and Science of Creative Aging

Ghizlane Moussaoui BSc Candidate
Early Investigator Poster Session
Smart and Personalized Geriatric Psychiatry: How Sensors, Mobile Devices and Informatics May Change the Way we Practice

Benoit Mulsant MD
Advances in Pharmacotherapy of Late-Life Depression
Pharmacotherapy of Late-Life Mental Disorders: Is There Anything New Under the Sun?

Anjana Muralidharan
Advances in Late-Life Schizophrenia: A Focus on Functional and Physical Abilities

Anusuiya Nagar MD
Early Investigator Poster Session

Ali Najafian Jazi MD, MS
Case Presentation 2: Dementia Diagnosis & Psychiatric Diagnosis
Case Presentation 3: Dementia Treatment

Craig Nelson MD
Cognitive Impairment in Late Life Depression

Kristen Nelson
Optimizing Geriatric Training and Evaluation: How to Enhance Direct Observation and Feedback in the Clinical Setting for Geriatric Clinical Educators

Sarah Nguyen MD
Early Investigator Poster Session

James Norton PhD
New Research Poster Session

Phillip Painter MD
New Research Poster Session

Francisco Parra
Productive Aging and Creativity: The Lives and Art of Georgia O’Keefe, Pablo Picasso and Claude Monet
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Amita Patel MD
Sleep Disorders in Institutionalized Elderly: Treatment Considerations, Strategies for Improvement in Quality of Life of Patients and Reduction of Caregiver Burden

Rajesh Patel MD
Sleep Disorders in Institutionalized Elderly: Treatment Considerations, Strategies for Improvement in Quality of Life of Patients and Reduction of Caregiver Burden

Georgios Petrides MD
Update on New Research and the Clinical Practice of ECT in the Elderly

Klara Pokrzywko MA
Early Investigator Poster Session

Courtney Polenick PhD
Early Investigator Poster Session

Dennis Popeo MD
Revisiting the 2012 IOM report: A renewed call for action
Developing Your Clinician/Educator Career

Sarah Pospos MD, MS
Early Investigator Poster Session

Angela Potes MSc
Early Investigator Poster Session

Guy Potter PhD
Late-Life Depression and Frailty: Is there a Common Vulnerability, and how does the Presence of Frailty Contribute to Clinical Outcomes of Geriatric Depression?

Tia Powell MD
Plenary II: Dementia, Ethics, and Health Policy with Tia Powell, MD

Winnie Qian BSc
New Research Poster Session

Rebecca Radue MD
Early Investigator Poster Session

Rebecca Radue, MD
Optimizing Geriatric Training and Evaluation: How to Enhance Direct Observation and Feedback in the Clinical Setting for Geriatric Clinical Educators

Ryan Rajaram MD
Oral Presentation: Affective Disorders
Tarek Rajji MD
Advances in Late-Life Schizophrenia: A Focus on Functional and Physical Abilities
Recent Advances In Prevention, Diagnosis and Management Of Dementia And The Associated Neuropsychiatric Symptoms

Mark Rapoport MD FRCPC
Driving and Dementia - An Introduction, Educational Resources, and International Perspectives
How to save the Grandma?
Smart and Personalized Geriatric Psychiatry: How Sensors, Mobile Devices and Informatics May Change the Way we Practice

Stephen Read MD
Forensics in Geriatric Psychiatry Fellowship: Evolution and Value

Karen Reimers MD
How to save the Grandma?

Soham Rej MD
Assessing the Older Adult with Bipolar Disorder: Review of the State of the Field and Recommendations for the Clinician and Researcher
Mind-Body Interventions for Late-Life Mental Health and Cognition

Brenna Renn PhD
Early Investigator Poster Session

Esther Rollhaus MD
Early Investigator Poster Session

Kasia Rothenberg MD, PhD
Case Presentation 2: Dementia Diagnosis & Psychiatric Diagnosis

Kimberly Rudd MD
Sorting through Hoarding Disorder in Older Adults: Presentation, Assessment, and Interventions

Robert Rymowicz BSc
Preparing For the Next Silver Tsunami: Managing Substance Use disorders in late life

Martha Sajatovic MD
Assessing the Older Adult with Bipolar Disorder: Review of the State of the Field and Recommendations for the Clinician and Researcher
New Research Poster Session
Pharmacotherapy of Late-Life Mental Disorders: Is There Anything New Under the Sun?

Teresa Sansone Ferguson
Age-Friendly Austin: Creating the Age-Friendly Action Plan

Veronica Santini
Neurology Update: Essential Tremor, Parkinson's Disease, and Stroke
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Elizabeth Santos MD  
*Developing Your Clinician/Educator Career*

Robert Santulli MD  
*New Research Poster Session*

Parnika Saxena MD  
*Early Investigator Poster Session*

Alessandra Scalmati MD PhD  
*Developing Your Clinician/Educator Career*

Jason Schillerstrom MD  
*How to save the Grandma?*

Susan Schultz MD  
*Dementia at the End of Life*

Dallas Seitz MD, FRCPC  
*Early Investigator Poster Session*  
*New Research Poster Session*  
*Psychotropic Drugs and Falls in Older Adults: an Update for the Geriatric Psychiatrist*

Patricia Serrano MD  
*Early Investigator Poster Session*

Daniel Sewell MD  
*Gay and Gray VII: A Multidisciplinary Approach to Transgender Aging*

Inna Sheyner  
*Dementia at the End of Life*

Daryl Shorter  
*Alcohol, Cannabis, Opiates, Cocaine Use and the Aging Brain*

Tatyana Shteinlukht MD PhD  
*Diversity: Opportunities, Challenges and Solutions.*  
*How to save the Grandma?*  
*The Art of Becoming a Leader: Learn from the Expert*

Adam Simning MD, PhD  
*Early Investigator Poster Session*

Stephanie Sims  
*HIV and AIDS in the Aging Population*

Ingmar Skoog MD, PhD  
*Oral Presentation: Affective Disorders*
LalithKumar Solai MD
*Who will take care of me when I am old? Addressing the Geriatric Workforce Crisis*

Anothai Soonsawat
*How Does Cognitive Aging Affect Clinical Competence of Physicians?*
*Current Status of Age-Based Mandatory Cognitive Testing of Physicians*

Shilpa Srinivasan MD
*Sorting through Hoarding Disorder in Older Adults: Presentation, Assessment, and Interventions*
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*SHAKEN NOT STIRRED: Collaborative Evaluation and Management of Neuropsychiatric Symptoms in Older Adults with Parkinson Disease*

Sarah Stahl PhD
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David Steffens MD
*Late-Life Depression and Frailty: Is there a Common Vulnerability, and how does the Presence of Frailty Contribute to Clinical Outcomes of Geriatric Depression?*

Jonathan Stewart MD
*Dementia at the End of Life*

Joel Streim MD
*Applying the Integrated Care Approach: Skills for the Consulting Psychiatrist*

Uma Suryadevara MD
*THINK DELIRIUM: An Inter-professional Automated Assessment, Intervention, and Educational Program*
*Digi...what? An overview of technology advances for dementia care.*

Rajesh Tampi MD MS DFAPA
*Consultation Liaison Geriatric Psychiatry in an Integrated Healthcare Model: An AAGP and APM Synergy Symposium*
*The role of International Medical Graduates in the treatment of late life psychiatric patients*
*Diversity: Opportunities, Challenges and Solutions.*
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*Evidence-Based Management of Behavioral and Psychological Symptoms of Dementia*
*New Research Poster Session*

Carl Taswell MD
*Clinical Research Informatics with SOLOMON and BrainWatch for Imaging the Neurodegenerative Disorders*
*New Research Poster Session*

Warren Taylor MD
*Advances and Barriers for Clinical of Neuroimaging in Late-Life Mood and Anxiety Disorders*
*Windows Into the Brain: Functional Networks Informing Treatment in Late-Life Depression*

Sivakumar Thangaraju MD (Psychiatry)
*New Research Poster Session*
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Alexander Threlfall MD  
*Public Policy and Geriatric Mental Health*

Theresa Toledo MD  
*Early Investigator Poster Session*

Gabriela Torres-Platas  
*Mind-Body Interventions for Late-Life Mental Health and Cognition*

Duygu Tosun PhD  
*Cognitive Impairment in Late Life Depression*

Louis Trevisan MD  
*Preparing For the Next Silver Tsunami: Managing Substance Use disorders in late life*

Ana Turner  
*It takes a village: The importance of interdisciplinary care in drug induced parkinsonism*

Ann Usitalo  
*HIV and AIDS in the Aging Population*

Ipsit Vahia MD  
*Smart and Personalized Geriatric Psychiatry: How Sensors, Mobile Devices and Informatics May Change the Way we Practice*

Kimberly Van Orden PhD  
*New Research Poster Session*

Smita Varshney MD  
*Alzheimer’s and Emerging Technologies*  
*Case Presentation 3: Dementia Treatment*

Taya Varteresian DO MS  
*Forensics in Geriatric Psychiatry Fellowship: Evolution and Value*

Akshya Vasudev MBBS, MD, MRCPsych  
*Mind-Body Interventions for Late-Life Mental Health and Cognition*

Deborah Wagenaar DO, MS  
*What’s Trending in Medical Education: Implications for Geriatric Psychiatry*

Lihong Wang PhD  
*New Research Poster Session*

Sophia Wang MD  
*Coming Together to Fight Delirium: How to Deliver Team-Based, Interdisciplinary Care to Prevent, Detect, and Manage Delirium and Its Long-Term Sequelae*  
*Aging and Post-Intensive Care Syndrome (PICS): How Can We Provide Integrated, Innovative Care for Older Adults Suffering from Delirium, Dementia, and Depression?*
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Gabriella Waserstein MD Cadidate
Early Investigator Poster Session

Sara Weisenbach PhD
Windows Into the Brain: Functional Networks Informing Treatment in Late-Life Depression

Judith Weissman PhD, JD
New Research Poster Session

Stephen Welch MD
Digi…what? An overview of technology advances for dementia care.

Warren Wen PhD
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Karen Whiteman PhD
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Early Investigators Posters

Poster Number EI 1

**Narrative interest standard: a novel approach to surrogate decision-making for individuals with dementia.**

James Wilkins¹

¹Psychiatry, Massachusetts General Hospital/McLean Hospital, Boston, MA, United States

**Introduction:** Dementia is a common neurodegenerative process that can significantly impair decision-making capacity as the disease process progresses. When an individual is found to lack capacity to make a decision, a surrogate decision-maker is generally sought to aid in decision-making. Typical bases for surrogate decision-making include the substituted judgment standard and the best interest standard. Given the heterogeneous and progressive course of dementia, however, these standards for surrogate decision-making are often insufficient in providing guidance for the decision-making for an individual with dementia, escalating the likelihood of conflict between potential surrogate-decision makers.

**Methods:** In this presentation, a narrative interest standard is presented as a novel approach for surrogate decision-making for individuals with dementia.

**Results:** Through incorporation of elements of a best interest standard in focusing on the current benefit-burden ratio and elements of narrative to provide context, history, and flexibility for values and preferences that may change over time, the narrative interest standard allows for elaboration of an enriched context for surrogate decision-making for individuals with dementia.

**Conclusions:** More importantly, however, a narrative approach encourages the direct contribution from individuals with dementia in co-authoring the story of what matters to them in their lives.

Poster Number: EI 2

**Functional Assessment Instruments in Late-Life Depression: A Systematic Review**

Kathleen Bingham, MD¹,²; Sanjeev Kumar, MD¹,³; Deirdre Dawson, PhD¹,⁴; Benoit H. Mulsant, MD¹,³; Alastair J. Flint, MB¹,²

¹University of Toronto, Toronto, ON, Canada
²University Health Network, Toronto, ON, Canada
³Centre for Addiction and Mental Health, Toronto, ON, Canada
⁴Rotman Research Institute, Baycrest, Toronto, ON, Canada

**Introduction:** The concept of functioning, defined generally as a person’s ability to perform the tasks necessary for independent living and to participate meaningfully and reciprocally in their community, has received increasing attention in recent years, as part of a trend in the psychiatric literature toward measuring real-world, generalizable outcomes (“clinical effectiveness”). There are a number of validated functioning scales that have been used in the major depressive disorder (MDD) population, focusing on global, occupational and social functioning. The late-life depression (LLD) population poses unique challenges in measuring functioning for a number of reason, including heterogeneity in health and cognition, and generational differences in social and gender roles and educational level. Given the emerging evidence for the importance of incorporating functional outcomes in depression research, along with the particular challenges of measuring functioning in LLD, the research community requires evidence-based guidelines for assessing functioning in this population. Such guidelines would allow for standardization of outcome measures and enhanced ability to compare results across studies. Prior to generating guidelines, however, we must first understand how functioning in LLD is currently being measured. Thus, the aims of this study are to i) systematically review and identify the current IADL and social functioning assessment instruments being used in the LLD literature, ii) identify which instruments have been validated in LLD, and iii) suggest factors for researchers to consider when selecting functional assessment instruments in LLD.

**Methods:** We performed a systematic review of Medline and CINAHL using PRISMA guidelines. We included studies that i) included only subjects aged 60 years and older with a depressive disorder diagnosed using a research or clinical interview, and
Methods: We selected IADL and social functioning based on the evidence that these two areas are most likely to be affected in persons with LLD. We excluded studies that encompassed persons with dementia, studies that investigated functioning in patients with a primary medical illness and/or neurological disorder and depression (e.g., stroke, Parkinson’s), and studies that included patients with another primary psychiatric disorder and comorbid depression. We also excluded studies that assessed only physical or basic ADL functioning, since these measures are not typically as relevant to LLD without major comorbid medical illness or dementia.

Results: Our search criteria yielded 21 functional assessment instruments, of which 8 measured IADL functioning only, 11 measured social functioning only, and 2 measured both IADL and social functioning. We found that only two instruments (the SF-36 and the Performance Assessment of Self-Care Skills) have been formally validated in the LLD population. Four studies of four separate instruments, while not done to formally validate the instruments in LLD, provide psychometric data supporting construct validity and sensitivity to change (two components of instrument validation).

Conclusions: The primary finding of this study is that, while many functional assessment instruments have been used in patients with LLD, only two have been formally validated in this population. Moreover, the extracted psychometric data of several of the other instruments is mixed. Many IADL instruments used in LLD were originally developed for use in more disabled populations, such as persons living in long-term care, and may not be sensitive to the more subtle difficulties encountered by older adults in relatively good physical and cognitive health. Some of the social functioning assessment instruments used commonly in LLD fail to take into account generational differences in social roles, and social functioning as a construct is quite heterogeneous and poorly defined in this body of literature. Thus, when selecting instruments, researchers assessing functioning in LLD should consider psychometric data in the general MDD and geriatric populations, the face validity of the instrument in question and its use in similar populations, the type of functioning most relevant to their particular population of interest, and the sensitivity required of the instrument to lower levels of disability. Further research is needed to develop standardized functional assessment guidelines in LLD.

Introduction: Insomnia is highly prevalent in older adults. There is a bidirectional relationship between sleep and mood. Up to 80% of those with depression report insomnia and almost half of those with insomnia report depression. Furthermore, insomnia is a risk for the onset and recurrence of depression and interferes with treatment outcome. Among depressed older adults, insomnia worsens cognitive performance and quality of life. The existing literature indicates that treating insomnia leads to improvement in depressive symptoms using both pharmacologic and behavioral interventions. One such intervention is Brief Behavioral Treatment for Insomnia (BBTI). BBTI incorporates strategies of sleep restriction and stimulus control to strengthen the homeostatic sleep drive and better align the time and timing of nocturnal sleep periods with the underlying circadian rhythm of sleepiness and alertness. We performed secondary analysis from three clinical trials on depression prevention in older adults to determine the effect of various interventions on sleep and mood changes as well as to determine the correlation between improvements in sleep and mood.

Methods: Data was acquired from three Late-Life Depression Prevention trials conducted at University of Pittsburgh. These trials included frail seniors receiving home-care services (DEP-ABC), older adults with cognitive impairment (RECALL) and older adults with knee arthritis pain (RAPID). All participants had subsyndromal depression, defined as Patient Health Questionnaire (PHQ-9) score of at least 1, with at least one of the cardinal symptoms of depression endorsed. Participants were included in the analyses if they were categorized as having subthreshold or threshold insomnia from the SCID interview (defined as 2 or 3 on the insomnia item from the depression module). These participants were subsequently divided into intervention type: received BBTI, received other psychosocial intervention but not BBTI (Non-BBTI), and usual care (UC). Interventions included: Cognitive Behavioral Therapy (CBT), Physical Therapy (PT), BBTI, Problem Solving Therapy (PST) or a combination of PST and physical exercise. Sleep measures included Item #6 (Q6) (index of overall sleep quality) of the Pittsburgh Sleep Quality Index (PSQI) and Item #3 (index of frequency of sleep disturbances) Q3 from the PHQ-9. Depression was assessed with the PHQ-9 minus Q #3. Assessments were administered at pre-treatment and immediately following treatment. Univariate analyses (chi-square tests, t-tests) were used to identify treatment group (BBTI, non-BBTI, and UC) differences among demographic and pre-treatment outcomes. Repeated measure analyses of covariance were conducted to examine the interaction between time and treatment condition on outcome measures while controlling for study type.
(Dep-ABC, RECALL, or RAPID). Gain scores (change) between pre- and post-treatment scores were created for the sleep and mood outcomes. Pearson correlation coefficient were used to investigate the relation between changes in sleep and mood.

**Results:** We investigated which interventions resulted in changes in sleep and compared sleep scores by time and treatment time. For PSQI Q6, the time x treatment condition interaction was significant, $F(2,134) = 3.10, p = .048, \eta^2 = .04$. For Q3 of the PHQ-9, the time x treatment condition interaction was significant, $F(2,133) = 3.77, p = .03, \eta^2 = .05$. We investigated which intervention resulted in changes in mood and compared depression scores by time and treatment type. For PHQ-9 minus Q3: time by treatment type controlling for study type is not significant: $F(2,133) = .70, p = .50, \eta^2 = .01$. We investigated if changes in sleep and mood were correlated and found significant correlations between changes in sleep scores with changes in depression scores. Pearson correlation PHQ-9 Q3 x PHQ-9 minus Q3 = 0.195, sig (2-tailed) 0.023, $N = 137$ and PSQI Q6 x PHQ-9 minus Q3 = 0.188, sig (2-tailed) 0.029, $N = 135$.

**Conclusions:** BBTI can be used to treat insomnia in older adults with various comorbidities such as pain, frailty and cognitive impairment. In this population of older adults, there were no significant differences in depression outcome between the different interventions. In older adults with depression, there is a positive association between sleep and mood changes and sleep problems should be identified and targeted when treating older adults at risk for depression. More research is needed to identify the mechanism by which treating sleep improves depression outcomes.

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**A Diagnostic Dilemma: Co-Morbid Attention Deficit Hyperactivity Disorder and Bipolar Disorder in Geriatric Patients**

Erika N. Heard, MD; Cristina Poscablo-Stein, MD, MPH; Yousef Sohail, MD; Anusuiya Nagar, MD; Adriana P. Hermida, MD

Emory University, Atlanta, GA

**Introduction:** In the adult population, lifetime prevalence of comorbid Attention Deficit and Hyperactivity Disorder (ADHD) and Bipolar Disorder (BD) co-occur at rates of 17.6% [1]. Rates in the elderly population have not been well studied. Those who present with both disorders simultaneously present a diagnostic and treatment challenge. These challenges are present due to the overlapping symptomatology and the complications that can arise when treating these disorders inappropriately, with the major complication that treatment of ADHD with stimulants can induce mania.

**Methods:** Review of the literature regarding ADHD and bipolar disorder comorbidity and the treatment of comorbid these illnesses.

**Results:** A 64 year old Caucasian male presented to the outpatient clinic for treatment of ADHD and BD. During initial evaluation he endorsed symptoms most consistent with ADHD but not with BD. There was no family history of BD and no previous hospitalizations. He never had episodes of depression. His symptoms were not periodic, rather consistent since childhood. Neuropsychiatric testing was completed and confirmed the diagnosis of ADHD, thus mood stabilizer tapered off to discontinuation. He was eventually continued only on lisdexamfetamine (Vyvanse). He initially showed improvement in symptoms of hyperactivity, inability to focus, and was better able to complete tasks around the house. After a year of stimulant treatment, he presented with complaints of increased forgetfulness, decreased need for sleep, decreased concentration, worse distractibility, increased impulsivity, worsened irritability, and mood lability. On mental status exam he was hyperverbal, with mood lability, easily distracted, tangential, and psychomotor agitation. He did not have any delusions or hallucinations. He was recently started on opioids and these were discontinued. Medical work up was initiated due to a change in behavior. The work up, including a MRI of the brain, was negative. Vyvanse was tapered off and Divalproex Sodium was initiated with the plan to up titrate to symptom improvement. He was noted to have significant improvement of manic symptoms with these medication changes, however, hyperactivity and concentration again worsened. Additional neuropsychiatric testing was ordered.

**Conclusions:** This case illustrates the diagnostic difficulty and treatment of comorbid ADHD and BD. It demonstrates the need for a longitudinal history of these patients and close monitoring when initiating treatment. Additionally, it is important to recognize the intersection of these two disease entities and the appropriate management of both, especially in the geriatric population.

This research was funded by: none.
**Ketamine in Late Life Treatment-Resistant Depression**

Erika Heard, MD; Yousuf Sohail, MD; Anusuiya Nagar, MD; Oliver Glass, MD; Adriana Hermida, MD

**Introduction:** Ketamine is a dissociative anesthetic, which provides antagonism on the N-methyl-D-aspartate (NMDA) receptor. Several studies have demonstrated rapid anti-depressant and anti-suicidal effects from the administration of ketamine in adult patients but studies in late life patients are lacking. While ketamine may increase sympathetic stimulation and cause decreased respiratory rate in geriatric patients, it is still nonetheless considered a safe agent. Low-dose intravenous infusion of ketamine is gaining popularity in the treatment for treatment-resistant depression (TRD) in late life patients. We provide a case report on a patient in late life who suffered from TRD and was treated with ketamine.

**Methods:** A case report of the use of intravenous ketamine to treat a geriatric patient with TRD along with a literature review of the subject.

**Results:** A 76-year-old female with a history of hypertension and arthritis presented with worsening depressive symptoms for the past two years. She endorsed neuro-vegetative symptoms of depressed mood, poor appetite, unintentional 25-pound weight loss, and conflicted feelings about wanting to live. She also reported difficulties with concentration and memory, feelings of worthlessness, and psychomotor retardation. Her daughter stated she was more vegetative and had a strong desire not to live alone. QIDS (Quick Inventory of Depressive Symptomatology) baseline was 23. She had previous trials of multiple medications including paroxetine, fluoxetine, sertraline, escitalopram, bupropion, and venlafaxine. This patient showed poor tolerance to all the medications and at the time of assessment was taking mirtazapine 7.5 mg and duloxetine 60 mg. Electroconvulsive therapy (ECT) was recommended; however, the patient was found to be not a good candidate as per anesthesiology due to multiple comorbidities. As a result, mirtazapine was titrated to 15 mg nightly while duloxetine was continued at 60 mg daily. Patient was started on intravenous ketamine infusions of 20 mg (0.5 mg/kg) over 40 minutes. Patient tolerated the acute course of ketamine, which was administered twice per week. Patient and daughter reported clinical improvement after the first infusion with noticeable improvement in QIDS (23 to 12) after 6 acute sessions without adverse effects. Improved symptoms included brighter affect, increased energy, decreased anhedonia, increased daily activity, improved appetite (gained 40lbs), and being more engaged in the community. Additionally, she began to take care of herself again. She has received 17 ketamine treatments with latest QIDS score of 1. After 6 acute infusion sessions, she was tapered to once per week, then once per 10 days, once per 2 weeks and then to a once every three week schedule before discontinuing. The patient continued to report improvements. The literature on intravenous ketamine infusions has shown effectiveness in reducing depressive symptoms in cases of TRD. The patient presented in this study demonstrates promise of the use of ketamine in late life depression patients. This case also highlights that ketamine can be an alternative option for elderly patients with TRD who do not qualify for ECT. Within the geriatric population, comorbid medical conditions and polypharmacy may increase the chance of morbidity and mortality. Ketamine infusions at a low dose must be monitored closely over a course of time. Therefore, ketamine infusions should only be administered to TRD patients in facilities where appropriate medical monitoring can occur. Geriatric patients who are given ketamine infusions should be assessed for the development of dependency, and addiction given its abuse potential. Further research on this novel therapy will yield greater knowledge of how to best utilize ketamine infusions in geriatric patients.

**Conclusions:** The literature on intravenous ketamine infusions has shown effectiveness in reducing depressive symptoms in cases of TRD. Similarly, our patient had a decline in depressive symptoms and a positive outcome. The case highlights that ketamine can be used as an alternative for the TRD population that may not qualify for ECT. Within the geriatric population, comorbid pathology and poly-pharmacy increase the chance of morbidity and mortality. Ketamine infusions at a low dose can be a potential treatment if monitored closely over a course of time. Therefore, ketamine infusions offer a safe and effective alternative option for TRD patients in psychiatric facilities where close monitoring can occur. Patients on ketamine treatments should be continually monitored for addiction potential and adverse effects to ketamine infusions, none of which were seen with our current patient. Further research on this novel therapy will yield greater knowledge of how to best utilize ketamine infusions for the general population and more specifically for the geriatric subset that encompasses the majority of TRD patients.

**Home is Where the Heart is**

Anusuiya Nagar, MD; Perry Westerman, MD

**1**Emory University, Atlanta, GA

**2**Western Michigan University, Kalamazoo, MI
Introduction: The population age 65 and over has increased from 36.2 million in 2004 to 46.2 million in 2014 and is projected to more than double to 98 million in 2060. With the advances in medicine, the current average life expectancy is 78.8 years which is dramatically longer than before. However, of those additional years, the issue is one of quality over quantity. With the “Aging in Place” movement, studies have demonstrated that seniors fear displacement from their homes more than they fear death. This case is an effort to present the challenges faced by geriatric population as their independence is compromised for the sake of their safety.

Methods: Review of the literature on the prevalence of psychiatric disorders in non-displaced senior versus those in institutionalized settings. A clinical case is discussed to further illustrate the challenges faced by clinicians in balancing a patient’s desire for independence and their safety.

Results: Ms. A.R. is a 68 year-old divorced Caucasian woman with a longstanding psychiatric history of Bipolar Disorder who was admitted involuntarily on a petition filled out by her daughter in the context of manic symptoms and an inability to care for herself. During her hospital stay, she was stabilized on her medication regimen and discharged home. At home, the patient took a minor fall but refused to go to a rehabilitation facility which resulted in her son-in-law’s (durable power of attorney) petition her back into the hospital. Over the course of the next few months, the patient was on the psychiatric unit as a result of her unwillingness to discharge to a nursing home and her family’s unwillingness to allow her to go home alone. Patient’s prolonged hospital stay exposed her to risks of infection as well as de-conditioning. This resulted in a dilemma for the treating team who considered the patient to be competent enough to live alone but the family (DPOA) was not agreeable. Eventually patient was discharged to a short-term step down facility followed by discharge home. This case was an example of a common dilemma faced by geriatricians when dealing with families that are hyper focused on an elderly family member’s safety without valuing their desire to age at home.

Conclusions: Currently, in this country, more than 1.5 million people are estimated to be displaced in nursing homes. Further, the seniors who suffer from this institutionalized existence have a higher prevalence of mood disorders compared to those seniors in the general population. To ensure healthy aging, it is important to pay equal attention to the quality of the additional years and the preservation of independence as the safety of our elderly when treatment plans are being generated. As geriatricians, we must assist the elderly in living a full and rich last chapter of their life and aging in place for as long as possible is a key element in this effort.

Poster Number: EI 7

Misdiagnosed and Misunderstood—an Atypical Presentation of Anti-NMDA Receptor Encephalitis

Anusuiya Nagar, MD; Kevin A. Kunzer, MD

1Emory University, Atlanta, GA
2Western Michigan University, Kalamazoo, MI

Introduction: Anti-N-methyl-D-aspartate receptor (Anti-NMDAR) encephalitis is a relatively new and under diagnosed disease process which was first described in 2007. It is a subacute, autoimmune neurologic disorder with psychiatric manifestations and is paraneoplastic. This disease typically affects young females who present with psychiatric symptoms such as delusions or hallucinations and progress to have seizures, abnormal movements, and autonomic instability. Typically the diagnosis is made by cerebrospinal fluid results as well as EEG. Here, we present an atypical case of this treatable but highly misdiagnosed form of limbic encephalitis.

Methods: Review of the literature on Anti-NMDAR encephalitis. A clinical case is presented to illustrate an atypical case of this disease.

Results: Mrs E. is a 71 year-old high-functioning married caucasian female without a previous psychiatric history who was admitted on the medical floor for altered mental status and mutism. Her husband had reported increased alcohol consumption in the few weeks prior to admission and patient was deemed to have alcohol withdrawal delirium. She was started on an alcohol withdrawal protocol and was treated with benzodiazepines but had a minimal response. CT and MRI were normal and her mutism was deemed to be psychogenic in nature. Neurology and psychiatry were consulted due to the mutism. In discussion with her husband, no acute stressor was identified. Patient performed very poorly on her mini mental status exam and when instructed to write a sentence, drew dots across the paper. An EEG was ordered and demonstrated marked encephalopathy. While a diagnosis of Anti-NMDAR encephalitis was low on the differential due to her age as well as the atypical presentation of mutism, she had new onset stereotypic lip smacking movement and a spinal tap was performed. Patient’s CSF studies demonstrated NMDA receptor antibodies and diagnosis was made.

Conclusions: Anti-NMDAR encephalitis is a treatment responsive paraneoplastic encephalitis which typically affects young women who initially present with psychiatric symptoms that progress to neurological symptoms. As demonstrated in this case, the disease can present atypically in an older female with mutism and altered mental status. Diagnosis is made based on serum
and CSF results or a characteristic extreme delta brush pattern on EEG. If treatment is initiated early, the disease has a very good prognosis. Treatment includes resection of a possible tumor and immunotherapy and because there is a good possibility of recovery, it is important that clinicians are aware of this condition.

Introduction: Having access to safe, well-tolerated and effective treatments that incur minimal risk are of increased importance in the elderly. In addition, in current clinical practice, the cost of health care is often an important patient care concern. In 2013, the average cost of a psychiatric inpatient hospitalization for mood disorders for those 65 years old and above was $29,964, or approximately $2,909 per day. Leucovorin (folinic acid), a water-soluble form of reduced folate that metabolizes to methyl folate, has been reported to be a safe, well-tolerated and effective adjunctive treatment for depression in younger adults. It has not been rigorously studied in the elderly who often suffer from multiple comorbid conditions and are on many medications. This pilot study assesses the safety and tolerability of leucovorin antidepressant augmentation in elderly psychiatric inpatients with depression. It also provides preliminary information as to whether treatment with leucovorin is associated with decreased days of clinically needed hospitalization which may represent increased efficacy of overall treatment as well as decreased healthcare cost.

Objectives: This pilot study assesses the safety and tolerability of leucovorin antidepressant augmentation in elderly psychiatric inpatients with depression and whether treatment with leucovorin is associated with decreased days of clinically needed hospitalization.

Methods: A retrospective chart review study was performed, reviewing the medical records of patients over 60 years of age who were discharged from the Saint Elizabeth’s Medical Center Geriatric Psychiatry Unit between June 1, 2014 and April 1, 2016. The charts of patients who were diagnosed with a depressive disorder (associated with major depressive disorder or bipolar disorder) were selected for detailed review. Those patients who had received SSRI, SNRI or NaSSA treatment, augmented with leucovorin, were compared with a similar group who had not received leucovorin. Variables considered included age, gender, education level, Montreal Cognitive Assessment score, Geriatric Depression Scale score, admission serum folate level, maximum number of antidepressants ever taken during the admission, number of antidepressants at admission or discharge, top three antidepressants used, leucovorin associated adverse effects, and the number of days of hospitalization. The deidentified data were managed using REDCap. The study was approved by the St. Elizabeth’s Medical Center Institutional Review Board.

Results: Five hundred thirty nine charts were reviewed. Thirty five patients with depression who had received SSRI/SNRI/NaSSA treatment augmented with leucovorin calcium 25 mg daily ("leucovorin group") were identified. These patients were compared to 81 patients with depression who had not received leucovorin ("non-leucovorin group"). There were no differences between the leucovorin and non-leucovorin groups in leucovorin associated adverse effects. The average number of days of clinically needed hospitalization of the leucovorin group was 8.70 $±$ 6.01, as compared with the non-leucovorin group’s 13.46 $±$ 10.79 days. The difference in the average number of days of clinically needed hospitalization between the two groups was 4.76 days. Paired t-test results comparing the leucovorin group’s number of days of clinically needed hospitalization with the non-leucovorin group’s number of days of clinically needed hospitalization yielded t(116) = 2.1843, p = 0.03 (two-tailed), considered to be statistically significant.

Conclusions: This retrospective chart review study provides preliminary information that suggests that leucovorin is safe and well-tolerated in depressed elderly psychiatric inpatients. The average number of days of clinically needed hospitalization of the leucovorin group was 8.70 $±$ 6.01, as compared with the non-leucovorin group’s 13.46 $±$ 10.79 days. The difference in the average number of days of clinically needed hospitalization between the two groups was 4.76 days. Paired t-test results comparing the leucovorin group’s number of days of clinically needed hospitalization with the non-leucovorin group’s number of days of clinically needed hospitalization yielded t(116) = 2.1843, p = 0.03 (two-tailed), considered to be statistically significant. In 2013, a difference of 4.76 days would have cost about $13,846 more on average per patient in the non-leucovorin group. This suggests potential fiscal significance that may impact overall healthcare cost and needs further study. These results and interpretations are preliminary and need further analysis and investigation, as it is limited by sample size, retrospective nature of the study, and use of non-standardized measures.
**Ketamine in Electroconvulsive Therapy**

Parnika Saxena, MD; Randall Espinoza, MD, MPH, MD

David Geffen School of Medicine, University of California Los Angeles, Los Angeles, CA

**Introduction:** Major Depressive disorder is a leading cause of disability in the United States and the second leading cause of YLDs globally. 1, 2 Although pharmacotherapeutic options abound, remission rates for major depressive disorder are not encouraging as reported by the STAR-D trial. 3 Electroconvulsive therapy (ECT) is the oldest and one of the most effective treatment alternatives for severe depression. Although ECT has been shown to be efficacious in depressed older adults, a subgroup of patients may show either limited or no response to this intervention. Thus, there has been interest in modifying ECT by adding agents which might either augment or accelerate response or which might mitigate side-effects. Ketamine, an arylcyclohexamine which is pharmacodynamically a noncompetitive NMDA antagonist, is a dissociative anesthetic that has been shown to cause rapid improvement of depressive symptoms and suicidal ideation when given separately as an intravenous infusion. 4

**Methods:** PubMed and Google Scholar databases were queried with the search terms ketamine, depression and ECT, and ultimately, we identified and reviewed sixteen papers detailing patient and illness characteristics, ECT treatment parameters, and mood and cognitive outcomes.

**Results:** The 16 studies were a mix of randomized control trials, retrospective studies, case series and single patient reports of index phase ECT. The demographics of the studies were variable. ECT treatment parameters also varied as did outcomes. The data are presented in Tables 1, 2 and 3. The illnesses studied were primarily major depressive disorder, bipolar depression, and in one study, schizoaffective disorder. Interestingly, in 3 out of 7 studies which included older adults significant improvement with ketamine was reported. In only one study (Bryson et al) were we able to get data specific to elderly patients. In this case series of 9 subjects, 5 out of 6 responders to ECT were >65 years of age and the only subject who experienced sustained remission was >65 years of age. Five out of 7 studies with elderly patients studied cognition. Only one study displayed a worse reorientation time, while the other studies showed a significant improvement in cognitive function.

**Conclusions:** Data on ketamine use in ECT are limited, especially in the older adult population. However, available data suggest modest improvement in mood, and intriguingly, in cognition. Ketamine used adjunctively may be associated with faster relief from depression with the most significant difference in improvement reported to be in the first 3–4 sessions of ECT. Of note, there are confounding variables in these studies which limit interpretation of findings. Further, these studies examined cognitive outcomes during index phase of treatment. Effects over maintenance treatment remains unknown. We will report results of a quality improvement project.

**References**

Table 1. Demographics and Study Characteristics

<table>
<thead>
<tr>
<th>Study</th>
<th>Diagnosis</th>
<th>Sample size and gender distribution (M/F)</th>
<th>Age (Mean: ketamine vs comparator anesthetic; otherwise mean of entire sample)</th>
<th>Medical burden (In ASA)</th>
<th>Instrument used to measure depression</th>
<th>Instrument used to measure cognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Krystal et al</td>
<td>MDD, bipolar disorder, schizoaffective disorder</td>
<td>46; 17/19</td>
<td>Mean: 67.6</td>
<td>Not available</td>
<td>not studied</td>
<td>reorientation time</td>
</tr>
<tr>
<td>Okamoto et al</td>
<td>MDD</td>
<td>31; 16/15</td>
<td>Mean: 59.3/55.1</td>
<td>upto ASA III</td>
<td>HDRS</td>
<td>not studied</td>
</tr>
<tr>
<td>Kranaster et al</td>
<td>MDD</td>
<td>42 (18- &gt; ket; 7/11)</td>
<td>Mean: 65.4/63.8</td>
<td>not recorded</td>
<td>HDRS 21</td>
<td>MMSE</td>
</tr>
<tr>
<td>Loo et al</td>
<td>MDD, bipolar disorder</td>
<td>51;18/24</td>
<td>Mean: 45.2/41.4</td>
<td>not available</td>
<td>MADRS</td>
<td>neuropsychological battery</td>
</tr>
<tr>
<td>Rasmussen et al</td>
<td>MDD, bipolar disorder</td>
<td>38,14/24</td>
<td>Mean: 47/48.6</td>
<td>not available</td>
<td>PHQ9 and HADS</td>
<td>MMSE</td>
</tr>
<tr>
<td>McDaniel et al</td>
<td>MDD, severe</td>
<td>10</td>
<td>Mean: 47/45</td>
<td>not available</td>
<td>MADRS</td>
<td>STM in MMSE</td>
</tr>
<tr>
<td>Ostroff et al</td>
<td>MDD, severe</td>
<td>1; 0/1</td>
<td>47</td>
<td>not available</td>
<td>MADRS clinician rating scale of 1 to 10</td>
<td>subjective report</td>
</tr>
<tr>
<td>Yen et al</td>
<td>MDD, bipolar disorder</td>
<td>20; 8/12</td>
<td>Mean: 53 yrs (4 pts above 65)</td>
<td>upto ASA III</td>
<td>not studied</td>
<td>reorientation time</td>
</tr>
<tr>
<td>Kuscu et al</td>
<td>MDD</td>
<td>58; 30/28</td>
<td>Mean: 42.7 (T), 44.8(K), 38.6(T + K); 4 pts &gt; 60 yrs</td>
<td>not available</td>
<td>HDRS, HAM-A</td>
<td>not studied</td>
</tr>
<tr>
<td>Yoosefi et al</td>
<td>MDD</td>
<td>31; 17/14</td>
<td>Mean: 43.2+2.13</td>
<td>upto ASA III</td>
<td>HDRS 21</td>
<td>MMSE</td>
</tr>
<tr>
<td>Zhong et al</td>
<td>MDD, bipolar disorder</td>
<td>90; 36/54</td>
<td>mean: 30.67 (15–67)</td>
<td>not available</td>
<td>HDRS 17</td>
<td>neuropsychological battery</td>
</tr>
<tr>
<td>Bryson et al</td>
<td>MDD, bipolar disorder</td>
<td>9; 6/3</td>
<td>mean: 60.89 (5 pts &gt; 65 yrs)</td>
<td>not available</td>
<td>Unknown</td>
<td>not studied</td>
</tr>
<tr>
<td>Salehi et al</td>
<td>MDD</td>
<td>160; 74/86</td>
<td>mean: 27.58/25.15</td>
<td>not available</td>
<td>HDRS 17</td>
<td>not studied</td>
</tr>
<tr>
<td>Abdallah et al</td>
<td>MDD, bipolar disorder</td>
<td>16; 9/7</td>
<td>Mean: 47.15+0.98</td>
<td>not available</td>
<td>HDRS 25 and BDI</td>
<td>not studied</td>
</tr>
<tr>
<td>Jarventausta et</td>
<td>MDD</td>
<td>32; 19/13</td>
<td>Mean: 48.8/53.7</td>
<td>upto ASA III</td>
<td>MADRS and BDI</td>
<td>not studied</td>
</tr>
<tr>
<td>Wang et al</td>
<td>MDD</td>
<td>40; 18/22</td>
<td>Mean: 56.2+2.06</td>
<td>not available</td>
<td>HDRS 17</td>
<td>not studied</td>
</tr>
</tbody>
</table>

MDD, Major Depressive disorder; ASA, Physical status as per American society of anesthesiologists; HDRS, Hamilton depression rating scale; BDI, Beck Depressive inventory; MADRS, Montgomery Asberg Depression rating scale; MMSE, Folstein’s mini mental status exam.
<table>
<thead>
<tr>
<th>Study</th>
<th>Comparator anesthetic used</th>
<th>Machine used</th>
<th>Lead placement</th>
<th>Dose of ketamine</th>
<th>Frequency of treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Krystal et al</td>
<td>Methohexital</td>
<td>Thymatron, Mecta</td>
<td>RUL, BL</td>
<td>1.31 mg/kg</td>
<td>Index course</td>
</tr>
<tr>
<td>Okamoto et al</td>
<td>Propofol</td>
<td>Thymatron</td>
<td>Not available/unknown</td>
<td>0.86 mg/kg</td>
<td>twice a week X 8 treatments</td>
</tr>
<tr>
<td>Kranaster et al</td>
<td>Thiopental</td>
<td>Thymatron</td>
<td>RUL, BL</td>
<td>43.61 mg</td>
<td>not available</td>
</tr>
<tr>
<td>Loo et al</td>
<td>Thiopental</td>
<td>Mecta</td>
<td>RUL</td>
<td>0.5 mg/kg</td>
<td>not available</td>
</tr>
<tr>
<td>Rasmussen et al</td>
<td>Methohexital</td>
<td>Thymatron</td>
<td>RUL, BL</td>
<td>1 mg/kg</td>
<td>not available</td>
</tr>
<tr>
<td>McDaniel et al</td>
<td>Etomidate</td>
<td>Mecta</td>
<td>non dominant UL</td>
<td>1 mg/kg</td>
<td>thrice a week</td>
</tr>
<tr>
<td>Ostroff et al</td>
<td>n/a</td>
<td>Mecta</td>
<td>BL</td>
<td>0.5 mg/kg</td>
<td>thrice a week X 6 treatments</td>
</tr>
<tr>
<td>Yen et al</td>
<td>Methohexital</td>
<td>Thymatron</td>
<td>RUL, BL</td>
<td>1–1.5 mg/kg</td>
<td>not available</td>
</tr>
<tr>
<td>Kuscu et al</td>
<td>Thiopental</td>
<td>Thymatron</td>
<td>BL (bitemporal)</td>
<td>1 mg/kg</td>
<td>thrice a week</td>
</tr>
<tr>
<td>Yoosfei et al</td>
<td>Thiopental</td>
<td>Thymatron</td>
<td>BL (bitemporal)</td>
<td>1–2 mg/kg</td>
<td>thrice a week</td>
</tr>
<tr>
<td>Zhong et al</td>
<td>Propofol</td>
<td>Thymatron</td>
<td>BL (bitemporal)</td>
<td>0.8 mg/kg and 0.5 mg/kg for adjunctive use</td>
<td>thrice a week X 8 treatments</td>
</tr>
<tr>
<td>Bryson et al</td>
<td>Started on methohexital or propofol and switched to ketamine</td>
<td>Unknown</td>
<td>RUL, BL (bifrontal)</td>
<td>1.1 mg/kg</td>
<td>not available</td>
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<td>Salehi et al</td>
<td>Thiopental</td>
<td>Unknown</td>
<td>unknown</td>
<td>0.8 mg/kg</td>
<td>not available</td>
</tr>
<tr>
<td>Abdallah et al</td>
<td>Thiopental</td>
<td>Mecta</td>
<td>RUL, BL (bitemporal)</td>
<td>0.5 mg/kg</td>
<td>thrice a week X 6 treatments</td>
</tr>
<tr>
<td>Jarventausta et al</td>
<td>Ketamine + propofol vs normal saline + propofol</td>
<td>Thymatron</td>
<td>RUL, BL (bitemporal)</td>
<td>0.4 mg/kg</td>
<td>not available</td>
</tr>
<tr>
<td>Wang et al</td>
<td>Ketamine vs ketamine + propofol vs propofol</td>
<td>Huicheng</td>
<td>BL (bitemporal)</td>
<td>0.8 mg/kg</td>
<td>not available</td>
</tr>
</tbody>
</table>

RUL, right unilateral; BL, bilateral.
<table>
<thead>
<tr>
<th>Study</th>
<th>Table 3: Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 3: Results</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Impact on depression</td>
</tr>
<tr>
<td>Krystal et al</td>
<td>Not studied</td>
</tr>
<tr>
<td>Okamoto et al</td>
<td>Significantly greater improvement w/ ketamine after 2nd and 4th sessions</td>
</tr>
<tr>
<td>Kranzler et al</td>
<td>Improved w/ ketamine, One sided t: p&lt;0.05</td>
</tr>
<tr>
<td>Loo et al</td>
<td>No difference compared to placebo</td>
</tr>
<tr>
<td>Rasmussen et al</td>
<td>No difference in both groups</td>
</tr>
<tr>
<td>Mcdaniel et al</td>
<td>No difference</td>
</tr>
<tr>
<td>Ostnoff et al</td>
<td>Mood improved</td>
</tr>
<tr>
<td>Van et al</td>
<td>Not tested</td>
</tr>
<tr>
<td>Kassirer et al</td>
<td>No difference; more anxiety w/ ketamine; HRS not significantly different however MM-A significantly lower in pts w/ thiopental</td>
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<tr>
<td>Youssef et al</td>
<td>Earlier improvement in depression after ket vs placebo</td>
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<td>Zhong et al</td>
<td>Earlier improvement in depression</td>
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<tr>
<td>Bryson et al</td>
<td>Good response; 4/9 (1 sustained remission) and 6/9</td>
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<tr>
<td>Saleh et al</td>
<td>Good response; trend significantly better w/ ketamine</td>
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<tr>
<td>Abdelali et al</td>
<td>No significant difference</td>
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<tr>
<td>Jervontausta et al</td>
<td>Statistically significant improvement in both groups but no difference</td>
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<tr>
<td>Wang et al</td>
<td>Significantly better response in ket and ket+prop; adverse effects less in propofol vs ket</td>
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"Medicolegal Elective: Psychiatrists and Lawyers Working Together"

Parnika Saxena, MD; Sarah Gelberd, MD; Randall Espinoza, MD, MPH, MD

1David Geffen School of Medicine, University of California Los Angeles, Los Angeles, CA
2Los Angeles County of Mental Health, Los Angeles, CA

Introduction: The United States population is aging and by the year 2025 approximately 20% of the population will be over the age of 65. The elderly may be more susceptible to abuse and neglect, scams, and fraud and they often face issues of decisional capacity as they age. Mental health issues or impaired capacity may affect one’s ability to contract, make medical decisions and resist undue influence. Psychiatrists, and especially Geriatric Psychiatrists, may have to navigate the probate or mental health court system in matters of conservatorship on behalf of older adults. Unfortunately, there is no specific training addressing this facet of work which includes addressing issues of testamentary capacity, medical and legal decision-making, and autonomy. This elective was developed not only to address this issue but also to sensitize psychiatrists and lawyers-in-training when working with the elderly.

Methods: The elective ran for a cumulative 14 hours which was spread over four days. Law students from SouthWestern School of Law (SLS) and geriatric psychiatrists were taught this course together. It was preceded by a pre-elective course for the psychiatrists to aid their understanding of capacity especially testamentary capacity. They were also familiarized with elements determining undue influence and vulnerability. The following objectives were proposed: An overview of key issues in elder law from the perspective of physicians and lawyers, Recognition of capacity issues through the use of a case file and video of a testator who is the subject of a will contest Preparation and analysis of a Medical Declaration of Capacity Development of trial skills for the law student and greater expertise in testifying as an expert witness by the psychiatrists The course was taught by a geriatrician (Dr S Gelberd), a senior attorney (J Morris) specializing in elder law and abuse, a will and trust litigator (S Levin), two geriatric psychiatrists from UCLA (Dr A Kaufman and Dr S Read) and the former presiding Judge of the LA County probate Court (Judge A Bobb). They learned about communication barriers and differences in the fields of law and medicine, while exploring issues of abuse, ethnicity and language. A real-life elder case was recreated using an actual closed case video for a unique learning experience. Seven psychiatrists volunteered to serve as expert witnesses while law students represented each side. The interactions included both direct and cross examinations. A state of the art court room was used to simulate a courtroom experience. They each underwent a simulated aging experience to gain a greater sensitivity to the older adult population.

Results: The law students and psychiatrists (DMH and fellows) were asked to rate their experience after the course was completed Upon conclusion of the class, 100% of the students gave the professors and Subject Matter Experts (psychiatrists) “excellent” reviews. The average satisfaction score for the professors of the course was 4.88/5 and for the course itself was 4.63/5. The feedback by retired Judge Bobb was educational, enlightening and was rated “outstanding.” The Geriatric Psychiatry fellows and DMH Psychiatrists participating in the course were equally enthusiastic and submitted 100% excellent reviews. Since there was a significant aspect of examination of expert witness involved, Southwestern law highly recommends that law students complete a course on trial advocacy prior to completing this elective. This elective will be offered again in early 2017 and the geriatric psychiatry fellows from UCLA and LAC DMH psychiatrists are scheduled to attend it.

Conclusions: 1. Since the elective was given the psychiatrists are reporting a greater ease navigating the probate court system. 2. This collaborative elective helped bring a broader understanding of two professional groups that rarely learn and work with each other. 3. Southwestern Law School in response to the elective, immediately offered the SCALES program, the current two year law students an eldercare class and has begun discussions to develop an Elder Law track 4. A geriatric psychiatrist, who attended the session, is currently put together a similar course at Stanford.

Poster Number: EI 11

"Systematic Review and Meta-Analysis of the Prevalence of Major Depressive Disorder among Older Adults with Alzheimer’s Disease and Related Forms of Dementia"

M. Selim Asmer, MD; Julia Kirkham, MD, FRCPC; Hailey T. Newton, BSc; Zahinoor Ismail, MD, FRCPC; Roxanne Leung, MSc; Heba Elbayoumi, BSc (Pharm); Dallas Seitz, MD, FRCPC

1Queen’s University, Toronto, ON, Canada
2University of Toronto, Toronto, ON, Canada
3University of Calgary, Calgary, ON, Canada
**Introduction:** There are increasing numbers of older adults with dementia, among which major depressive disorder (MDD) has been reported to be common. Co-morbid depression in persons with dementia may exacerbate cognitive and functional decline, increase frequency and severity of behavioral disturbances, lead to poorer medical outcomes, hasten admission to long term care, and increase overall mortality. Depression in this population can also lead to increased caregiver burden and frequency of depression in caregivers. Although there are clear associations between MDD and dementia, the overall prevalence of Major Depressive Disorder in Dementia (DpD) has not been well described. Past studies have observed a wide range of results, ranging from 8 to 40%, with many studies reporting prevalence estimates near the lower end of the range. Possible reasons for the wide range of prevalence include different definitions used to define MDD, methodological variation and differences in the underlying study populations. Also, the factors that may be associated with the prevalence of DpD have also not been well described.

**Objectives:** The goal of our study was to conduct a systematic review and meta-analysis to determine the prevalence of DpD. We also sought to determine factors associated with MDD among persons with dementia including type and severity of dementia, clinical setting of studies and methods for diagnosing dementia and depression. This information may be helpful in better understanding the overall burden of DpD and help guide screening, clinical evaluation, and management decisions.

**Methods:** We searched electronic databases to identify studies of the prevalence of DpD. We included studies that used validated criteria for both MDD and for dementia. We included prospective and retrospective observational studies. Only English language publications were included. We only included studies that used standard definitions for defining major depressive disorder and dementia. Meta-analysis was used to determine pooled estimates and 95% confidence intervals for the prevalence of DpD. Subgroup analysis was used to compare the prevalence of MDD across dementia subtypes, study setting (e.g. outpatient/inpatient, community sample, or long-term care), geographical location, dementia severity, and MDD criteria.

**Results:** 8,747 citations were identified of which 54 studies met inclusion criteria including 9,800 individuals with dementia. Meta-analysis identified that the prevalence of MDD in all cause dementia was 15.8% (95% CI: 12.3–20.4%). The prevalence of DpD was higher among individuals with vascular dementia (24.9%, 95% CI:17.6–34.6%) compared to Alzheimer’s disease (14.4%; 95% CI:10.9–19.1%, between groups P = 0.02). The prevalence of MDD did not differ significantly according to dementia severity or study setting. The pooled prevalence of DpD was higher in studies where NIMH-dAD criteria were used to diagnose MDD (33.31% (95% CI: 25.20% - 44.04%)), compared with DSM-IV (17.34% (95% CI: 9.58% - 31.38%)) or DSM-III-R criteria (13.24% (95% CI: 9.40% - 18.65%)).

**Conclusions:** In conclusion, our study suggests that major depressive disorder is common among patients suffering from dementia and that the prevalence varies with dementia subtype, with a higher prevalence of MDD in older adults with VaD compared to AD. Our study did not find any significant differences in patients from different residential settings or dementia severity. A higher pooled prevalence using NIMH-dAD criteria for MDD are consistent with previous studies showing higher sensitivity for these criteria compared to DSM-IV. The diagnosis and treatment of MDD in older adults with dementia has significant clinical implications for overall prognosis for older adults suffering from dementia, and distress of their caregivers. Further research is needed to clarify the relationship between dementia and depression for improvement of diagnostic and management strategies.

**Depressive and Anxiety Symptoms in Older Adults with Auditory, Vision, and Dual Impairment**

Adam Simning, MD, PhD; Steven Barnett, MD; Silvia Sörensen, PhD; Yeates Conwell, MD

University of Rochester, Rochester, NY

**Introduction:** Impairments in hearing and vision become more prevalent with increasing age and can have a significant impact on an older adult’s functioning and quality of life. The association of auditory, vision, and dual auditory and vision impairment with depressive and anxiety symptoms remains inadequately characterized, however. Using a nationally representative sample of older adults, we aimed to evaluate the association between sensory impairment and symptoms of mental illness. We hypothesize that: 1) compared to older adults without impairment, those with auditory, vision, and especially dual impairment will have higher levels of clinically significant depressive and anxiety symptoms, and 2) the association of auditory and/or vision impairment with anxiety and depressive symptoms will persist even after accounting for sociodemographics, medical comorbidity, and functional impairment status.

**Methods:** The National Health and Aging Trends Study (NHATS) was initiated in 2011 to examine the functional status and health of a nationally representative sample of United States Medicare beneficiaries aged 65 years and older. A total of 7,507 older adults had information on auditory and/or vision impairment, which was determined via interview questions. The prevalence rates of clinically significant anxiety and depressive symptoms were determined by the GAD-2 and PHQ-2, respectively.
Results: 12.0%, 3.1%, and 1.3% of older adults had reported auditory, vision, and dual auditory and vision impairment, respectively. Clinically significant depressive (p < 0.001) and anxiety (p < 0.001) symptoms varied by impairment grouping: 12.6% and 10.3% (no impairment), 21.1% and 22.0% (auditory impairment), 28.4% and 23.0% (vision impairment), and 46.2% and 36.7% (dual impairment), respectively. In multivariable logistic regression analyses that accounted for sociodemographics, medical comorbidity, and functional impairments, auditory, vision, and dual impairment were associated with an increased odds of clinically significant depressive (OR = 1.36, OR = 1.52, and OR = 2.72, respectively) and anxiety (OR = 1.86, OR = 1.51, and OR = 2.25, respectively) symptoms.

Conclusions: Using a nationally representative sample of older adults, our findings suggest that sensory impairment is relatively common and, even after accounting for medical comorbidity and functional impairment, is associated with clinically significant depressive and anxiety symptoms. Research should further examine mental health and sensory function outcomes of interventions that target older adults with sensory impairments.

This research was funded by: The National Health and Aging Trends Study (NHATS) is sponsored by the National Institute on Aging [U01AG032947] through a cooperative agreement with the Johns Hopkins Bloomberg School of Public Health. Dr. Simning is supported through the Empire Clinical Research Investigator Program, sponsored by the New York State Department of Health.

CRP as a Mediator of APOE on Dementia
Safa A. Al Rubaye, MD, MBChB; Donald R. Royall, MD; Palmer Raymond, PhD
Uthscsa, San Antonio, TX

Introduction: ApoE ε4 allele is associated with higher risk of Alzheimer’s disease (AD) and cognitive decline than are the other alleles. ApoE ε4 allele reduces the age of onset of AD (Corder et al., 1993). In this analysis, we studied CRP (C Reactive Protein) as a possible mediator of ApoE specific association with δ. We used longitudinal mediation models in a structural equation model (SEM) framework to examine the mediation effect in longitudinal data from the Texas Alzheimer’s Research and Care Consortium (TARCC).

Methods: We employed SEM to examine the mediation effect of CRP on ApoE’s association with δ in a well characterized cohort (TARCC). Subjects included n = 3358 TARCC participants [1240 cases of Alzheimer’s Disease (AD), 688 “Mild Cognitive Impairment” (MCI) cases, and 1384 normal controls (NC)]. CRP levels were determined at baseline by Luminex assay (Rules Based Medicine /Austin, TX). All observed measures were adjusted for education, ethnicity, gender, Geriatric Depression Scale (GDS) scores, Hb1Ac, age and HCY. Amphiregulin was additionally adjusted for batch effects. We used an ethnicity equivalent δ homolog (i.e., “dEQ”). Wave 2 dEQ scores were used. Thus, the model is longitudinal and arguable causal. Furthermore, we randomly divided the cohort into 2 groups. Group A (n = 1691) was used to construct the model, while Group B (n = 1694) was used to replicate and verify the parameters of interest. Analyses were conducted in Analysis of Moment Structures (AMOS).

Results: Model fit was excellent [c2 = 550.717 (17), p < 0.001; CFI = 880; RMSEA = 0.055]. Serum CRP was found to mediate 8.1% of ApoE’s association with Wave 2 dEQ scores (p < 0.001) (Table 1). The effect generalized across random subsets of TARCC’s sample.

Conclusions: This may be the first demonstration CRP as a potential mediator of the APOE ε4 allele on dementia or observed cognitive performance. CRP is reported to have adverse effects on observed cognitive performance, which appear to be moderated by possession of the APOE ε4 allele. CRP’s effect is reported to occur in the absence of an ε4 allele (Haan et al at 2008, Lima et al, 2014,& Metti et al 2014). We find CRP to have a positive (salutary) effect on dEQ. However, CRP levels are lowered in the presence of an ε4 allele (by path c). CRP’s demonstrated weak salutary association with δ in the present analysis suggests some potential for CRP reduction to magnify the adverse dementing effect of an ε4 allele while trivially improving cognitive performance in ε4 persons. (Figure 1).

Table 1. dEQ’s Mediation Effects (Group A; n = 1528)

<table>
<thead>
<tr>
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<td>-0.22, p &lt; 0.001</td>
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Poster Number: EI 13

CRP as a Mediator of APOE on Dementia
Safa A. Al Rubaye, MD, MBChB; Donald R. Royall, MD; Palmer Raymond, PhD
Uthscsa, San Antonio, TX

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Impaired Illness Awareness 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, MD, PhD,1,2 Jun Ku Chung, BSc,1,2 Parita Shah, BSc,1,2 Eric Plitman, BSc,1,2 Yusuke Iwata, MD,1,2 Shinichiro Nakajima, MD, PhD,1,2 Bruce G. Pollock, MD, PhD,1,2 Ariel Graff-Guerrero, MD, PhD,1,2

1Centre for Addiction and Mental Health, Toronto, ON, Canada
2University of Toronto, Toronto, ON, Canada

Introduction: Impaired illness awareness is a common feature of Alzheimer’s dementia (AD) and less so of mild cognitive impairment (MCI). Importantly, impaired illness awareness negatively influences clinical outcomes for patients and their caregivers, and may predict the conversion from MCI to dementia. We aimed to determine the following: (1) differences in brain glucose metabolism (FDG-PET) among individuals with AD, MCI, and healthy control (HC) participants in relation to impaired illness awareness; (2) the relationship of impaired illness awareness to FDG-PET in MCI and AD patients when controlling for other related factors that may contribute to impaired illness awareness and brain glucose metabolism in AD; and (3) the predictive utility of impaired illness awareness scores in MCI patients for conversion to AD.

Methods: We analyzed data for 1044 participants from the ADNI database with the following classifications: AD (n = 184), MCI (n = 504), and HCs (n = 356). Impaired illness awareness was measured with the composite discrepancy score of the study partner and participants’ scores for the Everyday Cognition scale (i.e. ECog partner minus ECog participant scores). Bivariate correlations and multiple regression analyses were performed to determine the relationship between impaired illness awareness and FDG-PET glucose metabolism for each group (Figure 1). Additionally, multinomial logistic regression and receiver operating characteristic curve analyses were performed in the MCI sample to determine if impaired illness awareness predicted conversion from MCI to AD. Subsequent regression analyses were performed controlling for age, gender, education, APOE4 carrier status, dementia severity, and cognitive dysfunction.
Results: Hypometabolism independently contributed to impaired illness awareness 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. Impaired illness awareness was associated with conversion from MCI to dementia by 5 years (OR = 3.880, df = 1, p < 0.001), even after including covariates (OR = 1.875, df = 1, p < 0.001). An ECog-composite score < -0.50 was 93% sensitive for conversion from MCI to dementia, and a score >0.75 was 90% specific.

Conclusions: Impaired illness awareness is an under recognized clinical phenomenon in MCI and AD that is modulated by brain glucose hypometabolism. Moreover, impaired illness awareness independently predicts conversion from MCI to dementia, which may facilitate clinical decision-making.

This research was funded by: The research was partially supported by Ontario Mental Health Foundation grant (OMHF)â€”Type A Grant (AG); National Institutes of Health RO1MH084886-01A2 (AG); and by Canadian Institutes of Health Research, OMHF and Centre for Addiction and Mental Health fellowship awards (PG).

Poster Number: EI 15

Emerging Evidence—Cutaneous Assessment in Parkinson’s Disease
Adriana P. Hermida, MD¹; Malgorzata Stakun, MD²; Oliver M. Glass, MD³

¹Emory University, Atlanta, GA
²Medical University of Warsaw / Szpital Kliniczny Dzieciatka Jezus, Warsaw, Poland
³East Carolina University, Greenville, NC

Introduction: Parkinson’s Disease (PD) is a neurodegenerative disorder known for causing a constellation of symptoms including but not limited to Bradykinesia, postural instability, rigidity and cognitive impairment. A major pathological hallmark of this disease is the deposition of α-synuclein rich Lewy bodies in the brain. Epidemiologic evidence shows that cutaneous melanoma (CM) occurs 1.5–3.5 times more frequently among patients with Parkinson disease (PD) than in the general population. Our aim of this poster is to provide selected literature on cutaneous manifestations of PD to initiate a discussion regarding three issues: 1) The promising diagnostic value of cutaneous biopsies 2) The increased risk for the development of malignant melanoma 3) The importance of improving collaborative care between geriatric psychiatrists and dermatologists.
Methods: A systematic literature review was performed of the following databases: PubMed, Medline, Embase and Cochrane. Search terms included: “Parkinson’s Disease cutaneous”; “Parkinson’s Disease synuclein” The word “synuclein” was interchanged with “Lewy bodies”, “alpha-synuclein” and “melanoma”. To live up to the title of our poster, our literature review focused on studies from the 2014–2016. All of our presented data is from the year 2016.

Results: Emerging evidence is pointing towards the presence of cutaneous α-synuclein as a biomarker for PD. A prospective cohort by Gibbons et al. sampled twenty-eight participants with PD and 23 control participants. The results were impressive with a 90% sensitivity and specificity for skin biopsies of sympathetic adrenergic nerve fibers being able to distinguish controls from patients with PD. The authors noted that there was an association between α-synuclein, autonomic failure and more advanced disease. Limitations of the study include a small sample size, and the lack of very early stage patients. The location of skin biopsy requires further studies, however Donadio et al. suggests that biopsing skin nerves in the cervical area may provide greater likelihood for diagnosing PD. Furthermore, α-synuclein has a high level of expression in malignant melanoma, an interesting finding given that patients with PD have been found to have a higher occurrence and risk of melanoma. In fact, it is believed that α-synuclein may undergo pathological changes through post-translation modification when serine-129 is phosphorylated, possibly leading to the development of PD and melanoma. Through our review of literature on this topic, we also came across the potential role of the Parkin gene (also named PARK2, PRKN, MIM#602544). Abnormal Parkin may result in certain cancers, including melanoma.

Conclusions: The findings suggest that the presence of cutaneous α-synuclein is likely an important biomarker in PD. Despite the increased documented risk of melanoma in patients with PD, we were unable to find any guidelines for routine skin assessments in this patient group. Given the diagnostic role of α-synuclein and the increased risk of melanoma in patients with PD, we recommend enhanced collaborative care between dermatologists, geriatric psychiatrists and neurologists. Additionally, it is vital that patients with PD receive routine dermatological assessments. Further studies are needed to better understand the diagnostic correlation between α-synuclein, the Parkin gene, PD and cutaneous malignancy.

Poster Number: EI 16

Electroconvulsive Therapy (ECT) in Late Life: Dental Protection—a Neglected Topic

Oliver M. Glass, MD1; Magdalena Glass, DD2; Brian C. Muzyka, DMD, MS, MBA1; Adriana P. Hermida, MD3

1East Carolina University, Greenville, NC
2Emory University, Atlanta, GA

Introduction: ECT is the most effective treatment in psychiatry and is increasingly becoming a more acceptable method of treatment due to its efficacy, tolerability, and minimal side effect profile. Older age is known to be a favorable factor for response to ECT. A common injury of ECT is oral trauma, which increases in chance with subsequent treatments. There are no clear oral protection guidelines for patients undergoing ECT. Since patients in late life are at increased risk for a wide range of oral health diseases, ECT may produce unexpected dental complications. In this poster we review the published literature on ECT and oral care while focusing on patients in late life. We evaluate whether psychiatrists and dentists should have improved collaborative care for patients in late life who require ECT.

Methods: We searched PubMed for all English language literature published between 1946 and August 2016 concerning ECT and oral health using the title search terms “ECT dental”; “ECT dentistry”; “ECT oral health”; “ECT mouth guard”; “ECT teeth”; “tooth damage ECT”. “ECT” was interchanged for “electroconvulsive therapy” in the search terms as well. We extracted literature that is relevant to patients in late life.

Results: Minneman (1995) emphasized the ideal bite guard should direct loading forces to posterior teeth and deflect oral soft tissue from biting surfaces. Kiran and colleagues (2009) described an easily constructed gauze bite block, which they named roll-gauze mouth gag. Ogami and colleagues (2014) published a report on the effectiveness of using an ethyl-vinyl-acetate tissue from biting surfaces. Kiran and colleagues (2009) described an easily constructed gauze bite block, which they named roll-gauze mouth gag. Ogami and colleagues (2014) published a report on the effectiveness of using an ethyl-vinyl-acetate mouth guard to protect against excessive occlusal forces caused by m-ECT. Woo and Do (2012) describe a patient who developed a tongue laceration secondary to ECT despite the use of a fitted silicone mouth guard. Morris and colleagues (2002) developed a pre-ECT oral evaluations training system used by physicians in training to assess the need for oral protection.

Silbert in 1990 recommended that athletic “boil type” mouth guards could be substituted in place of stock mouth guard devices during ECT. Mecta Corporation sells a plastic Blachy style disposable bite block for use in ECT. Somatics has proposed Ventil-A™, a single use closed-cell foam construction mouth protector, and a reusable autoclavable rubber mouth guard. Third party manufacturer, Dupaco Inc, created a rigid plastic bite block, which is disposable and disarticulates the molar teeth.

Conclusions: There is a clear deficit in guidelines and studies regarding dental protection during ECT. This is surprising since ECT induces a seizure that can often trigger excessive occlusal force. When a laryngeal mask is used to enhance hyperventilation, an appropriate bite block should be used to prevent dental injuries. Patients in late life are vulnerable to periodontal disease, root caries, temporomandibular joint disease, thinning of the oral mucosa, decreased mucosal vascularity and dental avulsion. Additionally,
psychiatric patients, in general, when compared to healthy subjects are more likely to have oral lesions and dental disease. As a result, psychiatric patients in late life who require ECT are a subgroup of patients who require extra assessment in oral health. With the continued evolution of ECT, it is imperative that comparison studies evaluate what method of oral protection is most optimal in patients in late life. Dental assessment with treatment prior to and post-ECT is warranted. If adequate oral protection can be ensured, the risks associated with ECT induced oral trauma will be diminished.

Poster Number: EI 17

A Case Example of Difficulties in Evaluating Cognitive Changes in a Patient with Comorbid Depression
Jennifer C. Jacobson, MD; Alexandria N. Harrison, MD; Erica C. Garcia-Pittman, MD

University of Texas Dell Medical School, Austin, TX

Introduction: The overlap between depression and dementia is common, and differentiating between the two can be challenging. No single diagnostic test can be employed to confirm the suspected diagnosis, and a combination of treatment teams and modalities must be employed. This case discusses the challenges and importance of differentiating between depressive and neurocognitive symptomatology during the treatment of a patient with a previous history of depression and ongoing cognitive impairment.

Methods: Mr. E., a 65-year-old Caucasian male with a past psychiatric history of unspecified depression, presents to the outpatient geriatric psychiatry clinic after a referral by his neurologist with residual depressive symptoms and cognitive impairment despite ongoing pharmacotherapy. He endorsed depressive symptoms including low mood, anhedonia, apathy, fatigue, poor appetite, and concentration impairment since 2006. He complained of cognitive deficits since 2012, primarily in memory and visuospatial organization that caused early retirement from his work as a CPA. Since 2014 he has received integrated outpatient care from his primary care provider, neurologist, and psychiatrist including pharmacotherapy with antidepressants and psychosocial support. The patient’s mood symptoms resolved except residual apathy and anhedonia, and his cognitive impairment gradually worsened. The providers disagreed on whether or not the primary etiology of the patient’s symptoms was an underlying mood or neurocognitive disorder. This led to the concern for suboptimal treatment of his cognitive impairments as a result of bias toward a primary psychiatric diagnosis given his history of depression, compared to a patient with no previous psychiatric history.

Results: Mr. E. underwent repeated neuropsychological testing to better clarify his diagnosis, which revealed an underlying unspecified dementia. He was initiated on memantine and donepezil to specifically target cognitive impairments, and stimulants were added to optimize control of residual apathy. Concern for Alzheimer’s versus frontotemporal dementia necessitated a PET scan to differentiate the underlying etiology and help guide management, which revealed Alzheimer’s dementia.

Conclusions: Given that patients with cognitive dysfunction can present with depressive symptoms and vice-versa, providers should maintain a low threshold for suspicion of underlying neurocognitive decline in a patient with persistent cognitive impairment despite global mood restoration. Conversely, residual depressive symptoms could potentially indicate either inadequately controlled mood or progressive cognitive decline and require a thorough neurocognitive evaluation to help guide management. Providers should diligently employ all the resources available, including a multidisciplinary approach to treatment, to determine the primary etiology and guide management.

Poster Number: EI 18

A Case of Hallucinations of Phantom Limbs and Zoo Animals: Vivid Imagination, Hoarding, Dementia and More Victoria Chima MBBS, Kecia-Ann Blissett MD, Melinda S Lantz MD

Department of Psychiatry, Mount Sinai Beth Israel and the Icahn School of Medicine at Mount Sinai

Victoria Chima, MBBS, MBBS1,2; Kecia-Ann Blissett, DO, DO1,2; Melinda S Lantz, MD, MD1,2

1Mount Sinai Beth Israel, New York, NY
2Icahn School of Medicine at Mount Sinai, New York, NY

Introduction: The primary presentation of visual hallucinations in a geriatric patient is often a difficult diagnostic challenge. Initial considerations include visual loss, eye disease, neurologic illness, illusionary phenomenon and metabolic insults. Delirium, dementia, mood disorders and late onset psychosis must also be considered. The environmental, physical and social stressors facing the patient must also be considered. Hallucinations in late life are often extremely distressing to the patient and
Significant others. Reaching a diagnosis can be helpful in providing a treatment plan, psychoeducation to patient and family and planning for future care needs. This case illustrates the care of a patient who presented with vivid visual hallucinations and was evaluated by multiple providers with extensive diagnostic testing.

**Methods:** Mr. A is a 78 year old unmarried male with a doctorate level of education. He was brought to the psychiatric emergency department of the hospital by several friends and neighbors due to concerns regarding increasing, frightening visual hallucinations. Mr. A reports that for 3 to 4 weeks he has been experiencing hallucinations of unfamiliar persons, body parts and animals. He describes these as people with distorted body parts, limbs coming out of his body such as an additional arm, disfigured faces that at times apperred to be zoo animals on human bodies. At times these appeared as giants, cartoon-like in motion, interacting with each other but not with him. The hallucinations were worse at night and in conditions of dim light. He is at times able to alleviate the intensity of the visions by turning the lights on and off. The visions were complicated with what he felt were illusions of seeing them over the clutter in the hoard in his apartment which he also described as distressing. He collected items such as pillowcases, linens, towels and household items that were mostly new and still in packages. These items were clean, but extreme in amount and size to the extent that there were limited paths to walk in his apartment. The patient feared that he was “losing his mind” and wanted help. He has no prior psychiatric history, lives alone and interacts with a partner on the internet who he has visited in another country. He was socially isolated since his retirement as a science teacher.

**Results:** The patient received and exhaustive medical and neurological work up at 2 different hospitals, a primary care physician, ophthalmologist, neurologist and psychiatrist. He has a known history of benign prostatic hypertrophy and hyperlipidemia. Laboratory testing including complete blood count, metabolic panel, electrolytes, glucose, glycosylated hemoglobin, lipid profile, Vitamin B12 and folate levels, thyroid function studies and levels of Lead and Mercury were all within normal limits. Urine toxicology for drugs of abuse was negative. He underwent several non-contrast head CTs and MRI of the brain, all of which were unremarkable. Neurologic evaluation revealed some mild peripheral neuropathy on the lower extremities evaluated with EMG testing. A lumbar puncture was offered to the patient who declined. He was evaluated by an ophthalmologist who has known him for more than 10 years with the impression of very early cataract formation in both eyes. Corrective lenses were prescribed with a recommendation for ongoing follow up on an annual basis. The patient was evaluated with MOCA with scores of 28/30 and 29/30. On MMSE he scored 24/30 in the hospital while actively hallucinating and 29/30 when seen in the outpatient clinic 2 weeks post discharge. He was referred for neuropsychological testing but is fearful on his ability to perform the tests.

**Conclusions:** This case illustrates the complexity of evaluating and treating distressing visual hallucinations in an older man. The patient’s overall presentation is suggestive of Charles Bonnet Syndrome with ongoing concerns regarding a Neurocognitive disorder. The patient has multiple psychosocial stressors which impacted his living environment, care needs and the severity of his symptoms. His high level of education and strong premorbid verbal skills clouded standard office-based cognitive testing. He presented with a cluster of symptoms including vivid visual hallucinations, lower limb neuropathy and mild cognitive impairment. He was able to tolerate aripiprazole 5 mg PO once daily with overall improvement in the visual hallucinations and no signs of extrapyramidal symptoms. He was accepting of help with his hoarding behaviors and his partner came to provide assistance. The patient requires ongoing follow up to clarify the diagnosis and manage his symptoms. Caregiver education, psychosocial support and environmental modifications of his apartment to reduce the hoarding are a vital aspect of his care. The multifaceted and multifactorial nature of geriatric disorders and care planning are strongly illustrated by this case.

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**Post Number: EI 19**

**A Review of Cholinesterase Inhibitor Discontinuation in Alzheimer’s Disease: Should Clinicians Ever Stop Treatment?**

Brenna N. Renn, PhD\(^1\); Ali Asghari, Ali, MD\(^2,3\); Stephen Thielke, MD, MSPH, MA\(^4,5\); Angela Catie, MD\(^1\); Sharyl R. Martin, MD, PhD\(^2\); Brian G. Mitchell, PharmD\(^2,5\); Mark Kunik, MD, MPH\(^3\)

\(^1\)University of Washington, Seattle, WA
\(^2\)Baylor College of Medicine, Houston, TX
\(^3\)Michael E. DeBakey Veterans Affairs Medical Center, Houston, TX
\(^4\)VA Puget Sound Healthcare System, Seattle, WA
\(^5\)VA HSR&D Houston Center of Innovation, Houston, TX

**Introduction:** The increasing local and international prevalence of Alzheimer’s disease (AD) and associated burden imparts a high priority on safe and effective treatment options. Cholinesterase inhibitors (ChEI) are the primary pharmacological treatment for symptom management of Alzheimer’s disease, but the relative risks and benefits may favor discontinuation during the progressive disease course. While the literature and professional guidelines generally provide clear and consistent recommendations for initiating ChEI treatment, what remains unclear are the guidelines for discontinuing treatment. Given
the lack of consensus regarding ChEI discontinuation, this session reviewed the empirical evidence and practice recommendations for discontinuation of ChEI in AD.

**Methods:** A literature search for ChEI discontinuation trials was conducted in PubMed, PsycINFO, and the Cochrane Database of Systematic Reviews. English-language professional/practice/clinical guidelines were retrieved from the National Guideline Clearinghouse, Guidelines International Network, Guideline Central, PubMed, Google search engine, and websites of seven relevant specialty societies. Additional English language references were sought by consulting leading textbooks. Expert advisors, comprised of five physicians and doctoral-level practitioners and faculty in the respective disciplines at a large academic medical center reviewed the textbook list and provided recommendations for other widely accepted and referenced texts, which were screened for duplicates. The first author conducted the search for RCT, professional guideline, and textbooks and screened all non-duplicate titles and abstracts for inclusion. The second and senior authors of this session supplemented the search. Exclusion at screening was conservative; any content that did not clearly fit the exclusion criteria was reviewed with the senior author and when necessary, a full-text copy was obtained for review. Full-text materials (both electronic and hardcopy) of materials meeting initial inclusion criteria were obtained and reviewed independently by two reviewers. Disagreements were resolved by consensus. Both authors independently applied selection criteria and extracted data into tables, which were collated by the first author. If the content under review met exclusion guidelines, the reason for exclusion was noted and discussed amongst the two reviewers.

**Results:** The search, based on publications from 2005 to June 2016, resulted in 282 articles; after removal of duplicates and excluded articles, five randomized controlled (RCT) and one observational trial met inclusion criteria. All five RCTs were rated as high quality. Although evidence for or against discontinuation was mixed, the majority of studies (three of five) favored continuation of ChEI treatment. Results of the observational study intimated that discontinuing ChEI did not result in worse neuropsychiatric or functional outcomes. The empirical evidence was supplemented by a review of 15 practice guidelines and 37 medical texts across seven categories. There was large variability in whether discontinuation was discussed in practice guidelines and texts. Findings from guidelines and texts support discontinuation under specific circumstances, such as in the presence of steady physical or cognitive decline, side effects, or preference of patient (and/or family or other caregivers).

**Conclusions:** In general, the limited empirical evidence and large variability in clinical recommendations makes it difficult to draw robust conclusions. Rigorous evidence of the effects of discontinuation would inform high-quality practice guidelines, which would in turn assist clinicians in making informed prescribing decisions and offering safe and effective treatment. Future studies are needed to inform practice guidelines, particularly in persons with more severe impairment and in long-term care settings.

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Poster Number: Ei 20

**Antipsychotic Use in Dementia: A Systematic Review of Benefits and Risks From Meta-Analyses**

Rajesh Tampi, MD; Deena Tampi, MSN, MBA-HCA, RN; Silpa Balachandran, MD; Shilpa Srinivasan, MD

1Case Western Reserve University School of Medicine, Cleveland, OH
2Saint Francis Hospital and Medical Center, Hartford, CT
3University of South Carolina School of Medicine, Columbia, SC

**Introduction:** The purpose of this review is to evaluate the data on the use of antipsychotics in individuals with dementia from meta-analyses.

**Methods:** We performed a literature search of PubMed, MEDLINE, EMBASE, PsycINFO and Cochrane collaboration databases through November 30, 2015 using the following keywords: antipsychotics, dementia and meta-analysis. The search was not restricted by the age of the subjects or the language of publication of the study. However, in the final analysis we only included studies involving human subjects that were published in English language journals or had official English translations. In addition, we reviewed the bibliographic databases of published articles for additional studies.

**Results:** This systematic review of the literature identified a total of sixteen meta-analyses that evaluated the use of antipsychotics in individuals with dementia. Twelve meta-analyses evaluated the efficacy of antipsychotics among individuals with dementia. Eight of the twelve studies also assessed adverse effects. Two additional studies evaluated the adverse effects of antipsychotics i.e., death. Two meta-analyses evaluated the discontinuation of antipsychotics in individuals with dementia. Three meta-analyses were conducted in individuals with Alzheimer’s disease (AD) whereas one focused on individuals with Lewy Body Dementia (LBD). The rest of the twelve meta-analyses included individuals with dementia.

**Conclusions:** Antipsychotics have demonstrated modest efficacy in treating psychosis, aggression and agitation in individuals with dementia. Their use in individuals with dementia is often limited by their adverse effect profile. The use of antipsychotics should be reserved for severe symptoms that have failed to respond adequately to non-pharmacological management strategies.

**This research was funded by:** None.
2017 AAGP Annual Meeting

Poster Number: EI 21

Oxytocin for Frontotemporal Dementia: A Systematic Review
Rajesh Tampi, MD, MS; Deena Tampi, MSN, MBA-HCA, RN; Silpa Balachandran, MD; Michael Maksimowski, MD; Mohsina Ahmed, MD

1Case Western Reserve University School of Medicine, Cleveland, OH
2Saint Francis Hospital and Medical Center, Cleveland, OH

Introduction: The aim of this systematic review is to identify published randomized controlled trials (RCTs) that evaluated the use of oxytocin in individuals with frontotemporal dementia.

Methods: A literature search was conducted of PubMed, MEDLINE, EMBASE, PsycINFO and Cochrane collaboration databases for randomized controlled trials (RCTs) in any language that evaluated the use of oxytocin in individuals with FTD. Bibliographic databases of published articles were also searched for additional studies.

Results: A total of two RCTs that evaluated the use of oxytocin in individuals with FTD were identified. In one study, the use of oxytocin in individuals with FTD produced a reduction in identification of negative facial expressions (anger and fear) which can be hypothesized to improve trust and increase cooperation in these individuals. Both studies noted oxytocin was well tolerated and showed short term benefits on behavioral symptoms in individuals with FTD.

Conclusions: Oxytocin appears to improve social aspects of cognition and behavioral symptoms in individuals with FTD and is well tolerated. However, positive data from larger and longer duration RCTs are needed before the routine use of oxytocin in individuals with FTD can be recommended.

This research was funded by: None.

Poster Number: EI 22

Akathisia or Anxiety: What is the Difference?
Patricia Serrano, MD; Priya Musunuri, MD

Einstein Medical Center, Philadelphia, PA

Introduction: Akathisia is a medication-induced movement disorder often described by patients as restlessness or an inability to stay still. It is often interpreted as anxiety and insomnia. If the symptoms are severe enough, the agitation that it causes may be treated with neuroleptic medication that can worsen the condition if it hasn’t been properly identified.

Methods: Review of patient’s chart and Pubmed and Ovid searches were conducted using the terms akathisia, anxiety, and denosumab.

Results: We present the case of a 64-year-old female hospitalized in the geriatric psychiatric ward for severe anxiety. She had no psychiatric history prior to the start of the symptoms she presented with. She endorsed multiple symptoms of depression, including suicidal ideation, decreased sleep and appetite, severe anxiety, and restlessness. Symptoms had started rather acutely 6 months prior with insomnia and anxiety. Her physical examination was relevant for tremor in her upper extremities that worsened when she was expressing her distress. She had been given multiple combinations of medications by outpatient providers and her restlessness only increased. At the time of admission she was taking mirtazapine, olanzapine, and buspirone. The initial impression was that she had akathisia, and her medications were tapered. She was then started on propanolol and ativan. After several days her symptoms had not changed. In her personal history there were no identifiable triggers at the time symptoms started. Medical causes were ruled out with assistance of the geriatrics and neurology teams after an extensive laboratory work-up and head tomography. The patient was unable to tolerate an MRI because of her symptoms. After a thorough medication review with the help of her outpatient pharmacy and provider, denosumab was identified as the only different medication the patient received days prior to the start of her symptoms. After a literature search, one case report was obtained reporting a woman with organic anxiety after denosumab administration. Even though denosumab was administered 3 days prior to the start of symptoms and there were no other triggers, it is unknown if this is the cause of the patient’s symptoms because she was given only one dose and several months later her symptoms had only worsened. In the one case described in the literature, hypocalcemia as a secondary effect was identified in the patient who developed anxiety after several doses. Our patient’s symptoms and presentation were attributed to akathisia after antipsychotic treatment, but even after the treatment was stopped, and she was provided with benzodiazepines and beta blockers, she did not improve. After over 20 days in the unit she did not improve with optimal pharmacological management. Medical reasons were exhausted and ECT was offered as treatment, but the patient and her family requested discharge.
Conclusions: Akathisia should be ruled out in patients complaining of restlessness and anxiety. Medications taken by the patient should be evaluated for recent additions or an increase in dosage of drugs associated with akathisia.

Poster Number: EI 23

“I Can’t Breathe” the Case of Factitious Disorder in 65 Year Old Woman with Multiple Admissions
Asa L. Cheesman, MD; Sina Shah, MD; Rajasekaran Addepalli, MD
Lincoln Medical and Mental Health Center, Bronx, NY

Introduction: This case presents a 65 year old woman, who on initial presentation was complaining of multiple somatic symptoms. She was in obvious distress, breathing rapidly, moaning, difficult to engage. Also repeatedly reporting shortness of breath, inability to swallow, leg weakness, abdominal pain and constipation. Patient has had multiple previous medical admissions in multiple hospitals within the past 8 months with similar presentation. She was last admitted to another hospital one month prior and full workup for shortness of breath, chest pain, cough, dysphagia, UTI and bronchitis was done. Possible diagnosis of Somatic Symptom Disorder was made and patient was lost to follow up. She was admitted to psychiatry inpatient at a different hospital due to her persistent amplification of nonspecific somatic symptoms, lack of supportive physical findings, apparent anguish, refusal to eat or drink and her continued evasiveness during evaluations. Lack of clear objective markers made it difficult to diagnose the patient, therefore, Somatic Symptom Disorder and Delusional Disorder were considered. She responded to olanzapine 5 mg at bed time and supportive therapy. Exacerbation of symptoms with the presence of a physician, inconsistent compliance and response to treatment, no prominent secondary gain and excessive clinical history contributed to the diagnosis of Factitious Disorder. This stresses the importance of close observation, obtaining collateral information from family and previous admissions to make the diagnosis of Factitious Disorder.

Methods: Case report. Close observation for 16 days with collateral from family and hospital records.

Results: Exacerbation of symptoms with the presence of a physician, inconsistent compliance and response to treatment, no prominent secondary gain and excessive clinical history contributed to the diagnosis of Factitious Disorder.

Conclusions: Case report. Exacerbation of symptoms with the presence of a physician, inconsistent compliance and response to treatment, no prominent secondary gain and excessive clinical history contributed to the diagnosis of Factitious Disorder. This stresses the importance of close observation, obtaining collateral information from family and previous admissions to make the diagnosis of Factitious Disorder.

Poster Number: EI 24

Idiopathic Basal Ganglia Calcification
Kari Malwitz, MD; Judith H. Crossett, MD; Susan K. Schultz, MD
University of Iowa Hospitals and Clinics, Iowa City, MO

Introduction: Idiopathic Basal Ganglia Calcification, also known as Fahr’s Syndrome, is an autosomal dominant disorder characterized by calcium deposits in the brain most often within the basal ganglia. Fahr’s Disease is relevant to geriatric psychiatry as it may present with symptoms that include delirium, dementia, and psychosis. A case of a 61 year old woman with Fahr’s disease who presented with behavioral disturbance, syncopal episodes and dysphagia will be presented to illustrate the relevance to geriatric mental health care. While it is commonly considered a neurologic disorder, a PubMed search was conducted to include search terms reflecting behavioral symptoms to better understand their connection to Fahr’s Syndrome.

Methods: A Pubmed search of Fahr’s Disease was performed, using combinations of the terms “Fahr’s disease”; “behavioral”; “psychiatric”; “syncope” and “dysphagia”. Another search was carried out utilizing the term “Idiopathic Basal Ganglia Calcification” instead of “Fahr’s Disease”, also with combination searches using key words “behavioral”; “syncope” and “dysphagia”. A final search was conducted with the term “Familial Idiopathic Basal Ganglia Calcification” with the accompanying key words “behavioral”; “syncope” and “dysphagia”.

Results: A Pubmed search with key words “Fahr’s disease” and “behavioral” returned 18 results. The search with terms “Idiopathic Basal Ganglia Calcification” and “psychiatric” yielded 47 results. When the term “psychiatric” was replaced with “behavioral”, 19 results were obtained. By contrast, searching for the general disorder name including either Fahr’s disease or idiopathic basal ganglia calcification yielded up to 299 references. Among the reports that included behavioral descriptions, symptoms ranged from depression, anxiety and personality changes to mania, psychosis and even catatonia.

Conclusions: While onset most often occurs by the age of 50, the relatively late onset and behavioral presentation of this disorder merits recognition among geriatric psychiatrists. Literature on Idiopathic Basal Ganglia Calcification, or Fahr’s...
Disease, is limited in terms of reports addressing its behavioral features. It can present with an array of symptoms, including severe behavioral challenges. Psychiatrists should consider Fahr’s disease as a differential diagnosis in the evaluation of psychosis and cognitive impairment when neuroimaging reveals calcification of the basal ganglia.

**Poster Number: EI 25**

**Primary Informal Caregivers of People with Dementia: Quality of Life and Care Issues**

Montserrat Fernández

IMSS General Hospital, Chihuahua, Mexico

**Introduction:** The way of see the old age and ageing is changing with the society structure too. The health and technology advances has done a life expectancy increase, enable wellbeing and quality of life (QoL), but also in the old age the need of long-term care because dependence and disability for different diseases, like dementia. The QoL concept is multidimensional and at this moment there are not a curative dementia treatment, so that the main objective care is to promote well-being and keeping the best QoL for the person with dementia (PWD) and their caregivers (Lucas, 2007). In the case of the PWD caregiver, could be an increasing stress, the burden is one of the most important dimension in the likelihood of abuse in PWD (Blazer et al, 2010; Rivera, s.f.). The burden consequences to the caregiver could be physic, psychologic, social, working, familiar, economic or legal problems.

**Methods:** The overall objective of the study was to determine the association of quality of life with care characteristics and burnout informal primary caregiver of the person with dementia who attended the consultation in the Psychogeriatric Clinic of the National Institute of Psychiatry Ramon de la Fuente (INPRF). The specific objectives were; describe the demographic and clinical characteristics of the person with dementia; compare the characteristics of care and quality of life among caregivers with burnout and not burnout, and compare the demographic and clinical characteristics of the person with dementia among those caregivers with and without burnout. Subjects: IPC of PWD who attended the Psychogeriatric Clinic of the INPRF, in Mexico City, between May and October 2014. The instruments used were the Questionnaire SF-36, Zarit Scale, the Neuropsychiatric Inventory, Katz Index and we developed a care characteristics questionnaire. Statistical analysis was using the \( \chi^2 \), Student t test and Pearson correlation coefficient. Statistical significance was set at \( p < 0.05 \).

**Results:** The total sample obtained was 30 primary caregivers of people with dementia, the distribution was 20 informal caregivers female and 10 male, with a mean age of 57 years (SD 14.65), the most common type of relationship was the being the son of patients with dementia (53%), followed by wife / husband (27%) and sister / brother (13%); almost half of all caregivers had a degree in their schooling (n = 12, 40%). Marital status of 14 caregivers was being married, 8 of them were...
single, 6 separated and 2 divorced. The distribution of the characteristics of people with dementia were as follows; the vast majority were females (n = 22, 73%), their average age was 76 years (SD = 9), the average age of onset of dementia was 70 years (SD = 10.81), with an average of 7-years (SD = 5.4) dementia time evolution. From the application of the scale of Zarit, seven caregivers without burnout, four mild burnout and nineteen intense burnout; for the proposal objectives, two categories were formed: informal primary caregiver without burnout plus mild burnout (27%) and informal primary caregivers with intense burnout (63%). The result of the comparison of the quality of life between the two groups was statistically significant, showing a lower average and thus a lower quality of life in caregivers with intense burnout, compared without/mild burnout group (t: -2.1915, df 8; p = 0.04); the largest mean difference between groups was shown in the dimensions of emotional role, physical role and vitality, in decreasing order (Table 1). By associating the variables of the characteristics of care with the groups, a statistically significant association between informal primary caregivers with intense burnout and devote more time to caring per day was observed above the average of 11.8 hours, compared to the group without / mild burnout (Table 2).

Regarding the analysis of body correlation demographic and clinical characteristics of the person with dementia and caregiver burnout, a direct relationship was found, so that the more neuropsychiatric symptoms (INP) of the person with dementia, increased burnout the primary caregiver (r = 0.499; p = 0.005) and an inverse relationship between the relationship of the person with dementia and the care burnout (r = -0.576; p = 0.001) (Table 3). The comparison between each of

Table 1. Dimensions Comparison of the QoL (SF-36) Between Caregivers with Intense Burnout and Without/Mild Burnout

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Intense Burnout</th>
<th>Without/Mild Burnout</th>
<th>MD</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Function</td>
<td>89.5</td>
<td>92.9</td>
<td>3.5</td>
<td>1.7</td>
</tr>
<tr>
<td>Physical role</td>
<td>78.3</td>
<td>80.9</td>
<td>2.6</td>
<td>1.0</td>
</tr>
<tr>
<td>Pain</td>
<td>62.6</td>
<td>63.2</td>
<td>0.5</td>
<td>1.7</td>
</tr>
<tr>
<td>General Health</td>
<td>55.5</td>
<td>61.1</td>
<td>5.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Vitality</td>
<td>54.7</td>
<td>61.1</td>
<td>6.4</td>
<td>1.8</td>
</tr>
<tr>
<td>Social Function</td>
<td>66.4</td>
<td>68.6</td>
<td>2.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Emotional Role</td>
<td>59.6</td>
<td>63.9</td>
<td>4.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Mental Health</td>
<td>60.3</td>
<td>62.5</td>
<td>2.2</td>
<td>1.7</td>
</tr>
<tr>
<td>Evolution</td>
<td>42.1</td>
<td>47.5</td>
<td>5.4</td>
<td>1.8</td>
</tr>
<tr>
<td>Total</td>
<td>45.0</td>
<td>50.3</td>
<td>5.3</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Table 2. Comparisons of the Care Characteristics Between Caregivers with Intense Burnout and Without/Mild Burnout Caregivers Group

<table>
<thead>
<tr>
<th>Variable</th>
<th>Intense Burnout</th>
<th>Without/Mild Burnout</th>
<th>Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care reason</td>
<td>Affection</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Moral</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Imposition</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Care time (hours/day)</td>
<td>&lt; X (24.5)</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>&gt; X (25.5)</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Care time (years)</td>
<td>&lt; X (4)</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>&gt; X (6)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Economic support</td>
<td>IPCC</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>IPCC Fremantle</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>IPCC and another member family</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Only other family</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>House</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Work</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Activities without base IPC</td>
<td>Routine activities</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Two or more activities</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Rest days</td>
<td>No</td>
<td>35</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Vacations</td>
<td>No</td>
<td>38</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Secondary caregivers</td>
<td>No</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>Psychosocial problems</td>
<td>No</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>34</td>
<td>9</td>
</tr>
<tr>
<td>Depression</td>
<td>No</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td>Sleep time (hours)</td>
<td>&lt; X (5.5)</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>&gt; X (6)</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Insomnia</td>
<td>No</td>
<td>33</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

PDI=person with dementia, IPC=informal primary caregiver
neuropsychiatric symptoms, according to the Neuropsychiatric Inventory, also showed statistical significance between the two groups (t test: 3.99, df 17; p = 0.0009). (Table 4).

**Conclusions:** The health of the informal primary caregiver is part of their coping resources and should be given attention and care from different social agents and society in general. Within the social services, attention must be made by an interdisciplinary team, integrating the PWD and their family, in a model of care focused on the person with dementia, emphasizing the importance of their health, well-being and sense of care as a possibility to transcend as a personal being.

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**Poster Number:** EI 26

**Utilization of Family Therapy Techniques to Provide Clinical Interventions in Later Life**

Sarah A. Nguyen, MD1,2; Madeleine Abrams, LCSW3; Michelle Conroy, MD1,2; Paul D. Kirwin, MD1,2

1Yale University School of Medicine, New Haven, CT
2VA Connecticut Healthcare System, West Haven, CT
3Albert Einstein College of Medicine/Montefiore Medical Center, New York, NY

**Introduction:** Families are central in the lives of many older adults. Most older adults experience families as integral to their daily wellbeing, but formal training in family therapy has been difficult to integrate into psychiatric training programs. Conflicting paradigms, constraints of time and money, and limited resources and supervisor availability contribute to the underutilization of family therapy techniques. The Accreditation Council for Graduate Medical Education (ACGME) does not explicitly require family assessment and therapy in geriatric psychiatry fellowship training. However, understanding family network dynamics and use of these techniques during fellowship is particularly important as one ages into more complex medical and/or cognitive issues.
Methods: A series of case vignettes illustrate the perspective of a Geriatric Psychiatry Fellow on the impact of using family therapy techniques on the course of individual treatment. Therapeutic work with families augmented decision-making processes and improved relationship structures in later life. These interventions in turn helped the individuals and their families adjust and accept age-related decline in physical and cognitive capacities. The goal was to maximize the quality of life for both the patient and their family members and to support the highest level of autonomy for the older adult. Examination of how personal factors influenced both clinical and systems perspectives for each case and family is reviewed, with demonstration of varying family therapy techniques and interventions used.

Results: Incorporation of family therapy techniques can provide more effective individual patient interventions. Families or advocates are critical to helping older adults navigate complex healthcare systems. A family approach can focus on the individual's psychological strengths and vulnerabilities, in addition to health risks, to guide a more comprehensive treatment approach underpinning the coping capacities of both the individual and the family. In doing so, patients and families are more able to accept and manage the changes associated with the progression of their cognitive and medical diseases.

Conclusions: Fellowship training should include defined approaches to family work as a critical therapeutic modality for older adults. Family therapy techniques in relation to the aging process are rarely discussed. Family therapy techniques are critical to maximize effective healthcare and improve quality of life of older persons.

Poster Number: EI 27

Medical Care Activities among Spousal Caregivers of Older Adults with Functional Impairment: Associations with Caregiving Difficulties and Gains
Courtney A. Polenick, PhD; Amanda Leggett, PhD; Helen C. Kales, MD

University of Michigan, Ann Arbor, MI

Introduction: Spouses of older adults with functional impairment commonly assist with their partner’s medical care. Nevertheless, little is known about the implications of these activities for spouses’ caregiving experiences. We examined how spouses’ medical care activities (health systems interaction tasks and medical/nursing tasks) are linked to both positive and negative aspects of caregiving (difficulties and gains). We also considered whether these links varied by caregiver age, gender, and education.

Methods: We utilized a secondary analysis of data from the 2011 National Health and Aging Trends Study (NHATS) and the 2011 National Study of Caregiving (NSOC). The nationally representative US sample included 353 spousal caregivers and their community-dwelling care recipients aged 65 years and older. Hierarchical linear regression models controlled for caregivers’ sociodemographics and health conditions, social support resources, assistance with activities of daily living (ADLs) and instrumental activities of daily living (IADLs), and care recipients’ health and functioning.

Results: Health systems interaction tasks (e.g., making appointments) were linked to greater emotional difficulties for caregivers, whereas medical/nursing tasks (e.g., foot care) were associated with greater gains from caregiving. Medical/nursing tasks were also linked to greater physical difficulties for caregiving wives and caregivers with less education.

Conclusions: Medical care activities may have both positive and negative consequences for caregiving spouses, which appear to depend in part on sociodemographic characteristics. This study highlights the critical importance of ensuring that spouses have the resources and support needed to provide increasingly complex care to their partners.

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Poster Number: EI 28

Perceptions of Purpose in Life Within Spousal Care Dyads and Caregiving Difficulties
Courtney A. Polenick, PhD; Helen C. Kales, MD; Kira S. Birditt, PhD

1University of Michigan, Ann Arbor, MI
2Institute for Social Research, University of Michigan, Ann Arbor, MI

Introduction: Greater feelings of purpose in life (e.g., feeling that one's life has direction and meaning) are a personal resource that is linked to better health and may buffer the negative impact of chronic stress. Yet little is known about how feelings of
Purpose in life may mitigate the negative aspects of caring for a family member with illness or disability, a commonly encountered stressor in middle and later life.

**Methods:** We utilized a nationally representative US sample of 313 spousal caregivers and their partners aged 65 years and older with functional impairment from the 2011 National Health and Aging Trends Study (NHATS) and the 2011 National Study of Caregiving (NSOC) to evaluate the associations between both care partners’ views of purpose in life and caregivers’ reports of emotional and physical caregiving difficulties. We also considered whether these links varied by caregiver gender. Models controlled for sociodemographic characteristics and several indicators of caregivers’ and care recipients’ health and well-being, along with caregivers’ care tasks, engagement in valued activities, and social support resources.

**Results:** Caregivers’ own perceptions of greater purpose in life were linked to fewer physical caregiving difficulties. Caregiving wives who reported more purpose in life also had fewer emotional care-related difficulties. The link between caregivers’ feelings of purpose and emotional caregiving difficulties was moderated by care recipient purpose in life. Specifically, when care recipients perceived low levels of purpose in life, caregivers who felt greater purpose in life had fewer emotional difficulties.

**Conclusions:** Findings underscore the interdependence within spousal care dyads, and suggest that spousal caregiver and care recipient perceptions of purpose in life may be consequential for the experience of care-related difficulties. Caregivers’ greater sense of purpose appears to be particularly valuable in managing the emotional challenges of the care role when care recipients lack this personal resource.

This research was funded by: This work was supported by grant 2 T32 MH 073553-11 from the National Institute of Mental Health (Stephen J. Bartels, Principle investigator) and the University of Michigan Program for Positive Aging (Helen C. Kales, Site-Co Director).

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**Couples’ Alcohol Use Patterns in Middle and Later Life: Stability and Influence Across 16 Years**

Courtney A. Polenick, PhD; Kira S. Birditt, PhD; Frederic C. Blow, PhD

1University of Michigan, Ann Arbor, MI  
2Institute for Social Research, University of Michigan, Ann Arbor, MI

**Introduction:** Research indicates that wives and husbands may influence one another’s alcohol consumption. Yet little is known about within-couple patterns of alcohol use over time in midlife and later life. The purpose of this study was to examine individual stability and mutual influence in alcohol use across 16 years among middle-aged and older couples.

**Methods:** This study focused on a sample of 901 consistently married wives ($M = 56.60$ years) and husbands ($M = 60.03$ years) who participated in nine waves of the Health and Retirement Study (HRS). We estimated dyadic multilevel models to examine the stability of one’s own alcohol use (drinks per occasion and drinks per week) over time as well as mutual influences in patterns of alcohol use within couples. Models controlled for marital characteristics, lifetime history of alcohol problems, and known predictors of alcohol use including age, race, education, household income, self-rated health, health conditions, smoking status, and depressive symptoms.

**Results:** Own prior alcohol use positively predicted alcohol use across waves for wives and husbands. Partners’ alcohol use was found to be influential for both spouses and also moderated the stability of alcohol use for wives.

**Conclusions:** This study provides evidence of both individual stability and mutual influence within middle-aged and older couples in their long-term patterns of alcohol consumption. Findings highlight the interdependence between spouses, and imply that partners’ use of alcohol should be considered when examining men’s and women’s alcohol use over time.

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**Caregiver Burnout: Application of Dialectal Behavioral Therapy**

Theresa Toledo, MD; Esther Akinyemi, MD

1Henry Ford Hospital Residency Program, Detroit, MI  
2Henry Ford Health System, Detroit, MI

This research was funded by: This work was supported by grant 2 T32 MH 073553-11 from the National Institute of Mental Health (Stephen J. Bartels, Principle Investigator).
Introduction: Caregiver burnout is a well-documented phenomenon. As high as 50% of caregivers have been shown to experience significant psychological distress which can escalate to symptoms of burnout, depression and anxiety.1,2 Caregivers of geriatric patients are usually engaged full time without periods of respite to attend to their own needs. They are often spouses, family, or friends and may be living with the patient. This may lead to neglect of their other responsibilities, their own health and wellness,3 and eventually progress from distress to caregiver burnout, and to clinically significant mental health problems. This is especially problematic in caregivers of patients with cognitive impairments, and stroke which increase the risk of psychological distress and poor overall health.3 While caregiver burnout has been well-documented, there is minimal information on effective interventions. There is some evidence showing potentially positive effects of Mindfulness-Based Stress Reduction5,6 and mixed results when using technology-based interventions.7,8 The goal of this study is to evaluate the impact of implementing a short intervention to teach distress tolerance and stress reduction based on dialectal behavioral therapy (DBT). DBT was chosen due to its grounding-based efficacy in mindfulness, distress tolerance and emotional regulation, as well as its practical use in the general population. We will present the results of the potential effectiveness of this intervention.

Methods: Target population: 50 Adult (ages 18 and above) caregivers of geriatric (age 62 and above) patients who are dependent on caregivers for at least Instrumental Activities of Daily Living (IADLs) if not Activities of Daily Living (ADLs) at least 8 hours a day. Control group will consist of about 25 adults at the same clinic who do not have a caregiver or in need of a caregiver. Setting: Suburban outpatient Geriatric Psychiatry clinic. Patients presenting with caregivers will be identified by administrative staff on check in and medical assistants assigned to the geriatric psychiatrist. Adult patients be asked for voluntary participation in the study. Participation in the study will include providing demographic information, a pre-survey with the shortened Zarit Burden Scale9 to screen for caregiver burnout, the intervention to those who volunteer to use it, and an immediate post-survey. The video intervention is a 20–30 minute video explaining and teaching about DBT-based distress tolerance skills with examples of practical use. All participants, regardless of use of the video intervention, will additionally be given a short reference page of these skills, and have access online to these materials at any time. At intervals of three months and six months after the initial survey, a post-survey with the short version of the Zarit Burden scale and questions regarding helpfulness of the skills taught during the intervention. Voluntary participants of the study will be offered the opportunity receive the video intervention on site either the same day or within the same week—those volunteers who are not caregivers or in need of one will be considered part of the control group.

Results: No results at this time. Initial results expected in 2017.

Conclusions: No conclusions at this time.

References

Introduction: Cultural competency has become an important practice in the mental health field. The recent incorporation of a cultural formulation interview in the DSM-5 further goes to show the essential role that culture has in a patient’s mental health care. Cultural competence is important in helping provide the patient with the best care possible by understanding the views/interpretations of their mental illness, their cultural interpretations of stressors propagating their illness, and their understanding of treatments, along with their expectations of resolution of symptoms. In Texas, as in the rest of the United States, the presence of Latino/a patients has continued to grow at a rapid rate, with a similarly increasing elderly Latino/a population. As such, having cultural competency among a growing minority group is significant to how they receive treatment.

Methods: This case report focuses on a geriatric patient with Bipolar II and the associated complexities in treatment that arise in large part due to the patient’s cultural beliefs regarding his mental illness. Patient’s clinical documents in our electronic medical records system were reviewed. A literature survey was performed on the topic of cultural competency and its relevance to psychiatric care and treatment.

Results: A 70-year-old, Spanish-speaking, Latino male was seen in outpatient psychiatry clinic for initial complaint of recurrent mood episodes. He had previously been treated by providers in Mexico and more recently in the US, who had trialed him on several medications including SSRIs, SNRIs, mood stabilizers, and benzodiazepines. Patient received ECT early in our care given the severity of his mood symptoms, which seemed to improve after several trials of treatment. However, the patient’s condition was never stabilized long term due to barriers such as language differences, medication non-adherence, and a lack of patient insight. The patient ended up seeking outside care in his native country of Mexico, which led to interference with our care plan and a subsequent hypomanic episode. In an effort to improve patient care, we focused on bridging cultural gaps by developing an understanding of the patient’s belief towards his illness, providing him a Latino/a Spanish-speaking provider when possible (allowing for easier communication), and managing expectations of treatment and illness course.

Conclusions: Cultural competency plays a critical role in the psychiatric treatment of patients, especially as the number of diverse patient populations continue to increase in the coming years. In an effort to improve the psychiatric care of a man experiencing Bipolar II, we leverage the findings obtained through a cultural competency formulation to help contextualize cultural barriers and better address them in our assessment and treatment plan.
This research was funded by: PACE/PACENET Program, Pennsylvania Department of Aging, Harrisburg, PA.

**Improving Access to Collaborative Behavioral Health Care for Rural-Dwelling Older Adults**

Jacqueline R. Arenz, MD\(^1\); Shahrazad Mavandadi, PhD\(^2\); Kristin Foust, BS\(^1\); Suzanne DiFilippo, RN, BA\(^1\); Joel E. Streim, MD\(^1,2\); David W. Oslin, MD\(^1,2\)

\(^1\)Dept of Psychiatry, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA

\(^2\)VISN 4 MIRECC, Cpl. Michael J. Crescenz VA Medical Center, Philadelphia, PA

**Introduction:** The collaborative mental health (MH) care model was developed to address logistic and system-level barriers and optimize outcomes among individuals receiving MH treatment in primary care. Collaborative care is coordinated by MH care managers who provide patient-centered education, counseling, and decision support to patients and their primary care providers (PCPs), a licensed MH prescriber who provides supervision, and algorithm-driven tailoring of pharmacological and non-pharmacological treatment plans. Collaborative MH care interventions specifically targeting older adults have been shown to be effective. However, access and outcomes related to these programs may vary as a function of patients’ geographic location and income. For example, many rural elders with MH conditions remain under-identified or lack access to specialty or home-based MH care, with access to collaborative care nearly non-existent. Moreover, older adults with low income not only are more susceptible to MH conditions (e.g., depression), but also respond less favorably to psychotherapy and pharmacotherapy than their more affluent counterparts. Finally, factors such as comorbidity, lack of knowledge of MH resources, and lack of symptom/medication monitoring alone vs. integrated behavioral health care management services on sleep outcomes, controlling for clinical and sociodemographic variables.

**Methods:** The sample included 655 older adults newly prescribed an antidepressant or benzodiazepine by a non-psychiatrist and enrolled in the SUpporting Seniors Receiving Treatment And Ntervention (SUSTAIN) program. The SUSTAIN program provides symptom and medication monitoring, brief behavioral therapy, and care management services by phone to enrollees in the Pennsylvania Department of Aging’s pharmaceutical assistance program (PACE/PACENET). PACE/PACENET is a prescription drug program for low and moderately low-income seniors. Data were extracted from clinical program records on self-reported sociodemographics (age, financial status, gender), clinical symptoms (depressive [PHQ-9] and anxiety [GAD-7] symptoms, high-risk suicidal ideation [Paykel Suicide Scale]), overall mental and physical functioning (Veterans RAND 12-Item Health Survey [VR12]), and medication (antidepressant and/or benzodiazepine) use in the previous month. Sleep indices were assessed using a modified version of the Pittsburgh Sleep Quality Index (PSQI). Sleep latency (number of minutes until sleep onset), duration (total number of hours of sleep), and sleep quality (very good–very bad), were collected at baseline and 3-month follow-up. Multiple regression analyses were run to examine sleep indices at 3 months, adjusting for baseline sleep, medication use, intervention type (monitoring alone vs. integrated care management), and clinical and sociodemographic variables.

**Results:** The mean age of the sample was 77.2 (SD 6.5) years. The majority were female (84.6%), non-Hispanic white (92.6%), unmarried (73.7%), and reported having enough finances to “at least get along” (85.2%). Roughly half (48.7% and 44.3%) reported taking an antidepressant or benzodiazepine, respectively, in the past month. Enrollees in the sample had a mean score of 8.86 (SD 4.5) on the PHQ-9 (range = 0–24), 4.46 (SD 4.3) on the GAD-7 (range = 0–21), 48.3 (SD 10.9) on overall mental functioning (range = 4.85–73.85), and 34.9 (SD 12.4) on overall physical functioning (range = 3.87–66.86). Patients also had an average of 47.1 (SD 59.6) minutes until sleep onset (range = 0–420), 6.8 (SD 2.0) total hours of sleep (range = 0–14), and a sleep quality score of 2.26 (SD 0.8; range = 1–4). Results from multiple regression analyses revealed that, adjusting for all other variables, better physical functioning (b(SE) = 0.27(0.14), p = 0.05) was associated with less time until sleep onset, while benzodiazepine use was associated with greater sleep latency (b(SE) = 5.19(3.14), p = 0.10) at 3-month follow-up. Moreover, receiving care management services (b(SE) = 0.23(0.11), p = 0.04) and antidepressant use (b(SE) = 0.26(0.11), p = 0.02) were associated with longer sleep duration at 3 months. Finally, greater physical functioning (b(SE) = 0.01(0.02), p = 0.03), mental functioning (b(SE) = 0.01(0.03), p = 0.01), and receiving care management services as opposed to symptom/medication monitoring alone (b(SE) = 0.11(0.05), p = 0.03) were associated with better sleep quality at 3 months, while reporting benzodiazepine use (b(SE) = 0.13(0.05), p = 0.01) was associated with worse sleep quality.

**Conclusions:** In this select population of low-income elders enrolled in a state-sponsored pharmacy benefit and treatment support program, greater physical and mental functioning, antidepressant use, and behavioral health care management were all associated with indices of better sleep at 3-month follow-up; but the use of benzodiazepines was associated with greater sleep latency and poorer sleep quality. These findings suggest that collaborative care management may be most helpful when it supports appropriate use of antidepressants and avoidance of benzodiazepines in elders who report sleep difficulties.
transportation further complicate treatment for this vulnerable group. Thus, development of MH service delivery models that can more comprehensively identify and meet the needs of older adults with MH conditions living in rural settings is needed.

The primary objective of this project was to evaluate the extent to which a community-based, telephone-delivered collaborative care intervention is associated with access to and engagement in integrated MH care services among low-income older adults living in both rural and urban regions.

**Methods:** The sample included 8766 older adults identified as having been prescribed a new psychotropic medication by the SUpporting Seniors Receiving Treatment AndNtervention (SUSTAIN) program. The SUSTAIN program provides brief behavioral therapy and care management services via phone to enrollees in the Pennsylvania Department of Aging’s pharmaceutical assistance program (PACE/PACENET). PACE/PACENET is a comprehensive prescription drug program for low and moderately low income seniors. Data on older adults’ geographic location (i.e., zip code) were used to categorize older adults as living in either rural or sub/urban counties. Program penetration was calculated by dividing the number of older adults completing baseline SUSTAIN clinical interviews by the number of older adults living in each zip code/county. Data on baseline interview completion rates (completed vs. unable to contact/refused), sociodemographic (e.g., age, gender, marital status, ethnicity) and clinical characteristics (e.g., depressive (PHQ-9) and anxiety (GAD-7) symptoms, overall mental and physical functioning) were extracted from clinical records. Chi-square and Analysis of Variance (ANOVA) were used to analyze whether there were rural vs. urban differences in program penetration, baseline interview completion rates, and patient sociodemographic and clinical characteristics.

**Results:** The majority of older adults (mean age = 80.6 (+7.6 SD)) referred to the SUSTAIN program were female (79.5%), non-Hispanic white (91.8%), and unmarried (74.2%). Comparisons of sociodemographic and clinical characteristics revealed no differences among those living in rural vs. urban counties with the exception of those in rural counties being more likely to be non-Hispanic white (98.1% vs. 88.3%; x2(df = 1) = 64.0, p < 0.001) and married (33.5% vs. 22.4%; x2(df = 1) = 32.4, p < 0.001), and less likely to have had an alcoholic drink in the prior 3 months (14.0% vs. 21.4%; x2(df = 1) = 16.2, p < 0.001) than their urban counterparts. Examination of baseline interview completion rates revealed that older adults in rural areas were slightly more likely to engage in telephone care management (39.8% vs. 35.7%; x2(df = 1) = 9.3, p = 0.002) than those in urban counties. Finally, the program penetration rate was significantly higher (i.e., double the rate) in rural as opposed to urban counties (F(df = 1,65) = 5.9, p = 0.02).

**Conclusions:** Findings suggest that the SUSTAIN program increases outreach and facilitates engagement in collaborative MH care services regardless of patients’ geographic location. Program features, such as identifying older adults newly prescribed psychotropic medication via pharmacy casefinding and offering brief, telephone delivery of all program services may help overcome barriers to engagement associated with patients’ geographic residence, time, and resources. SUSTAIN also may promote collaboration with PCPs in rural settings who may not have access to specialty MH care services. Future work would benefit from examination of rural vs. urban group differences in sustained program engagement and intervention outcomes.

Poster Number: EI 34

**Remembering the Forgotten: UCLA & the LA County Genesis Program Collaborating for Better Community Mental Health Through Home Visits of Marginalized Older Adults**

Seon B. Kum, MD; Randall Espinoza, MD, MPH, MD, MPH; Sarah Gelberd, MD; Pedram Amani, MD

1UCLA, West Hollywood, CA
2Los Angeles County Department of Mental Health Countywide Older Adult Services, Los Angeles, CA

**Introduction:** There is compelling evidence that early intervention in mental healthcare can improve outcomes and lower health care costs. One particular model of early intervention—the Genesis Program—has been shown to be effective in improving the physical and mental health of an elderly mostly homebound population. In this model, a psychiatrist works alongside a nurse, social worker and/or a case manager to identify and treat mental illnesses in the patient’s home, while also promoting medical compliance through regular visits.

**Methods:** Through a collaborative effort between the UCLA Geriatric Psychiatry Fellowship and the LA County DMH Genesis Program, a team-based academic and public psychiatry approach is interwoven into community mental health, and vice versa. A variety of academically-informed and clinically driven activities inform this approach. These activities comprise OACTs (older adult consultation team meetings); journal clubs; forensic team meetings; a 6 month rotation for UCLA fellows; field safety training of the fellows; supervision by Dr. Gelberd, MD, an internist for Genesis, and Dr. Espinoza, MD,MPH, a psychiatrist at UCLA; 2.5 hour long seminars with CME value; conferences on Geriatrics; and tele-psychiatry in client homes. From the aforementioned, we are able to bring up-to-date evidence-based treatment to vulnerable older adults, who are often indigent, undocumented and unable to navigate the usual ambulatory healthcare system. Furthermore, there is a difference in the approach and intervention for each case based on the clinician’s background. Whether he/she has mostly academic or
community mental health experiences, the fellow is taught a variety of approaches to caring for the mentally ill using these distinct perspectives. The fellow is put into the role of leader in a many different settings: as a leader of the team going out to the homes and as a leader acting as consultant to clinicians in the community and within the Genesis program to allied health providers. Through regular supervision and mentoring by both a Geriatric Psychiatrist and Geriatrician, the fellow develops the capacity to assume team leadership and to acquire team management skills. Thus, he/she also acts as a mentor to social workers, USC psychiatry residents and other trainees who rotate through the Genesis program on a monthly basis. He/she also acts as teacher, giving a 2.5 hour long seminar on subjects pertaining to the care of the older adult home-bound population. We look back, since the inception of the collaboration between UCLA and LA County DMH Genesis program, at the patient demographics, diagnoses, needs, healthcare utilization and outcomes of the patients seen in this program.

**Results:** The potential impact of this program is principally in two domains: 1) workforce development and 2) decreasing the marginalization of the socially isolated mentally ill older adult. Addressing the former, several fellows have gone into community psychiatry after their experience with the Genesis program, with some even staying with the program itself. To the latter, this community outreach program allows for older adults with mental illnesses to receive much needed healthcare in their homes.

**Conclusions:** The Genesis program has won several awards over the years for its fresh and practical approach to the distribution of mental healthcare. Since the addition of UCLA geriatric psychiatry fellows to the Genesis Program, there has been an enrichment of the community psychiatry program by adding a more academic approach to its patient care. The UCLA Geriatric Psychiatry Fellowship has also been enriched through the introduction of the Genesis Program to its curriculum by increasing the exposure of its fellows to severely mentally ill patients who are often untreated, poor, and isolated. By caring for the sickest of the sick, the fellows are able to work as team leaders in creating treatment plans and, ultimately, giving hope to the often forgotten mentally ill patients.

**Poster Number:** EI 35

**Can Psychiatric Self-Report Scales be Used to Predict Acute Health-Service Utilization Outcomes in Geriatric Psychiatry Patients?**

Ghizlane Moussaoui, BSc Candidate; Gabriela Torres-Platas, PhD; Ching Yu, MD, MA; Salam El-Majzoub, MD; Ian Bernstein, BA Candidate; Marilyn Segal, MD; Karl J. Looper, MD, MSc; Soham Rej, MD, MSc

1Jewish General Hospital, Montréal, QC, Canada
2McGill University, Montreal, QC, Canada
3University of Toronto, Toronto, ON, Canada

**Introduction:** As our population is aging at an unrivaled rate, the need for limited geriatric mental health services is increasing. The aim of this study was to determine whether individual items and total scores on widely used psychiatric self-report scales can predict the likelihood of future psychiatric and medical emergency room (ER) visits and hospitalizations. We hypothesized that scores on psychiatric scales would predict future acute health care utilization.

**Methods:** Between May–Aug 2015, 85 geriatric psychiatry outpatients and inpatients were recruited and assessed using the Brief Symptom Inventory (BSI-53), the Patient Health Questionnaire (PHQ-9) and the Activities of Daily Living questionnaire (ADL). Univariate and multivariate Cox regression were used to evaluate whether scores on the questionnaires predicted time-to-acute health care utilization outcomes at 12-month follow-up: psychiatric ER visits, psychiatric hospitalization, medical ER visits and medical hospitalization.

**Results:** Our results showed that both the BSI-53 and the PHQ-9 items and total scores did not predict future mental health care utilization. However, an association was found between the total score in the ADL questionnaire and subsequent medical ER visits OR = 1.613/point increase on ADL (worse functioning) (95% CI: 1.244, 2.093); p < 0.001., which was independent of covariates.

**Conclusions:** Overall, our results did not find psychiatric self-report to be predictive of acute health services utilization in geriatric psychiatry patients. However, there was an association between worse functioning on the ADL and medical ER visits. Future research can confirm whether assessment of geriatric psychiatry patients’ functional ability and tailoring services to this may help prevent mental health utilization.

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Assessing Geriatric Psychiatrists’ Participation in End-of-Life Care Discussions
Sarah A. Kleinfeld, MD1; Edward Wicht, MD, JD, LLM2

1Medstar Georgetown University Hospital, Arlington, VA
2Medstar Washington Hospital Center, Washington, DC

Introduction: As the U.S. population ages, attention and focus on end-of-life (EOL) care issues is critically important. According to the Institute of Medicine’s 2015 report, Dying in America, twenty percent of Americans are expected to be over the age of sixty-five by 2050 (compared with nine percent in 1960).1 One survey of approximately 2,000 Medicare beneficiaries showed that forty percent had not engaged in discussions regarding EOL care planning with family or providers.2 Patients are more likely to have discussed EOL care planning if they are female, Caucasian, college-educated, or have chronic medical conditions.1,2 In 2015, the Centers for Medicaid and Medicare Services (CMS) finalized plans to provide reimbursements to physicians and healthcare providers for EOL care planning discussions.2 Previously cited clinician barriers to initiating EOL care discussions included prognostic uncertainty, fear of causing distress, navigating patient readiness, and feeling inadequately trained for EOL care discussions.1,3 Geriatric psychiatrists are uniquely positioned to have a strong role in this conversation given their training in both the medical and psychosocial dynamics that play significant roles in patients’ decision making. Although significant work has been done regarding EOL care and fields such as palliative care, internal medicine, oncology, and critical care, limited literature is available regarding geriatric psychiatry’s views on its part in end-of-life care discussions. The primary objective of this study is to determine if geriatric psychiatrists and trainees (geriatric psychiatry fellows and psychiatry residents interested in geriatric psychiatry) currently discuss end-of-life care issues with their patients. We hope to learn how frequently geriatric psychiatrists discuss end-of-life care issues with their patients, their comfort level with these discussions, and their beliefs about the role of the geriatric psychiatrist in the EOL care conversation.

Methods: Geriatric psychiatrists (defined as those who have completed fellowship training in geriatric psychiatry or those who treat patients aged sixty-five and older) and trainees (geriatric psychiatry fellows and psychiatry residents interested in geriatric psychiatry) will be surveyed through an online survey tool. Participants will be recruited from email list-servs available through the American Association of Geriatric Psychiatry or email addresses obtained from geriatric psychiatry training program websites. Potential participants will be sent a brief electronic survey consisting of nineteen questions. The survey will remain open for completion for an eight-week period. Background information will be obtained regarding level of training, area of clinical practice, and the percentage of time spent providing care to geriatric patients. Participants will be asked if they document the presence of an advanced directive, living will, or surrogate decision maker or if they discuss these options with patients. Finally, the survey includes questions about level of comfort discussing end-of-life care decisions, degree to which participants discuss these issues with their patients, and interest in additional training or continuing medical education (CME) related to this topic.

Results: Results are pending at this time. Survey data will be collected by December 31, 2016. Results will be analyzed to determine how many participants discuss end-of-life care issues with their patients and their interest in additional training in this area. Additionally, survey responses will be reviewed to see if specific care settings (i.e. nursing homes, academic medical centers, and Veterans’ Affairs medical centers) or level of training are associated with differences in responses about discussing end-of-life care decisions.

Conclusions: Greater awareness and attention to EOL care issues is increasingly important as the number of elderly Americans grows. Geriatric psychiatrists are in a unique position to play an important role in EOL care decision making with their patients. Our study aims to gain a better understanding of the degree to which providers in this field discuss EOL care planning with their patients and barriers that may prevent them from doing so to a greater degree.

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References
Reminiscence Therapy in Patients with Neurocognitive Disorders: A Case Report and Literature Review
Sarah A. Kleinfeld, MD

Medstar Georgetown University Hospital, Arlington, VA

Introduction: Approximately 5.2 million adults in the United States aged 65 and older suffer from Alzheimer disease. Current treatment options have limited efficacy. In addition to cognitive decline, many patients experience neuropsychiatric symptoms including agitation, depression, apathy, psychosis, and disinhibited behavior. No FDA-approved pharmacologic treatments currently exist to address these debilitating symptoms, which are often distressing to both patients and caregivers. Nonpharmacological and psychosocial interventions play an important role in the management of neuropsychiatric symptoms in patients with neurocognitive disorders such as Alzheimer’s disease. We report a case of a patient with major neurocognitive disorder due to Alzheimer’s disease and significant behavioral disturbances who responded positively to reminiscence therapy. In addition, this poster will include a literature review discussing the evidence for the use of reminiscence therapy in patients with neurocognitive disorders.

Methods: Mr. J is a ninety-year-old man with a past psychiatric history of major neurocognitive disorder due to Alzheimer’s disease and a past medical history of hyperlipidemia, hypothyroidism, and benign prostatic hypertrophy. He presented to our geriatric psychiatry clinic in 2013 to establish care. Mr. J is a retired elementary school teacher and lives with his wife of thirty years in an independent living senior apartment building. Mr. J’s wife reported he was diagnosed with Alzheimer’s disease in 2003 and was started on donepezil at that time. Memantine was added to his medication regimen about two or three years later. At the time of his initial evaluation in our clinic, Mr. J was pleasant, calm, and cooperative. He was engaged in the interview and answered questions about his history along with his wife. He presented with mild cognitive impairment and a Folstein Mini-Mental Status Exam score of 20. His medication regimen of donepezil 10 mg by mouth nightly and memantine 10 mg by mouth daily was continued. He did well for some time, but his wife began to report increased agitation, behavioral disturbances, and resistance to care beginning in the spring of 2016. In addition to starting the patient on low-dose valproic acid twice daily, Mr. J and his wife were referred to our psychology department for a psychosocial intervention.

Results: Mr. J and his wife began bi-monthly therapy in July 2016. Therapy was focused on reminiscence, defined in the literature as an interaction involving recalling or telling memorable events, which often occurs in stages and with others present. Mr. J and his wife were encouraged to bring in pictures and photo albums associated with positive memories to their visits. Although Mr. J could not always recall the people or events depicted in the photos, his wife was encouraged to describe the moments captured in the images. At times Mrs. J was surprised by how much her husband would remember after receiving prompting from her. Mr. J and his wife were encouraged to undertake similar activities at home between sessions. Within three months of beginning therapy, Mrs. J noted significant improvement in her husband’s behavioral symptoms and stated he was calmer and easier to redirect. She also expressed significant relief of her own caregiver burnout, which had been a concern prior to starting therapy.

Conclusions: This poster reports a case of a ninety-year-old patient with major neurocognitive disorder due to Alzheimer’s disease who developed agitation, irritability, and behavioral disturbances. These symptoms were burdensome to the patient and quite distressing to his wife, who is his primary caretaker. In addition to initiating pharmacological treatment, the couple was referred for psychotherapy with an emphasis on reminiscence. Mr. J responded positively to this intervention and his wife reported significant relief of her own caretaker burnout. Reminiscence therapy may offer positive benefits to patients and caretakers. This poster will focus on the evidence for the use of reminiscence therapy in patients with neurocognitive disorders. The corresponding literature review will include definitions of reminiscence therapy as well as information regarding indications, benefits, and limitations associated with this modality.

This research was funded by: None.

References
Introduction: Financial exploitation in the elderly is a billion dollar concern in the United States. Although elders are more likely to be taken advantage of by trusted relatives, they suffer the greatest financial loss from frauds and scams devised by strangers. This report examines the case of an 82 year old female who, despite having the insight that she gave away $500,000 to a lottery scam, remained hopeful about future winnings. Geriatric psychiatry was consulted to evaluate her capacity to manage her finances. By law, incapacity requires that a mental condition mediate the disability. This woman had no evidence of a cognitive, mood, or gambling disorder. However she did meet DSM-V criteria for a delusional disorder. The purpose of this study was to perform a literature review supporting the diagnosis of delusional disorder as a mediator for financial incapacity.

Methods: We conducted a medline search (1996-Aug 2016) by combining the key terms “elder abuse”, “financial exploitation or scam or fraud”, and “delusion”.

Results: The victim’s neuropsychological testing was essentially normal (MMSE 27/30, EXIT25 14/50, CLOX1 10/15, CLOX2 12/15, MIS 6/8, GDS 3/15). However, her fixed belief that she won the lottery was not amenable to change in light of conflicting evidence. Moreover, apart from the ramifications of this delusion, her functioning was not markedly impaired and her behavior was not obviously bizarre or odd. These findings supported a diagnosis of delusional disorder. However, our medline search produced zero results using our combined search terms.

Conclusions: Our literature review suggest that our formulation of this victim’s participation in lottery scams as a delusional disorder is a novel concept. Linking her lottery participation with delusions allowed for the psychiatry consultant to declare her incapacitated, which can facilitate family oversight of her finances, saving her from financial ruin. Given the civil rights implications of capacity assessments, more research is needed to establish the validity of this formulation.

Introduction: Glutamate is the major excitatory neurotransmitter in the central nervous system. Metabotropic glutamate receptor 5 (mGluR5) is among the various receptors for glutamate and is thought to play a vital role in cognitive performance. mGluR5 is located post-synaptically on neurons and on glia with high density in the hippocampus; intermediate density in the striatum, cerebral cortex, deep cerebellar nuclei, and thalamus; and lowest density in the cerebellum. There is evidence linking mGluR5 to the memory changes that occur as part of both normal aging, as well as pathological aging and Alzheimer’s disease (AD). For example, post-mortem studies show an increase in mGluR5 protein in the caudate nucleus with normal aging which may be a response to synaptic loss that serves to preserve excitability and function. This is supported by further studies where aged rats without memory decline have preserved mGluR5 density compared with those with significantly worse spatial memory. Since cognitive decline may occur in the context of both normal and pathological aging, understanding the associated changes in mGluR5 expression is of great importance. Therefore, we utilized positron emission tomography (PET) with $[^{18}F]FPEB$, a radioligand that binds to mGluR5 with high specificity to measure mGluR5 availability in adults across the life span. Measuring mGluR5 availability in healthy adults of a wide age range will allow us to investigate whether differences in mGluR5 availability is associated with normal aging.

Methods: Participants consisted of 45 cognitively normal men and women between the ages of 18 and 81 years old who were control subjects from 4 different studies. Participants had no neurodegenerative disease, no major medical or psychiatric illness, and had enrolled as healthy controls in a $[^{18}F]FPEB$ PET study. All participants underwent magnetic resonance imaging (MRI) scanning on the 3T Trio Scanner with a twofold purpose: 1) to exclude any structural abnormalities; 2) to co-register the PET and MRI images for image analysis. All participants underwent $[^{18}F]FPEB$ brain PET scan. The radiotracer was injected as bolus plus constant infusion and participants were scanned during steady state (90-120mins post-injection). Volume of
distribution \( V_T \) was computed using a venous or arterial input function. Because there is gray matter atrophy with normal aging, we performed gray matter masking and partial volume correction to correct for effects related to overall gray matter atrophy. The primary outcomes included \( V_T \) of the whole cerebral cortex, hippocampus, or whole cortex. Secondary outcomes included BPND using a cerebellar gray matter reference region. Linear regression was used to investigate the association between mGluR5 availability and age.

**Results:** mGluR5 availability was inversely associated with age in the caudate \((p = 0.006, r^2 = 0.161)\), but not in the hippocampus or whole cortex. When \( V_T \) values were calculated using gray matter masked images, or images corrected for partial volume effects, there was no statistically significant association with age. Secondary analysis performed using a tissue reference region (cerebellar gray matter) yielded similar results with a significant association between age and \( V_T \) in the caudate \((p < 0.005, r^2 = 0.294)\), but not in hippocampus or whole cortex. There were no significant associations after gray matter masking or partial volume correction. In additional models, sex did not contribute significantly to the model variance when included as a covariate. Finally, there were no significant associations between receptor availability and the potential confounding variables of tracer injection dose or plasma free fraction.

**Conclusions:** This is the first study to investigate age related differences in mGluR5 availability in humans. The results indicate that there are no age related declines in receptor density in the regions examined despite previous adult and preclinical animal studies suggesting age related changes in mGluR5 protein. Some regional associations with age were initially noted, however these relationships were no longer present after either gray matter masking or partial volume correction. This suggests a general loss of gray matter with age that is not mGluR5 specific. Understanding the effect of age on mGluR5 expression continues to be important for studies of age related diseases such as AD.

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Poster Number: EI 40

**Characteristics of Older Adults with Homelessness or Housing Instability**

Corey Hassell, BA; Marcia Ca Mecca, MD; Adam P Mecca, MD, PhD

1Quinnipiac University, New Haven, CT
2Yale University, New Haven, CT
3VA Connecticut, New Haven, CT

**Introduction:** According to a report by the U.S. Department of Housing and Urban Development in 2012, 1.5 million people in the U.S. experience homelessness at some point during a year. Trajectories to homelessness in older age vary widely. Some individuals become homeless as children or young adults and then experience episodes of housing instability throughout their life. Alternatively, older adults may have their first episode of housing instability or homelessness during later life. Understanding the relationship between aging and housing instability may provide evidence for age-related risk factors. For example, homelessness may represent a new functional impairment in older individuals who have a history of previous housing stability, and potentially be a harbinger of an undiagnosed cognitive impairment. This project aims to explore potential risk factors and trajectories of housing instability experienced by the oldest adults seeking housing assistance at the VA Connecticut Healthcare for Homeless Veterans (HCHV) Clinic.

**Methods:** Chart Review: This is a retrospective study conducted by chart review of adults who were 69 years old and older and seen in the VA Connecticut HCHV Clinic during a 12-month period between October 2014 and October 2015. Data extracted from the chart include age, housing history, medical/psychiatric visit history and diagnoses. In addition, information from housing assessments and past records were used to construct a narrative timeline of past housing experiences up to the date of presentation to the HCHV Clinic during the study period. These narratives were used to determine the age each person first experienced housing instability and homelessness. Statistical Analysis: A linear regression model was used to describe the observed relationship between current age and age of first episode of housing instability or homelessness. A theoretical model of housing instability and homelessness with age was constructed assuming that the expected probability of an episode of unstable housing or homelessness was equally likely at any age starting from the age of 18.

**Results:** During the study period, there were 843 HCHV Clinic visits for 556 individuals. We reviewed the charts of individuals that were 69 years old or older. This included 47 patients ranging from 69 to 89 years old. Three patients were excluded because they were stably housed. Another 6 were excluded due to a lack of information regarding housing history. Thirty seven of the remaining 38 were men. We identified 34% (13) at risk of losing their housing and 66% (25) currently homeless. The sample included 39% (15) with a substance use disorder, 56% (22) with a mood disorder, 24% (9) with an anxiety disorder and 8% (3) with a history of schizophrenia or schizoaffective disorder. Only 18% (7) were diagnosed with any cognitive impairment. Only one of the patients had an episode of housing instability or homelessness before 50 years old and 7

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had an episode of housing instability or homelessness prior to 60 years old. Age when first at risk of homelessness (Figure 1) and age when first homeless (Figure 2) were much higher than expected based on the theoretical (probability) model (see red dotted lines). In addition, both age at risk ($r^2 = 0.28$, $p < 0.05$) and age homeless ($r^2 = 0.34$, $p < 0.05$) remained highly correlated with age of presentation to the HCHV Clinic. This indicates that older patients are likely experiencing housing instability for the first time.

**Conclusions:** The results of this investigation provide evidence that older adults seeking housing assistance are experiencing recent housing instability for the first time. Comparison to prediction models suggests that age may be a risk factor for new housing instability and homelessness. This raises a question of whether housing instability in older adults may represent a new functional impairment and a first presenting symptom of an underlying neurocognitive disorder. If so, evaluating and supporting this impairment will be essential to assist patients in regaining safe and stable housing. Further investigations that include assessment of housing trajectories of younger patients will be important to determine the strength and validity of this observation.
Creation of a Psychosocial Interventions Clinic for Elderly Patients with Schizophrenia

Angela Golas, MD, FRCPC; Petal S. Abdool, MD, FRCPC; Joydip Banerjee, MHSc, BScPT; Rita Desai, BHSc. (HD), CHSM, PMP; Benoit H. Mulsant, MSc, MD, FRCPC; Christopher R. Bowie, PhD, PhD; Tarek K. Rajji, MD, FRCPC

1CAMH, Toronto, ON, Canada
2University of Toronto, Toronto, ON, Canada
3Queen’s University, Kingston, ON, Canada

Introduction: 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 project discusses the implementation of CR together with CBSST into the clinical setting as part of a Psychosocial Interventions (PI) 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 living. 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. Patients 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 patients (N = 15); one group has received CR (N = 7). All patients are over the age of 60 (mean [SD] age: 67.9 [3.9]) and have a diagnosis of schizophrenia. CBSST had a positive and significant effect on the Leisure activities domain, Independent Living Skills Survey—Self Report before CBSST (M = 0.43, SD = 0.13) compared to after (M = 0.51, SD = 0.12) the intervention (paired t(14) = −2.56, p = 0.02). There was no significant improvement on cognitive or functional measures for patients receiving the CR intervention with the participants who completed thus far. Qualitative feedback from patients 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 for each intervention.

Optimizing Prescribing of Antipsychotics in Long-Term Care (Opal)

Julia Kirkham, MD, MSc; Dallas Seitz, MD, PhD

Queen’s University, Kingston, ON, Canada

Introduction: Increasing numbers of older adults are affected by dementia, and many will eventually reside in long-term care (LTC). Inappropriate antipsychotic use in this setting is common and associated with serious adverse effects. Limited evidence exists on the most effective strategies for reducing inappropriate antipsychotic prescribing. The objective of the study was to evaluate a multicomponent approach including an educational program to reduce inappropriate antipsychotic prescribing in LTC facilities.

Methods: A prospective, stepped wedge, controlled study design was used to evaluate the effect of the intervention in 10 LTC facilities in Ontario and Saskatchewan, Canada. The primary outcome was the proportion of residents receiving an antipsychotic without a diagnosis of psychosis.

Results: At baseline, the overall antipsychotic prescribing rate was 28.6% (Standard Deviation (SD) 4.3%). Data collection is ongoing; results at three months following implementation showed a relative reduction in the mean rate of inappropriate antipsychotic prescribing of 5.2% (SD 7.8%). The change was not statistically significant (P = 0.06). There were no significant changes in related quality indicators, including falls, restraint use, and behavioural worsening.
Conclusions: Preliminary study results show a trend towards lower rates of inappropriate antipsychotic prescribing. Previous studies have observed larger reductions, however, comparisons across studies are difficult owing to highly variable study designs, and few high quality Canadian studies exist. Early results are promising; if effective in the complete evaluation, the intervention offers a sustainable and practical means by which to improve the care of older adults in LTC.

Physician Involvement in Patients’ Retirement Decision-Making
Nisha Mehta-Naik, MD; Nancy Needell, MD; Caitlin Snow, MD

New York Presbyterian-Weill Cornell Medical Center, New York, NY

Introduction: Retirement is often the first significant life transition of older age, with wide ranging biopsychosocial effects on an individual’s financial status, social support structure, physical and mental health. Studies suggest that retirement, depending on individual circumstances, is correlated with either improvement or decline in mental health for older adults1. In the setting of an aging American population with increased average life expectancies, it will become progressively more important for physicians to understand if and how retirement impacts physical and mental health so as to best tailor health promotion efforts during this life transition. Moreover, physicians may benefit from better understanding the complexities of retirement decision-making, in an effort to better address their patients’ concerns. Research has explored how physicians interface with patients regarding key psychosocial stressors that impact older adults. There is literature to suggest that physicians discuss other key life transitions with patients, including bereavement2 and elder abuse3. However, thus far, no research has explored physicians’ involvement in patients’ retirement decision-making process. The current study aims to examine physician involvement in patients’ retirement decision-making, and the factors influencing involvement including demographic characteristics, attitudes, barriers and practices. 1. Mojon-Azzi S, Sousa-Poza A, Widmer R. The effect of retirement on health: a panel analysis using data from the Swiss Household Panel. Swiss Medical Weekly. 2007; 137:581–585 2. Lemkau JP; Mann B, Little D, et al. A Questionnaire Survey of Family Practice Physicians’ Perceptions of Bereavement Care. Archives of Family Medicine. 2000; 9(9):822–829. 3. Kennedy RD. Elder abuse and neglect: the experience, knowledge, and attitudes of primary care physicians. Family Medicine. 2005; 37(7)481-5.

Methods: Physicians in the Departments of Psychiatry and Internal Medicine at an academic medical center will be sent questionnaires regarding physician involvement in patients’ retirement decision-making process, and barriers to involvement. This study will be conducted through a web-based survey, such that respondents’ identities will remain anonymous. The questionnaire consists of 4 sections: 1) Demographic information (without any protected health information), 2) Physician Attitudes towards patient retirement decision-making, 3) Barriers to physician involvement in patient retirement decision-making, and 4) Physician practices regarding patient retirement decision-making. The survey design was adapted from a study regarding physician practices and attitudes regarding bereavement care2, as well as discussions with clinical experts.

Results: Data are being collected and will be reported.

Conclusions: Formal conclusions pending analysis of results. The results of this specific study may highlight physicians’ strengths and specific limitations in discussing retirement with patients.

This research was funded by: This study has not received financial support.

Tai Chi Interventions in Mental Illness: Results From a Pilot Study in Adults and a Systematic Review in Older Adults
Angela Potes, MSc1,2, Gabriela Torres-Platas, PhD1,2, Zoë Thomas, MD1,2, Joseph Therriault, BSc1,2, Rebecca Fox, BA2, Linda Morin2, Joanne Drapeau2, Marilyn Segal, MD1,2, Karl J. Looper, MD, MSc1,2, N.P. Vasavan Naig, MD1,2, Akshya Vasudev, MD4, Helen Lavretsky, MD1, Soham Rej, MD, MSc1,2

1McGill University, Montreal, QC, Canada
2Jewish General Hospital, Montreal, QC, Canada
3Douglas Mental Health University Institute, Montreal, QC, Canada
4University of Western Ontario, London, ON, Canada
5University of California Los Angeles, Los Angeles, CA
**Introduction:** The high prevalence of mental disorders in our aging population is placing increasing pressure on the health care system with population growth, particularly in geriatric psychiatry. Therefore, there is great interest to find alternative, scalable, and cost-effective strategies to improve psychological well-being in older adults. Mind-body interventions are gaining popularity and have been found to be effective in treating major depression, cognitive dysfunction, anxiety, substance use, chronic physical illnesses, sleeping problems, and other mental issues. Tai Chi/Qigong, a millenary movement-based intervention used in China, has been shown to be effective to treat mental health conditions and its implementation in the Western world is rising. The objective of the present study is to describe the impact of Tai Chi/Qigong in (A) a retrospective pilot study of adults suffering from depression and anxiety and (B) a systematic review on mind-body interventions on older adults with mental illness.

**Methods:** (A) The pilot study examined 13 adults who participated in a 13-week hour-long Tai-Chi/Qigong course. Measures of depression, anxiety, insomnia and quality of life were compared pre- and post-intervention. (B) Articles were included if they were randomized controlled trials, published in English, French or Spanish. Articles were excluded if they did not meet the following criteria: sample of older adults (a) > 60yrs, (b) at risk of or diagnosed with mental illness, (c) with sample sizes larger than 5, (d) measuring quantitative outcomes and/or (e) no unpublished material.

**Results:** (A) Despite not reaching statistical significance (p > 0.05), results from the pilot study indicate moderate effect sizes on depression (d = 0.47) and anxiety (d = 0.38). (B) Ten mind-body RCT intervention articles were selected out of 3915 identified and 847 fully retrieved and revised articles. Out of these ten, six RCTs on Tai Chi/Qigong were identified. Three addressed its effects in older adults with depression. Significant results were reported in mood improvements and delays of cognitive decline.

**Conclusions:** Findings suggest that Tai-Chi/Qigong interventions may provide accessible, well-tolerated, resource-efficient strategies to improve psychological well-being in older adults. Tai-Chi/Qigong may have potential benefits for depression, anxiety, and cognition in this population. Study limitations from the pilot study and systematic review identify the confounding effects of group social support and the use of small sample sizes. Higher quality RCTs including active control groups are warranted.

**Poster Number: EI 45**

**Measuring Participant Effort in a Depression Prevention Trial: Who Engages in Problem-Solving Therapy?**

Sarah T. Stahl, PhD; Steven Albert, PhD; Mary Amanda Dew, PhD; Stewart J. Anderson, PhD; Jordan Karp, MD; Ariel Gildengers, MD; Meryl A. Butters, PhD; Charles F. Reynolds III, MD

University of Pittsburgh, Pittsburgh, PA

**Introduction:** To determine the acceptability of clinical interventions for depression prevention, identifying clinical characteristics associated with its engagement is needed. The purpose of this study is to describe levels and correlates of participant engagement in Problem Solving Therapy (PST) in adults 60 and older with subthreshold depression.

**Methods:** As part of a clinical trial to prevent depression among older adults with subthreshold depression, participants who were randomized to receive PST completed 6–8 sessions in which they learned skills to solve self-selected problems that were contributing to stress and reduced quality of life. To measure participants’ engagement with PST, interventionists completed 3 scales that rated participants’ level of participation in problem solving activities, understanding of the multistep process of PST, and between-session homework effort. Using logistic regression, we examined whether physical health, level of cognitive function, and disability served as correlates of engagement in the PST intervention of our depression prevention trial (n = 50).

**Results:** The 50 trial participants, on average, participated in all intervention activities with good effort, had a good understanding of PST concepts, and demonstrated good, adequate work in all homework areas. Gait speed was significantly associated with engagement in PST. Participants who walked faster were more likely to engage with PST compared to participants who walked slower. All other baseline variables did not reach significance.

**Conclusions:** Our data suggest that older adults who walk slowly may need alternative delivery methods to fully engage in PST. Gait speed is reflective of physical and cognitive health and predictive of frailty, disability, and psychomotor speed slowing. For these reasons, gait speed and may be a marker for poor engagement in psychosocial interventions like PST. We strongly encourage geriatric specialists to assess older adults’ gait speed and develop pathways to access evidence-based interventions for those with slow and/or declining gait speed.

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Main and Mediating Effects of Age and Functional Impairments on Veterans’ Mental Health Care Engagement
Karina Davis, MD¹; Mark Lyubkin, MD¹,²; Minden Sexton, PhD²

¹University of Michigan, Dexter, MI
²Ann Arbor Veterans Affairs Hospital, Ann Arbor, MI

Introduction: Geriatrics patients (defined by 65 years and older), often report deficits in multiple functional areas. Unfortunately, this may result in additional barriers for Veterans seeking mental health treatment. Since the transition to DSM-V, the World Health Organization Disability Assessment Schedule (WHODAS) 2.0 has been the recommended assessment for evaluating functional impairments following removal of the Global Assessment of Functioning (GAF). The WHODAS is a 36 item self-administered assessment that evaluates an individual’s level of functioning in six key domains: cognition, mobility, self-care, getting along, life activities and participation. Although the WHODAS has been validated across multiple patient populations, little work has been done amongst veterans who have different mental health disease prevalence and may differ on self-reported disability measure. Moreover, further studies are needed to determine how functional impairments, as measured by the WHODAS 2.0, mediate engagement in care, particularly for Veterans at risk for increased disability. Since functional impairments are known to increase with age, our study will, first assess whether this finding can be replicated in the veteran population and then explore the relationships between geriatric status and treatment engagement (as measured by the number of appointments attended and possibly medication compliance as defined by medication possession ratios) and whether WHODAS 2.0 Global and Domain scores mediate this relationship.

Methods: Data was obtained from a sample of 463 Veterans (amongst who 84 were geriatric) attending initial mental health evaluations at a Midwestern Veterans Healthcare System outpatient generalist psychiatry clinic. Responses from the WHODAS 2.0 collected and stratified by WHODAS domain as well as age. Next, we plan to determine treatment defined as engagement by number of psychiatric and therapy follow up appointment a veteran attended via chart review. Institutional review board approval was obtained from the participating medical center.

Results: Preliminary t-tests indicated geriatric Veterans, (defined by age ≥ 65), were significantly more likely than their non-geriatric peers to report greater total disability (t = 2.34, p = .02), and worsened functioning in mobility (t = 4.22, p < .001), self-care (t = 3.98, p < .001), and domestic/leisure responsibility (t = 3.74, p < .001) domains. We propose to utilize mediated regression analyses to ascertain whether geriatric Veterans are less likely to engage in care and to test whether functional impairments mediate this relationship.

Conclusions: If a relationship between functional impairment and engagement in care is determined, this may help identify Veterans at greatest risk for premature attrition or medication non-compliance and suggest potential avenues to reduce barriers to care engagement.

Aging and Autism Spectrum Disorder
Elizabeth Wise, MD¹; Peter Rabins, MD, MPH¹; Marcia Smith, PhD²

¹Johns Hopkins Hospital, Baltimore, MD
²CSAAC, Montgomery Village, MD

Introduction: First described in 1943 by Leo Kanner, autism has traditionally been conceptualized as a childhood disorder. Kanner described the children’s “all-powerful need for being left undisturbed,” their inability to relate themselves, and an “anxiously obsessive desire for the maintenance of sameness.” These core features are captured in the DSM 5 diagnosis of autism spectrum disorder (ASD), which requires deficits in social communication and interaction and restrictive, repetitive patterns of speech or behavior. The increase in prevalence of ASD is likely attributable to extrinsic factors, including improved awareness and changes in diagnostic classification, as well as individual-level risk factors, such as increasing parental age. Epidemiological studies have shown that ASD is a lifelong condition. Thus, with the increased prevalence of ASD and graying of the population, there is an essential need for studies on aging and autism.

Methods: This study was set at a private non-profit agency that serves people with ASD. We identified 114 individuals who entered the agency between 1981 and 2009 and were 30 years or older at the time of data collection. We excluded 11 who left the program in the past 35 years. Of the remaining 103, 24 declined to participate, 74 consented, and 5 had died. We reviewed their medical and psychological records to check the validity of the ASD diagnosis, using DSM 5 criteria. We collected data...
from charts on demographics, language capability, intellectual functioning, behavior problems, medical conditions, supported employment, and staff support. Language and intellectual abilities were determined by the psychologist’s clinical experience and knowledge of each individual. We performed Fisher’s exact test to compare behaviors between two age groups and between genders, as well as McNemar’s test to determine change in point prevalence of behavior problems. ANOVA was run to compare medical conditions between the two age groups. An individual blind to the IQs but who knew the participants ranked their level of intellectual disability as either none, mild, moderate, or severe. These rankings correlated with their measured full-scale IQs, with \( p < 10^{-5} \).

**Results:** 79 participants were included in the study, all but five living at time of study completion. Almost 80% were Caucasian men. Mean age was 49.9 years. One third had either no speech or spoke in one to two-word phrases. Mean full-scale IQ in the 39 participants in whom it had been measured was 61.2. Physical aggression toward others was the most prevalent problematic behavior; nearly three-quarters of the sample engaged in this behavior at some point. Self-injurious behavior was reported in two thirds of the sample. The prevalence of all problematic behaviors declined over time, with significance levels below 0.05.

The two groups were divided into those older than 50 versus those younger than 50, based on the sample’s median age of 50. The two groups did not differ significantly in gender, prior placement, or language capabilities. Mean paternal age at birth was 32.8 yrs in participants older than 50 versus 29.7 yrs in those younger than 50 (\( p < 0.05, \) ANOVA \( f = 3.97 \)). There was a trend toward significance in comparing the mean maternal age at participant’s birth (mean maternal age older group = 29.6 yrs vs. the younger group 27.5 yrs, \( p = 0.11 \)). Age did not have a significant effect on intellectual disability among those who had measured full-scale IQs. A significant difference in the mean age among the staff to patient residential ratios was found by ANOVA, with older participants needing less intensive supervision (\( f = 3.46, P < 0.05 \)). Those who needed 1:1 supervision or two staff members’ assistance, were youngest (\( f = 3.46, p < 0.05 \)), with a mean age of 46.2 yrs. There was a trend for physical aggression, property destruction, screaming, and tantrums to be more prevalent in the younger group and for elopement to be more prevalent in the older group.

**Conclusions:** We examined a specific cohort of people who are ascertained by the fact that they needed a high level of care. Thus, the sample does not represent the spectrum of autism. The data demonstrate that many aspects of ASD have been relatively stable over the past 70 years. Comparing behavioral symptoms, medical disorders, and levels of residential and vocational supervision in those born before 1966 to those born in the 1970s and 80s, we found significant differences in only two domains: more GI disorder other than constipation in older individuals and more aggression in the younger group. At the level of the individual in this cohort, problematic behaviors improved dramatically over time. Whether this was due to interventions provided by staff or aging cannot be determined from the study, but these data demonstrate that these symptoms are not a necessary concomitant of ASD.
## 2017 AAGP Annual Meeting

### Demographics and Characteristics of Adults with ASD

<table>
<thead>
<tr>
<th>Age</th>
<th>All ages (% , N = 74)</th>
<th>Age &lt; 50 (% , N = 34)</th>
<th>Age &gt;= 50 (% , N = 40)</th>
<th>Age Comparisons</th>
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<tbody>
<tr>
<td>30–39 years</td>
<td>20.3 (15)</td>
<td>23.5 (8)</td>
<td>32.5 (13)</td>
<td>$\chi^2 = 0.7276$, $p = 0.393649$</td>
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<td>40–49 years</td>
<td>25.7 (19)</td>
<td>32.3 (11)</td>
<td>10 (4)</td>
<td>Fisher exact test = 0.021889</td>
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<td>50–59 years</td>
<td>36.5 (27)</td>
<td>14.7 (5)</td>
<td>25.6 (10)</td>
<td>Fisher exact test = 0.096108</td>
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<tr>
<td>60–69 years</td>
<td>13.5 (10)</td>
<td>5.2 (2)</td>
<td>76.9 (30)</td>
<td>Fisher exact test = 0.065431</td>
</tr>
<tr>
<td>70–79 years</td>
<td>4.1 (3)</td>
<td>5.2 (2)</td>
<td>76.9 (30)</td>
<td>Fisher exact test = 0.065431</td>
</tr>
</tbody>
</table>

### Mean paternal age at birth, SD

- All ages: 31.3, 6.52
- Age < 50: 29.5, 6.9
- Age >= 50: 32.78, 6.8

### Mean maternal age at birth, SD

- All ages: 28.6, 5.65
- Age < 50: 26.97, 5.43
- Age >= 50: 29.62, 5.57

### Mean age, standard deviation

- All ages: 49.9, 10.4
- Age < 50: 40.8, 6.01
- Age >= 50: 57.8, 6.4

### Median age

- All ages: 50.5
- Age < 50: 42
- Age >= 50: 57

### Male

- All ages: 82.4, 61
- Age < 50: 88.2, 30
- Age >= 50: 77.5, 31

### Female

- All ages: 17.6, 13
- Age < 50: 11.8, 4
- Age >= 50: 22.5, 9

### Caucasian

- All ages: 79.7, 59
- Age < 50: 70.6, 24
- Age >= 50: 87.5, 35

### African-American

- All ages: 10.8, 8
- Age < 50: 11.8, 4
- Age >= 50: 10, 4

### Hispanic

- All ages: 2.7, 2
- Age < 50: 5.9, 2
- Age >= 50: 0

### Asian

- All ages: 6.8, 5
- Age < 50: 11.8, 4
- Age >= 50: 2.5, 1

### Autism errors

- All ages: 54.1, 40
- Age < 50: 50, 17
- Age >= 50: 57.5, 23

### Full language

- All ages: 10.8, 8
- Age < 50: 14.7, 5
- Age >= 50: 7.5, 3

### Non-verbal or one-word phrases

- All ages: 35.1, 26
- Age < 50: 35.3, 12
- Age >= 50: 35, 14

### Staff: patient residential supervision

- 1:3: 38.9, 28
- 1:2: 23.6, 17
- 1:1 or 2:1: 37.5, 27

### Staff: patient vocational supervision

- 1:3: 2.8, 2
- 1:2: 61.1, 44
- 1:1 or 2:1: 36.1, 26

### No restrictions

- All ages: 70.8, 51
- Age < 50: 63.6, 21
- Age >= 50: 76.9, 30

<table>
<thead>
<tr>
<th>Behaviors and Supervision by Age</th>
<th>All ages in past year, N = 74 (% ,n)</th>
<th>Age &lt; 50 in past year, N = 34 (% ,n)</th>
<th>Age &gt;= 50 in past year N = 40 (% ,n)</th>
<th>Age comparisons</th>
</tr>
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<tbody>
<tr>
<td>Self-injurious behavior</td>
<td>28.4, 21</td>
<td>23.5, 8</td>
<td>32.5, 13</td>
<td>$\chi^2 = 0.7276$, $p = 0.393649$</td>
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<tr>
<td>Physical aggression</td>
<td>20.3, 15</td>
<td>32.3, 11</td>
<td>10.4</td>
<td>Fisher exact test = 0.021889</td>
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<tr>
<td>Verbal aggression</td>
<td>1.4, 1</td>
<td>2.9, 1</td>
<td>0</td>
<td>Fisher exact test = 0.096108</td>
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<tr>
<td>Property destruction</td>
<td>17.6, 13</td>
<td>20.6, 7</td>
<td>15.6</td>
<td>$\chi^2 = 0.3963$, $p = 0.528996$</td>
</tr>
<tr>
<td>Elopement</td>
<td>2.7, 2</td>
<td>0</td>
<td>5.2</td>
<td>Fisher exact test = 0.696108</td>
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<tr>
<td>Screaming</td>
<td>9.5, 7</td>
<td>11.8, 4</td>
<td>7.5, 3</td>
<td>Fisher exact test = 0.696108</td>
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<tr>
<td>Stealing</td>
<td>1.4, 1</td>
<td>0</td>
<td>2.5, 1</td>
<td>Fisher exact test = 0.696108</td>
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<tr>
<td>Hoarding</td>
<td>1.4, 1</td>
<td>0</td>
<td>2.5, 1</td>
<td>Fisher exact test = 0.696108</td>
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<tr>
<td>Oppositional behavior</td>
<td>1.4, 1</td>
<td>0</td>
<td>2.5, 1</td>
<td>Fisher exact test = 0.696108</td>
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<tr>
<td>Staff:patient residential supervision</td>
<td>1:3: 38.9, 28</td>
<td>27.3, 9</td>
<td>48.7, 19</td>
<td>$\chi^2 = 5.4335$, $p = 0.065431$</td>
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<tr>
<td>1:2: 23.6, 17</td>
<td>21.2, 7</td>
<td>25.6, 10</td>
<td>$\chi^2 = 5.4335$, $p = 0.065431$</td>
<td></td>
</tr>
<tr>
<td>1:1 or 2:1: 37.5, 27</td>
<td>51.5, 17</td>
<td>25.6, 10</td>
<td>$\chi^2 = 5.4335$, $p = 0.065431$</td>
<td></td>
</tr>
<tr>
<td>Staff: patient vocational supervision</td>
<td>1:3: 2.8, 2</td>
<td>0</td>
<td>5.2, 2</td>
<td>$\chi^2 = 3.5949$, $p = 0.165721$</td>
</tr>
<tr>
<td>1:2: 61.1, 44</td>
<td>54.5, 18</td>
<td>66.7, 26</td>
<td>$\chi^2 = 3.5949$, $p = 0.165721$</td>
<td></td>
</tr>
<tr>
<td>1:1 or 2:1: 36.1, 26</td>
<td>45.4, 15</td>
<td>28.2, 11</td>
<td>$\chi^2 = 3.5949$, $p = 0.165721$</td>
<td></td>
</tr>
<tr>
<td>Restricted access to item</td>
<td>29.2, 21</td>
<td>36.4, 12</td>
<td>23.1, 9</td>
<td>$\chi^2 = 1.5274$, $p = 0.216501$</td>
</tr>
<tr>
<td>No restrictions</td>
<td>70.8, 51</td>
<td>63.6, 21</td>
<td>76.9, 30</td>
<td>$\chi^2 = 1.5274$, $p = 0.216501$</td>
</tr>
</tbody>
</table>
In Vivo Staff Training of the Nursing Staff by Behavior Medicine to Improve Detection of Depression in the Long Term Care Setting

Paroma Mitra, MD, MPH1,2; Honey Win, MD1; Nathalie Gomez, MD1; Michelle Marquez, PsyD1; Ravindra Amin, MD1

1New York City Health + Hospitals, New York, NY
2New York University Medical Center, New York, NY

Introduction: Co-morbid depression adversely impacts a variety of health, cost and quality of life outcomes across all care settings. Common metrics in the literature that measure depression in the long term care (LTC) include prevalence of syndromal depression (22–40%), and depression treatment rates (25% of those with syndromal depression). Another important metric, prevalence of depressive symptoms as measured by PHQ-9 or PHQ-9 OV during the quarterly administration of the Minimum Data Set (MDS), administered by the primary care staff is collected by the Centers for Medicaid and Medicare Services -{CMS} (6.7 % national average, with a range of 0–20%). The Long-Term Care Minimum Data Set (MDS) is a standardized, primary screening and assessment tool of health status that forms the foundation of the comprehensive assessment for all residents in a Medicare and/or Medicaid-certified long-term care facility. The MDS contains items that measure physical, psychological and psychosocial functioning. Evidence through literature review do not show whether these symptoms of depression measuring 6.7% via MDS is truly accurate or not. We hypothesize that depression is under detected by PHQ-9 method administered during the MDS. Our previous attempts to improve depression detection by using standard classroom training for nursing staff on administration of the PHQ-9 and PHQ-9 OV had shown limited improvement in detection of depression. We previously demonstrated that compared to classroom training, in vivo training by a mental health clinician yielded significant and sustained improvement to reduce the use of unnecessary antipsychotic medication in managing dementia related behaviors.

Methods: In a 165 bed long term care facility, we identified two comparable units with 33 beds each to be an intervention unit, and a care-as-usual unit. The intervention consists of a three phase in vivo staff training, each phase implemented over a three month duration. Phase 1: a psychologist performs depression rating using PHQ-9 or PHQ-9 OV, whichever is applicable, in front of the nursing staff. Phase 2: The nursing staff is coached by the psychologist to perform the depression rating scale. Phase 3: The staff is supported and monitored doing the assessment in an ongoing manner by the psychologist. We intend to implement the phase I and phase II s over six consecutive months, while the phase III may endure much longer.

Results: The baseline data for the 2nd quarter of 2016 show 1.7 % of all patients scoring positive for moderate to severe depression (a score of 10 or more on PHQ-9 or PHQ-9 OV). The preliminary result from the for all 15 patients who got a psychologist administered depression rating as part of the phase-I on the intervention unit show 4 patients (3/15, 20 %) scoring positive for mild depression (score between 5 and 9), and 1 patient (1/15, 6.6%) scoring positive for moderately severe depression (score of 15), while 10 patients (10/15, 66.6%) scoring for no depression (score of 4 or below). At baseline in 2nd quarter 2016, all 15 patients had scored has having no depression (score of 4 or below). We intend to present the depression score data from phase-I and phase-II implemented over a six months period on the intervention unit, and a comparison of this data with the depression scores on the care-as-usual unit for the same duration.

Conclusions: Improving measuring symptoms of depression by the primary care team will improve both detection of emerging clinical depression and monitor treatment outcomes; it has quality of care implications for 16,000 nursing homes in the US. To
improve the quality of life of residents, proper screening of depression is crucial, so is the selection of proper screening tool. According to past research studies, a preference should be given to scales with good response formats, good match with residents’ characteristics, and fewer resources required for administration in terms of time completion and clinical training. For residents who have difficulties completing self-report instruments due to physical, communicative, and/or cognitive abilities, a combination of self, observer, or collateral sources data should be used. The Mood Questionnaire based on the PHQ-9 that is embedded in the MDS 3.0 resident assessment protocol is one such scale. We hope to demonstrate that in vivo staff training, though labor intensive, yields a true and a sustained improvement in the primary nurses’ performance to the symptoms of depression using PHQ-9 or PHQ-9 OV which is a CMS required tool. The two main limitations are short implementation period, and small sample size. Despite the study limitations, results of this study are generalizable and may be replicated at various nursing homes in the country.

Poster Number: EI 49

The Impact of Primary Care on Medical Health Outcomes for Elderly Patients with Psychotic Disorders—a Comparison between Two Hospital Systems in Canada

Ching Yu, MD, MA1; Tarek K. Rajji, MD2

1McGill University, Montreal, QC, Canada
2University of Toronto, Toronto, ON, Canada

Introduction: Patients with schizophrenia or related disorders are at higher risk of medical complications and premature deaths. Their mortality risk can be as high as two to three times that of the general population. The high mortality rates can be partially attributed to their psychiatric issues. They are also found to be associated with the increased burden of medical comorbidities. Given that patients with schizophrenia are less likely to seek appropriate care and may not be compliant to medical services, it is possible that their poorer quality of primary health care can increase their risks of developing medical complications. However, there has yet been any studies that examine the correlation between adverse medical events and the quality or availability of primary health care for the patients. In our study, we aimed to examine this correlation.

Methods: This was a retrospective cohort study of all geriatric psychiatry patients (age ≥ 60) diagnosed with a primary psychotic disorder who have been followed at and/or admitted at two major hospital systems of two metropolitan cities in Canada between 2003 and 2008 - Center for Addiction and Mental Health in Toronto and Jewish General Hospital in Montreal. We followed each patient retrospectively for a period of 5 years. We ascertained the clinical and demographic data of the patients—their age, gender, psychotropic and non-psychotropic medications, medical co-morbidities, and access to primary care physicians. During the 5 year follow-up period, we ascertained the number of psychiatric and medical hospitalizations. We also used the Charlson Comorbidity Index to systemically categorize the medical comorbidities. Using Pearson Chi-Square and Student t-tests, we compared the clinical and demographic characteristics of the two populations as well as their rates of psychiatric and medical hospitalizations. We also examined the bivariate correlations between the hospitalization and the patient characteristics. The study was approved by the ethics committee at both sites.

Results: We ascertained the clinical and demographical characteristics of the two patient populations (Table 1). We observed higher rates of medical hospitalization among the patients followed at the Montreal hospital (n = 50) in comparison to the patients followed at the Toronto hospital (n = 87). 32.0% of the patients in Montreal required medical hospitalization over the 5 year follow-up period while 13.8% of the patients in Toronto required medical hospitalization (χ² = 6.47, p = 0.01). Access to primary care physician does not correlate with the rate of medical hospitalization among the two population (Table 2). For the Toronto population, there is an expected positive correlation between the number of medical hospitalization and their Charlson

Table 1. Clinical and Demographic Characteristics

<table>
<thead>
<tr>
<th></th>
<th>JGH (N = 50)</th>
<th>CAMH (N = 87)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age</td>
<td>74.96 (61–95)</td>
<td>70.07 (59–84)</td>
</tr>
<tr>
<td>Female</td>
<td>33 (66.0%)</td>
<td>36 (41.4%)</td>
</tr>
<tr>
<td>Total number of psychotropic medication</td>
<td>2.37</td>
<td>1.94</td>
</tr>
<tr>
<td>Number of patients with access to GP</td>
<td>22 (44.0%)</td>
<td>66 (75.9%)</td>
</tr>
<tr>
<td>CCI Score</td>
<td>0.76</td>
<td>1.36</td>
</tr>
<tr>
<td>Hypertension</td>
<td>10 (20.0%)</td>
<td>40 (46.0%)</td>
</tr>
<tr>
<td>Diabetes</td>
<td>7 (14.0%)</td>
<td>23 (26.0%)</td>
</tr>
<tr>
<td>Dyslipidemia</td>
<td>3 (6.00%)</td>
<td>32 (36.8%)</td>
</tr>
<tr>
<td>Total number of patients with psych rehosp during follow-up period</td>
<td>21 (42.0%)</td>
<td>12 (13.8%)</td>
</tr>
<tr>
<td>Total number of patients with med hospital during follow-up period</td>
<td>16 (32.0%)</td>
<td>12 (13.8%)</td>
</tr>
</tbody>
</table>
Comorbidities Index (Correlation = 0.225, p = 0.04) (Table 2). We did not observe a similar correlation for the population in Montreal (Correlation = 0.00, p = 1.0) (Table 2). We found that medical burdens among the patients in Montreal are lower than expected (Table 1). Foremost, the average Charlson Comorbidities Index scores among the Montreal population is significantly lower than the average scores among the Toronto population (Table 1). Furthermore, the prevalence of various common chronic medical comorbidities among the Montreal group are lower than expected. Only 20.0% of the Montreal patients had the diagnosis of hypertension in comparison to the prevalence of above 60% in the general elderly population in Quebec. Likewise, only 14% of them had the diagnosis of diabetes comparing to the observed prevalence of 20% while only 6% of them had the diagnosis of dyslipidemia comparing to the prevalence of 59% found in the general elderly Canadian population.

Conclusions: Our results are in accordance with a previous study that demonstrated patients with chronic mental illness have significantly more undiagnosed medical illnesses. With their medical illnesses inadequately diagnosed, we suspect that the conditions were inadequately managed. Consequently, we observed higher rates of medical hospitalization among the population. It had been proposed that patients with schizophrenia have less access to medical services and it might affect their health outcomes. However, we did not observe any significant correlation between adverse health events and access to primary health care. On the other hand, it had been shown that the quality of primary health care for patients with schizophrenia is subject to general practitioner bias and that patients with schizophrenia are less likely to receive important health monitoring which include blood pressure and cholesterol check. Our data suggests that health outcomes of elderly patients with schizophrenia are affected not simply by their access to primary care but rather by the quality of the care. In conclusion, we see the need to continue optimizing primary health care delivery for elderly patients with schizophrenia in order to help prevent adverse health outcomes.

Poster Number: EI 50

Assessing Responsiveness of Health Systems to Drug Safety Warnings
Lauren B. Gerlach, DO1; Claire Stano, MS2; Matheos Yosef, PhD2; Hyungjin M. Kim, ScD1,2; Kara Zivin, PhD1,2

1University of Michigan, Ann Arbor, MI
2VA Ann Arbor Healthcare System, Ann Arbor, MI

Introduction: FDA warnings are common and over 60 drug safety communications were issued within the United States in 2011 alone. However, there are currently limited studies evaluating the responsiveness of health systems to FDA warnings. The 2011–2012 FDA drug safety warnings for citalopram and QT prolongation provide a natural experiment to assess how health systems respond to safety communications. The present study evaluated the response of the Veterans Health Administration (VHA), the largest integrated health system within the United States, to the 2011 and 2012 FDA warnings for citalopram. We sought to determine system-level VA national trends in citalopram use and dose compared to alternative antidepressants following the FDA warnings.

Methods: The study period included data from 2/2010 to 9/2013. In order to understand changes in antidepressant prescribing rates, we calculated the percentage of patients prescribed citalopram for each month and compared findings across three study periods: 1) prior to the FDA warning in 8/2011; 2) post-2011 FDA warning until the second warning in 3/2012;
Mind the Heart-Evaluating the Arrhythmogenic Potential of Trazodone
Rushiraj C. Laiwala, MD1,2; Shilpa Srinivasan, MD3

1University of South Carolina School of Medicine, Blythewood, SC
2Department of Mental Health, Columbia, SC

Introduction: In 1966, Trazodone was developed in Italy. After initial marketing in Europe in the 1970s, it received U.S. Food and Drug Administration (FDA) approval in 1981 for the treatment of major depression.1 Since the mid-1980s, the use of antidepressants for symptomatic treatment of insomnia has grown steadily with Trazodone becoming most frequently used antidepressant2 and the second most commonly prescribed agent for the treatment of insomnia.3 With a total number of annual prescriptions at 26,242,000 in 2013, trazodone was 6th most frequently prescribed psychiatric medication in country.4 Although trazodone was initially thought to have a safe cardiac profile, there has been a growing concern regarding trazodone and cardiac dysrhythmias. In this poster, we review a clinical case and related literature examining the arrhythmogenic potential of Trazodone.

Methods: A literature search was conducted on Pubmed utilizing terms, “Trazodone and Arrhythmias” “Trazodone and Cardiac Conduction Abnormalities” & “Trazodone and Cardiac Toxicity”. Results yielded 78 articles. Of these, 19 articles were relevant to Trazodone’s arrhythmogenic potential.

Results: Literature review suggested 7 case reports and case series reporting cardiac side effects and dysrhythmias associated with use of trazodone. There were also 10 reports related Trazodone overdose with significant medical complications. Out of 10 cases, 4 cases documented EKG changes and arrhythmias. Plus 3 preclinical and animal studies have elucidated mechanism of cardiac toxicity, by accessing role of IKr (rapid’ delayed rectifier current) inhibition by trazodone, leading to QT prolongation and increasing risk of subsequent arrhythmia.

Conclusions: With more than 26 millions prescriptions written annually and being second most common agent for treatment of insomnia, Trazodone’s omni is unquestionable. Earlier studies suggested that trazodone appears to have a relatively benign cardiovascular profile. Over the years, several case series and case reports have emerged suggesting electrophysiological abnormalities secondary to treatment with trazodone in both patients with premorbid cardiac co-morbidities and in those without it. These abnormalities ranged from prolonged PR interval, complete heart block, bradycardia, supra ventricular tachycardia, QT prolongation, ventricular tachycardia and torsades de pointes. Dangerous cardiac complications associated with at least 4 cases of trazodone overdose further exemplify potential cardiac-toxicity associated with trazodone. Although, existing literature on trazodone-associated cardiac side effects and toxicity is limited, available literature and wide spread of use of trazodone advocates for prescriber awareness of trazodone’s cardiovascular safety profile and further need for investigation to evaluate the cardiac safety profile of Trazodone.
Poster Number: EI 52

Catatonia Secondary to Olanzapine Discontinuation: A Dramatic Decline and a Dramatic Response
Gabriella Waserstein, MD; Mina Boazak, MD; Anusuiya Nagar, MD; Justin Palanci, MD; Larry Tune, MD
Emory University, Atlanta, GA

Introduction: Catatonia is an underdiagnosed neuromotor syndrome that is defined by the DSM-5 as the presence of three or more of twelve established symptoms (cataplexy, mutism, stupor, waxy flexibility, posturing, mannerisms, stereotypes, echopraxia, grimacing, echolalia, agitation, negativism). The under-recognition of this syndrome by clinicians has been noted in the context of schizophrenia, major mood disorders, and general medical conditions. While its pathophysiology is an ongoing topic of study, catatonia has been etiologically linked to various psychiatric and medical illnesses. The adage of old, often refers to mood disorders, psychotic disorders, and medical conditions (in order of primacy) as being the causative agents of catatonia. Iatrogenic catatonic reactions secondary to antipsychotic treatment have been implicated as well. However, there is a gap in the literature regarding the paradoxical therapeutic benefit of antipsychotics on patients presenting with catatonic symptoms, as well as the negative impact of antipsychotic discontinuation on catatonic symptoms. The following is a report of one such case.

Methods: AG is a 67-year-old African American female with a past psychiatric history of treatment resistant major depressive disorder with psychotic and catatonic features, and a past medical history of hypertension, hyperlipidemia, anemia, and hypothyroidism, who was being treated with bifrontal ECT maintenance therapy in conjunction with Olanzapine 15 mg twice daily and Sertraline 200 mg daily. On the day of her 88th ECT treatment, AG presented as markedly divergent from her established baseline. At the time, her symptoms included anhedonia, avolition, alogia, paranoia, stuporousness, marked ambitendency, and mannerisms. She was admitted to our adjoining psychiatric unit with a diagnosis of major depressive disorder with catatonic and psychotic features impairing her ability to care for herself. Discussion with the patient’s daughter and caregiver revealed that AG had recently stopped taking her psychotropics, triggering a rapid decline that led to her presenting symptoms. Her psychotropic medication regimen, as described above, were therefore immediately resumed. In addition, she was started on a full course of inpatient ECT.

Results: AG rapidly improved throughout her stay. By her third treatment AG had shown significant enough improvement to warrant discharge with continued outpatient ECT. Upon discharge, her depressive, psychotic, and catatonic symptoms had completely remitted, though mild cognitive deficits and hyperverbal speech persisted.

Conclusions: This case contributes to the literature by speaking towards a potential etiology of our patient’s catatonia and highlighting the dramatic effect of ECT on the patient. Furthermore, in the case we discuss the symptomatic crossover between our patients various illnesses, pointing to a potential cause of the under diagnosis of catatonia.

Poster Number: EI 53

The Effects of Cognitive Behavioral Therapy among Older Adults Compared with Younger Adults in Community Mental Health
Sarah Pospos, MD, MS; Rachel Higier, PhD; Lisa Benson, PhD; Lynn McFarr, PhD

1Harbor-UCLA Medical Center, Torrance, CA
2Los Angeles County Department of Mental Health, Los Angeles, CA

Introduction: Although Cognitive Behavioral Therapy (CBT) has been successfully established to treat depression in both geriatric and younger adult populations, research that directly compared CBT effectiveness in older versus younger patients were somewhat limited to specific clinical populations and had varying methods, measures and, most importantly, conclusions. For example, one study found similar CBT effects on depression but larger Quality of Life (QoL) improvement in younger versus older veterans aged 65 +. While superior CBT effects were seen in older adults aged 54 + in a meta-analysis on psychotherapy and an agoraphobia study, another meta-analysis showed stronger effects in younger patients with GAD. In light
of these rather conflicting findings, we aim to determine if CBT favors one age group over another in patients with mixed anxiety and depression. As seniors growth projection reaches 20% of U.S. population by 2030, appraisal of CBT effectiveness in older versus younger individuals could potentially influence public mental health direction in addressing these emerging needs. Furthermore, given CBT benefits of minimal adverse effects and high versatility (i.e., could be administered by various providers versus only by physicians), CBT could especially be useful in public mental health settings that emphasize provider diversity. As part of a larger ongoing study, this study aims to compare the rates of depression and anxiety as well as CBT effects on anxiety, depression, suicidal ideation (SI), and QoL across age groups in a public mental health outpatient setting.

Methods: 78 both anxious and depressed outpatients who participated in individual CBT at Los Angeles County were categorized into younger (N = 62), older (aged 55–64) (N = 10), and oldest (aged 65+) (N = 6). Clinicians included psychologists, marriage and family therapists, and social workers who received training through the Los Angeles County Department of Mental Health CBT Roll-Out, the largest roll-out of CBT among community mental health providers in the United States to date. Baseline and post-treatment measures of anxiety (Generalized Anxiety Disorder 7-item), depression (Patient Health Questionnaire 9-item), QoL and SI (Outcome Questionnaire 45-item) were administered and analyzed with descriptive statistics, repeated measures analysis of variance and Cohen’s d effect size estimates.

Results: Among 208 CBT outpatients, 19 of 21 (90%) older and 7 of 11 (64%) oldest patients were both depressed and anxious and 2 of 21 (10%) and 3 of 11 (27%) were depressed. 78 (50%) of 157 both anxious and depressed patients completed post-treatment measures (mean age = 37.09, SD = 17.67), with no significant baseline differences between completers and non-completers or between age groups. Overall, depressed patients had higher psychological (depressed mood, anhedonia, guilt, poor concentration) versus somatic depressive sub-score (insomnia, fatigue, poor appetite, psychomotor retardation), but there were no significant between-age group differences (F(2, 78) = .04, p = .93 and F(2, 78) = .02, p = .57). CBT generally decreased anxiety; overall, psychological and somatic depressive scores; SI; and improved overall, symptom distress-, interpersonal relation-, and social role-associated QoL, although the strongest effects were seen in the older group. Moreover, significant between-group differences were evident in QoL social role sub-score (F(2, 78) = .15, p < .01) with effect sizes of d = 1, d = .79, and d = .47 for older, young, and oldest group. With regards to QoL components, CBT predominantly improved symptoms distress for older (d = 1.58) and oldest group (d = 1.10), and social role for younger patients (d = .79).

Conclusions: Older community outpatients (aged 55+) mostly presented with comorbid depression and anxiety, with predominant psychological (versus somatic) depressive symptoms seen across age groups. While CBT appeared to decrease anxiety and depression, reduce SI and improve QoL across ages, the most prominent effect was found in the older group, with significant between age-group difference in social role-associated QoL. Our findings confirmed CBT superior effects in older adults, particularly in those who are both depressed and anxious, and added value to the very few studies that had compared CBT effectiveness across age groups. Thus, in addition to CBT benefits of minimal adverse effects and high versatility, these findings endorse CBT usage in treating the depressed or anxious elderly, especially in diverse care settings such as public mental health clinics. Moreover, CBT could particularly be useful when medical comorbidities or adverse effects of pharmacologic interventions severely limit treatment.

### Table 1. CBT Effects on Anxiety, Depression, Quality of Life and Suicidal Ideation

<table>
<thead>
<tr>
<th></th>
<th>Anxiety</th>
<th>Depression</th>
<th>Perceived Quality of Life</th>
<th>Suicidal Ideation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Box p-value</td>
<td>Levene p-value</td>
<td>Between-group</td>
<td>Within-group</td>
</tr>
<tr>
<td>GAD-7</td>
<td>.37</td>
<td>.14</td>
<td>&lt;.01 (p = .92)</td>
<td>.07 (p = .77)</td>
</tr>
<tr>
<td>PHQ-9</td>
<td>.36</td>
<td>.63</td>
<td>.03 (p = .35)</td>
<td>.04 (p = .23)</td>
</tr>
<tr>
<td>PHQ-9 Psych.</td>
<td>.64</td>
<td>.32</td>
<td>.04 (p = .24)</td>
<td>.06 (p = .10)</td>
</tr>
<tr>
<td>PHQ-9 Somatic</td>
<td>.03*</td>
<td>.50</td>
<td>.02 (p = .57)</td>
<td>.02 (p = .54)</td>
</tr>
<tr>
<td>OQ-45</td>
<td>.31</td>
<td>.12</td>
<td>.02 (p = .43)</td>
<td>.03 (p = .33)</td>
</tr>
<tr>
<td>OQ-45 SD</td>
<td>.14</td>
<td>.45</td>
<td>.03 (p = .39)</td>
<td>.03 (p = .28)</td>
</tr>
<tr>
<td>OQ-45 IR</td>
<td>.20</td>
<td>.38</td>
<td>.05 (p = .18)</td>
<td>.05 (p = .15)</td>
</tr>
<tr>
<td>OQ-45 SR</td>
<td>.68</td>
<td>.56</td>
<td>.15 (p &lt; .01*)</td>
<td>&lt;.01 (p = .93)</td>
</tr>
<tr>
<td>OQ-45 (item 8)</td>
<td>.78</td>
<td>.79</td>
<td>.21 (p = .46)</td>
<td>.03 (p = .34)</td>
</tr>
</tbody>
</table>

**Abbreviations.** Clinical measures: GAD-7: Generalized Anxiety Disorder 7-item, PHQ-9: Patient Health Questionnaire 9-item, PHQ-9 Psych.: Patient Health Questionnaire 9-item psychological symptoms sub-score, PHQ-9 Somatic: Patient Health Questionnaire 9-item somatic symptoms sub-score, OQ-45: Outcome Questionnaire 45-item, OQ-45 SD: Outcome Questionnaire 45-item Symptom Distress sub-score, OQ-45 IR: Outcome Questionnaire 45-item Interpersonal Relations sub-score, OQ-45 SR: Outcome Questionnaire 45-item Social Role sub-score.
options among older adults. As medication status may serve as a potential confounder, future randomized controlled trials that compare CBT intervention group, medication intervention group and control group are needed. Tables 1 and 2

Table 2. CBT Effect Sizes on Anxiety, Depression and Suicidal Ideation Across Age Groups

<table>
<thead>
<tr>
<th></th>
<th>Cohen’s d</th>
<th>Baseline (SD)</th>
<th>Post-measure (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Effect Size</td>
<td>Mean Score</td>
<td>Mean Score</td>
</tr>
<tr>
<td>Anxiety</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GAD-7</td>
<td>Total</td>
<td>1.09</td>
<td>14.13 (4.63)</td>
</tr>
<tr>
<td></td>
<td>Young</td>
<td>1.03</td>
<td>13.98 (4.73)</td>
</tr>
<tr>
<td></td>
<td>Older</td>
<td>1.68</td>
<td>15.60 (5.02)</td>
</tr>
<tr>
<td></td>
<td>Oldest</td>
<td>0.73</td>
<td>13.17 (2.40)</td>
</tr>
<tr>
<td>Depression</td>
<td>Total</td>
<td>0.84</td>
<td>15.92 (6.26)</td>
</tr>
<tr>
<td></td>
<td>Young</td>
<td>0.80</td>
<td>15.58 (6.37)</td>
</tr>
<tr>
<td></td>
<td>Older</td>
<td>1.27</td>
<td>17.10 (6.62)</td>
</tr>
<tr>
<td></td>
<td>Oldest</td>
<td>0.48</td>
<td>17.50 (4.72)</td>
</tr>
<tr>
<td>PHQ-9 Psych.</td>
<td>Total</td>
<td>0.89</td>
<td>7.99 (3.16)</td>
</tr>
<tr>
<td></td>
<td>Young</td>
<td>0.83</td>
<td>7.79 (3.22)</td>
</tr>
<tr>
<td></td>
<td>Older</td>
<td>1.69</td>
<td>8.70 (3.40)</td>
</tr>
<tr>
<td></td>
<td>Oldest</td>
<td>0.58</td>
<td>8.83 (1.94)</td>
</tr>
<tr>
<td>PHQ-9 Somatic</td>
<td>Total</td>
<td>0.76</td>
<td>7.32 (3.19)</td>
</tr>
<tr>
<td></td>
<td>Young</td>
<td>0.78</td>
<td>7.21 (3.30)</td>
</tr>
<tr>
<td></td>
<td>Older</td>
<td>0.83</td>
<td>7.80 (3.19)</td>
</tr>
<tr>
<td></td>
<td>Oldest</td>
<td>0.36</td>
<td>7.67 (2.34)</td>
</tr>
<tr>
<td>Suicidal Ideation</td>
<td>Total</td>
<td>0.22</td>
<td>1.04 (1.09)</td>
</tr>
<tr>
<td></td>
<td>Young</td>
<td>0.13</td>
<td>0.98 (1.11)</td>
</tr>
<tr>
<td></td>
<td>Older</td>
<td>0.52</td>
<td>1.00 (1.05)</td>
</tr>
<tr>
<td></td>
<td>Oldest</td>
<td>0.63</td>
<td>1.67 (0.82)</td>
</tr>
</tbody>
</table>

Abbreviations. Clinical measures: GAD-7: Generalized Anxiety Disorder 7-item, PHQ-9: Patient Health Questionnaire 9-item, PHQ-9 Psych.: Patient Health Questionnaire psychological symptoms sub-score, PHQ-9 Somatic: Patient Health Questionnaire somatic symptoms sub-score, OQ-45: Outcome Questionnaire 45-item.

Poster Number: EI 54

Medical and Psychiatric Comorbidities Associated with Opiate Use Disorder in the Geriatric Population: A Systematic Review

Rachel Kester, DO1; Jason Strauss, MD1; Alecia Greenlee, MD1; Joji Suzuki, MD2; Hsiang Huang, MD, MPH1

1Cambridge Health Alliance/Harvard Medical School, Cambridge, MA
2Brigham and Women’s Hospital/Harvard Medical School, Boston, MA

Introduction: In the United States, the number of adults over 65 is expected to grow to 90 million by 2020. As the baby boomer generation ages, substance use among older adults is projected to double from 2.8 million in 2006 to 5.7 million in 2020. Between 1992 and 2008, the proportion of older adult hospital admissions that reported primary heroin abuse increased from 7.2 to 16%. There has been little research involving the interaction between substance abuse and the aging process, however, increased comorbid medical conditions coupled with age-related physiologic changes increase the risk of harm in this population. It is important for health care providers, public health officials and policy makers to monitor the treatment needs of this population. The objective of this systematic review is to examine the medical and psychiatric comorbidities associated with opioid use in older adults to better understand and treat this growing population.

Methods: Our systematic review was based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method. We searched for English language articles via MEDLINE, CINAHL, PsycINFO, PsycArticles, EMBASE, Cochrane Library, Web of Science and reference lists of key papers. We checked the reference lists of reports of all included studies and other systematic reviews for additional published, unpublished or ongoing research. The search focused on articles published from the
Early Clinical Exposure to Geriatric Psychiatry and Medical Students’ Interest in Caring for Older Adults: A Randomized Controlled Trial—Preliminary Findings

Klara Pokrzywko, MA1; Petal S. Abdool, MD2; Gabriela Torres-Platas, PhD3; Trent Semeniuk, MD4; Yara G. Moussa, MD5; Ghizlane Moussaoui, BSc6; Chloé Leon, MD7; Wayne Baic5, MD8; Michael Wilkins-Hoa, MD9; Paul Blackburn, MD, MEd10; Jess Friedland, MD11; N.P. Vasavan Nair, MD12; Karl J. Loope13, MD, MSc13; Marilyn Segal, MD13; Tricia Woon, MD, MSc13; Tarek K. Rajji, MD2; Soham Rej, MD, MSc3

1University of Montreal, Montreal, QC, Canada
2University of Toronto, Toronto, QC, Canada
3McGill University, Lachine, QC, Canada
4UBC, Vancouver, BC, Canada
5McMaster University, Hamilton, ON, Canada

Introduction: We expect that in the next 25 years, the population aged older than 65, will almost double in developed countries. This age group will require an increased amount of mental health care with psychiatric, cognitive and medical complexity. Unfortunately, there are few doctors wishing to specialize in geriatric psychiatry, geriatric medicine, or to care for older adults in general. Previous reports have identified a number of potential predictors of interest in geriatric psychiatry amongst residents, including exposure to geriatric psychiatry rotations early in medical school and comfort level in working with geriatric patients and their families. Our next step is to evaluate how clerkship exposure to geriatric psychiatry may influence 3rd year medical students’ interest in caring for older adults, comfort in caring for them and their families, as well as choosing geriatric psychiatry as a specialization.

Methods: This was a pragmatic randomized controlled education trial conducted at the Jewish Hospital (JGH) and the Douglas Mental Health Institute, McGill University, Montreal, Canada. Medical students undergoing their 16-week half-time 3rd year clerkship rotation in psychiatry were randomized to the equivalent of 2–4 weeks full-time exposure to clinical geriatric psychiatry (n = 30). Depending on the site, the allocation of the rotation in geriatric psychiatry intervention to control group varied from 1:3 (Douglas Institute) to 3:1 (JGH). To document medical students’ interest, students were asked to complete a paper or an online survey (https://www.surveymonkey.com/) before and after their rotation in psychiatry. Questions were conceived using demographic, experiential/educational, and vocational potential predictors of interest identified in the literature. The main outcome measure was “change in interest in caring for older adults”. Participants rated their interest on a 10-point Likert scale (1 = not at all interested, 5 = neutral, 10 = very interested). To facilitate interpretation, a rating of 7 and above was defined as “interested in becoming a geriatric psychiatrist”, whereas rating of 5 and below where considered “not interested”. Similar definitions were used for our secondary outcomes: “interest in becoming a geriatric psychiatrist” and “comfortable in working with older adults and their families”. Statistical Analysis: We compared the intervention and control groups for demographic and other potentially confounding variables using Chi-Squared and Student’s T-tests. We examined bivariate associations between exposure to geriatric psychiatry and interest in becoming a geriatric psychiatrist using Chi-Square, Fisher’s exact, Student’s T-test, Mann-Whitney-U test, as appropriate, comparing the main outcomes between the intervention and control groups.

Results: 30 medical students completed the study by the time our interim analysis was conducted. Students who were exposed to geriatric psychiatry (n = 16) and those that were not exposed to geriatric psychiatry (n = 14) during their clerkship rotation did not differ with respect to their baseline demographic characteristics. Being randomized to geriatric psychiatry exposure (n = 16/30) was associated with a greater increase in “interest in becoming a geriatric psychiatrist” at 16-week follow-up (mean change of 0.56 +/-1.67 vs. -0.92 +/-1.86 points on a 10-point Likert scale, U = 66.5, p = 0.048). However, there was no association between geriatric psychiatry exposure during clerkship and our main outcome change in “interest in caring for older adults” (mean change of 0.0625 +/-2.49 vs. 0.50 +/-1.87, U = 91.5, p = 0.337) or secondary outcome, change in “comfort working with geriatric patients and their families” (mean change of 0.56 +/-2.34 vs. 0.14 +/-2.07 with U = 106.5, p = 0.817).
Conclusions: Our initial results suggest a trend toward an association, as there were no statistical significance, between geriatric psychiatry clinical exposure during psychiatry clerkship in medical school and an increase in interest in becoming a geriatric psychiatrist. This potential impact of geriatric psychiatry clinical exposure during medical school, as well as a) effects on other outcomes and b) subgroup effects, will be further assessed when our randomized trial will be completed (anticipated n = 150 by June 2017). Whatever the future final results of this pragmatic geriatric psychiatry education RCT, we believe they will help inform the design of medical school curricula in preparation for our increasingly aging population.

This research was funded by: Charitable Donations to the Jewish General Hospital, as well as the Canadian Institutes of Health Research Fellowship Award.

Poster Number: EI 56

Interprofessional Learners’ Performance in a Late Life Depression Simulated-Patient Assessment: Preliminary Results From the GEAR-UP Project
Rebecca M. Radue, MD1; Lisa Li Boyle, MD, MPH1,2; Lauren Welch, PharmD, BCPS, CGP1; Alexis Eastman, MD1; Rebecca Schroeder, BS2; Carol Hermann, MA, MLIS2; Steve Barczi, MD, FAASM1,2

1University of Wisconsin, Madison, WI
2William S Middleton Memorial Veterans Hospital, Madison, WI

Introduction: The Wisconsin Geriatric Workforce Enhancement Program (GWEP) is a consortium of five collaborating organizations and over a dozen community partnerships that has been in place for over 30 years. The GWEP’s primary aim is to prepare the health care workforce to optimize health outcomes for older adults in Wisconsin. An interdisciplinary team of GWEP educators from the University of Wisconsin (UW) and the Madison VA Geriatric Research, Education, and Clinical Center (GRECC) have collaborated on the Geriatrics Equipped and Ready for Unsupervised Practice (GEAR-UP) project with a primary goal of designing an adaptable, competency-based learning experience that develops “geriatrics-equipped” inter-professional team members and that is replicable to different professional training programs. The GEAR-UP project will provide training to healthcare professionals across a variety of learner levels, including medical students, residents, and VA Geriatric Scholars (a program that offers a geriatrics immersion experience for professionals in primary care). The GEAR-UP educators developed a simulated-patient experience designed to be completed by diverse learners during their geriatric training to assess learner competency in 3 core areas of geriatrics: cognitive impairment, falls, and late life depression (LLD). Preliminary findings of learners’ performance for the LLD simulation are presented and highlight need for targeted training for learners in the area of LLD.

Methods: The GEAR-UP team includes geriatricians, a geriatric pharmacist, a geriatric psychiatrist, and administrators. The team reached consensus on specific evidence-based practice behaviors necessary to deliver competent care for older adults with cognitive impairment, falls, and LLD. The team developed standardized-patient simulations in the three content areas to assess learners’ level of competence in these practice behaviors. These simulations were then tested starting in March 2014. Assessment tools were adapted over time during this process in a two-phase approach based on feedback from assessors and learner participants. The simulations are used as formative evaluations and instruction tools. They are placed strategically near the mid-point of the learners’ geriatric practical to allow faculty to highlight areas of needed improvement and focus for the remainder of the geriatric practical. Assessment scores are maintained in a database that can be used for further assessment of learner performance against their peers. We present descriptive data from 2014 to present with new data continuing to be collected. As the assessment tool slightly varied from year to year in an effort to optimize the experience for learners, only shared key, evidence-based evaluation components are included in this analysis.

Results: To date, 77 learners, with medicine residents the majority, have completed the LLD simulation (Figures 1 and 2). The highest performing group has been the geriatric medicine fellows, while the lowest performing, the Geriatric Scholars (Figure 3). Performance varied across components of LLD evaluation and management, highlighted by extremes of 30% of learners asking about alcohol and drug use vs. 63% recommending appropriate behavioral activation strategies to help manage LLD (Figure 4[LB1]). [LB1]To Fig 4 graph, Added “Figure 4.” To title of Performance on Specific simulation components graph, along with “Geriatric Depression” in title.

Conclusions: Possible explanations for the observed variation in learner performance includes discipline specific biases, differences in training programs, time out of core training and differences in content exposure related to time allocated for geriatric training in different discipline-specific program schedules. The learners’ performance appears congruent with their level of training, with the exception of medical students and Geriatric Scholars. It was surprising that the Geriatric Scholars, who consist of primary care team members, displayed the lowest performance on the simulation while medical students did comparatively well. There were clear gaps in competencies for LLD in both areas of evaluation and management. Our sample is small with a large representation of medicine residents, thus we have not conducted statistical testing to determine whether observed differences are statistically significant. However, our observations do help inform areas of focus for further training. Our team continues to investigate barriers and
opportunities to train based on the disparities noted. Our team has identified potential future directions that include developing shared curriculum and shared evaluation approaches to train interprofessional teams, using outcomes of structured evaluations by way of a needs assessment to inform/adapt curriculum for learners, and collecting a normative database based on overall performance.
This research was funded by: William S. Middleton Veterans Administration (VA) Geriatric Research, Education and Clinical Center (GRECC) & University of Wisconsin (UW) Department of Medicine, Madison, WI — This project was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant U1QHP28712 (Geriatrics Workforce Enhancement Program). The information or content and conclusions contained herein are those of the authors and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

Poster Number: EI 57

Trauma in Older Adults: A Medical Education Initiative
Esther Rollhaus, MD; Alessandra Scalmati, MD, PhD
Montefiore Medical Center, Bronx, NY

Introduction: An appreciation for the prevalence and impact of patients’ trauma histories has led to new initiatives in trauma-informed healthcare. However, research on trauma-informed healthcare for older adults has lagged behind. Medical student education that fosters competency in trauma-informed interviewing and medical skills is limited, especially with regards to the care of older adults with either recent or distant histories of trauma.

Methods: To address these deficits in medical education we designed a curriculum to educate medical students about the prevalence of traumatic experiences in older adults and the impact of former trauma on older adults’ access to care and healthcare decision-making. The curriculum aims to foster empathy and interest in older adults with histories of trauma and to impart the interviewing skills and the principles of trauma-informed practice necessary for competent and sensitive medical care. The curriculum is case-based and involves an interactive didactic component, followed by a role play, in which students hone skills in trauma interviewing. To assess the efficacy of the curriculum, the scores of pre- and post-knowledge-based and attitudinal assessments will be compared.

Results: The curriculum was piloted to a cohort of twelve third year medical students. The data revealed trends toward greater post-course confidence in competencies such as taking a trauma history, empathizing with patients with histories of trauma, and understanding basic principles of trauma-informed care. Qualitative data obtained was overwhelmingly positive with many students appreciating the inclusion of this topic which had not been made available in the standard curriculum. The sample size is too small to make definitive conclusions about the efficacy of the curriculum so the survey will be administered to multiple cohorts over the course of the academic year.

Conclusions: While skill-based competency is not directly assessed, we expect that through education on the prevalence and impact of trauma and increased awareness of the principles of trauma-informed care, medical students will subsequently incorporate trauma enquiries into their care for older adults.
Association of Serotonin Genes with History of Suicide Attempt in Late Life Depression
Ali Bani Fatemi, MSc; Vincenzo de Luca, MD; James Kennedy, MD; Benoit H. Mulsant, MD; Eric Lenze, MD; Charles F. Reynolds III, MD

1Camh, Toronto, ON, Canada
2Washington University, St. Louis, MO
3University of Pittsburgh School of Medicine, Pittsburgh, PA

Introduction: Major Depressive Disorder (MDD) is a major risk factor for suicide. Familial, adoption, and twin studies suggest that the risk for suicide is both genetic and heritable. However, to date, there are no robust genetic predictors of suicide or suicide attempt in major depression. Several serotonin genes have been studied as candidate genes in suicidal behaviour such as HTR1A, HTR2A, HTR1B, HTR2C, TPH1, TPH2, 5HTT, and MAOA. The findings drawn from candidate gene studies in suicidal behavior are inconsistent.

Methods: We genotyped 18 functional variants of eight selected serotonin genes in a well characterized sample of older patients with MDD (n = 466). The genetic variants of each gene were compared between suicide attempters and non-attempters using Pearson chi-square.

Results: We found rs25531, HTTLPR, and 5HTT-VNTR in intron 2 in 5HTT significantly associated with suicide attempt.

Conclusions: We found that the G allele in the HTTLPR region is associated with suicide attempt, suggesting that this rare variant should be analyzed independently from the nearby long/short polymorphism. All previous studies on suicide attempt have neglected or combined this rare variant with the long/short polymorphism. Future studies need to confirm that the G allele in the HTTLPR region should be considered as a single marker in studies of genetic predictors of suicidality.

This research was funded by: CIHR, NIH.

Problem Solving Therapy Improves Social Problem Solving Skills in Older Adults with Depression and Low Back Pain
John Kasckow, MD, PhD; Charles F. Reynolds III, MD; Jordan Karp, MD; Sunita Chickering, MA; Jennifer Morse, PhD

1University of Pittsburgh Medical Center, Pittsburgh, PA
2VA Pittsburgh Health Care System, Pittsburgh, PA
3Chatham University, Pittsburgh, PA

Introduction: Depressive disorders and chronic low back pain (CLBP) are highly comorbid in older adults. Problem Solving Therapy has been used successfully in primary care with older adults with medical comorbidity to treat depression. A modified version - 'Problem Solving Therapy for Depression and Pain' (PST-DP) has been developed for the treatment of older adults with depression and CLBP. It is a systematic learning based and behaviorally activating approach guided by a therapist which teaches patients effective problem solving skills. Changes in problem solving styles are assessed with the Social Problem Solving Inventory (SPSI). In various populations it has been demonstrated that improved social problem solving skills are associated with less depressive symptoms. This has not been examined when treating older depressed patients with CLBP with problem solving approaches. We examined the hypothesis: An intervention consisting of high-dose venlafaxine and PST-DP (VEN/PST-DP) in older depressed adults with CLBP would lead to more improvements in SPSI scores relative to a control condition consisting of high dose venlafaxine with supportive management (VEN/SM).

Methods: Patient were ≥ 60 years old with the following: 1) PHQ-9 score ≥ 10; 2) PRIME-MD diagnosis of major depression, minor depression, or dysthymia; 3) low back pain more days than not of at least moderate severity, for at least the past 3 months; 4) score ≥ 8 on the 20-item Numeric Rating Scale for average low back pain in the past week; 5) a history of physician prescribed treatment for CLBP; 6) score ≥ 80 on the Modified Mini-Mental State exam; 7) No alcohol/substance misuse within 6 months; 8) willingness to stop current antidepressant pharmacotherapy. Exclusions were: 1) low back pain as a serious medically emergent condition; 2) psychotic spectrum disorder or bipolar disorder; 3) medically unstable, delirious, or terminally ill; 4) contraindication to venlafaxine; 5) wheelchair-bound. The intervention consisted of 2 phases. In phase 1, for
6 weeks all subjects received open-label treatment with venlafaxine XR up to 150 mg/day and supportive management (SM). Participants whose depression and/or pain did not meet criteria for response progressed to phase 2. During the 14 weeks of phase 2, participants were randomized to (VEN/PST-DP) or (VEN/SM). PST-DP differed from traditional Problem Solving Therapy as follows: 1) a greater focus on activity and movement scheduling; 2) if insomnia or stress were selected as problems, Brief Behavioral Treatment of Insomnia and instruction in progressive muscle relaxation and diaphragmatic breathing were provided; and 3) if pain was selected as a problem, clinicians offered instruction on more effective use of analgesics and how to improve communication with primary care providers about pain management. We characterized our sample with regards to baseline demographics. SPI scores were obtained at baseline and endpoint. To test our hypothesis, we used a random intercept mixed model to examine whether there were treatment differences in SPI scores at endpoint compared to baseline.

**Results:** 139 participants were randomized in phase 2; 68 received VEN/PST-DP and 71 received VEN/SM. The average age was 69.93 +/- 8.03 with 13.94 +/- 2.64 years of education. Fifteen percent were non-white and 60% were male; 54% were married/cohabitating, and 30% were employed. There was a significant treatment by time interaction effect for total SPI scores, with total SPI scores improving more in the VEN/PST group (β = 5.20 +/- 2.63; p = 0.048). Education was a significant predictor in the model (β = 1.39 +/- .46; p = 0.003). For the positive problem orientation subscale, we did not detect a treatment by time interaction. However, the negative problem orientation subscale score decreased more with VEN/PST-DP (β = −4.88 +/- 2.29 for treatment X time; p = 0.033). Education was also a significant covariate (β = −1.36 +/- .39; p < 0.001) in the model.

**Conclusions:** In this sample of depressed older adults with CLBP, adding PST-DP to venlafaxine improved overall social problem solving skills and led to improvements in negative problem solving orientation. Decreasing negative problem orientation reflects a) participants being less likely to view problems as a threat to one’s well being, b) improvements in problem solving efficacy and c) improvements in frustration tolerance. Problem Solving Therapy has been shown to improve depressive symptoms in older individuals with depression associated with various syndromes such as macular degeneration and stroke. Further analyses will determine whether improvements in social problem solving skills in this population is associated with continued improvements in depressive symptoms during prolonged follow-up. We will also explore whether improvements in social problem solving skills are associated with improvements in relationships, prevention of depressive relapse, and maintenance of analgesia.

This research was funded by: AG033575 and MH101371.

**Poster Number: NR 3**

**Resting-State Functional MRI Correlates of Negative Urgency in Late-Life Depression**

Kevin Manning, PhD; Lihong Wang, MD, PhD; Godfrey D. Pearlson, MA, MBBS; David Steffens, MD, MHS

1University of Connecticut Health Center, Farmington, CT
2Yale School of Medicine, New Haven, CT

**Introduction:** Negative urgency is defined as the tendency to engage in impulsive action when experiencing negative emotion. The construct of negative urgency is based upon the premise that aversive feelings, such as anger, depression, or anxiety, may disrupt emotional inhibition and result in rash behavior in individuals prone to the negative urgency trait. Negative urgency is closely associated with neuroticism, or emotional instability, although evidence derived from younger adults suggests there is both a clinical and neural distinction between the two constructs. High negative urgency, but not neuroticism, is associated with impulsive behavior in college students and, whereas both high neuroticism and negative urgency are associated with smaller volume in emotional regulation regions of the dorsomedial prefrontal cortex and right temporal pole, only high negative urgency is associated with lower volume in the reward region of the ventral striatum. Together, this evidence suggests there may be clinical utility in distinguishing between neuroticism and negative urgency, especially in populations where impulsive behavior is a concern. There is a dearth of information on negative urgency in older adults. Whereas older adults are generally not considered impulsive, recent evidence suggests high negative urgency is both common and clinically significant in late-life depression. High negative urgency, measured using the impulsivity subscale of the NEO-PI-R, was found in 39% of a sample of older adults with major depression and was associated with a worse 10-year treatment response. Other neuroticism traits, however, including vulnerability to stress and a total neuroticism composite score, were also associated with poor treatment response over time in this cohort. In an effort to better understand these constructs, the aim of the present study was to investigate similarities and differences in the neural correlates of negative urgency, vulnerability to stress, and total neuroticism in older adults with major depression. We hypothesized that different personality traits would be associated with distinctive neural activity patterns even during resting state.
Methods: Inclusion criteria for all subjects were age 60 or above, ability to read and write English, Mini-Mental State Examination score 25 or greater, and a diagnosis of major depression, single episode or recurrent, as established by a clinical interview with a geriatric psychiatrist using the Montgomery-Asberg Depression Rating Scale (MADRS). Exclusion criteria for the study were other primary psychiatric disorders besides generalized anxiety, established clinical diagnosis of dementia or other neurological disorders, and conditions associated with MRI abnormalities or those that would disqualify MRI. Total neuroticism, vulnerability to stress, and negative urgency (i.e., the impulsivity subscale of the NEO-PI-R) were measured using the NEO-PI-R. Trait raw scores were converted to gender-adjusted T scores using normative data. MRI Methods The amplitude of low-frequency oscillation (ALFF) during resting state was used to examine neural activity during resting state. Five minute, eyes-open resting state fMRI were acquired using simultaneous multislice EPI sequence with factor of 8 from a Siemens Skyra 3T scanner. Standard preprocessing procedures were applied. Amplitude of Low-Frequency Fluctuation (ALFF) for each subject was computed using the DPABI package (http://rfmri.org/DPABI). Significant level was set at p < 0.05 with FDR cluster correction for multiple comparisons.

Results: The sample included 35 older adults with major depression. The sample was mildly to moderately depressed based upon an average MADRS of 18.8 (SD = 6.5) and comprised mostly of white (88%) women (68%) with an average age of 70.2 (SD = 6.4). There were no significant correlations between ALFF and vulnerability to stress and ALFF and total neuroticism when controlling for age, gender, and MADRS score. By contrast, there were significant negative correlations between ALFF and negative urgency in the dorsomedial prefrontal cortex, insula, and parahippocampal gyrus after controlling for age, gender, and MADRS.

Conclusions: Negative urgency in late-life depression shows distinct significant correlations with salience and emotional regulation brain regions measured with ALFF when contrasted with total neuroticism and vulnerability to stress. Further investigations into the clinical significance of this construct in older adults with major depression is warranted.

This research was funded by: Supported by NIH grant R01 MH096725.

Poster Number: NR 4

A Voxel Based Morphometry Study of Gray Matter Volume Abnormalities in Elderly with Late Onset Depression

Sivakumar P, Thangaraju M, MD (Psychiatry); Shivakumar Venkataram, PhD; Ganesan Venkatasubramanian, MD, PhD; Nagalakshmi R M, MSc(Psychology); Harshita Vishwakarma, PhD; Jitender Saini, DM (Neuroradiology); John P, John, MD(Psychiatry); Varghese Mathew, MD(Psychiatry)

National Institute of Mental Health And NeuroSciences (NIMHANS), Bangalore, India

Introduction: Reduction of gray matter volume in fronto-striatal-limbic regions have been suggested to contribute to the pathophysiological basis of late life depression (LLD). However, the specific brain regions implicated in the pathophysiology of LLD are inconsistent across studies. This could be possibly due to the heterogeneity of the clinical profile of study subjects and the neuroimaging methods across studies. There are also significant number of negative studies showing no difference in gray matter volume between LLD and healthy control group. There are very limited number of studies evaluating gray matter volume abnormalities in elderly with late onset depression (LOD) from India.

Methods: 38 Elderly with LOD (mean age = 65.71 Yrs, SD = 5.45, 25 Females) and 40 healthy control subjects (mean age = 66.68 Yrs, SD = 5.75, 26 Females) group matched for age and sex were evaluated with 3 Tesla Magnetic Resonance Imaging (MRI) scan. They were assessed with Geriatric depression scale for severity of depression. Cognitive function was assessed with Hindi Mental Status Examination (HMSE). Voxel-based morphometry (both whole brain analysis and seed based approach) implemented through SPM-8 was used to explore the volume differences in gray matter between late onset depression (LOD) and Healthy control group. Hippocampus and Orbitofrontal cortex (OFC) were the a priori regions specified for evaluation using seed based approach. We also evaluated the correlation of gray matter brain volume with clinical measures like age of onset, duration of illness and depression severity. The analysis was controlled for the confounding effects of age, sex, years of education and Intra Cranial Volume.

Results: LOD and control groups did not have significant difference in age and sex. LOD group had significantly less education and HMSE score compared to the control group. Whole brain analysis suggested significant reduction of volume in Left precentral gyrus (P_{PFWE} = 0.004), and Right Inferior Semi-Lunar Lobule (cerebellum) P_{PFWE} = 0.011. Analysis using seed based approach suggested significant reduction of left and right OFC volume in LOD group compared to healthy control group (P_{unc} < 0.001). LOD group also had lesser left and right hippocampal volume than healthy control group (P_{unc} = 0.016 for left hippocampus and 0.015 for right hippocampus). The difference in OFC and Hippocampus volume was not significant.
after the Family Wise Error correction. Clinical measures like age of onset, depression severity and duration of illness did not have significant correlation with any of the brain gray matter volume.

**Conclusions:** Study findings suggest the possible involvement of left precentral gyrus, right inferior semi-lunar lobule, orbitofrontal cortex and hippocampus in the pathophysiology of LOD. However, the study findings could have been influenced by the effect of antidepressant exposure to most of the subjects with LOD.

<table>
<thead>
<tr>
<th>Region</th>
<th>Talairach &amp; Tournoux co-ordinate X</th>
<th>Talairach &amp; Tournoux co-ordinate Y</th>
<th>Talairach &amp; Tournoux co-ordinate Z</th>
<th>T value</th>
<th>Cluster size</th>
<th>P</th>
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</thead>
<tbody>
<tr>
<td>Left precentral gyrus</td>
<td>−43</td>
<td>−3</td>
<td>50</td>
<td>5.82</td>
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<td>−45</td>
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<td>Left hippocampus</td>
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<td>2.19</td>
<td>39</td>
<td>0.016†</td>
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<tr>
<td>Right hippocampus</td>
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<td>−12</td>
<td>2.21</td>
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<td>&lt;0.001†</td>
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<td>−27</td>
<td>4.04</td>
<td>60</td>
<td>&lt;0.001†</td>
</tr>
</tbody>
</table>

*(P Family wise error corrected).
†(P uncorrected).

Group differences showing significant reduction in Left precentral gyrus volume in LOD patients (T value map overlaid on significant cluster as per the color bar) P Family Wise Error corrected < 0.05.
Group differences showing significant reduction in Right and left Orbito Frontal Cortex volume in LOD patients (T value map overlaid on significant cluster as per the color bar) Puncorr < 0.001.

This research was funded by: 1. Indian Council for Medical Research, Government of India, Grant Ref. No. 54/12/CFP/GER/2011-NCD- II 2. Department of Science and Technology, Government of India.

Poster Number: NR 5
Intepirdine (RVT-101), a 5-HT6 Receptor Antagonist, as an Adjunct to Donepezil in Mild-to-Moderate Alzheimer’s Disease: Efficacy on Activities of Daily Living Domains
Ilise Lombardo, MD; Geetha Ramaswamy, MD; Lawrence Friedhoff, MD, PhD; Ebenezer Asare, MD
Axovant Sciences, Inc, New York, NY

Introduction: Intepirdine (RVT-101) is an orally administered, 5-hydroxytryptamine 6 (5-HT6) receptor antagonist being investigated for the treatment of mild-to-moderate Alzheimer’s disease (AD). It includes a number of favorable properties including oral administration, once daily dosing, lack of a food effect, and the low potential for drug interactions. We present results of a secondary analysis of the 23-item Alzheimer’s Disease Cooperative Study-Activities of Daily Living Scale (ADCS-ADL23) from a randomized, double-blind, placebo-controlled Phase 2b study.

Methods: In this study, 684 subjects with mild to moderate AD (MMSE score 10–26 points), and receiving stable donepezil treatment, were randomized to receive 35 mg intepirdine, 15 mg intepirdine, or placebo. A 48-week study, primary endpoints were assessed at week 24. A pre-specified Mixed-Methods Repeated Measures (MMRM) was used to evaluate the intent-to-treat population at week 24. The ADCS-ADL23 items range from basic to instrumental ADLs. A total score of 0–78 points may be obtained; lower scores indicate greater impairment. For this trial, the following scales were pre-specified: Basic ADLs. The score was calculated as the sum of questions 1-6b and ranges from 0–22 points (items: eating, walking, using the toilet, bathing, grooming and dressing). Instrumental ADLs. The score was calculated as the sum of questions 7–23 and ranges from 0–56 points (items: using the telephone, watching television, conversations, clearing dishes, personal belongings, making drinks, making snacks, taking rubbish out, getting out and about, shopping, keeping appointments, being left alone, current events, reading, writing, pastimes/hobbies, household chores). Total Independence ADLs. This scale was a dichotomous recalculation of the 23 ADCS-ADL items, by scoring an item as 1 point if the highest performance was obtained, and 0 points for any other response. The score ranges from 0–23 points, with a score of 23 suggesting complete independence.

Results: At Week 24, in subjects receiving stable donepezil treatment, statistically significant treatment differences in favor of intepirdine 35 mg over placebo were observed for the Instrumental ADLs scale (Mean treatment difference 1.6 points, p = 0.023) and the Total Independence ADLs scale (Mean treatment difference 1.0 points, p = 0.002). As seen in the primary analysis mean treatment differences for the 15-mg group were generally numerically superior to placebo; however, they were
not statistically significant. The mean Basic ADL scale scores remained stable across the 24-week treatment phase for all treatment groups; no clinical or statistically significant treatment differences were observed.

**Conclusions:** In this pre-specified secondary analysis of subjects with mild-to-moderate AD completing a Phase 2b study, the 35 mg dose of intepirdine was shown to be effective in improving instrumental ADLs as well as a measure of independence through the total independence scale. These results suggest that intepirdine treatment has the potential to provide benefits on important aspects of function in Alzheimer’s disease. The 35 mg dose of intepirdine has advanced into a confirmatory Phase 3 study (Study RVT-101-3001 (NCT02585934)) that is now underway.

**This research was funded by:** The study and all analyses were conducted and funded by GSK. Axovant Sciences, Inc., provided support for developing the abstract and poster content. Medical writing support was provided by Konic Ltd.

**Poster Number: NR 6**

**Memantine Added to Background Cholinesterase-Inhibitors Reduces Agitation and Neuropsychiatric Symptoms in Alzheimer’s Disease**

Alireza Atri, MD, PhD; George T. Grossberg, MD; Suzanne Hendrix, PhD; Noel Ellison, MS; Merrilee R. Johnstone, PhD; John Edwards, MD, MBA

1Ray Dolby Brain Health Center, California Pacific Medical Center, San Francisco, CA
2Center for Brain/Mind Medicine, Department of Neurology, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA
3Saint Louis University, Saint Louis, MO
4Pentara Corporation, Salt Lake City, UT
5Prescott Medical Communications Group, Chicago, IL
6Allergan plc, Jersey City, NJ

**Introduction:** Agitation, a common, problematic neuropsychiatric symptom associated with Alzheimer’s disease (AD), can increase caregiver burden and costs. Memantine and its extended-release formulation are approved for moderate-to-severe AD; cholinesterase inhibitors (ChEIs) are additionally approved in mild AD. Previous studies suggest that ChEIs, memantine, and memantine added to ChEIs provide benefits for neuropsychiatric symptoms in AD. This study evaluated the effect of memantine added to ChEIs on agitation, other neuropsychiatric symptoms, and related caregiver burden in patients with AD experiencing agitation.

**Methods:** Data were pooled from three phase 3, randomized, double-blind, placebo-controlled 24-week trials evaluating memantine for patients with moderate-to-severe or mild-to-moderate AD receiving concurrent ChEIs. Inclusion for these analyses required Neuropsychiatric Inventory-agitation (NPI-agitation) scores >0 at baseline or end-of-treatment. A mixed-effect repeated-measure model evaluated least squares mean differences (LSMD) between groups on NPI-agitation and NPI Caregiver Distress-agitation (NPI-D-agitation), as well as total and sub-domain scores, from baseline to weeks 12 and 24, with alpha 0.05. Effect sizes were estimated with Cohen’s d.

**Results:** Of 1140 patients, 532 had symptomatic agitation and were analyzed (mean age ± SEM 76.10 ± 0.349 years; mean baseline MMSE ± SEM 10.83 ± 0.137): 269 placebo/ChEIs, 263 memantine/ChEIs. Memantine/ChEIs significantly improved NPI-agitation at weeks 12 (P = 0.0003; d = -0.3193) and 24 (P = 0.0001; d = -0.3554) compared with placebo/ChEIs. Similar between-group effects were observed for NPI-D-agitation at week 12 (P = 0.0067; d = -0.3346) and week 24 (P = 0.0147; d = -0.3126). Congruent benefits of memantine were observed for NPI total score (week 12: P = 0.0003; d = -0.3174; week 24: P = 0.0004; d = -0.3213), NPI-delusion (week 12: P = 0.0217; d = -0.2016; week 24: P = 0.0365; d = -0.1913), NPI-D-delusion (week 12: P = 0.0191; d = -0.2894), NPI-irritability/lability (week 12: P = 0.0001; d = -0.3400; week 24: P = 0.0013; d = -0.2933), NPI-D-irritability/lability (week 12: P = 0.0109; d = -0.3152), and NPI-anxiety and NPI-apathy/indifference (week 24: P = 0.0400; d = -0.1875; P = 0.0127; d = -0.2287).

**Conclusions:** Memantine added to ChEIs may substantially reduce agitation and other behavioral disturbances in AD patients who experience agitation, and also may reduce caregiver burden related to these symptoms.

**This research was funded by:** Supported by Allergan plc, Irvine, CA, USA.
Introduction: Temporal stages of neurodegenerative processes may exist, spanning from beta-amyloid elevation to grey matter atrophy, and leading to cognitive impairment and clinical symptoms of dementia. Suspected non-Alzheimer’s disease pathophysiology (SNAP) defines individuals showing evidence of neurodegeneration (i.e., hypometabolism) without signs of beta-amyloid pathology. Although SNAP is a uniquely defined biomarker-based concept, findings from previous studies focusing on clinical and structural trajectories of Alzheimer’s disease (AD)-related pathology changes in SNAP are inconsistent.

Methods: Using data from Alzheimer’s disease Neuroimaging Initiatives, we categorized patients with mild cognitive impairment (MCI) into four different groups: amyloid only (\(\beta^+\)HYPO\(^+\)), amyloid positive and hypometabolism (\(\beta^+\)HYPO\(^-\)), no amyloid nor hypometabolism (\(\beta^-\)HYPO\(^+\)), and SNAP (\(\beta^-\)HYPO\(^-\)). Cortical A\(\beta\) positivity was defined using the radiotracer \(\text{F}^{18}\)-Florbetapir standardized uptake value ratio (SUVR) > 1.10. Cortical hypometabolism was defined using the radiotracer Flurodeoxyglucose (FDG) SUVR < 5.95, which is 1 standard deviation (SD) below baseline global FDG SUVR (sum of FDG SUVR of left and right angular, posterior cingulate, and temporal regions) of controls in ADNI (\(n = 521\)). In addition to the aforementioned three groups: \(\beta^+\)HYPO\(^-\) (\(n = 34\)), \(\beta^+\)HYPO\(^+\) (\(n = 29\)) and \(\beta^-\)HYPO\(^-\) (\(n = 36\), who were matched to patients with SNAP for age, gender, apolipoE4 (apoE4) protein genotype, and scores on Montreal Cognitive Assessment. Elderly controls (\(n = 40\)) were also matched to patients with SNAP for age, gender, and apoE4 genotype to allow comparisons of longitudinal changes in brain structure and cognitive functions over a 2-year follow-up period. Additionally, SNAP patients with hippocampal volumes smaller (SNAP-Hippo; \(n = 20\)) than the mean of the total SNAP group were analyzed to specifically examine patients showing structural and functional degeneration without A\(\beta\).

Aforementioned analyses with matched comparison groups were again carried out in this subsample. Hippocampal volume changes were used to assess changes in structure. Scores on the Clinical dementia rating, functional assessment questionnaires, and different sub-scores of Rey-Auditory verbal learning test were used to assess changes in clinical symptoms of dementia, daily functions, and cognitive function, respectively. Independent t-tests and chi-square tests were used to compare clinical and demographic profiles at baseline. Mixed-effect model repeated measurements were carried out to observe longitudinal changes in symptoms of dementia, daily functions, cognitive function and hippocampal volume between the SNAP and comparison groups.

Results: At baseline, there was no difference in function and cognition between SNAP and A\(\beta^+\) groups (i.e. A\(\beta^+\)HYPO\(^-\) and A\(\beta^+\)HYPO\(^+\) group). SNAP group showed worse clinical symptoms of dementia and functions at baseline in comparison to the A\(\beta^-\)HYPO\(^-\) group (\(p < 0.001\) and \(p = 0.04\), respectively) and elderly controls (both \(p < 0.001\)). SNAP group showed lower levels of cerebrospinal fluid total tau and p-tau in comparison to both matched A\(\beta^+\)HYPO\(^+\) (\(p = 0.02\) and \(p = 0.001\), respectively) and A\(\beta^-\)HYPO\(^-\) group (\(p = 0.003\) and \(p = 0.004\), respectively). Two years of follow-up showed no significant difference in left and right hippocampal volume changes between SNAP group and any of the aforementioned four comparison groups. In terms of longitudinal changes in cognitive decline, SNAP group showed worse functional deterioration in comparison to A\(\beta^-\)HYPO\(^-\) (\(p = 0.04\)) and control groups (\(p = 0.02\)). On the other hand, A\(\beta^+\)HYPO\(^+\) group showed more severe changes in clinical symptoms of dementia (\(p = 0.025\)) in comparison to SNAP group. No difference in cognition or functional changes was found between the A\(\beta^-\)HYPO\(^+\) and SNAP groups. Sub-analyses between SNAP-Hippo and comparison groups showed that SNAP-Hippo group (\(n = 19\)) showed more pronounced left hippocampal atrophy (\(p < 0.05\)) and function deterioration (\(p = 0.02\)) in comparison to the matched A\(\beta^-\)HYPO\(^-\) group (\(n = 19\)). There was no difference in terms of changes in hippocampal volume and cognitive function over the 2 years between the SNAP-Hippo (\(n = 16\)) and matched A\(\beta^+\)HYPO\(^+\) groups (\(n = 16\)).

Conclusions: Patients with MCI and SNAP showed deteriorations in cognitive function that are more severe than both A\(\beta^-\)HYPO\(^+\) and control groups, but less prominent than A\(\beta^+\)HYPO\(^+\) group. However, SNAP group with smaller hippocampal volumes has a similar trajectory to A\(\beta^+\)HYPO\(^+\) group, suggesting that despite not showing A\(\beta\) pathology, the former has a similar illness progression as the A\(\beta^+\)HYPO\(^+\) group. This study reinforces the notion that cognitive and functional decline, as manifested in dementia, may not follow temporally ordered biomarker cascades. In addition, it supports
Implementation of a Psycho-Social Intervention Program for Working Caregivers

Daniel Jimenez, PhD; Richard Schulz, PhD; Dolores Perdomo, PhD; Chin Chin Lee, MS; Sara J. Czaja, PhD

1University of Miami Miller School of Medicine, Miami, FL
2University of Pittsburgh, Pittsburgh, PA

Introduction: Although considerable evidence has now accumulated documenting the effectiveness of psychosocial interventions to alleviate caregiver distress, there is limited empirical data on the impact of employer/organizational programs on caregiver outcomes or employer outcomes. The limited data that are available suggest that use of these types of programs is positively correlated to improved outcomes. There is a need for increased corporate attention to help employee caregivers balance their work and caregiving commitments, and to develop innovative programs for working caregivers. This study focuses on implementation and evaluation of a pilot project designed for working caregivers. The overall objective of this pilot project was to test the feasibility, acceptability, and potential efficacy of a multicomponent, psychosocial, technology-based intervention for working caregivers.

Methods: The project was conducted in Phases. Initially, focus groups were conducted with human resource personnel and a sample of caregivers employed at a private, non-profit institution in South Florida to gather information to refine the intervention. A total of 71 family caregivers, affiliated with the same organization, were then randomized to either the Caregiver Workstation condition (n = 35) or a control condition (n = 36). The intervention was delivered on a dedicated website for a five-month period and included: skill-building modules; a resource guide; information and tips, educational seminars (video), and five telephone support group sessions. Caregivers in the control condition received standard information about community resources. A post-treatment assessment was completed 5 months after baseline.

Results: A total of 62 caregivers completed the 5-month follow-up. The attrition rate of 12.7% was lower than the 15% that we had originally predicted based on other caregiver studies. Over half of caregivers found the Caregiver Workstation to be “a great deal” helpful (53.1%) and that the information provided was easy to understand (56.3%). Participants found the telephone support groups to be very useful: 59.4% found their participation in the telephone support groups to be “a great deal” valuable; 56.3% found that their participation in the telephone support groups increased their knowledge of caregiving “a great deal;” and 50% felt that their participation in the telephone support groups improved their skills as a caregiver. In addition, 78% of caregivers stated that the project did not require too much work or effort and 78% of them said that they would recommend the intervention to others. This pilot project was not powered to test a hypothesis our goal was rather to gather information on the usefulness of the program and strategies to maximize implementation success. However, there was a significant effect of time for caregiver burden such that participants reported a decrease in burden at the follow-up assessment. Although the interaction term was not statistically significant, there was a strong trend in the data suggesting that those in the intervention experienced a greater decrease in burden than those in the control condition.

Conclusions: This pilot study is the first step in developing a working caregiver intervention program that can be implemented on a broad scale basis. Our results indicate that an intervention tailored to the time demands of a working caregiver is feasible, acceptable to caregivers, and has the potential to have positive long-term effects. The Caregiver Workstation intervention is innovative in the delivery method. The use of technology was an innovative strategy to overcome logistic barriers many caregivers experience in access to needed programs and services. Technology offers several advantages over current intervention approaches such as increased ability to deliver and access information on demand, asynchronously and over long distances, increased access to health professionals and social support. Technology also affords the opportunity to present information in a wide variety of formats to suit the needs of the user population. In this pilot study, a website was created to enable working caregivers to access educational modules and health-related information or information about available community resources on their own time. Via this website, caregivers were able to watch skill building videos and attend “support groups” in order to communicate with other caregivers. Technology based interventions also have the benefits of a “one size fits all” intervention while at the same time being able to tailor to the individual caregiver’s needs. For example, an important factor is “stage” of the caregiver’s career. Caregivers who are in the early stages may need more information on what to expect in terms of their loved one’s disease whereas those in the later stages of caregiving may need more information on transition issues such as placement or legal matters.

This research was funded by: This research was supported by grants 2008-055 from the Retirement Research Foundation.
Methods: HOLA is a multi-component, health promotion intervention funded by the National Institute of Mental Health (NIMH). This prevention approach was tested against a fotonovela, an enhanced psychoeducation control condition, in a sample of Latino older adults with minor or subthreshold depression or anxiety. A total of 60 older Latinos (aged 60+) were randomized to either HOLA or the fotonovela. As a pilot study, the primary outcomes of interest were recruitment, adherence, retention and acceptability. Data were also collected on depression and anxiety symptom severity. Although the pilot study was not powered to detect differences in symptom severity, we present these data as well.

Results: We met our recruitment target in 14 months. None of the participants have been lost to follow up, indicating that HOLA is a feasible and acceptable health promotion intervention. Throughout the pilot trial, we have learned several key lessons. First, the CHW and the group format are essential. Second, participants really liked the focus on health promotion and recognize that physical and mental health are linked. Third, splitting up HOLA into its multiple components would not work. In this case, the whole is greater than the sum of its parts. Participants really appreciated the individual physical and social activation sessions. They liked the information that was presented, the ground rules, goal setting, and problem solving done. They enjoyed the walking component, and the pleasant events scheduling done during the cool down phase of each walk. Participants noted that the pleasant events provided a means for the intervention to generalize into the participants’ every day lives and relationships. Fourth, participants want a maintenance phase added to the intervention. They stated that by building in regularly scheduled booster sessions, it would help keep them motivated. Knowing that they had to meet with the CHW at certain intervals would hold them accountable to maintain the gains that they had achieved. Fifth, participants wanted more information. Participants in HOLA stated that the information regarding anxiety and depression in the social and physical activation session was not enough. They also stated that they just wanted to have more information about county wide programs for older adults. Sixth, the greater flexibility of HOLA to honor participant beliefs, stigma, and treatment preferences may have facilitated the low dropout rates. Additionally, there was a significant effect of time for depression and anxiety severity such that participants in the HOLA condition reported a decrease in depression and anxiety severity at the follow-up assessment. Although the interaction term was not statistically significant there was a strong trend in the data suggesting that those in HOLA experienced a greater decrease in symptom severity than those in the fotonovela condition.

Conclusions: Health promotion interventions represent a potential solution to the multiple disparities experienced by older Latinos. The emphasis on treating mental health problems through health and wellness techniques could appeal to older Latinos as a nonstigmatizing and culturally acceptable alternative to traditional mental health services. HOLA was specifically designed to address older Latinos’ views concerning the causes of mental illness, mental health treatment, and stigma towards traditional mental health services. Offering such a culturally tailored approach to depression and anxiety prevention may help to circumvent the lower rates of engagement in mental health services by older Latinos. The significance of the project further derives from the likelihood that, if effective in reducing risk factors for common mental disorders, HOLA can be explicitly linked to preventing common mental disorders in late life and rapidly disseminated as an indicated prevention intervention throughout the country at low-cost.
**Introduction:** Delusions are estimated to affect a third of all Alzheimer’s disease (AD) patients. The subset of patients who develop delusions are more likely to experience negative outcomes such as accelerated cognitive decline, a higher rate of institutionalization, and increased caregiver burden, compared to their non-psychotic counterparts. Furthermore, the presence of delusions in individuals with normal cognition and mild cognitive impairment (MCI) increases the risk of conversion to dementia. However, despite the high prevalence and poor outcomes, the neurobiological mechanism underlying delusions is not well understood, which hinders the development of effective treatments for these patients. The existing treatment for psychosis in AD has very limited effects and has been associated with significant adverse effects. There is increasing evidence that higher order cognitive constructs are mediated by alterations in functional networks rather than static structural brain changes. One of the most well defined function networks to date has been the default mode network (DMN). The DMN is a robust resting-state network that has been identified to play a key role in the development of many neuropsychiatric disorders, including Alzheimer’s disease and schizophrenia. Interestingly, in a previous study, we found that AD patients who developed delusions showed gray matter atrophy in several brain regions corresponding to the default mode network (DMN) following the onset of delusions, including the ventral and dorsal medial prefrontal cortex, medial temporal cortex, and the precuneus. In contrast, the subset of AD patients who did not develop delusions only showed one cluster of atrophy that fell within the DMN. Building on our previous finding, we aimed to investigate the functional resting-state differences between AD patients with and without delusions. We hypothesized that delusions are associated with decreased DMN connectivity compared to non-delusional group.

**Methods:** Using resting-state functional magnetic resonance imaging (fMRI), the connectivity patterns of the DMN were explored in 7 non-delusional AD and 6 delusional AD patients. The Neuropsychiatric Inventory Questionnaire (NPI-Q) completed by an informant was used to identify patients with delusions. The Mini-Mental State Exam (MMSE) was used to measure global cognitive status. A dual-regression principal component analysis was run across the 13 subjects, using 8 components per subject. The corresponding individual subject DMN maps were generated by regressing the group IC pattern onto subject data. A 1-way t-test was ran on the 2 cohorts, with significance set at $p < 0.005$, uncorrected.

**Results:** There were no significant age and MMSE score differences between the delusional and non-delusional AD groups. Non-delusional AD subjects showed a robust DMN pattern, including activation of the posterior cingulate (PCC), middle temporal lobes (MTL), and ventromedial prefrontal cortex (vmPFC). Conversely, delusional AD subjects had a diminished DMN pattern, with non-significant PCC, and greatly reduced extent of MTL and vmPFC.

**Conclusions:** There has been substantial effort in recent years to understand the neurobiology of psychosis in Alzheimer’s disease. However, neuroimaging studies have been limited to structural and functional changes in discrete loci. Psychosis and delusions may arise not from damage to a single region, but may be mediated by disruption of brain networks. Here, we compared the DMN connectivity between AD patients with and without delusions. There was a decreased pattern of DMN de-activation in the delusional AD group compared to the non-delusional group. This suggests that delusions are associated with decreased DMN connectivity, with PCC being particularly vulnerable. Delusions in AD may develop through impairing connectivity within the DMN. (Figure 1).

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**Figure 1.** Group-level component representing the default mode network (DMN). Non-delusional adults had a highly robust DMN pattern, including the PCC, MTL, and VMPFC. Conversely delusional adults had a diminished DMN pattern with non-significant PCC and greatly reduced extent of MTL and VMPFC.
**Determining the Impact of Psychosis on Rates of False Positive and False Negative Diagnosis in Alzheimer’s Disease**

Winnie Qian, BSc1,2; Corinne Fischer, MD1,2; Tom A. Schweizer, PhD1,2; David G. Munoz, MD1,2

1St. Michael’s Hospital, Toronto, ON, Canada
2University of Toronto, Toronto, ON, Canada

**Introduction:** Recent studies comparing clinical and post-mortem brain analysis have found that >20% of patients who were clinically diagnosed with Alzheimer’s disease (AD) did not have AD pathology, but instead had other AD “mimics” such as hippocampal sclerosis, vascular dementia (VaD) or dementia with Lewy bodies (DLB). Psychosis is a common feature of AD, estimated to affect nearly half of these patients. Psychotic symptoms also occur in other forms of dementia, to differing degrees. For example, psychosis—particularly hallucinations—is commonly observed in patients with DLB and VaD, but have low prevalence rates in patients with frontotemporal dementia (FTD). In the current study we examined how rates of clinical misdiagnosis (false positives and false negatives) in AD is affected by the presence of psychosis (delusions and/or hallucinations). We hypothesized that AD patients with psychosis will have a higher rate of misdiagnosis than AD patients without psychosis, given the symptom overlap with other dementias.

**Methods:** Data from the National Alzheimer’s Coordinating Center (NACC) database, collected between the September 2005 and May 2012 data freeze, were used for the current analysis. We compared the clinical (“Probable AD” using the NINCDS-ADRDA criteria) and neuropathological diagnosis (“High Likelihood” on the NIA-Reagan) in patients presenting with AD and in patients with confirmed neuropathological diagnosis of AD at autopsy. The NPI-Q was used to identify patients with psychosis. The rates of false positive versus false negatives between psychosis groups were statistically assessed using the Pearson chi-square test for categorical variables, with significance set at $p < 0.05$.

**Results:** We identified 961 patients from the database who met criteria, which included 606 patients without psychosis over the course of follow-up (AD-P), 173 patients with delusions (AD+D), 79 patients with hallucinations (AD+H), and 103 patients with both delusions and hallucinations (AD+DH). The overall rate of misdiagnosis in all patients was 23.9%. The rate of misdiagnosis was 26.2% in the AD-P group, 18.5% in the AD+D group, 19.0% in the AD+H group, and 23.3% in the AD+DH group. There was a significant difference in rates of misdiagnosis between psychosis groups ($X^2 = 19.58, p = 0.021$). Specifically, the AD-P group had a significantly higher rate of false positive diagnosis (15.5%) compared to the AD+D group (6.9%; $X^2 = 7.56, p = 0.006$), AD+H (5.1%; $X^2 = 5.73, p = 0.017$), and AD+DH group (6.8%; $X^2 = 5.47, p = 0.019$). Rates of false negatives did not significantly differ between the groups. The actual pathologies in the false positive cases, subdivided by psychosis group, are summarized in Table 1, while the clinical diagnoses of the false negative cases are summarized in Table 2.

**Conclusions:** In the current study, we found that the rate of clinical misdiagnosis of AD to be 23.9%, consistent with previous studies. This rate should represent the minimum, because the final clinical diagnosis prior to death was used. The presence of psychosis was associated with lower rates of false positive diagnosis, suggesting the presence of psychosis should increase clinical

**Table 1. Neuropathologic Diagnosis of False Positive Cases by Psychosis Group Breakdown**

<table>
<thead>
<tr>
<th>Neuropathological Diagnosis</th>
<th>AD-P (n = 93)</th>
<th>AD+D (n = 12)</th>
<th>AD+H (n = 4)</th>
<th>AD+DH (n = 7)</th>
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<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Vascular</td>
<td>31</td>
<td>47.0%</td>
<td>1</td>
<td>8.3%</td>
</tr>
<tr>
<td>Lewy body</td>
<td>12</td>
<td>18.2%</td>
<td>2</td>
<td>16.7%</td>
</tr>
<tr>
<td>Medial temporal lobe sclerosis</td>
<td>12</td>
<td>18.2%</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Tau, other</td>
<td>11</td>
<td>16.7%</td>
<td>1</td>
<td>8.3%</td>
</tr>
<tr>
<td>FTD</td>
<td>7</td>
<td>10.6%</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>FTD specific</td>
<td>2</td>
<td>3.2%</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td></td>
<td>2 FTD</td>
<td>2.2%</td>
<td>2 FTD</td>
<td>1 Pick</td>
</tr>
<tr>
<td></td>
<td>2 CBD</td>
<td>2.2%</td>
<td>2 CBD</td>
<td>14.3%</td>
</tr>
<tr>
<td>Mixed</td>
<td>13</td>
<td>19.7%</td>
<td>3</td>
<td>25.0%</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>7.5%</td>
<td>5</td>
<td>41.7%</td>
</tr>
</tbody>
</table>

AD-P = Never psychotic; AD+D = delusion-only psychosis; AD+H = hallucination-only psychosis; AD+DH = delusion and hallucination psychosis; PSP = progressive supranuclear palsy; FTD = frontotemporal dementia; CBD = corticobasal degeneration; Pick’s = Pick’s disease.
suspicion of an AD diagnosis. Meanwhile, patients without psychosis are more commonly false diagnosed with AD when underlying pathologies are responsible. Our findings have important clinical implications because misdiagnosed patients may not receive the appropriate treatment, which may impact clinical outcomes. For instance, cholinesterase inhibitors used to treat AD have limited effectiveness in VaD and FTD. Our research demonstrated that psychosis might be a factor that influences clinicians’ decision during diagnosis. Further studies are required to validate these findings in patients with mild disease, but these preliminary results suggest psychosis in late stage patients may serve as a useful clinical biomarker of AD pathology.

Poster Number: NR 12

Relationship between APOE e4 and Cognitive and Functional Outcomes in Alzheimer’s Disease Patients with Psychosis

Winnie Qian, BSc1,2; Tom A. Schweizer, PhD1,2; David G. Munoz, MD1,2; Corinne Fischer, MD1,2

1St. Michael’s Hospital, Toronto, ON, Canada
2University of Toronto, Toronto, ON, Canada

Introduction: Psychosis affects 41% of Alzheimer’s disease (AD) patients, with approximately 1 in 3 developing delusions and 1 in 6 developing hallucinations. Psychosis in AD has been linked to adverse outcomes, including greater cognitive impairment, accelerated cognitive decline and increased functional impairment. Carrying one or more APOE e4 alleles has been found in some studies to increase psychosis risk, but overall the association has not been found in the majority of studies. However, no studies to date have investigated the impact of APOE e4 on cognitive and functional outcomes in psychotic AD patients, separated into specific delusional and hallucinatory endophenotypes. The current study aimed to investigate the relationship between psychosis status and cognitive and functional outcomes in neuropathologically confirmed cases of AD, and how the relationship may be affected by APOE genotype.

Methods: Data were obtained from the National Alzheimer’s Coordinating Center (NACC) database collected between September 2005 and December 2015. The Uniform Data Set and the Neuropathology Data Set were used. We included AD subjects with a neuropathological confirmation of AD, i.e. frequent neuritic plaque on CERAD and Braak Stage of V or VI, which corresponds to a “high likelihood of dementia due to AD” based on the NIA-AA Reagan criteria. The presence of psychosis (delusions and/or hallucinations) was determined using the Neuropsychiatric Inventory Questionnaire (NPI-Q). Cognitive status was measured using the MMSE while functional status was measured using FAQ. Higher FAQ scores are indicative of greater functional impairment. A 2 (APOE e4 status: yes or no) by 4 (psychosis status: never-psychotic, delusional, hallucinatory, or both delusions and hallucinations) factorial design was performed using SPSS. Age and education were entered as covariates. Significance level was set at p < 0.05 and multiple comparisons were corrected with the Bonferroni method.

Results: We identified 1236 subjects from the NACC database who had confirmed AD at autopsy with APOE e4 and NPI-Q data, which included 625 non-psychotic subjects (AD-P) and 611 psychotic subjects (AD+P). The psychotic group was further divided into 475 subjects with delusion-only psychosis (AD+D), 331 with hallucination-only psychosis (AD+H), and 195 subjects with both forms of psychosis (AD+DH). There were significant main effects of both psychosis status and APOE e4 status on MMSE scores (F(3, 891) = 8.508, p < 0.001; F(1, 891) = 6.263, p = 0.013, respectively), while only psychosis status had a significant effect on FAQ scores (F(3, 1214) = 17.073, P < 0.001), after controlling for age and education. Both covariates were significantly related to MMSE scores (p < 0.001, p = 0.022 for age and education, respectively) but not

Table 2. Clinical Diagnosis of False Negative Cases by Psychosis Group Breakdown

<table>
<thead>
<tr>
<th>Clinical Diagnosis</th>
<th>AD-P (n = 66)</th>
<th>AD+D (n = 20)</th>
<th>AD+H (n = 11)</th>
<th>AD+DH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parkinson</td>
<td>10 15.0%</td>
<td>3 15.0%</td>
<td>2 18.2%</td>
<td>2 11.8%</td>
</tr>
<tr>
<td>VaD</td>
<td>9 13.6%</td>
<td>0 0.0%</td>
<td>1 9.1%</td>
<td>4 23.5%</td>
</tr>
<tr>
<td>DLB</td>
<td>7 10.6%</td>
<td>11 55.0%</td>
<td>6 54.5%</td>
<td>10 58.8%</td>
</tr>
<tr>
<td>Possible AD</td>
<td>40 60.1%</td>
<td>5 25.0%</td>
<td>2 18.2%</td>
<td>1 5.9%</td>
</tr>
<tr>
<td>PSP</td>
<td>0 0.0%</td>
<td>1 5.0%</td>
<td>0 0.0%</td>
<td>0 0.0%</td>
</tr>
</tbody>
</table>

AD-P = Never psychotic; AD+D = delusion-only psychosis; AD+H = hallucination-only psychosis; AD+DH = delusion and hallucination psychosis; VaD = vascular dementia; DLB = dementia with Lewy bodies; PSP = progressive supranuclear palsy.
significant for FAQ scores. Subjects with one or more copies of the \textit{APOE} e4 allele had lower MMSE scores than patients without any \textit{APOE} e4 alleles. Post-hoc test for the effects of psychosis revealed that AD+H and AD+DH groups had lower MMSE scores than AD-P, and AD+DH had lower MMSE than AD+D. All psychotic subgroups had significantly higher FAQ scores than AD-P, with AD+H and AD+DH groups having significantly higher FAQ scores than AD+D. There was a significant interaction effect between psychosis group and \textit{APOE} e4 status on MMSE scores ($p = 0.038$). Specifically, AD patients with hallucinations-only psychosis were significantly more negatively affected by the presence of \textit{APOE} e4 allele.

**Conclusions:** The presence of psychosis during the course of AD is associated with more severe cognitive and functional impairment, consistent with previous studies. Patients with hallucinations, with or without accompanying delusions, showed further cognitive and functional impairment compared to subjects with just delusions. In addition to previous studies, we analyzed the effect of \textit{APOE4} allele on cognition and function in the different psychosis subgroups, and found that the presence of one or more copies of the e4 allele was related to decreased cognitive performance, but did not affect functional status. In addition, the effect of \textit{APOE} e4 was more detrimental to cognition for the hallucination subgroup compared to the other psychotic groups and non-psychotic group. Our results support the conclusion that delusions and hallucinations have distinct biology, and outcome in each group may be differentially affected by the \textit{APOE} e4 allele.

**Poster Number:** NR 13

**A Systematic Review of Alzheimer’s Disease and Dementia Stigma Research: How Might We Move the Stigma Dial?**

Lynn Herrmann, PhD, MPH$^1$; Elisabeth Welten, MSc, MA$^2$; James B. Leverenz, MD$^3$; Alan Lerner, MD$^4$;
Nancy Udelson, BA$^5$; Cheryl Kanetsky, LSW, MBA$^5$; Martha Sajatovic, MD$^5$$^2$$^4$

$^1$Northern Illinois University, DeKalb, IL
$^2$Case Western Reserve University, Cleveland, OH
$^3$Cleveland Clinic Lou Ruvo Center for Brain Health, Cleveland, OH
$^4$University Hospitals Cleveland Medical Center, Cleveland, OH
$^5$Alzheimer’s Association Cleveland Area Chapter, Beachwood, OH

**Introduction:** While stigma is a pervasive and problematic issue for individuals with cognitive impairment and dementia, research is relatively sparse, and evidence-based approaches to effectively address stigma remain limited. This literature review examined the past decade of world-wide original research on dementia-related stigma, including a description of presentations of stigma in research samples, domains of AD stigma, stigma assessment, and interventions to reduce dementia-related stigma. Gaps in knowledge and recommendations for future research to address AD stigma were also identified.

**Methods:** Using standard systematic review methodology, original research reports were identified and assessed for inclusion criterion confirmation, date/geographic region, sample characterization, methodology and key findings. Reports were also assessed to see if they included information on 1) types of stigma, 2) stigma interventions, and 3) dementia-related stigma in minority sub-groups.

**Results:** There were 51 articles that met inclusion criteria, with most reports originating from the U.S. and Europe. Main themes included tools for stigma evaluation, stigmatizing beliefs in specific populations (healthcare workers, students, families), correlates of stigmatizing attitudes, stigma sub-domains, consequences of stigma, and approaches to reduce stigma. There is no uniformly-accepted “gold standard” measure for evaluating dementia stigma in research studies. Stigma is widely prevalent in many settings and may be worse in those with limited disease knowledge, in those with little contact with people with dementia, in men, in younger individuals in the context of culture and ethnicity. Health providers sometimes contribute to the perpetuation of stigma. There are few evidence-based stigma reduction approaches, and the literature review found only a single report that involved a real-world intervention that included people with dementia.

**Conclusions:** There is a limited evidence-base on dementia-related stigma, and large-scale stigma-reduction approaches with demonstrated outcomes are lacking. Given world-wide aging trends, this is an important area for future research.

**This research was funded by:** This project has been supported by an educational grant from the Alzheimer’s Association (Cleveland Area Chapter).
Safety of Disclosing Amyloid Imaging Results to MCI and AD Patients
Carl Taswell, MD, PhD1,2; Cheryl L. Donohue, RN3; Maree Mastwyk, PhD3; Andrea Louey, MPsysc3; Jacqueline Giummurra, MPsysc3; David Darby, MD3; Victor Villemagne, MD4; Colin Masters, MD3; Christopher Rowe, MD3
1UC San Diego, La Jolla, CA
2Brain Health Alliance, Ladera Ranch, CA
3Florey Institute Neuroscience, Melbourne, VIC, Australia
4Austin Health Molecular Imaging, Heidelberg, VIC, Australia

Introduction: PET brain imaging for biomarkers of dementia now provides the means to offer prognostic data relevant to an individual’s future health. Balancing the right to access this personal health information raises important research questions about benefits and risks. A concerned person with a negative scan may benefit from reassurance, but a vulnerable person with a positive scan may risk anxiety and depression. This study was performed to assess the psychosocial impact of disclosing a positive or negative amyloid brain scan result to asymptomatic and mildly symptomatic individuals with either MCI or early AD.

Methods: The study population included individuals with age >65 for healthy controls, age >55 and MMSE > 20 for those with MCI or early AD, and excluded individuals with any other current or prior medical and neuropsychiatric condition (including depression or anxiety) that could interfere with neuropsychological testing. All participants signed consent and underwent [18F]-NAV4694 (Navidea Biopharmaceuticals) amyloid imaging read as positive or negative and discussed with them by a physician. Participants were evaluated with a panel of psychometric scales (CES-D, GDS, HADS-A, HADS-D, STAI) both before and after disclosure of scan results with a mean interval of 98 days between the before and after assessments. Paired t-tests were performed for the statistical analysis with the null hypothesis of no change in psychological status.

Results: For participants who completed amyloid scans (N = 143), there were 34 subjects clinically diagnosed with AD, 98 with MCI, and another 11 with none or other including “healthy complainer”. For participants with positive amyloid scans (N = 91) who completed psychometrics before and after, the null hypothesis could not be rejected for CES-D, GDS, HADS-A, HADS-D, STAI but could be rejected for GDS with p = 0.009. However, we consider the latter a misleading statistical artifact because the actual mean score changed only from 2.2 to 2.7 which is well within the normal range for the GDS scale. Thus, there was no significant change in before and after psychometrics for subjects with disclosure of either positive or negative amyloid scans.

Conclusions: We did not observe any worsening of psychological health with a panel of psychometric scales assessed on individuals to whom amyloid brain scan results were disclosed. Therefore, we consider it safe, without apparent risk, to disclose amyloid imaging results to persons who have no prior history of neuropsychiatric illness.

Examining the Clinical Profile of Nelotanserin, a Novel Agent in Development for Lewy Body Dementia
Warren Wen, PhD1; Shankar Ramaswamy, MD1; Stephen Piscitelli, PhD2; Lawrence Friedhoff, MD, PhD1
1Axovant Sciences, Inc., New York, NY
2Roivant Sciences, Inc., New York, NY

Introduction: Lewy bodies Dementia (LBD) is a progressive neurodegenerative disease, affecting approximately 1.4 million elderly in the US. It includes two related disorders: dementia with Lewy bodies (DLB) and Parkinson’s disease dementia. While cognitive dysfunction is a core component of LBD, approximately 80% of the patients also exhibit behavioral disturbances early in the disease, including visual hallucinations (VH) and REM sleep behavior disorders (RBD). The mechanisms underlying these behavioral disturbances are poorly understood; an imbalance between cholinergic and monoaminergic (i.e., serotonin) neurotransmitters may be involved, and excessive 5-HT2a receptor activity has been implicated. As VH have been shown to coincide with REM sleep, RBD may be linked to VH in LBD patients. Nelotanserin is an oral, potent and selective 5-HT2a inverse agonist. In earlier studies, nelotanserin has been shown to reduce awakenings and arousals, sleep stage shifts, and Stage 1 and 2 sleep, and increase slow wave sleep and Stage 3 and 4 sleep. Currently, nelotanserin is being developed for the treatment of VH in LBD and RBD in DLB. This analysis evaluated the clinical profile of nelotanserin in completed studies.
Methods: Nelotanserin has been evaluated in five phase 1 studies and two phase 2 studies to date encompassing 792 subjects receiving active drug. Safety analysis included adverse events (AEs), clinical laboratory evaluations, vital signs, and ECGs. Cardiovascular measurements were assessed by monitoring adverse events and 12-lead electrocardiogram (ECG) recordings. The phase 2 studies were conducted in patients with primary insomnia, including an objective sleep study evaluated with polysomnography (PSG).

Results: Results from clinical laboratory evaluations, vital signs, ECGs were generally unremarkable. The most common treatment-emergent AEs include headache, somnolence, and dizziness; no dose response relationship was observed for these AEs. There were no deaths. One subject who received a single dose of nelotanserin 20 mg experienced a serious AE of diverticulitis; this event was deemed by the investigator to be unrelated to nelotanserin. Less than 2% of subjects experienced AEs that led to treatment discontinuation. There was no evidence of QTc prolongation. In the phase 2 objective sleep study, nelotanserin produced significant improvements on objective measures of sleep maintenance and consolidation.

Conclusions: Nelotanserin was generally safe and well tolerated, and has demonstrated effects on sleep consolidation parameters as measured by PSG. Studies evaluating the safety and efficacy of nelotanserin in LBD are ongoing.

This research was funded by: The completed studies and analyses were conducted and funded by Arena Pharmaceuticals. Axovant Sciences, Inc., is responsible for the conduct of ongoing nelotanserin trials in DLB. Axovant provided support for developing the abstract and poster content. Medical writing support was provided by Konic Ltd.

Poster Number: NR 16

Long-Term Effects of Telephone-Delivered Psychotherapy for Late-Life GAD

Gretchen Brenes, PhD; Suzanne Danhauer, PhD; Mary F Lyles, MD; Andrea Anderson, 7167402, MS; Michael Miller, PhD

Wake Forest School of Medicine, Winston-Salem, NC

Introduction: The focus of the current study is on long-term follow-up for Generalized Anxiety Disorder (GAD) in rural-dwelling elders. The data for this study are from a randomized clinical trial of cognitive-behavioral therapy delivered by telephone (CBT-T) and telephone-delivered nondirective supportive therapy (NST-T) for the treatment of GAD in rural-dwelling elders. We demonstrated the superiority of CBT-T for reducing worry, GAD symptoms, and depressive symptoms immediately upon completing treatment. The purpose of the current study is to determine if intervention effects were still present 1 year after completing treatment.

Methods: Participants were adults aged 60 years or older with a principal or co-principal diagnosis of GAD based on the DSM-IV and living in 1 of 41 rural NC counties. One hundred forty-one participants were randomized to either CBT-T or NST-T. CBT-T consisted of up to 11 sessions focused on recognition of anxiety symptoms, relaxation, cognitive restructuring and use of coping statements, problem-solving, worry control, behavioral activation, exposure therapy, and relapse prevention, with optional chapters on sleep and pain. NST-T consisted of 10 sessions focused on providing a supportive atmosphere in which participants could share and discuss their feelings and did not provide any direct suggestions. Primary outcomes included interviewer-rated anxiety severity (HAMA) and self-report worry severity (PSWQ-A) measured at 9 months and 15 months after randomization. Mood-specific secondary outcomes included self-report GAD symptoms (GAD-7) and depressive symptoms (BDI).

Results: There was a significant decline in anxiety symptoms (HAMA) among participants in both treatments, but there was a significantly greater decline in general anxiety symptoms at the 15-month assessment among participants who received CBT-T (difference in improvement = 3.31; 95% CI, 0.45 to 6.17; p = 0.024). Similarly, there was a significant decline in worry (PSWQ-A) among participants in both treatments but there was a significantly greater decline in worry among participants who received CBT-T (difference in improvement = 3.13; 95% CI, 0.59 to 5.68; p = 0.016). There was a significant decline at the 15-month assessment in depressive symptoms (BDI) among participants in both treatments, but there was no significant difference in depressive symptoms between interventions (difference in improvement = 2.88; 95% CI, 0.17 to 5.60; p = 0.0376). Similarly, there was a significant decline in GAD symptoms (GAD-7) in both treatments, but there was no significant effect of treatment on GAD symptoms (difference in improvement = 1.65; 95% CI, −0.20 to 3.50; p = 0.080). A meaningful response to treatment with respect to worry has been defined as a 50 point reduction in the PSWQ-A. A significantly greater percentage of participants in the CBT-T intervention (86.0%) demonstrated this decline than participants in the NST-T intervention (66.1%; Fisher’s exact test p = 0.0172). For anxiety symptoms, a meaningful response to treatment is a ≥ 50% reduction in HAMA scores, while remission has been defined as a HAMA score ≤ 7. A greater percentage of participants in the CBT-T condition experienced a ≥ 50% reduction in HAMA scores (39.6% vs. 27.4%), although this difference was not statistically significant (Fisher’s exact test p = 0.2202). Further, a significantly greater percentage of
participants in the CBT-T condition (31.3%) had a HAMA score ≤7 than participants in the NST-T condition (14.5%); Fisher’s exact test \( p = 0.0397 \).

**Conclusions:** Brenes and colleagues previously demonstrated the superiority of CBT-T to NST-T in reducing mood symptoms in older adults with GAD upon intervention completion. The current findings demonstrate the superiority of CBT-T on reducing worry and general anxiety symptoms measured 12 months after the cessation of the intervention. The effect on depressive symptoms was borderline \( (p = 0.0376 \text{ versus a critical value of 0.0375}) \) and the effect was not maintained on GAD symptoms, which was somewhat reduced \( (p = 0.088) \) by the 1 year follow-up assessment. The current study found that the superiority of CBT-T to NST-T on worry and anxiety was present 1 year after completing treatment. The primary limitation of this study is the limited generalizability of the findings, as the sample consisted predominantly of white women. Nonetheless, the results of this study demonstrate that a relatively short-term approach has seemingly long-term benefits in reducing worry. At the 1 year follow up, 86% of participants who received CBT-T experienced a clinically significant reduction in worry symptoms. The cost-effectiveness of CBT-T relative to psychotropic medications, and in particular, anxiolytic medications, needs to be examined. Given the intervention brevity, client satisfaction, safety, and efficacy, CBT-T should be recommended by physicians for the treatment of late-life GAD.

This research was funded by: This work was funded by grant R01 MH083664 from the National Institute of Mental Health to Dr. Brenes.

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**Poster Number: NR 17**

**A Mobile Dementia Observation System (DObs): Development and Pilot Usability Testing**

Ari Cuperfain, MSc1,2; Cecelia Marshall, BSW, MSW, RSW2; Mario Tsokas, BSW, RSW2; Qiannan Zhao, BEng1; Dade Sheng, BEng1; Karen Chiu, BSc1,2; Andrea Iaboni, MD, DPhil1,2

1University of Toronto, Toronto, ON, Canada
2Toronto Rehabilitation Institute, Toronto, ON, Canada

**Introduction:** Responsive behaviours in dementia, such as agitation and aggression, are common and distressing for caregivers and patients. It is estimated that 80% of residents in long-term care have dementia, and that 70% of these individuals will have behavioural symptoms, 30% of them severe. A basic principle of assessment of behavioural symptoms is to chart the behavioural patterns over 24 hour cycles, to help establish their frequency, severity, and any patterns. A widely used tool for this assessment is called the dementia observation system (DOS), which is paper-based and onerous.

**Methods:** We have developed a prototype of a mobile application, Dementia Observation (DObs), which integrates information from nursing observations with data from a wearable device on the observed resident with dementia. We conducted usability testing of the DObs mobile application on six assessors, three of whom were clinicians with extensive experience with DOS behavioural monitoring. Quantitative measures of speed and user interaction errors were recorded. Assessors also completed the system usability scale (SUS), a perceived usefulness scale, and a technological self-efficacy scale. Qualitative assessment was performed via the ‘cognitive walkthrough’ and ‘think aloud’ approaches. Post-test questions related to improvements and clinical implementation were discussed.

**Results:** Six assessors with an average overall computer self-efficacy rating of 7.7 out of 10 (range: 4.2 to 9.5) completed a scenario-based usability test of the DObs mobile application. On average, users completed 85% of tasks with all components correct, however, only 64% of tasks were completed on the first attempt. The most frequent anticipated DObs function, charting routine patient behaviours, took on average 51 ± 31 seconds to complete the first time this skill was assessed. This time reduced to 42 ± 22 seconds when a similar behaviour was recorded a second time. Other clinical considerations were identified through user testing such as: collecting multiple behaviours within a given time interval, clarifying which events constitute incidents and which do not, retroactive charting, and incorporating a remote integrated data storage.

**Conclusions:** Mobile technology offers an opportunity to improve the assessment and treatment of responsive behaviours in dementia. Areas of improvement with respect to usability of the DObs mobile application were explored. The app will be redesigned, and usability testing will then be repeated. Future studies will examine DObs feasibility in clinical setting and develop machine learning algorithms to synthesize behavioural, contextual and motion tracking information.
User interface showing screen to collect patient behaviours. Behaviours are typically recorded regularly at 15- or 30-minute intervals.

This research was funded by: This project was funded by a University Health Network Psychiatric Consultants Research Grant. ABC received funding from the Comprehensive Research Experience for Medical Students (CREMS) program of the University of Toronto, and the Mach-Gaensslen Foundation of Canada.

Poster Number: NR 18

A Rehabilitation Goal-Setting Mobile Application (OnMyFeet) in Older Adults: Usability and Acceptability

Karen Chiu, HBSc(Kin)\(^1,2\); Ari Cuperfain, MSc\(^1,2\); Kexin Zhu, B.Eng\(^1\); Xiongbin Zhao, B.Eng\(^1\); Siyang Zhao, B.Eng\(^1\); Andrea Iaboni, MD, DPhil\(^1,2\)

\(^1\)University of Toronto, Richmond Hill, ON, Canada
\(^2\)Toronto Rehabilitation Institute, Toronto, ON, Canada

Introduction: Background: Patient-directed goal-setting is an important practice in physical rehabilitation and it has been shown to enhance participation and improve functional outcomes. To facilitate patient-directed goal-setting, we have developed a mobile application called OnMyFeet. OnMyFeet is based on principles of Enhanced Medical Rehabilitation and it delivers a guided goals interview that assists clients in setting, prioritizing, and personalizing goals. The objectives of this pilot usability study were: 1) assess the usability and acceptability of OnMyFeet in older adults and 2) assess the effectiveness of OnMyFeet on enhancing client-centredness of goals-setting.

Methods: Methods: Participants (mean age 70.3 ± 10.6 years) were two healthy older adults and four inpatients on an MSK rehabilitation unit. The cognitive walkthrough approach was used as the usability evaluation method and task scenarios were moderated using concurrent think-aloud. Qualitative and quantitative measures were collected through usability testing, interviews, and surveys.

Results: Results: OnMyFeet scored 65 ± 27.91 on the System Usability Scale. Users recommended adding clear and visible prompts for advance buttons, keeping a consistent direction in scrolling through lists, and more written instructions. Users enjoyed maintaining a diary of their progress and having a larger role in decision-making. On the Client-Centredness of Goal-Setting survey, the mobile application received scores over 90% in all subscales which were indicators of high client-centredness.
Conclusions: Conclusion: We found that OnMyFeet enhances client-centredness of goal-setting in therapy. The next prototype of the mobile application will aim to improve usability by addressing the identified usability issues specific to older adults.

This research was funded by: This research is funded by Canadian Frailty Network (Technology Evaluation in the Elderly Network), which is supported by the Government of Canada through the Networks of Centres of Excellence (NCE) program. This project is also funded by a University Health Network Psychiatric Consultants Research Grant.

Poster Number: NR 19

Predictors of Unmet Need among Caregivers of Persons with Dementia
Donovan Maust, MD, MS1,2; Amanda Leggett, PhD1; Helen C., Kales, MD1,2

1University of Michigan, Ann Arbor, MI
2VA Ann Arbor Healthcare System, Ann Arbor, MI

Introduction: Among caregiving provided to community-dwelling older adults, care for those with dementia accounts for one-third of the persons providing care and 41% of total caregiving hours (1). While the burden of caregiving is influenced by characteristics of the person with dementia, caregiver factors also influence burden (2). As of the need for informal caregiving increases with the aging of the population, healthcare providers and the public health system must identify those caregivers in greatest need of training and intervention. Two ongoing initiatives include public health surveillance of caregiving: Health People 2020, the federal government’s goals for improving the health of Americans (3); and the Healthy Brain Initiative of the Centers for Disease Control and Prevention (CDC) and Alzheimer’s Association (4). The Caregiver Module of the CDC’s Behavioral Risk Factor Surveillance System was developed in order to estimate the national burden of unmet caregiver need, which we use to understand which caregivers are at greatest risk.

Methods: The BRFSS is a system of state health surveys that include >400,000 adult interviews each year; with weighting, the survey represents all unique adult households in each state. In the CM, each respondent is asked: “During the past 30 days, did you provide regular care or assistance to a friend or family member who has a health problem or disability?” Respondents who indicate “Yes” are asked several additional questions, including the health condition of the person for whom they care (e.g., dementia) and need for additional support services. Among the 24 states that used the CM in 2015, 3,012 respondents (9.6%) reported being the caregiver of a person with dementia, representing over 1.7 million adults. We compared characteristics of dementia caregivers with and without unmet need for additional support services and then completed multivariate logistic regression to determine caregiver characteristics associated with unmet need.

Results: Among dementia caregivers, 25.8% reported unmet need, representing 446,557 caregivers. The most common need was “help in getting access to services”, reported by 50.8%. This was followed by: respite care (16.2%), individual counseling (12.9%), support groups (11.3%), and caregiving classes (8.8%). Female caregivers reported more unmet need than men (OR 1.45, p < 0.001), while the 55–74 year-old age group was most likely to report unmet need (OR 1.36, p < 0.001). Caregivers that were adult children were more likely to report unmet need than spouse caregivers (OR 1.33, p < 0.001). The caregiver characteristic most strongly associated with unmet caregiver need was time spent in caregiving. Compared to respondents reporting ≥8h/wk of caregiving, those who reported ≥40h/wk had 2.43 odds of unmet need (p < 0.001). The multivariate model is presented in Table 1; time burden of caregiving was again most strongly associated with unmet need. Unexpectedly, compared to caregivers who rated their health as excellent or very good, those caregivers who rated their health more poorly were less likely to report unmet need.

Introduction:

Limited research has examined associations between older adults living arrangements and health. Adults aged 65 years and older sampled from National Health Interview Survey 2009–2014. Four indicators of health (serious psychological distress, health status, functional limitations, and number of health conditions) were compared across older adults living alone, living with others related or unrelated, living with a partner and living with children.

Methods:

SUDAAN logistic regression models that were able to use imputed data were used for the dichotomous outcomes serious psychological distress and limitations in activities of daily living. Multinomial regression models applying a Multilog...
function for imputed data in SAS callable SUDAAN (SUDAAN version 11.0.1) were used to examine the association between living arrangements, self-reported health group and number of chronic conditions. All models controlled for a range of sociodemographic characteristics including age group, sex, race/ethnicity, and PIR.

**Results:** Older adults living alone or with others were more likely to report serious psychological distress compared to living with a partner, and less likely to report poor health compared to living with a partner. Older men living alone were less likely to report two or more conditions compared to men living with a partner. Older women living alone or with children were more likely to report two or more conditions compared to women living with a partner.

**Conclusions:** While the reduced risk of SPD among older adults living with a spouse or partner compared to other living arrangements was likely attributable to the psychosocial and relational benefits afforded by marriage, the observed association between living with others and poorer self-rated health may be a consequence of older adults with more serious health and functional limitations choosing to reside with other family members for instrumental social support and caregiving assistance. Older adults with poorer health may choose to live with other family members, rather than alone, to better cope with a serious disease or illness (Borsch-Supan, McFadden, & Schnabel, 1993). Our results suggest that older adults living with others tended to have the poorest health indicators across the four living arrangements we studied; they were significantly less likely to report excellent or very good health, tended to report greater SPD and limitations in ADLs, and reported a greater number of health conditions compared to older adults living with a spouse or partner. These findings are consistent with prior research linking co-residence with adult children and other family members to functional disability and poor health (Wang, 2013). In contrast, we found that older adults living alone were significantly less likely than older adults living with a spouse or partner to rate their health as poor. This finding suggests that living alone may be a marker for better health and greater functional independence among older adults. 

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**Poster Number: NR 21**

### Timing of Mental Health Services Use: Reducing the Risk of Late-life Suicidal Behavior

Amy L. Byer, PhD, MPH; Amy X. Lai, BA; Martha L. Bruce, PhD, MPH

1University of California, San Francisco, San Francisco, CA
2San Francisco Veterans Affairs Medical Center, San Francisco, CA
3Geisel School of Medicine at Dartmouth College, Hanover, NH

**Introduction:** History of suicidal behavior is one of the strongest predictors of subsequent suicidal behavior. Although such a risk is greatly reduced by mental health care, adults with history of suicidal behavior who have used mental health services are still at risk for suicidal behavior. Thus, using a sample of older adults with earlier-life suicidal behavior, this study examined the impact of history of mental health services use on the risk for late-life suicidal behavior.

**Methods:** The study sample included 293 older adults (≥55 years) with earlier-life suicidal behavior (suicidal ideation, plan, or attempt that occurred in earlier life, <55 years). All data were taken from the Collaborative Psychiatric Epidemiology Surveys (CPES, 2001–2003). The CPES is comprised of three national studies (the National Comorbidity Survey Replication, National Survey of American Life, and National Latino and Asian American Study) that collectively represent non-institutionalized, community-dwelling adults in the US. Because the CPES is representative of the age, racial-ethnic, and gender distributions of the nation, the reported findings are generalizable to the larger population of older adults in the US. The CPES assessed history of mental health services use and suicidal behavior through the World Health Organization’s World Mental Health Composite International Diagnostic Interview. History of mental health services use was defined as use of specialty mental health or general medical services for “emotions, nerves, mental health, or use of alcohol or drugs,” and was examined as two variables: 1) any services use versus no use and 2) amount of time from earlier-life suicidal behavior to services use (≤1, 2–5, 6–10, and ≥11 years). Lastly, late-life suicidal behavior was defined as suicidal ideation, plan, or attempt that first occurred in late life (≥255 years). The influence of history of mental health services use on late-life suicidal behavior was assessed through complex design-corrected and survey-weighted logistic regression analyses. The impact of any mental health services use and the timing of services use on the odds of late-life suicidal behavior were both assessed, with analyses adjusting for age, race-ethnicity, gender, and DSM-IV psychiatric disorders (any mood, anxiety, or substance use disorders). All findings were based on weighted analyses unless otherwise noted.

**Results:** The population of older adults with earlier-life suicidal behavior had a mean ± SE age of 63.0 ± 7. years. The distribution was 68.6% females, 79.4% non-Hispanic whites, and 20.6% non-whites (6.5% African Americans and 14.2% Hispanics or others). Furthermore, 67.9% of the population had prior mood, anxiety, or substance use disorders, with 79.7% who used mental health services and 13.8% who had late-life suicidal behavior. Although history of mental health services use versus no use was not
associated with late-life suicidal behavior (p > .05), the timing of services use influenced the risk of suicidal behavior in late life. After adjusting for age, race-ethnicity, gender, and psychiatric disorders, older adults with earlier-life suicidal behavior who delayed using mental health services were nearly 2 times more likely to have late-life suicidal behavior (OR: 1.53, 95% CI: 1.16–2.01, p = .002). The proportion of older adults with earlier-life suicidal behavior who delayed using services until ≤1, 2–5, 6–10, and ≥11 years later are presented by late-life suicidal behavior in Figure 1. In general, following earlier-life suicidal behavior, using mental health services within one year was typical for older adults who did not develop late-life suicidal behavior, whereas delaying use of services for ≥11 years was highly prevalent for those who developed late-life suicidal behavior.

Conclusions: This is the first study to our knowledge that examined the influence of history of mental health services use on the risk for suicidal behavior in late life. Our results highlight that older adults with earlier-life suicidal behavior who delayed using mental health services were significantly more likely to develop late-life suicidal behavior. These findings underscore that following earlier-life suicidal behavior, appropriate timing of mental health services use plays a vital role in reducing the risk for suicidal behavior in late life.

This research was funded by: This work is supported by a NIH R01 grant (MD007019) that is administered by the Northern California Institute for Research and Education through resources from the San Francisco Veterans Affairs Medical Center.

Primary Care Physicians’ Perceived Barriers on the Management of Depression in China Primary Care Setting
Shulin Chen, MD&PhD¿; Yeates Conwell, MD, MD²

1Zhejiang University, Hangzhou, China
2University of Rochester Medical Center, Rochester, NY

Introduction: Chinese patients with depression have limited access to mental health specialty care because of myriad barriers at different levels. Recently, there has been increased interest in targeting primary care settings for managing depression, because most depressed individuals visit their primary care physicians (PCPs) during the course of their depressive episodes. The present study examined PCPs’ perceived barriers on the management of depression.

Methods: A total of 295 PCPs completed a 36-item survey by mail. The survey questions included demographics, years in primary care, mental health training experience, and perceived barriers regarding the management of depression in their clinical and current practices. Chi-square and t-test analyses were used to compare the difference of demographic variables between the two districts. For the correlates of PCPs’ clinical practices and their perceived barriers, logistic regression models were used.

Results: At the practice level, lack of access to mental health specialists (37.8%) was the most commonly reported barrier and at patients’ level, reluctance toward diagnosis of depression (34.6%) was the high barrier. Results have indicated that most PCPs (69.2%) felt comfortable discussing psychological issues with patients. Mental health training is significantly related to PCPs’ clinical practice. When PCPs perceived moderate to high-level practice level barriers, prescription and referral were mostly preferred.
Conclusions: These findings will guide the development of future multifaceted intervention strategies and an appropriate collaborative care model in the management of depression in China primary care settings.

This research was funded by: The project was supported by Fogarty International Center, the National Institutes of Health of United States of American grant R01TW008699. This work was also supported by the Program for New Century Excellent Talents in University from the Ministry of Education China.

Poster Number: NR 23

Patient Satisfaction and Engagement with an In-Home Program Providing Support During the Last 12 Months of Life
Phillip Painter, MD; Ashley Brill, MS; Amy Nelson, RN, BSN; Wendy Rodkey, MCHES; Denise Streible, RN, BSN
Humana Inc., Louisville, KY

Introduction: Advanced care planning can help individuals with advanced illness adopt active behaviors in implementing effective quality of life/care planning communication and shared decision making processes with their family and physicians. Often at this stage of life, people have difficulty leaving the home and could benefit from in-home care. Humana Inc., a health and well-being company serving millions of people across the country, currently offers telephonic counseling on defining and conveying end-of-life preferences as well as assistance with completing online advanced directives. However, patients with advanced illness expressed an interest and need for in-person in-home care. Thus, we have partnered with Aspire Health to provide specialized in-home services to people with Humana Medicare insurance during their last 12 months of life. This study describes patient participation, satisfaction and engagement with the in-home program.

Methods: This program was initiated in 8 cities: Birmingham, Mobile, Knoxville, Nashville, Memphis, Chattanooga, Houston, and Chicago; and later it expanded to some parts of Ohio. A claims-based algorithm was used to identify patients in their last year of life, and physicians then reviewed patient records to verify. Enrollment began in March of 2016 and is rolling until the goal of enrolling 1000 patients is met. The program provides a comprehensive initial, in-home assessment with unlimited access to in-home nurse practitioner (NP), social worker and chaplain visits. At a minimum, in-home NP visits are conducted monthly. Participants also have telephone access to physicians or NPs 24 hours a day, 7 days a week. Other palliative care services are also provided as ordered by clinicians. Participation, satisfaction and engagement was evaluated and reported between April and August of 2016.

Results: A total of 4,008 patients (average age of 78 years old) were initially identified as eligible, with the majority (60%) of those residing in Tennessee, Chicago or Houston, which is representative of this population’s geographic location. The top three most common diagnoses were congestive heart failure (29%), cancer (22%) and chronic obstructive pulmonary disease (16%). As of September 26, 2016, 944 patients have participated, representing 94% of the initial program goal of 1000. The average length of time people have been in the program is 73 days. Thirty-three percent (33%) of participants have been discharged for the program for reasons including hospice enrollment, death, Aspire- or participant-determined “too healthy” for service, participant declaration and changing health plans. The average length of time in the program prior to enrollment in hospice was 71 days. In a satisfaction survey, participants rated the program as very helpful (1 = very unhelpful, 5 = very helpful) in explaining illness (4.84), medication use (4.7), future planning (4.4), and managing symptoms (4.6). NPs have made 87 urgent visits in circumstances where the patient otherwise would have gone to the emergency department. A total of 188 primary care physician referrals have been processed, and 457 after-hour calls have been made to the help line when physician offices are typically closed. Of the 620 currently active participants with known advance directive (AD) status, 100% have discussed it, 63% have an AD (42% created one as part of the program) and 37% have no documented AD.

Conclusions: Participants report high satisfaction with the program, underscoring the importance of in-person in-home care to patients. The enrollment, participation, and utilization of services suggest that there is a need for specialized services that can be delivered in the home during the last 12 months of life and preceding hospice. This program may prevent delaying care or difficult emergency department visits during times when a patient’s doctor’s office is closed.

Poster Number: NR 24

Physical Exercise-Induced Improvement in Gait Speed and Interoceptive-Exteroceptive Network Synchronization
Lanxin Ji, PhD candidate1; Xue Zhang, PhD candidate; Kevin Manning, PhD2; David Steffens, MD2; Lihong Wang, PhD2

1Center for Biomedical Imaging Research, Tshinghua University, Beijing, China
2UCONN Health Center, Farmington, CT
Introduction: Falling tendency in older adults has been found associated with cognitive decline. Physical exercise not only can improve gait speed, but also can improve cognitive function. However, neural mechanisms underlying the association between gaiting/falling and cognitive function/dysfunction as well as improvement of the relevant neural network function after physical exercises are not quite clear. We hypothesized that the relationships of functional connectivity among the four major neural networks, i.e executive network (ECN), salience network (SN), emotion processing network (Emo), and default mode network (DMN) could be associated with gait and cognitive function as well dysfunction. In this study, we examined the correlations between functional connectivity among these networks with cognitive and gait function before and after 6-week computer-guided dancing programs.

Methods: Twenty six healthy older adults [mean age (SD) = 73.3 (6.7) yrs] were randomly assigned to two 6-week computer-guided dancing programs, one with increased dance difficulty level (easy dance), the other with a consistent dance difficulty level (easy dance). Gait function, cognitive function, mood, and 8-minute resting state functional magnetic resonance imaging (fMRI) were measured before and after the exercise programs. The gait function was assessed using six-minute walking test (6MWT). Cognitive function was evaluated using a neuropsychology battery covering language, memory (such as CVLT delayed recall), executive function (such as Stroop and Trail Making B), attention, processing speed, and visual spatial domains. The total cognitive function score was calculated using summation of the standardized scores of each item. The mood state was evaluated by the Positive and Negative Affect Schedule. The fMRI images were acquired from a 3.0-Tesla Philips Achieva scanner. A high-resolution 3D T1-weighted anatomical images were collected with voxelsize of 1 mm³. Functional images were acquired with 35 slices transversely busing an echo-planar imaging (EPI) sequence (TR = 2500 ms, TE = 30 ms and voxelsize = 3.5 × 3.5 × 3.85 mm³). Respiratory and cardiac rates were recorded. Standard functional data preprocessing procedures were carried out using the DPARSF (http://rfmri.org/DPARSF). Seed-based functional connectivity using ROIs from the automated anatomical labelling (AAL) template was computed for each subject. Representative key hubs of each network, i.e bilateral middle frontal cortex for ECN, the right insula and bilateral anterior cingulate cortex for SN, bilateral amygdala and subgenual cingulate for Emo, and posterior cingulate and precuneus cortex for DMN were selected to calculate mean timecourse for each network. Functional connectivity (FC) among these networks was computed using the DPABI package. Multiple regression model at group level was used to examine the correlations between functional connectivity among networks and 6MWT, positive and negative affect, and cognitive function(using total score and time-by-item) before exercise and post-pre exercise. Significant level was set at p < 0.05 with false discover rate (FDR) correction for multiple comparison correction.

Results: We did not find significant difference in gait speed, cognitive function, or mood between post- and pre- exercises between the two physical exercise programs. Therefore, we combined data from the two exercise groups in doing further analyses. Before exercise, the FCECN-DMN + |FCECN-SN| during resting state was positively correlated with the Stroop task performance (r = 0.68, p = 0.0008), as well as CVLT-delay (r = 0.45, p = 0.02). Physical exercise marginally increased FCECN-DMN + |FCECN-SN| (t = 1.75, p = 0.04) and FCSN-ECN-FCSN-DMN (t = 1.77, p = 0.046), and decreased FCECN-Emo (t = 1.53, p = 0.06). We also found a significant increase in 6MWT after exercise (paired t test, t = 2.13, p = 0.03) and a positive correlation between increase of 6MWT and increase of performance on Trail Making B (r = 0.59, p = 0.04), Digital Span (r = 0.57, p = 0.03) and total score of cognitive function (r = 0.53, p = 0.05). Interestingly, the 6MWT tended to predict an increase in FCSN-ECN-FCSN-DMN after 6-week physical exercise (t = 0.55, p = 0.08).

Conclusions: The functional connectivity of ECN with default mode network and salience network was correlated with executive function and memory, which also had a marginal increase post exercise, suggesting a strong link between ECN connectivity and cognitive function. Our study confirmed a significant improvement in gait speed after six-week of dancing, which was also associated with cognitive function, particularly with executive function. Importantly, gait speed pre-exercise predicted an increase in functional connectivity of the salience network with internal and external networks. These results suggest that our dancing program is effective in improving gait speed and the integrity of interoceptive and exteroceptive network synchronization.

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Poster Number: NR 25

Older Adult Sleep Coaches Facilitate Sleep Intervention Groups for Seniors in Residential Care

Erin L Cassidy-Eagle, PhD1; Allison Siebern, PhD2; Lisa Unti, MPH3; Jill Glassman, PhD3; Laura B.B. Dunn, MD, MD1

1Stanford University School of Medicine, Santa Cruz, CA
2FNCVAMC, Fayetteville, NC
3ETR, Scotts Valley, CA
Evidence for Using rTMS among Older Adults with Psychiatric Disorders: A Systematic Review

Suneela Cherlopalle, MD1; Rajesh R. Tampi, MD, MS, DFAPA2; Geetha Manikkara, MD3; Arjun K. Nanda, MD1; Kirsten Wilkins, MD2

1MetroHealth Medical Centre, Cleveland, OH
2Yale, New Haven, CT

Introduction: The aim of this systematic review is to identify published randomized control trials (RCTs) that evaluated the use of repetitive transcranial magnetic stimulation (rTMS) for psychiatric disorders among older adults.

Methods: A literature search was conducted of PubMed, MEDLINE, OVID and PsychINFO databases for randomized controlled trials (RCTs) in any language that evaluated the use of rTMS for various psychiatric disorders among adults were searched through September 30, 2016. Only studies that were published in English language journals or had an official English translation were included in the final analysis. Additionally, bibliographic databases of published articles were searched for additional studies.

Results: A total of 40 RCTs were obtained through the search strategies. Conditions studied (n = number of RCTs) included mild cognitive impairment (MCI) (n = 1), Alzheimer’s disease (n = 4), major depressive disorder (n = 14), schizophrenia (n = 5), treatment resistant depression (n = 4), geriatric depression (n = 2), bipolar depression (n = 2), depression in Parkinson’s disease (n = 1), vascular depression (n = 1), nicotine dependence (n = 1), cocaine addiction (n = 1), motor cortical function (n = 2) and pain perception (n = 1). Available data indicate that in the majority of the studies rTMS was well tolerated, but efficacy results were variable with some studies showing benefit whereas other studies showed limited efficacy.

Conclusions: Although limited, available evidence suggests that rTMS is a safe and effective procedure. Side effects associated with its use include mild insomnia, transient headache, transient scalp tenderness, hearing problems that spontaneously resolve, transient difficulty concentrating, and worsening depression without need for any specific intervention in the majority of cases. rTMS may benefit various aspects of Alzheimer’s disease including an improvement in attention and psychomotor speed with sustained effects lasting for 3 months.1 Its use in individuals with schizophrenia did not appear to show significant benefit as in 3 trials there was no difference in refractory auditory hallucinations.2 However, there was improvement in negative symptoms in two trials.2 The majority of the studies of rTMS in depressive disorders showed no significant clinical benefit but some symptoms, like psychomotor retardation, did improve. In treatment resistant depression, only one of the four studies showed benefit with greater remission rates in the group that used rTMS. No significant benefit was noted among the trials involving individuals with bipolar depression and geriatric depression. Greater chance of abstinence was found among older individuals with cocaine dependence and nicotine dependence who received treatment with rTMS.3,4 These results indicate that rTMS may be beneficial for certain psychiatric disorders in older adults but the risks and benefits of its use should be carefully assessed before embarking upon treatment.4

Poster Number: NR 26

Reference:


Introduction: Independent Living Facilities (ILF) and Assisted Living Facilities (ALF) represent the fastest growing segment of long-term care. Residents present significant care challenges for staff due to impairments in sleep, cognition, and a range of other psychological, functional and medical challenges. Insomnia is an ideal intervention target given the evidence that treatments are very successful for a broad range of individuals; improvements have the potential to broadly impact public health; and further, sleep represents a modifiable risk factor for a range of other disorders, such as declining cognition, depression and functional impairment.

Methods: Our current investigation aimed to explore the feasibility, implementation fidelity and effectiveness of using trained senior volunteers from the community to implement an adapted CBT intervention for sleep disturbance in older adults in ILFs and ALFs. A 2-day training and intervention manual for these volunteer sleep coaches was based on the previous version: the 6-session, evidenced-based, interactive “Sleep Class” for older adults in residential settings who also frequently suffer from mild cognitive deficits.

Results: The ‘Sleep Class’ was well received by facilitators, staff and residents. Class participants (N = 8), gave favorable feedback of the class, however, dropout rates were high, indicating additional factors were at play. Strengths, weaknesses and lessons learned from this implementation effort will be reviewed. Participants that completed all aspects of the class and study (n = 3) showed a positive trend in all aspects of their sleep functioning, measured subjectively and objectively.

Conclusions: Given the challenges encountered, alternative implementation models (e.g. utilizing younger sleep coaches) will be tested, however, the core intervention design will be retained. If effective, future efforts will focus on transferability and scalability across residential care settings, and beyond, incorporating the use of trained sleep coaches to implement the intervention.

Poster Number: NR 26

Evidence for Using rTMS among Older Adults with Psychiatric Disorders: A Systematic Review

Suneela Cherlopalle, MD1; Rajesh R. Tampi, MD, MS, DFAPA2; Geetha Manikkara, MD3; Arjun K. Nanda, MD1; Kirsten Wilkins, MD2

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Poster Number: NR 26

Evidence for Using rTMS among Older Adults with Psychiatric Disorders: A Systematic Review

Suneela Cherlopalle, MD1; Rajesh R. Tampi, MD, MS, DFAPA2; Geetha Manikkara, MD3; Arjun K. Nanda, MD1; Kirsten Wilkins, MD2

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Introduction: Social communication deficits cause and maintain significant public health problems in later life, including social isolation and depression. Treatments to remedy these deficits exist for younger patients (e.g., autism spectrum disorders), but not older patients. Social communication deficits include both production of facial communication (including lack of eye contact and flat affect/little smiling) and production of non-facial communication (monotone/soft voice and negative speech content). The growing use of technology among older adults holds great promise for improving social communication deficits, which can arise from multiple biopsychosocial pathways; elucidating these pathways will allow for tailored interventions. Our team of clinician-researchers and computer scientists developed a novel affective computing program—the “Aging and Engaging Program” (AEP)—to help older adults improve social communication. We propose to improve social communication with our computing program, which provides automated feedback on the production of facial communication (poor eye contact, flat affect) and non-facial communication (negative speech content and soft/monotonous voice). Our premise is that deficits in social communication (target) are modifiable via computerized behavioral intervention among older adults. We hypothesize that ameliorating deficits in social communication will improve social functioning (functional outcome), which will in turn improve clinical outcomes, including reduced depression.

Methods: We conducted several focus groups with older adults and several meetings with key advisors (geriatricians, gerontologists, geriatric neuropsychologists) to help us refine the social communication scenarios to be relevant to older adults, as well as to assist us in the design of the modes of real-time and post-interaction feedback to provide to older adult participants. The Aging and Engaging Program (AEP) involves conversations with a virtual agent. The AEP records audio and video using a computer’s microphone and webcam and uploads data to a server in real-time. On the server, the facial and prosodic features are extracted from the audiovisual files, including smile intensity, pitch, volume, frequencies of the first three formants, and pixel difference between consecutive frames. A face tracker extracts eye-gaze direction as well as two-dimensional and three-dimensional coordinates of users’ pupils. To generate feedback, the AEP uses a hidden Markov model-based technique. For the subject, the AEP generates a summary with strengths and suggestions for continued improvement (See Figure 1 for an overview of the AEP). Pilot data from 25 older adults (25% male; average age 67) who engaged with the AEP and provided feedback on their experience provide initial feasibility data and acceptability data. Participants were recruited from an outpatient geriatric mental health clinic and through advertisements in a local newspaper.

Results: To evaluate the acceptability of our system, we asked our participants four questions. The statements and their average ratings are shown in Table 1. On average, participants self-reported the system easy to use, with a value of 1.96 (SD = 1.02). Our intuitive design choices, minimal button-pressing, and voice-assisted feedback might have made our system easy to use. We also examined differences in acceptability of the program by whether the participant scored above the 70th percentile on the PROMIS measures of depression, anxiety, and social isolation (Table 1). In these three categories, we did not find any significant differences in ratings between the groups, which, while inconclusive given our sample size, nonetheless suggests that those who are isolated/depressed/anxious are not less likely to find the program acceptable. This is important because those who report these characteristics are most likely to benefit from the program.

Figure 1.
Conclusions: Our exploratory study revealed key challenges while also underscoring the acceptability and feasibility of the system. Our participants shared their experiences using the system and, overall, found it useful, intuitive, and fairly accurate. This indicates that such technology might be accepted by all older adults, including (most importantly) by those who could stand to benefit the most. In the future, we will build a fully-automated system, which will be accessible from users’ homes. We will examine how participants are able to utilize their practice with our system to improve or maintain their existing relationships and maintain better health and quality of life.

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Poster Number: NR 28

**Economic Hardship is Associated with Insomnia in Older Adults: Findings from the National Health and Aging Trends Study**

Loretta Anderson, MA, MHS; Jeanine Parisi, PhD; Adam P. Spira, PhD

Johns Hopkins Bloomberg School of Public Health, Reisterstown, MD

Introduction: Studies have shown that both economic hardship and insomnia are associated with poor health outcomes such as depression and cognitive decline in older adults. The aging population often have increased sleep disturbances as they age, and may be at increased risk for economic hardship due to fixed retirement income and increasing health care expenses. In this analysis we examine if sleep may be one of the mechanisms through which economic hardship exerts negative effects on health in aging populations.

Methods: Using data collected from 7,075 survey respondents in 2012 of the National Health and Aging Trends Study, we used an application of logistic regression models to estimate the odds of insomnia. Economic hardship was measured through yes/no responses to four survey questions: was there a time recently when you didn’t have enough money for food, housing payments, utility payments, and enough money for medical bills or prescriptions.

Results: Results of the logistic regression models indicated that higher levels of economic hardship were associated with a greater odds of insomnia, after adjusting for age, race, gender, and education (Model 1) (OR = 2.77, 95% CI: 1.82, 4.23, p \leq .001), plus number of physical health conditions (Model 2) (OR = 2.34, 95% CI: 1.49, 3.67, p < .001), plus anxiety and depression (Model 3) (OR = 1.96, 95% CI: 1.24, 3.11, p < .01).

Conclusions: These findings indicate that after accounting for potential confounders, older adults with higher levels of economic hardship are twice as likely to have insomnia as those without economic hardship. By focusing our attention on issues of economic hardship in older adults, we may be able to improve the overall health and quality of life in this growing population. Future research may be needed to determine if one of the indicators of economic hardship, skipping meals, may cause older adults to lack the proper nutrition needed for optimum physical and mental health.

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Safety and Tolerability of Dextromethorphan/Quinidine in Older Patients

Stephen D’Amico, MD; David N. Alexander, MD; Andrew J. Cutler, MD, MD; Richard D. Zorowitz, MD; Charles S. Davis, PhD; Paul Shin, MD; Frederic Ledon, MS; Andrea E. Formella, PharmD

1Cornerstone Medical Group, Franklin, TN  
2David Geffen School of Medicine at UCLA, Los Angeles, CA  
3Florida Clinical Research Center, Bradenton, FL  
4MedStar National Rehabilitation Network, Washington, DC  
5CSD Biostatistics, Inc., Tuscon, AZ  
6Avanir Pharmaceuticals, Inc., Aliso Viejo, CA

Introduction: Pseudobulbar affect (PBA) is a neurologic condition characterized by laughing and/or crying episodes that are uncontrollable and incongruent with social context and prevailing mood. PBA occurs secondarily to a variety of unrelated neurologic conditions such as traumatic brain injury (TBI), stroke, and Alzheimer’s disease, and it can be highly disruptive to everyday life. PBA is thought to be under-recognized due to limited awareness, and consequent lack of screening for the condition and confusion with other neuropsychiatric conditions. Dextromethorphan hydrobromide/quinidine sulfate (DM/Q) 20/10 mg is the only treatment FDA-approved for PBA; approval was based on phase 3 studies in patients with PBA secondary to amyotrophic lateral sclerosis or multiple sclerosis. Medication safety can be a particular concern in the elderly due to polypharmacy, concomitant medical conditions, and increased risk for problems with cognition, balance, and stability. Few (~15%) patients in the DM/Q phase 3 clinical trial program for PBA were ≥65 years, and fewer were ≥75 years. Here, we review safety data for older patients from two recent clinical trials (PRISM II and AVR-131).

Methods: PRISM II was a phase 4 open-label, US, multicenter, 90-day trial. Patients with PBA secondary to either dementia, stroke, or TBI, with a Center for Neurologic Study-Lability Scale (CNS-LS) score ≥13 were treated with DM/Q 20/10 mg BID (QD during Week 1). Concomitant neuropsychiatric medications were allowed at stable doses. Safety measures included adverse events (AEs) and vital signs. Data were analyzed for the overall population, by disease cohort, and by age. Additionally, a sequential-comparison parallel trial (AVR-131)1 for patients with Alzheimer’s disease (AD)-related agitation evaluated DM/Q dosed at 20/10 QD in week 1, 20/10 BID in weeks 2–3, and 30/10 mg BID thereafter. Patients received DM/Q treatment for 5 or 10 weeks (depending on randomization arm). Stable dosages of antidepressants, antipsychotics, hypnotics, and medications used to treat dementia were allowed. Safety data included AEs, vital signs, and ECGs.

Results: Of the 367 patients enrolled in PRISM II, 152 (41.4%) were aged ≥65 years, including 70% (n = 94/134), 41% (n = 46/113), and 10% (12/120) of patients comprising the dementia, stroke, and TBI cohorts, respectively. The only AE reported in ≥5% of patients ≥65 years was urinary tract infection (UTI) 5.9%, which occurred in 6 (6.4%), 1 (2.2%), and 2 (16.7%) patients with dementia, stroke and TBI, respectively. Other AEs occurring in >3% of patients ≥65 years were diabetes 3.9% [n = 4 (4.3%), 1 (2.2%), and 1 (8.3%), respectively], headache 3.9% [n = 5 (5.3%), 1 (2.2%), and 0, respectively] and fall 3.3% [n = 3 (3.2%), 2 (4.3%) and 0, respectively]. Adverse events leading to discontinuation were reported for 13.2% of patients aged ≥65 [n = 14 (14.9%), 5 (10.9%), and 1 (8.3%), respectively] vs. 7.4% of those <65 years [n = 2 (5.0%), 1 (1.5%), and 13 (11.0%), respectively]. Serious adverse events were reported for 9.2% of patients aged ≥65 [n = 11 (11.7%), 2 (4.3%), and 1 (8.3%), respectively] vs. 4.2% of those <65 [n = 3 (7.5%), 3 (4.5%), and 3 (2.5%)]; none were deemed to be related to DM/Q treatment. Of the 220 patients randomized in the AVR-131 trial, 127 patients received placebo and 152 received DM/Q (n = 59 of these were re-randomized from placebo to DM/Q mid-study). The mean age was 77.8 years (only 11 [8.7%] were <65 years). Treatment-emergent AEs were reported by 61.2% vs. 43.3% (DM/Q vs. placebo). Treatment-emergent AEs (>3% more than placebo) in the DM/Q vs. placebo groups were fall (8.6% vs. 3.9%), diarrhea (5.9% vs. 3.1%), urinary tract infection (5.3% vs. 3.9%) and dizziness (4.6% vs. 2.4%). Serious adverse events occurred in 7.9% of DM/Q patients vs. 4.7% of placebo; none were deemed treatment-related. Discontinuations due to AEs were reported for 5.3% of patients treated with DM/Q vs. 3.9% placebo.

Conclusions: In these two trials, DM/Q treatment was generally well tolerated and associated with a low overall incidence of AEs, including in elderly patients and despite the allowed use of other psychiatric and dementia-related medications. The safety profile observed for older patients in PRISM II was consistent with safety findings from the Phase 2 trial of DM/Q for the treatment of agitation in patients with AD who had a mean age of 78 years, further supporting the safety profile of DM/Q in elderly patients at the approved dose to treat PBA. Cummings JL, et al. JAMA. 2015;314(12):1242–1254.

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**Ability of the Maze Navigation Test (MNT) to Predict Performance on a Specialist Driving Assessment for Individuals with Dementia**

Etuini Ma'u

Waikato District Health Board, Hamilton, New Zealand

**Introduction:** Whilst it is generally accepted that those with a moderate dementia should not drive, the driving ability of those with early cognitive decline or mild dementia is less clear. With no reliable measure to guide decisions, it is left to the physician’s subjective judgment as to whether further on-road testing is necessary, the cost of which is prohibitive for many. The Maze Navigation test (MNT) was developed as a measure of executive functioning and has been shown to predict driving ability. The aim of this study was to assess the ability of the MNT to predict driving performance on a specialist driving assessment for individuals with dementia.

**Methods:** 35 participants recently diagnosed with dementia in the Waikato memory service and still driving were administered the MNT, Montreal Cognitive Assessment (MoCA) and Trail making tests A & B, then completed a specialist occupational therapist on-road driving assessment.

**Results:** Of the 20 completed assessments to date, 10 (50%) passed without restrictions, 7 (35%) passed with restrictions and 3 (15%) failed the on road assessment, with only Trails A (p = .007) and Trails B (p = .027), but not MNT (p = .11), correctly predicting driving outcome. When participants were dichotomised into those with imposed driving restrictions (including driving cessation) or without, neither the MNT (p = .07), MoCA (p = .18), Trails A (p = .546) or Trails B (p = .226) predicted driving outcome.

**Conclusions:** Preliminary results indicate most individuals diagnosed with dementia and still driving are safe to do so, with only the Trails A&B tests predicting on-road driving outcome.

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**Combinatorial Pharmacogenomics Reduces Polypharmacy and Medication Cost in Elderly Patients with Anxiety and Depression**

Mark Mayhew, PhD; Michael Jablonski, PhD; Jim Li, PhD; Bryan Dechairo, PhD

Assurex Health, Mason, OH

**Introduction:** The frequency of adverse drug reactions (ADRs) and therapeutic failures are often increased in elderly patients. Individual genetic variations in drug-metabolizing enzymes and neurotransmitter transporters and receptors add to the heterogeneity of treatment response and safety. Selection of genetically concordant medications is not only important for proper efficacy and avoiding ADRs, but also affects polypharmacy, the number of prescriptions needed to treat psychiatric and associated comorbid conditions, and therefore also impacts healthcare costs.

**Methods:** In this subanalysis of a large pharmacogenomics trial (Winner et al. 2015), we aimed to better understand the medication cost savings and polypharmacy differences between medication selection guided by the GeneSight® combinatorial pharmacogenomic test (congruent) versus medication selection that did not follow the genetic test results (incongruent) in patients 65 years of age or older. Specifically, we assessed polypharmacy and the cost differences when patients were treated by primary care providers or psychiatrists for major depressive disorder (MDD) and generalized anxiety disorder (GAD).

**Results:** As a driver of cost savings, polypharmacy was reduced in both CNS and non-CNS medications with 2 less medications and 10 less medication refills per patient per year (PPPY) when healthcare providers made congruent decisions in patients 65 years of age or older. Congruence with the GeneSight® test recommendations, resulted in total medication cost savings of $4,114 PPPY for PCPs (p = 0.026) and $120 PPPY for psychiatrists (p = 0.719) compared to incongruence. Specific to psychiatric medications, PPPY cost savings were $1,738 PPPY for PCPs (p = 0.001) and $514 PPPY for psychiatrists (p = 0.397). The greatest cost savings was for GAD patients where congruent medication selection decisions resulted in $9,367 PPPY compared to incongruent decision making (p = 0.045). Meaningful cost savings of $5,538 PPPY (p = 0.176) were also observed for patients with MDD.

**Conclusions:** Significant medication cost savings were observed in patients 65 years of age or older when clinicians were congruent with pharmacogenomic test recommendations. Medication cost savings occurred for a number of reasons including a reduction in polypharmacy for both psychiatric and comorbid disorders. It has been shown in several studies that relieving depression symptoms results in improvement of other comorbid conditions like diabetes. We speculate that total medication savings are partly driven by improving depression, anxiety, and other comorbid disorders in combination. This is evident from
the reduction in medication spend across CNS and non-CNS medications and the greater cost savings associated with PCP treatment compared to treatment by a psychiatrist. Psychiatrists, in contrast to PDPs, might not be willing to reduce neuropsychiatric medications due to medication trials being the primary source of treatment for patients. Understanding the genetic and phenotypic heterogeneity of patients, particularly in the over 65 age group, allows clinicians to choose optimal therapeutic treatments, avoid ADRs, and save money on medication.

This research was funded by: Assurex Health.

Implementation of a Screening Tool for Outpatient Palliative Care Referrals from Geriatric Psychiatry: A Quality Improvement Project
Erin Zahradnik, MD1; Matthew Majeske, MD2

1University of Chicago, Chicago, IL
2Icahn School of Medicine at Mount Sinai, New York, NY

Introduction: Geriatric psychiatry patients often have significant medical problems in addition to their mental health concerns. Diseases such as dementia frequently present with neuropsychiatric symptoms, and serious health problems are associated with increased risk of depression and anxiety. Palliative care is a specialty that focuses on the treatment of physical and psychological symptoms related to life-limiting illnesses, many of which occur in the geriatric population. This quality improvement (QI) project aimed to develop a tool to facilitate outpatient referrals from geriatric psychiatry to palliative care.

Methods: The tool was developed using criteria based on palliative care and hospice eligibility, such as frequent hospitalizations, recent declining functional status, and unmet end-of-life needs. It contained both an educational component to help psychiatry providers understand specific palliative care goals, as well as a guide for determining which patients may benefit most. Patients (n = 230) were screened during their geriatric psychiatry clinic visits and then a more in-depth chart review was performed for those initially deemed good candidates (n = 13).

Results: Ultimately, 11 patients were found to warrant outpatient palliative care referral. We found that the most useful criteria for facilitating these referrals was 1) presence of a life-limiting or life-threatening condition, and 2) psychiatric symptoms related to the life-threatening condition.

Conclusions: The development of a palliative care screening tool and referral pathway for geriatric psychiatry patients with serious medical illnesses may help provide these patients with improved comprehensive care for their interrelated medical and psychiatric diseases.

Pharmacogenetics-Guided Treatment of Mental Illness in Late-Life: A Case Series
Ksenia Freeman, MD; Carl Cohen, MD; Michael Reinhardt, MD; Anup Mani, DO; Dina Ghoneim, MD

SUNY Downstate, New York, NY

Introduction: Psychopharmacotherapy of older adults is an exceptionally challenging and sensitive process. Safe implementation of pharmacotherapy requires: comprehensive assessment, careful person-centered planning, standardized monitoring, pharmacodynamic, and pharmacokinetic consideration. Given the complexity and high rates of adverse effects of psychopharmacotherapy in older adults, all potential tools to minimize risk and increase benefit merit investigation.

Methods: Pharmacogenetic testing has undergone only minimal investigation in older adults with mental health disorders. Through evaluation of an individual’s pharmacogenetic profile, this testing offers the promise of personalized pharmacotherapy, decreased polypharmacy, and increased adherence through minimization of adverse effects. Pharmacogenetics testing analyzes medications via pharmacokinetic and pharmacodynamic genes, related to the metabolism of pharmaceutical agents commonly used in psychiatry, evaluating both single gene effects and gene drug interactions. In this study, three multicomorbid, treatment-resistant geropsychiatric cases are reviewed and the results of their pharmacogenetic testing discussed.

Results: In each case, pharmacogenetic testing revealed a complex interaction between genes and drugs, potential pharmacokinetic and pharmacodynamic concerns, and suggested possible paths forwards symptom reduction or remission.
Conclusions: This case series presents a novel, individualized approach to psychopharmacotherapy for older adults with a high potential for both population and individual health outcome improvement. Selection of cases based on the presence of treatment resistance likely increases the yield of this testing. Further study is needed to investigate these potential benefits.

Poster Number: NR 34

**Medications Non-Adherence in Older Patients Prescribed Antipsychotic Medications**

Mancia Ko, PharmD, MBA; Thomas Smith, MD

Ingenuity Health, Baltimore, MD

Introduction: Maintenance of antipsychotic drugs (APD) is critical in the management of patients with serious mental illness in preventing relapse. Although older patients have better adherence rates compared to younger patients, lack of adherence remains a concern. The objective of the study is to assess factors associated with potential non-adherence of prescribed antipsychotic medications in older patients.

Methods: From 2013 to 2016, 2113 urine samples were obtained from patients, aged ≥65, who were prescribed APD. Samples were classified as APD positive (a positive LC/MS/MS result for APD parent and/or metabolite) or APD negative (negative LC/MS/MS). Samples were also classified as positive or negative for: non-prescribed opiates, synthetic opioids or benzodiazepines, cocaine and THC. Logistic regression analyses were used to calculate odds ratios and 95% CIs. Because data were obtained from a de-identified database, this study was not submitted for IRB review.

Results: The study population was 35.7% male with a mean age of 69.1 ± 4.4 years. Prescribed single APD therapy included quetiapine (27.8%), aripiprazole (20.6%), risperidone (17.3%), olanzapine (13.7%), paliperidone (2.8%), ziprasidone (3.6%), haloperidol (3.4%), clozapine (1.7%), with 9.3% prescribed multiple APD. Urine testing was positive for APD in 82.9% of samples and negative in 17.1%, and varied widely by prescribed drug. Patients prescribed ziprasidone, or multiple APDs had the highest rate of negative samples (27.6% and 27.0% respectively); with those on quetiapine aripiprazole, haloperidol and risperidone being in the mid-range (21.2%, 18.6% 16.9% and 11.5%, respectively), whereas samples from those on paliperidone, olanzapine and clozapine were least commonly negative (8.6%, 7.9% and 2.9%, respectively). APD negative individuals were more likely than APD positive to have a non-prescribed opiate/synthetic opioid found (21.9% vs. 11.3%; OR, 2.2; 95% CI, 1.6–3.0) as well as a non-prescribed benzodiazepine (9.8% vs. 6.0%; OR, 1.7; 95% CI, 1.1–2.6). A non-prescribed APD was found in 4.8% of samples, with paliperidone being the most commonly detected (2.1%). THC or cocaine was found in 3.9% and 1.2% of samples, respectively.

Conclusions: These data suggest that urine drug monitoring in older patients who are prescribed APD can be of value in both monitoring adherence to APD therapy, and in identifying the use of inappropriate prescription and non-prescription substances. The data also suggest that non-adherence to prescribed APD therapy is associated with use of non-prescribed opioids and benzodiazepines.

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Poster Number: NR 35

**Prevalence and Correlates of Use of Medications Associated with Prolongation of the Corrected QT Interval in Older Adults**

Dallas Seitz, MD,PhD; Raymond Woosley, MD; Adrian Baranchuk, MD; Maria Hussain, MD; Colleen J. Maxwell, PhD; Sudeep S. Gill, MD,MSc

1Queen’s University, Kingston, ON, Canada
2AZCERT, Oro Valley, AZ
3University of Waterloo, Waterloo, ON, Canada

Introduction: Introduction: Older adults are frequently prescribed multiple medications to promote optimal functioning and well-being. Many medications can be associated with adverse effects. Prolongation of the corrected QT (QTc) interval is an abnormality of cardiac ventricular repolarization that when severe can lead to lethal cardiac arrhythmias including torsades de pointes (TdP). Medications are a common Over 100 currently FDA and Health Canada approved medications have known to individually have effects on the QTc and several psychotropic medications are associated with an increased risk of QTc.
Methods: We used linked administrative databases at the Institute for Clinical Evaluative Sciences (ICES) at Queen’s University for this study. These datasets are linked using unique encoded identifiers and analysed at ICES. We included all individuals aged 66 and older as of April 1, 2014 in the province of Ontario, Canada. Medications with QTc effects were identified using the CredibleMeds(<a href="http://www.crediblemeds.org">www.crediblemeds.org</a>) Results: Results: Our overall study sample included 1.73 million older adults with a mean age of 73.5 years (SD: 7.4), 56% of whom were women. Among this population, 14.6% of individuals were prescribed 1 or more medications in the known risk of TdP, 7.5% were prescribed medications in the possible risk of TdP, and 39% were prescribed at least one medication with a conditional risk of TdP. Almost half of all older adults (48%) received at least one medication with some degree of QTc risk and 27% were prescribed multiple medications with QTc risk. Individuals receiving one of more medications with known QTc risk were more likely to have other risk factors for QTc prolongation when compared to those who did not received these medications including being more likely to have older age (P < 0.0001), female sex (P < 0.001), greater number of non-QTc related medications (P < 0.0001), history of hypokalemia (P < 0.0001), myocardial infarction (P < 0.0001), and heart failure (P < 0.0001). The three most commonly prescribed medications in the known TdP risk category included: Citalopram (15.9% of all known TdP risk prescriptions); Escitalopram (14.6%); and, Donepezil (12.3%). The three most commonly prescribed medications in the possible risk of TdP included Venlafaxine (19.7%), Mirtazapine (14.2%), and Tolterodine (12.4%).

Conclusions: Conclusions: Older adults are frequently prescribed individual and multiple medications associated with some degree of risk of QTc prolongation and individuals who receive these medications frequently have additional risk factors for QTc prolongation. Psychiatric medications are among the most commonly prescribed medications with known effects on QTc. Clinicians should be mindful of the QTc risks associated with medications and further studies are required to understand the impact of these medications on clinical outcomes.

Poster Number: NR 36

New Ways to Count Sleep: A Review of Suvorexant for Insomnia in Older Adults
Juliet A. Glover, MD; Stephanie Hrisko, MD; Shilpa Srinivasan, MD

1University of South Carolina School of Medicine, Columbia, SC
2Palmetto Health, Columbia, SC

Introduction: Sleep disturbance is common in older adults with over 50% experiencing one or more sleep complaints (Foley et al., 1995). Normal changes in sleep architecture occurring with age that do not require intervention include advancement in circadian rhythm, increased time in stage 1 and 2 sleep, decreased time in stage 3 and rapid eye movement (REM) sleep, and overall decreased sleep time (Rodriguez et al., 2015). DSM 5 defines insomnia as difficulty initiating or maintaining sleep, or early morning awakening with inability to return to sleep. These symptoms occur at least three times a week for at least 3 months and cause clinically significant impairment (American Psychiatric Association 2013). There are non-pharmacologic and pharmacologic treatment options for the treatment of insomnia. Non-pharmacologic interventions are generally safer for older adults including sleep hygiene, relaxation and other behavioral strategies, and cognitive therapy (Rodriguez et al. 2015). Until recently, pharmacologic options were limited to benzodiazepines, non-benzodiazepine GABA-A receptor modulators, and sedating antidepressants such as trazodone, mirtazapine, and tricyclic antidepressants. These pharmacologic agents have been associated with increased risk of daytime sedation, falls, and cognitive impairment (Rodriguez et al., 2015). Suvorexant (Belsomra) offers a novel mechanism of action as a dual orexin receptor antagonist (DORA). Animal studies suggest that DORAs may have decreased negative impact on motor performance (Ramirez et al., 2013) and cognition (Uslaner et al. 2013) compared to benzodiazepines and GABA-A modulators, a characteristic that may be beneficial to geriatric patients. This study reviews the literature on efficacy and safety of suvorexant in the treatment of insomnia in older adults.

Methods: A Pubmed search was conducted utilizing the following key words: “suvorexant” “orexin” “sleep” Filters utilized include human subjects and 65+ age group. Results yielded 7 studies. Of these, 3 randomized controlled trials (RCTs) were relevant: 2 examined safety and efficacy including use in geriatric patients and 1 RCT examined possible effects on respiratory status in patients with [B1] chronic obstructive pulmonary disease (COPD). Review of these studies led to 2 additional relevant studies, one examining pooled data from 2 RCTs and one systematic review.

Results: Of the RCTs reviewed, geriatric patients represented 20.8–59% of the total sample size. Most studies found suvorexant to be superior to placebo in improving sleep initiation and sleep maintenance along with preservation of sleep architecture (Michelson et al., 2014; Herring et al., 2015). High dose (30 mg for elderly) was found to be more effective than low dose (15 mg for elderly) suvorexant, particularly for sleep onset. However, higher doses were also associated with more adverse events. Although the most common adverse event was somnolence (13%), suvorexant was found to be 3.5 times more
likely to result in a therapeutic response rather than an adverse event (Citrome, 2014). Despite risk of somnolence, there was no significant increase in falls versus placebo. No clinically significant adverse effects on respiration were noted in patients with COPD (Sun et al., 2015). Regarding residual effects, there was no statistically significant effect versus placebo for immediate/delayed word recall in a study of healthy elderly patients upon being awoken in the middle of the night; however, there was next-day decrease in word recall for non-elderly patients given 40 mg doses in a separate study (Snyder et al., 2016). There was also no significant effect with the 15 or 30 mg doses of suvorexant in elderly participants on impaired driving performance in a study of 24 healthy elderly subjects. Nevertheless, because some participants had to prematurely stop their driving tests due to somnolence, product labeling suggests cautioning patients about next-day driving. Although the reviewed studies did not report results in elderly patients separately from overall participants, efficacy and tolerability were generally similar for elderly compared to non-elderly patients, with no recommendation for dose adjustment based on age alone.

Conclusions: Overall, the current literature suggests that suvorexant is an effective treatment consideration for insomnia in geriatric patients. It is generally well tolerated by older adults with few residual effects. Future areas of study include examination of side effect profile and residual effects specifically in geriatric patients to determine if these differ from that observed in younger adult or mixed age populations. Additionally, safety and efficacy in patients with comorbid neurocognitive disorder represents another relevant area of ongoing investigation.

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Suvorexant for Insomnia in Older Adults: A Systematic Review
Rajesh Tampi, MD, MS; Silpa Balachandran, MD; Geetha Manikkara, MD; Taparia Piyush, MD
Case Western Reserve University School of Medicine, Cleveland, OH

Introduction: OBJECTIVES: The aim of this systematic review is to identify published randomized control trials that evaluated the use of suvorexant for the treatment of insomnia in older adults.

Methods: METHODS: A literature search was conducted of PubMed, MEDLINE, EMBASE, PsycINFO and Cochrane collaboration databases for randomized controlled trials (RCTs) in any language that evaluated the use of suvorexant for treatment of insomnia in older adults. Bibliographic databases of published articles were also searched for additional studies.

Results: RESULTS: A total of two RCTs that evaluated the use of suvorexant in older adults with insomnia were identified. The first study primarily assessed the safety and tolerability of suvorexant for up to 1 year with the secondary objectives of assessing the efficacy of suvorexant in improving subjective total sleep time (sTST) and subjective time to sleep onset (sTSO) over the first month of treatment. Suvorexant showed greater efficacy than placebo in improving sTST (p < 0.0001) and sTSO (p = 0.0002). Suvorexant was generally safe and well tolerated and most patients completed a full year of treatment. The most common adverse effect was somnolence that was reported in 13% of the participants. The second study primarily assessed sleep efficiency on night 1 and at the end of week 4 along with the secondary endpoints of wake after sleep onset and latency to persistent sleep. Suvorexant showed improvements vs placebo on the co-primary end points of sleep efficiency at night 1 (10 mg, p < 0.01) and end of week 4 (10 mg, p < 0.001). Dose-related effects were also observed for sleep induction (latency to persistent sleep) and maintenance (wake after sleep onset) at night 1 (10 mg, p < 0.001) and at the end of week 4 (10 mg, p < 0.001). Suvorexant was generally well tolerated and that the most common side effects were somnolence, headache, dizziness and abnormal dreams.

Conclusions: CONCLUSIONS: Available evidence although limited indicates that suvorexant improves subjective total sleep time, time to sleep onset, sleep efficiency, sleep induction and maintenance in older adults and is generally well tolerated.

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Clinical Correlates of Insight in Older Adults with Schizophrenia
Anup Mani, DO; Carl Cohen, MD
SUNY Downstate Medical Center, Brooklyn, NY
Conclusions: The findings suggest that there is fluidity in levels of insight over time, although about two-thirds of subjects’ insight is not fixed and there are modifiable predictor variables, thereby suggesting potential points of interventions. Predicted greater insight, perhaps because the former provided a causal explanation for having a mental illness. Greater insight (conceptualization) and negative symptoms (blunting of affect) predict diminished insight. Having more physical disorders predicted greater insight over both periods. Although many factors thought to be associated with components of insight were separately using ordinal regression analyses with baseline of the T2 variable, time interval between assessments, and age as covariates. Two variables at T2 retained significance: Number of confidantes (Wald = 27.82; p < .001); frequency of clinical services (Wald = 8.44; p = .004).

Poster Number: NR 39

Use of Pimavanserin in Combination with Selective Serotonin Reuptake Inhibitors (SSRIs)

James C. Norton Jr., PhD; Doral Fredericks, PharmD, MBA; Kathy Chi-Burris, MPH; Randy Owen, MD

ACADIA Pharmaceuticals Inc., San Diego, CA

Introduction: Psychosis is common in Parkinson’s disease (PD) and increases in both frequency and severity with disease duration. It is associated with increased morbidity/mortality, complicates management of motor symptoms and often leads to long-term care placement. Pimavanserin is a potent, selective 5-HT₂A inverse agonist/antagonist recently approved in the U.S. for treatment of hallucinations and delusions associated with Parkinson’s disease psychosis (PDP). In addition to psychosis, PD patients have other significant neuropsychiatric comorbidities and are frequently on numerous concomitant medications. Depression, specifically, affects up to 60% of PD patients and is frequently treated with SSRIs/SNRIs. Data in the literature support the potential for a synergistic effect between 5-HT₂A receptor inverse agonist/antagonists and SSRIs in patients with neuropsychiatric disease. This post-hoc analysis evaluated a subgroup of patients from the pimavanserin clinical program to determine if there was any difference in antipsychotic response between the subjects receiving pimavanserin in combination with an SSRI versus those without.

Methods: A pooled analysis of two 6-week randomized, double-blind, placebo-controlled Phase 3 studies of pimavanserin 34 mg (equivalent to 40 mg pimavanserin tartrate), consisting of the 020 data and the 012 North America (NA) data, was conducted to assess the overall treatment effect of pimavanserin 34 mg. The outside-NA region in Study 012 was not included due to a difference in methodology in the assessment of the primary endpoint. In Study 020 and Study 012 NA region the SAPS measure was assessed by central, independent raters over live video feed; this was not the case for sites in Study 012.
Meeting Residents Halfway: The Geriatric Psychiatry Residency Track

Susan M. Duffy, MD; Susan K. Schultz, MD, MD; Susan Maixner, MD; Heba Gad, MD; Nancy Williams, MD; Faisal Taqui, MD

1University of Iowa, Iowa City, IA
2University of Southern Florida, Tampa, FL
3University of Michigan, Ann Arbor, MI
4Dartmouth, Lebanon, NH

Introduction: The 2012 survey of Geriatric Psychiatry Fellowship Programs supported by the American Geriatrics Society and the Association of Directors of Geriatrics Academic Programs showed a decline in residents pursuing a fellowship as well as fewer total programs available. One reason for this decline is thought to be the additional year of training, which has led to requests to allow residents to commence the fellowship in their fourth year. Given that this request has not yet been successful, finding an alternative method of improving geriatric education is of utmost importance. One such method may be mini-fellowships within residency as a way of improving knowledge in a specific area but in a shortened timespan. We examined mini-fellowship programs offered in other residencies and used their format as a template to devise a Geriatric Psychiatry “track”. The Geriatric Psychiatry track is a 6 month 4th year elective that provides a cohesive clinical and didactic experience for residents who desire geriatric training but not the full fellowship.

Methods: Residents were surveyed at different residency sites regarding their interest in a geriatric psychiatry fellowship as well as the elective geriatric psychiatry “track” within the residency. Specific questions focused on reasons for not pursuing a fellowship in geriatrics as well as whether the track option would decrease the likelihood of applying for a fellowship. Basic demographic information was collected as well to assess correlation with responses.

Results: A variety of factors contribute to life decisions during residency beyond academic interest in geriatric care. The demographics and social factors related to interest in pursuing a geriatric psychiatry fellowship and/or geriatric psychiatry elective track are described. Reasons for either choice are qualitatively presented along with the frequency of specific responses. Positive and negative attributes of each choice as voiced by the applicants and residents are qualitatively presented, including the perceived value of formal certification relative to advanced knowledge in the absence of certification.

Conclusions: Data from this study provide essential information regarding whether a geriatric psychiatry track as a 4th year elective could add an alternative way of boosting geriatric knowledge in a manner that is acceptable to trainees and in line with their social, family and career needs. If effective, this would increase the number of providers with a higher level of geriatric psychiatry knowledge. Beyond our traditional training programs, innovative methods such as mini-fellowships may offer one solution to a highly complex problem.

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Teaching College Students About Dementia and Shaping Attitudes Through Experiential Learning

Robert B. Santulli, MD1,2

1Geisel School of Medicine at Dartmouth, Lebanon, NH
2Dartmouth College, Hanover, NH

Introduction: Despite the rapidly growing number of people with dementia, and the greater attention the condition has been given in the media and elsewhere, there remain significant misperceptions about dementia, and those who suffer from it. Young people have even less knowledge about dementia than elders, which is particularly concerning since it is today’s young adults who will be caring for the anticipated 130 million people with dementia throughout the world in 2050. Whether or not these young people enter the healthcare field, they will certainly encounter Alzheimer’s disease and other forms of dementia in their families, neighbors, co-workers, and peers. Lack of knowledge about the condition and mistaken beliefs about those who suffer from it increase the sense of stigma about dementia. This can lead to those with dementia being viewed and treated in stereotyped and even devalued ways. College students are an especially important group to educate, and to positively shape their attitudes about the disease.

Methods: “Living with Dementia” is a ten week experiential learning course taught in the Department of Psychological and Brain Sciences at Dartmouth College. The course director is a geriatric psychiatrist who was formerly Director of Geriatric Psychiatry at Dartmouth-Hitchcock Medical Center and head of the Dartmouth Memory Clinic for many years. Additional instructors come from various related disciplines at Dartmouth College, the Geisel School of Medicine at Dartmouth, and elsewhere. Living with Dementia receives support from The Experiential Learning Initiative of the Dartmouth Center for the Advancement of Learning. The purpose of the course is to learn about dementia both didactically and from the perspective of the individual with the illness and his or her care partner. The specific goals of the course are: (1) to become familiar with the basic elements of dementia: its causes, prevalence, risk factors, symptoms, brain pathology, treatment, and other issues; (2) to understand dementia from the point of view of the person with the condition, and his or her family; (3) to appreciate not only what has been taken away by the illness, but also what remains; (4) to integrate what has been learned didactically with what has been learned experientially about the disease, and those who live with it; and (5) to reflect on these experiences in depth, in a way that enhances self-learning and growth. Prior to the first lecture, students complete the “Inventory of Dementia Experiences and Attitudes” (IDEA) survey, anonymously. This gathers basic demographic information about the student, assesses the degree of contact he or she has had with people with dementia previously, and asks the student to assess his or her overall knowledge about dementia. It also incorporates the Dementia Attitudes Scale, a validated tool used to measure how people feel toward those with dementia. In addition to classroom lectures, videos, and discussions on various topics, students are required to spend eight hours (four sessions of two hours each) in one or more community programs for people with dementia and their care partners. Students write reflective journal entries about their community experiences, and participate in a joint presentation in class about the specific community program in which they have participated. They also must also complete additional reflection exercises related to other materials assigned. At the end of the course, students again complete the IDEA survey, to determine if there have been any changes in their self-assessment of dementia knowledge, and to note any changes in their feelings about the condition, as measured by the Dementia Attitudes Scale.

Results: Students have been most enthusiastic about the course. In addition, individuals with dementia and their care partners have been very pleased and stimulated by student participation in the various community activities. The poster will describe changes in both knowledge about dementia and in attitudes toward those with the syndrome, as well.

Conclusions: Experiential learning, including both didactic classroom activities and participation in community programs for people with dementia, is a valuable and effective method to educate college students about dementia, and to help shape their attitudes toward those who have this increasingly common condition.

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