Serious Mental Illness and Dementia

CCNA brainXchange Webinar

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Faculty/Presenter Disclosure

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Territorial Acknowledgement

- I would like to take this opportunity to acknowledge the traditional territories of the people of the Treaty 7 region in Southern Alberta, which includes the Blackfoot Confederacy (comprising the Siksika, Piikani, and Kainai First Nations), the Tsuut'ina First Nation , and the Stoney Nakoda (including the Chiniki, Bearspaw, and Wesley First Nations). The City of Calgary is also home to Métis Nation of Alberta, Region III.

Objectives

1.) Understand the cognitive changes that can be associated with serious mental illness in older adults

3.) Review the relationships between SMI and dementia

3.) Discuss some considerations related to SMI and dementia in long-term care settings

Serious Mental Illness

- SMI typically includes schizophrenia (and related psychotic disorders) and bipolar disorder

- Schizophrenia ~ 1% of general population, 0.5% of older adults
- Bipolar disorder 1 – 2% of general population, 0.5 – 1% of older adults

- Numbers of older adults affected by SMI increasing
  - Aging of population, improvements in medical care for SMI

Serious Mental Illness and Dementia

- Dementia is more common among older adults with SMI
- 20 – 30% of older adults with schizophrenia have underlying dementia[1,2]
- 5 – 20% of older adults with BD have dementia

1. Seitz et al, unpublished
2. Hendrie, Am J Geriatr Psychiatry, 2014
3. Lala, J Geriatr Psychiatry Neurology, 2012

Risk of Dementia for Individuals with SMI

- SMI is associated with an increased risk of dementia
- Schizophrenia: RR = 2.3 for developing dementia[1]
- Bipolar disorder: RR = 2.3 vs individuals without BD[2]

1. Cai, Neuropsychiatric Dis Treat, 2018
2. Diniz, Am J Geriatr Psychiatry, 2017

SMI and Dementia

Figure 1. Prevalence of Dementia Diagnoses by Age and Race/Ethnicity in Cohorts With Schizophrenia (SZ) and Without Serious Mental Illness (SMI)

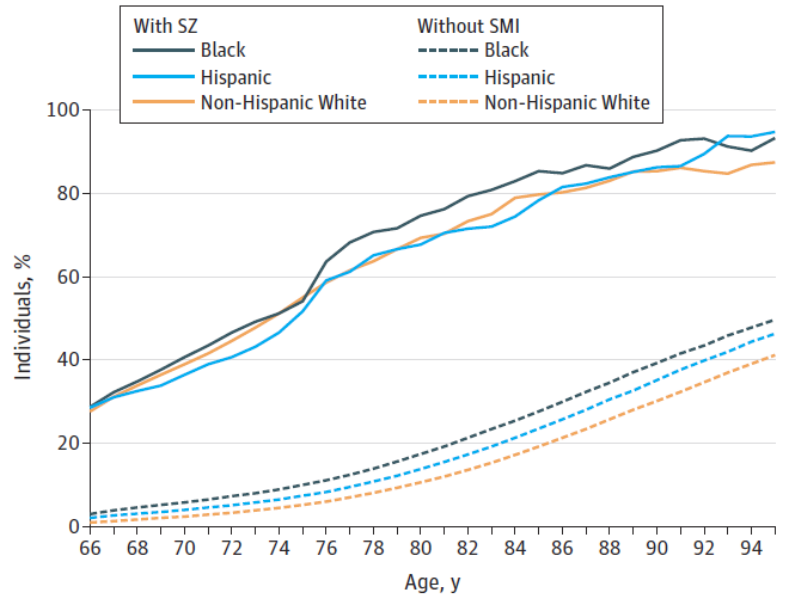
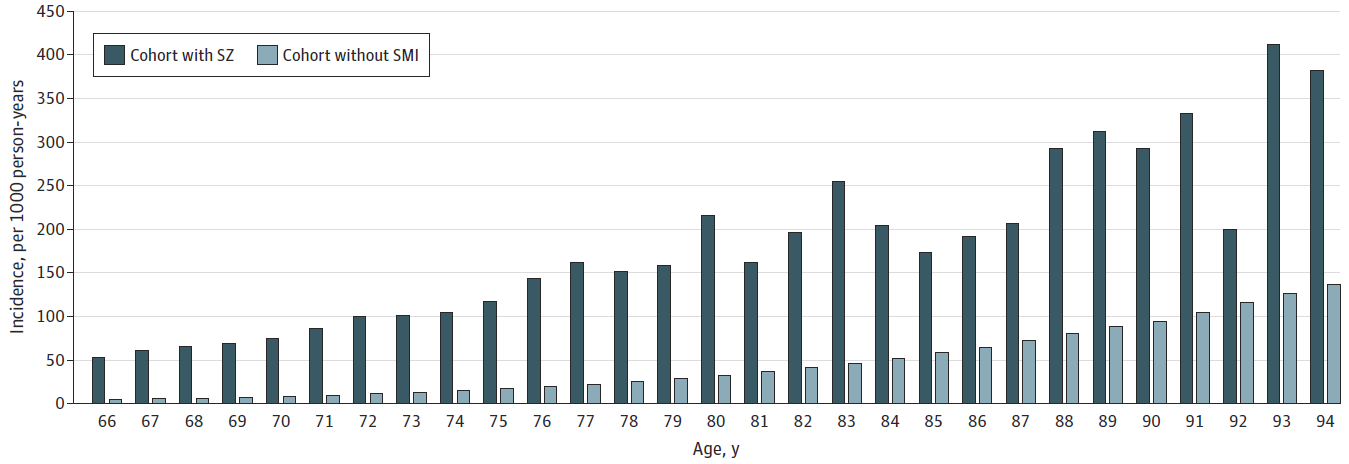


Figure 2. Incidence of Dementia Diagnoses by Age in Cohorts With Schizophrenia (SZ) and Without Serious Mental Illness (SMI)



Stroup, JAMA Psychiatry, 2021

Relationships between SMI and Dementia

- Dementia risk factors are more common among individuals with SMI than general population
  - Metabolic syndrome, cardiovascular disease
  - Education, cognitive reserve, physical exercise
  - ? Medications used to treat SMI
- SMI disease duration, “toxic mood episodes”, untreated psychotic symptoms may be neurotoxic
- Number of depressive episodes in bipolar disorder increases risk of dementia[1]

1. Kessing, J Neurol Neurosurg Psychiatry, 2004

Late-Onset SMI and Dementia

- Most older adults with SMI have dementia onset at younger age
- New onset psychosis or manic symptoms late in life are often prodromes for dementia
- Very late onset schizophrenia (onset > 60 years of age) 4x increased risk of dementia[1]
- Late-onset bipolar disorder (> 60 years)
  - Secondary causes of mania, Alzheimer's disease, vascular dementia, behavioural variant frontotemporal dementia

1. Kodesh, Schizophrenia Res, 2020

Cognition in Schizophrenia

- 70% of people with schizophrenia have cognitive impairment
- Older adults with schizophrenia have significant cognitive deficits when compared to age-matched controls
- Deficits in executive function, visuospatial ability and verbal fluency
  - Less impairment in memory, attention

Cognition in Schizophrenia

- Deficits are typically present at the time of illness onset (i.e. young age) and do not proportionally worsen over time
- People with schizophrenia more likely to cross threshold for functional impairment earlier with aging - “head start”

Longitudinal Cognitive Changes in Schizophrenia

- Highly heterogeneous course of cognition
- Neurodevelopmental
  - Changes noted at disease onset, change over time consistent with normal cognitive aging
  - Greatest change in cognition occurs early in disease
  - 50 - 60% of individuals with schizophrenia
- Neurodegenerative
  - 25- 40% have a longitudinal course of slowly progressive cognitive impairment (< Alzheimer's, 1 point MMSE/year)
  - 10 – 20% have cognitive changes consistent with neurodegenerative dementias

Cognition in Bipolar Disorder

- 40 – 50% of older adults with bipolar disorder have cognitive symptoms between mood episodes[1]
- Deficits in memory, attention, processing speed and executive impairment
- Similar to schizophrenia, deficits in cognition appear to be present at time of illness onset with ongoing age-related changes[2]

1. Miskowiak, Bipolar Disord, 2017
2. Ozerdem, Psychological Med, 2017

Frontotemporal Dementia and Bipolar Disorder

- Symptoms of mania (disinhibition, distractibility, irritability) can overlap with symptoms of behavioural variant frontemporal disorder
- Late-onset mania may be a prodrome of behavioral variant Frontotemporal dementia, bipolar disorder may be more common among individuals with FTD[1]

1. Mendez, J Neuropsychiatry Clin Neurosci, 2020

Late-Life Psychosis In Ontario

- Adults age 66 years and older, diagnosed with late-life psychotic disorder (schizophrenia, schizoaffective disorder) ICES
- Study years April 1, 2008 – March 13, 2018
- Sensitive LLP case definition:
  - One hospitalization with main diagnosis of psychosis (ICD 9, 295, 297, 298, or ICD 10 F20, F25, F29) or
  - At least one physician visit with ICD 9: 295, 298
- Specific LLP case definition:
  - One hospitalization with main diagnosis of psychosis (ICD 9, 295, 297, 298, or ICD 10 F20, F25, F29) or

Identifying People Living With Dementia

- Age 66 or older at cohort entry
- Case Ascertainment Algorithm (any one or more of):
  - One hospitalization for dementia related diagnosis (ICD 10: F00, F01, F02, F03, G30)
  - Three outpatient physician visits in two-year period at least 30 days apart (ICD-9: 331, 290)
  - One outpatient prescription for a cognitive enhancer (cholinesterase inhibitor or memantine)

Prevalence of Dementia Among Individuals with LLP

	Specific LLP Cohort (N=46,948)	Sensitive LLP Cohort (N=6,498)
Dementia	13,276 (28.2%)	1,657 (25.5%)
Long-Term Care	10,062 (21.4%)	1,552 (23.8%)

Risk Factors for Dementia in Individuals with SMI

	Hazard Ratio (95% CI)	P value
Age (per 1 point increase) 75 – 84 (vs. 66 – 74) 85 or older (vs. 66 – 74)	1.10 (1.09 – 1.10) 3.43 (3.21 – 3.66) 5,91 (5.41 – 6.46)	<0.001 <0.001 <0.001
Female Sex	1.15 (1.08 – 1.23)	<0.001
LTC residence	3.66 (3.37 – 3.97)	<0.001
Charlson Score	1.17 (1.14 – 1.19)	<0.001
Mental Health Conditions Mood disorders Anxiety Substance Use	 1.14 (1.07 – 1.21) 1.16 (1.08 – 1.23) 1.11 (1.02 – 1.22)	 <0.001 <0.001 0.01
Medications Benzodiazepines Any anticholinergic Rudolph anticholinergic score	 1.77 (1.66 – 1.88) 1.66 (1.53 – 1.79) 1.11 (1.11 – 1.12)	 <0.001 <0.001 <0.001
Medical Conditions Diabetes Stroke Parkinsonism	 1.14 (1.07 – 1.21) 2.17 (2.01 – 2.35) 3.37 (2.90 – 3.92)	 <0.001 <0.001 <0.001

N=33,672, 4,398 individuals developed dementia over 5 years (13%)

Antipsychotic Use in LLP

- Antipsychotic medications categorized as atypical antipsychotic monotherapy, typical antipsychotic monotherapy, polypharmacy
  - Included oral and depot medications
- Dosages as olanzapine equivalents and categorized as low (<2.5 mg), middle-low (>2.5 – 5.0), middle-high (>5.0 - <7.5), and high dose exposure (>7.5)
- Cumulative doses of medications up to 10 years exposure

Antipsychotics and Mortality

- Antipsychotics associated with an increased risk of mortality in people with dementia (those without SMI)[1]
- Antipsychotics may be protective against mortality in individuals with SMI[2,3,4]
- Little known about effects of antipsychotics among individuals with SMI and dementia

1. Schneider, JAMA, 2005
2. Xiang, Int J Geriatr Psychiatry, 2014
3. Wu, Schizophren Bull, 2015
4. Tiihonen, Am J Psychiatry, 2015

Antipsychotics and Mortality in LLP

Specific Cohort	Adjust HR (95% CI)	P Value
No Dementia		
Type of AP User		
Typical Monotherapy (vs. none)	0.73 (0.5 – 1.06)	0.09
Atypical Monotherapy (vs none)	0.55 (0.45 - 0.68)	<0.001
Polypharmacy (vs none)	0.69 (0.52 – 0.91)	0.008
Oral Olanzapine Eq (No Dementia)		
Low-medium (none-low)	0.65 (0.50 – 0.84)	0.001
Medium-High (non-low)	0.76 (0.53 – 1.09)	0.135
High (vs. none-low)	0.63 (0.50 – 0.77)	<0.001
Dementia		
Type of AP User		
Typical Monotherapy (vs. none)	0.71 (0.45 – 1.13)	0.15
Atypical Monotherapy (vs none)	0.38 (0.32 - 0.47)	<0.001
Polypharmacy (vs none)	0.47 (0.34 - 0.64)	<0.001
Oral Olanzapine Eq (No Dementia)		
Low-medium (none-low)	0.48 (0.37-0.61)	<0.001
Medium-High (non-low)	0.51 (0.35-0.74)	0.001
High (vs. none-low)	0.40 (0.31-0.51)	<0.001

Antipsychotic Exposure and Risk of Dementia in LLP

Specific Cohort	Adjust HR (95% CI)	P Value
No Dementia		
Type of AP User		
Typical Monotherapy (vs. none)	1.13 (0.82-1.57)	0.45
Atypical Monotherapy (vs none)	1.05 (0.86-1.28)	0.62
Polypharmacy (vs none)	1.33 (1.03-1.70)	0.03
Oral Olanzapine Eq (No Dementia)		
Low-medium (none-low)	0.99 (0.77-1.26)	0.92
Medium-High (non-low)	0.97 (0.68-1.38)	0.87
High (vs. none-low)	1.28 (1.05-1.56)	0.01

Bipolar Disorder Medications and Risk of Dementia

- Lithium may have neuroprotective properties against development of Alzheimer's disease
- Lithium use among individuals with BD associated with reduced risk of dementia (OR: 0.51)[1]
- Valproic acid is commonly used mood stabilizer in bipolar disorder
  - Associated with increased cognitive decline in Alzheimer's disease
- Valproic acid in bipolar disorder associated with increased risk of dementia among individuals with bipolar disorder (HR: 1.95)[1]

1. Velosa, Acta Psychiatr Scand, 2020
1. Tsai, J Affect Disord, 2018

Treatment of Cognitive Impairment in SMI

- Schizophrenia[1]
  - Possible benefit of cholinesterase inhibitors or memantine for on negative symptoms and MMSE scores
- Bipolar disorder[2]
  - Limited evidence for galantamine and cognitive training

1. Kishi, Int J Neuropsychopharmacol, 2018
2. Miskowiak, Eur Neuropsychopharmacol, 2016

Research Priorities in LTC

Engaged Stakeholder Groups	Research Priorities	Concerns/Barriers
Medical directors/providers surveyed (n = 89)	Chronic pain Urinary tract infection Dementia and behaviors Advance directives Heart failure Upper respiratory tract infection/pneumonia Polypharmacy Palliative care *Clostridium difficile* Falls Hospice	The system of nursing home care does not reward participation in research and has limited interaction with trained researchers. Participation is potentially a time burden.
Administrative leadership interview participants (n = 5)	Quality of life issues Overmedication Care transitions Mental health Reducing hospitalizations	Garnering staff buy-in for research activities, and time burden on staff
Frontline staff focus group participants (n = 17)	Quality of life issues Chronic pain Nutrition Medication and therapy compliance	Appropriate informed consent, desire to then receive results and benefits of gained knowledge, time burden on staff
Patients and families focus group participants (n = 11)	Neurologic disease (Alzheimer's, stroke rehab) Mental health Social involvement Urinary tract infection Antibiotic use	Appropriate consent, and privacy Family wary of burden on participants, and desire family involvement

Drake, JAMDA, 2019

REVIEW

Prevalence of psychiatric disorders among older adults in long-term care homes: a systematic review

Dallas Seitz,[1,2,3] Nitin Purandare[4] and David Conn[1]

[1] *Department of Psychiatry, Baycrest Centre, Toronto, Ontario, Canada*
[2] *Kunin-Lunenfeld Applied Research Unit, Baycrest Centre, Toronto, Ontario, Canada*
[3] *Women's College Research Institute, Toronto, Ontario, Canada*
[4] *Manchester Academic Health Science Centre, Manchester, U.K.*

Seitz et al, Int Psychogeriatr, 2010

Psychiatric Disorders in LTC

- Anxiety disorders (N=2) prevalence: 5% to 11%
- Substance Use, Veterans Affairs: 29% had lifetime history of alcohol abuse
- Schizophrenia (N=3): prevalence 6% to 9%
- Bipolar disorder (N=2): 3%

Seitz, Int Psychogeriatr, 2010

National Nursing Home Survey (2004)

Table 4. Prevalence of psychiatric disorders in long-term care (LTC) in the 2004 National Nursing Home Survey

PSYCHIATRIC DISORDER	TOTAL NUMBER OF RESIDENTS IN U.S. LTC HOMES[a]	PREVALENCE (%)
Total number of LTC residents	1,317,292	100.00
Dementia	687,561	52.19
Behavioral symptoms associated with dementia[a]	253,170	36.9
Major depression	17,523	1.33
Depressive syndromes	461,462	35.03
Mood symptoms[a]	555,817	42.3
Bipolar disorder	19,736	1.50
Anxiety disorders	154,099	11.70
Alcohol dependence or abuse	13,589	1.03
Schizophrenia	47,330	3.59

[a]As determined from mood and behavior indicators from Minimum Dataset assessments.
All results are estimates of the entire U.S. Nursing Home Population using Survey Weighting Procedures for individuals aged 65 years or older.

Seitz et al, Int Psychogeriatr, 2010

Prevalence of Psychiatric Disorders In Ontario LTC

Mental Health Condition	Prevalence N=65,896	Frequency
MDS-RAI Recorded Diagnoses:		
Dementia	46,742	70.9%
Depression	21,036	31.9%
Anxiety Disorder	6,199	9.4%
Schizophrenia	1,719	2.6%
Bipolar Disorder	1,275	1.9%
OHIP/CIHI Definitions:		
Dementia	53,669	81.4%
Depression/Bipolar	11,677	17.7%
Anxiety	26,699	40.5%
Psychotic Disorder	6,493	9.85%

Seitz, et al. unpublished

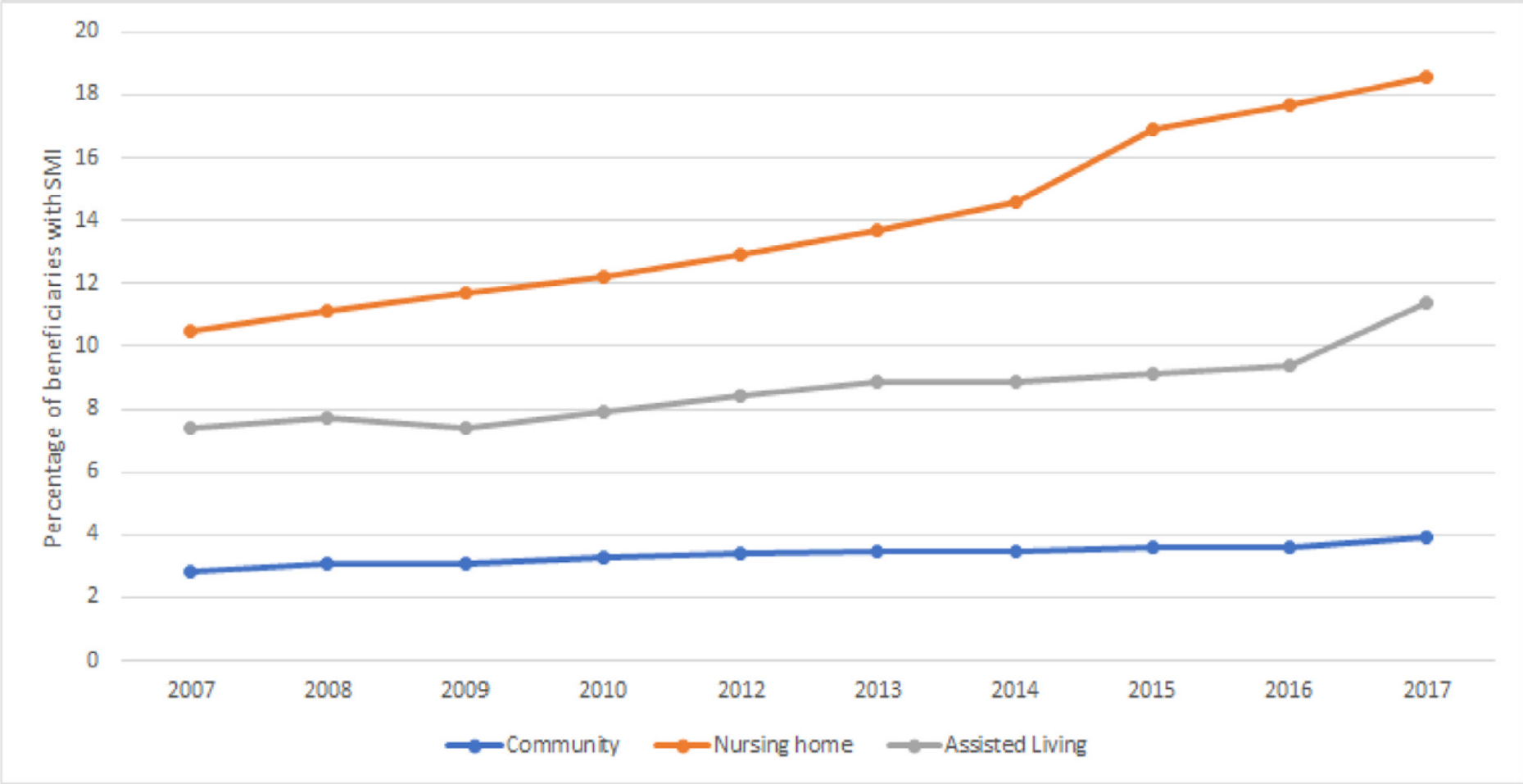
SMI in Long-Term Care

- SMI associated with 3X increased risk of LTC admission[1]
  - Median age of admission schizophrenia: 65 years vs 80 years
  - 60% of schizophrenia patients admitted <65 years old[3]

- Individuals with SMI more likely to be admitted to LTC with lower needs for physical care[2]
  - 3X to have low physical care needs compared to no SMI

1. Andrews, Am J Geriatr Psychiatry, 2009
2. Aschebrenner, J Aing Soc Policy, 2011
3. Aschbrenner, Psych Serv, 2015

SMI in Assisted Living and LTC



Hua, Am J Geriatr Psychiatry, 2011

Are more people being “diagnosed” with SMI in LTC?

- Inappropriate antipsychotic use in LTC is a publicly reported quality indicator in Canada and U.S.
  - Minimize unnecessary use in people with dementia
- Appropriate use includes individuals with schizophrenia, Tourette’s and Huntington's disease (or presence of psychosis)
  - non-dementia indications for antipsychotics
- Concern related to “gaming” of indicator by diagnosing individuals with dementia as having schizophrenia
- Number of long-stay LTC residents on antipsychotics who received diagnosis of schizophrenia doubled after changes to reporting in U.S.[1]

1. Winter, Clin Gerontol, 2019

Impact of Mental Illness in LTC

- Higher SMI in LTC facilities greater mental health hospitalizations[1]
- Higher SMI greater hospitalization of non-SMI residents[2]
- Higher SMI associated with lower mental health and medical care[3]
- Risk of MH hospitalization: schizophrenia OR=11, bipolar OR= 10.5[4]
- Individuals with SMI less likely to have pain adequately treated[5]
- Greater proportion of SMI associated with lower LTC quality[6]

1. Becker, Int J Geriatr Psychiatry, 2009
2. Rahman, Health Serv Res, 2013
3. Kim, Med Care, 2013
4. Becker, Int J Geriat Psychiatry, 2011
5. Brennan, Aging Ment Health, 2018
6. Jester, Geronotolgist, 2020

Models of Mental Health Care in LTC

- Psychiatrist only (consultation focussed)[1]
  - Can be effective
  - Telepsychiatry can improve access[2]
- Nurse-centred (outreach mental health)
- Multidisciplinary team approach
  - Most effective and service model preferred by LTC

- Effective programs include psychiatric, medical and environmental assessments and behavioral management skills for staff[3]

1. Bartels, Psychiatric Serv, 2002
2. Lyketsos, J Geriatr Psychiatry, Neurol, 2001
3. Collett, Int J Geriatr Psychiatry, 2009

Prevalence of Psychiatric Need and Access

Identified Need: 42.5%

Table 1
Psychiatric Need and Receipt of Psychiatric Services for Long-Term Care Residents

Variable	No Psychiatric Need Identified (n = 39,515)	Psychiatric Need Identified (n = 27,650)	Total (N = 67,165)	STD	*P* Value
Outpatient psychiatric service					
Service provided in LTC					
New psychiatric consult	438 (1.1%)	629 (2.3%)	1067 (1.6%)	0.1	<.001
New geriatric consult	37 (0.1%)	69 (0.2%)	106 (0.2%)	–	<.001
Follow-up outpatient care	31 (0.1%)	82 (0.3%)	113 (0.2%)	0.1	<.001
Any outpatient service	465 (1.2%)	703 (2.5%)	1168 (1.7%)	0.1	<.001
Service provided outside LTC					
New psychiatric consult	249 (0.6%)	277 (1.0%)	526 (0.8%)	0.1	<.001
New geriatric consult	11 (0.0%)	8 (0.0%)	19 (0.0%)	–	.967
Follow-up outpatient care	423 (1.1%)	678 (2.5%)	1101 (1.6%)	0.1	<.001
Any outpatient service	642 (1.6%)	928 (3.4%)	1570 (2.3%)	0.1	<.001
Inpatient psychiatric service					
New psychiatric consult	11 (0.0%)	19 (0.1%)	30 (0.0%)	0.0	.014
New geriatric consult	≤5	≤5	≤5	–	.399
Follow-up inpatient care	333 (0.8%)	542 (2.0%)	875 (1.3%)	0.1	<.001
Any inpatient service	339 (0.9%)	553 (2.0%)	892 (1.3%)	0.1	<.001
Other psychiatric service					
Mental health case conference	8 (0.0%)	34 (0.1%)	42 (0.1%)	0.0	<.001
Mental Health Act assessment	≤5	≤5	≤5	0.0	.169
Telephone consultation	<5	<5	<5	0.0	.800
Any psychiatric service	1242 (3.1%)	1933 (7.0%)	3175 (4.7%)	0.2	<.001

STD, standardized difference

Perlman, JAMDA, 2019

Any psychiatric service: 7.0%

Mental Health Need and Psychiatric Services

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Variable	Did Not Receive Psychiatric Service (n = 63,990)	Received Any Psychiatric Service (n = 3175)	STD	*P* Value	Adjusted Odds Ratio	95% CI	*P* Value
Psychiatric conditions and symptoms*							
Psychiatric conditions							
Anxiety disorder	26,762 (41.8%)	2175 (68.5%)	0.6	<.001	1.37	1.25-1.50	<.001
Mood disorder	10,659 (16.7%)	1212 (38.2%)	0.5	<.001	1.40	1.28-1.54	<.001
Schizophrenia	5922 (9.3%)	758 (23.9%)	0.4	<.001	1.26	1.12-1.40	<.001
Substance use	5390 (8.4%)	488 (15.4%)	0.2	<.001	0.96	0.85-1.08	.51
Dementia	53,700 (83.9%)	2939 (92.6%)	0.3	<.001	1.37	1.24-1.51	<.001
Psychiatric symptoms							
Aggressive Behavior Scale score ≥3	13,177 (20.6%)	1241 (39.1%)	0.4	<.001	1.58	1.40-1.79	<.001
Depression Rating Scale score ≥3	18,494 (28.9%)	1349 (42.5%)	0.3	<.001	1.30	1.15-1.48	<.001
Delusions	3120 (4.9%)	348 (11.0%)	0.2	<.001	1.38	1.18-1.61	<.001
Hallucinations	1723 (2.7%)	193 (6.1%)	0.2	<.001	1.28	1.05-1.56	.02
Course of psychiatric need							
No need at both time periods	33,550 (52.4%)	1024 (32.3%)	0.4	<.001	Reference	—	—
New	4723 (7.4%)	218 (6.9%)	0.0		1.38	1.16-1.63	<.001
Persistent	14,413 (22.5%)	1114 (35.1%)	0.3		1.24	1.04-1.48	.01
Resolved	11,304 (17.7%)	819 (25.8%)	0.2		1.33	1.12-1.57	.001
Cognitive Performance Scale							
Intact	6131 (9.6%)	210 (6.6%)	0.1	<.001	Reference	—	—
Borderline intact	5739 (9.0%)	280 (8.8%)	0.0		0.98	0.79-1.22	.87
Mild impairment	11,126 (17.4%)	481 (15.1%)	0.1		1.00	0.82-1.21	.97
Moderate impairment	23,541 (36.8%)	1360 (42.8%)	0.1		1.01	0.84-1.22	.90
Moderate severe impairment	5563 (8.7%)	356 (11.2%)	0.1		1.01	0.81-1.25	.96
Severe impairment	6707 (10.5%)	380 (12.0%)	0.1		0.92	0.74-1.15	.46
Very severe impairment	5183 (8.1%)	108 (3.4%)	0.2		0.80	0.55-1.15	.22

Perlman, JAMDA, 2019

Training LTC Staff in SMI Management

Training Topics	%
Attitudes towards residents with SMI/addressing stigma	63.4
Understanding symptoms of SMI	90.2
Assessment and differential diagnosis of SMI	46.3
Understanding the recovery model of care	65.9
Communicating with residents with SMI	78.1
Managing challenging behaviors	97.6
When to seek a mental health consult	58.5
How to identify additional resources/referrals in caring for residents with SMI	56.1

Understand Symptoms

Managing Behaviours

Training Modalities	Not at All Effective	Somewhat Effective	Very Effective	Extremely Effective
Web-based training	40.0	47.5	12.5	0.0
Paper-based training (eg, workbooks, manuals)	43.9	46.3	9.8	0.0
On-site training taught by a CLC staff member	2.4	24.4	56.1	17.1
On-site training taught by an outside consultant	0.0	17.1	61.0	22.0
Off-site training (eg, at a conference or seminar)	12.5	25.0	52.5	10.0
Train-the-trainer (initial trainer receives off-site training)	10.0	32.5	42.5	15.0

Preference for On Site Training

Muhalidharan et al, JAMDA, 2019

Mental Health Training for LTC Staff

- Limited information about mental health training programs for staff in LTC for conditions other than dementia
- Internet-based training modules improved knowledge and skills[1]
  - *Caring Skills: Working with Mental Illness*
  - Psychoeducation on: Mood disorders, anxiety disorders, schizophrenia, cognitive and personality disorders
  - Dispelling myths and stigma
  - Modelling of positive interactions with residents
  - Behavioral strategies for working with mental health symptoms
  - Skill mastery through vignettes

1. Irvine, JAMDA, 2012

Mental Health Training for LTC Staff

- CARES Serious Mental Illness:
  - Connect, Assess, Respond, Evaluate, Share – approach
- Two online modules, Introduction to SMI, Providing Appropriate Care
  - 2 – 3 hours total to complete both modules, Module 2 can be completed without Module 1
- Specific information provided on Schizophrenia, Bipolar Disorder, Major Depressive Disorder
- Includes clinician and persons with lived experience
- Significant improvements in knowledge, perspectives and confidence in working with SMI
  - Length, clarify of materials and technical issues identified as barriers

Molinari, Geriatr Gerontol Educ, 2017

Mental Health Care Pathways

- Randomized controlled trial of depression management in LTC
- Multidisciplinary care program, Act in Case of Depression (AiD)
- Program included education, depression screening, nonpharmacological and pharmacological treatment algorithms
- Measured prevalence of depression in time periods before and after implementation
- Program associated with reductions in depression prevalence following implementation:
  - 7.3% reduction in depression prevalence, largest effects in severe depression
  - More effective in people without comorbid dementia

1. Leontjevas, Lancet, 2013

“What was shown to be effective simply seems to be good quality, well organized care. The fact that Leontjevas and colleagues’ trial comes as one of the first assessments of its kind for a disorder with such a high prevalence should perhaps be seen as an uncomfortable reminder of how neglected the nursing home sector and its occupants are in research and more widely”

-Robert Stewart

Commentary, Lancet Vol 381, June 2013

Mental Health Units in LTC

- Mental health units or LTC facilities for individuals with severe mental illness[1]
  - Similar to dementia special care units
  - Specialized staff training, aggregating individuals with SMI together
  - Staff working in SMI units have greater comfort with SMI

1. Molinari, Geriatr Gerontol Education

Key Points

- Cognitive impairment and dementia are common among individuals with SMI
- Longitudinal assessment of people with SMI is crucial to diagnosing dementia in this population
- Individuals with SMI and dementia may require different non-pharmacological and pharmacological treatment approaches when compared to those without SMI

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