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Alberta Health Services

Knowledge Bites Lunch ‘n’ Learn

March 27, 2024

Depression in Persons Living in Long Term Care and with Dementia

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Specific Territorial Acknowledgement

Welcome to the University of Calgary. 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.

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Institutes: Hotchkiss Brain Institute, O'Brien Institute of Public Health

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Patients/Royalties: NA
Investments: NA
Other Affiliations: Guideline Panel CCSMH

Dr. Zahra Goodarzi MD MSc

Clinician Scientist & Geriatrician

Objectives

1. Understand how common depression is for persons living in LTC and with dementia and how to detect it
2. Discuss how depression affects persons living in LTC and with dementia
3. Consider options for treating depressive symptoms in persons living in LTC and experiencing dementia

Prevalence of Depression

Older Adults

Over 75 yo 4.6-9.3% have Major Depression

4.5-37.4% have depressive symptoms

Long-Term Care

44% have a diagnosis or symptoms of Depression

Persons with Dementia

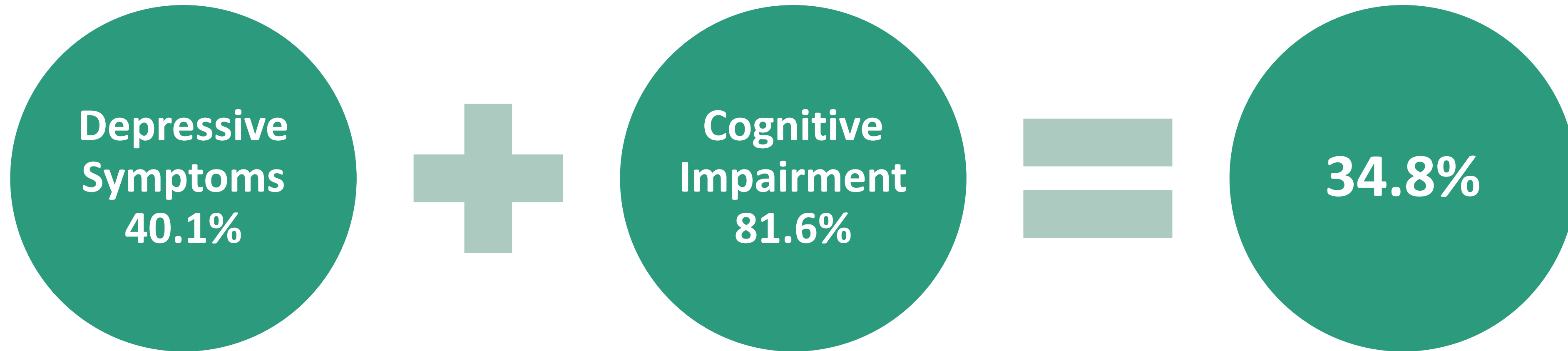
Major Depressive Disorder 15.9%

OR for Depression 2.64 (95% CI: 2.43, 2.86)

Higher in Vascular Disease

Snowden MB, Atkins DC, Steinman LE, Bell JF, Bryant LL, Copeland C, Fitzpatrick AL. Longitudinal Association of Dementia and Depression. Am J Geriatr Psychiatry. 2015 Sep;23(9):897-905.
Rodda J, Walker Z, Carter J. Depression in older adults. BMJ. 2011 Sep 28;343:d5219.
Asmer MS, Kirkham J, Newton H, Ismail Z, Elbayoumi H, Leung RH, Seitz DP. Meta-Analysis of the Prevalence of Major Depressive Disorder Among Older Adults With Dementia. J Clin Psychiatry. 2018 Jul 31;79(5).
https://secure.cihi.ca/free_products/ccrs_depression_among_seniors_e.pdf

What is the prevalence of depression in AB LTC?

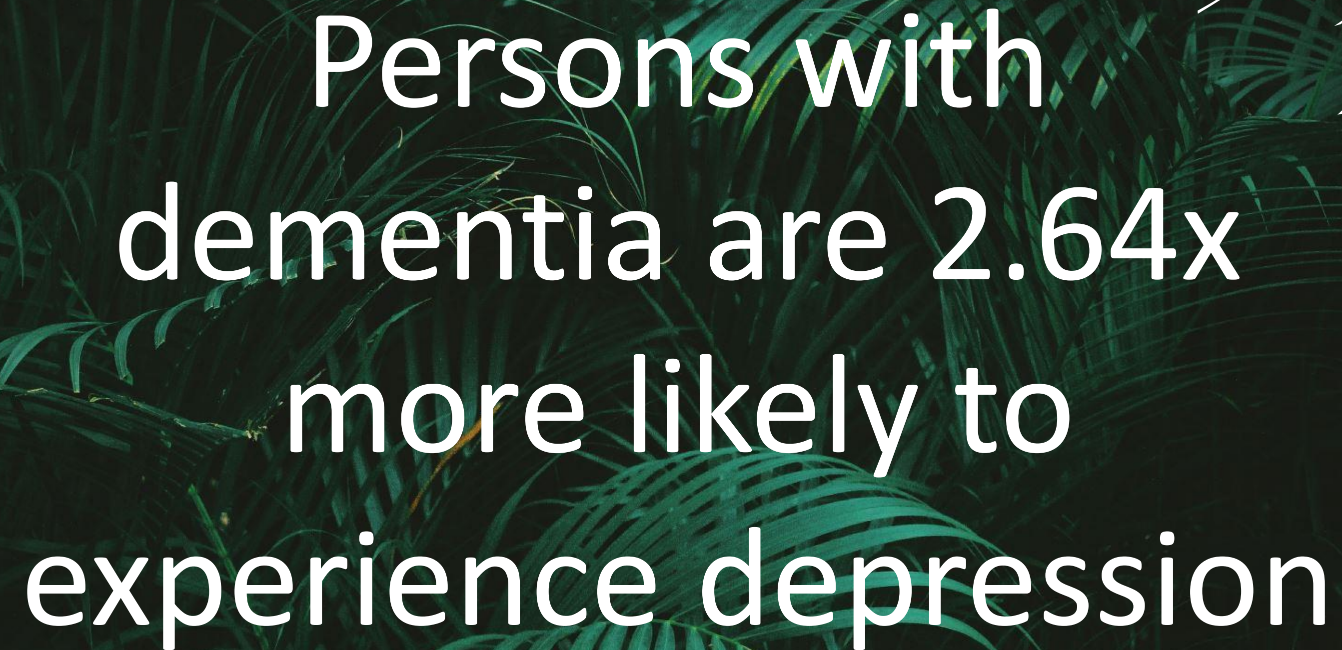


When controlling for covariates in LTC cognitive impairment remained associated with an increased odds of depressive symptoms.

Adj. OR 1.91 (95% CI 1.68,2.17)

TREC
Translating Research in Elder Care

Matthais Hoben*, Abi Heninger*, Jayna Holroyd Leduc, Jennifer Knopp-Sihota, Carole Estabrooks, Zahra Goodarzi. Exploring the impact of depression among long-term care residents with dementia.



Snowden MB, Atkins DC, Steinman LE, Bell JF, Bryant LL, Copeland C, Fitzpatrick AL. Longitudinal Association of Dementia and Depression. Am J Geriatr Psychiatry. 2015 Sep;23(9):897-905.
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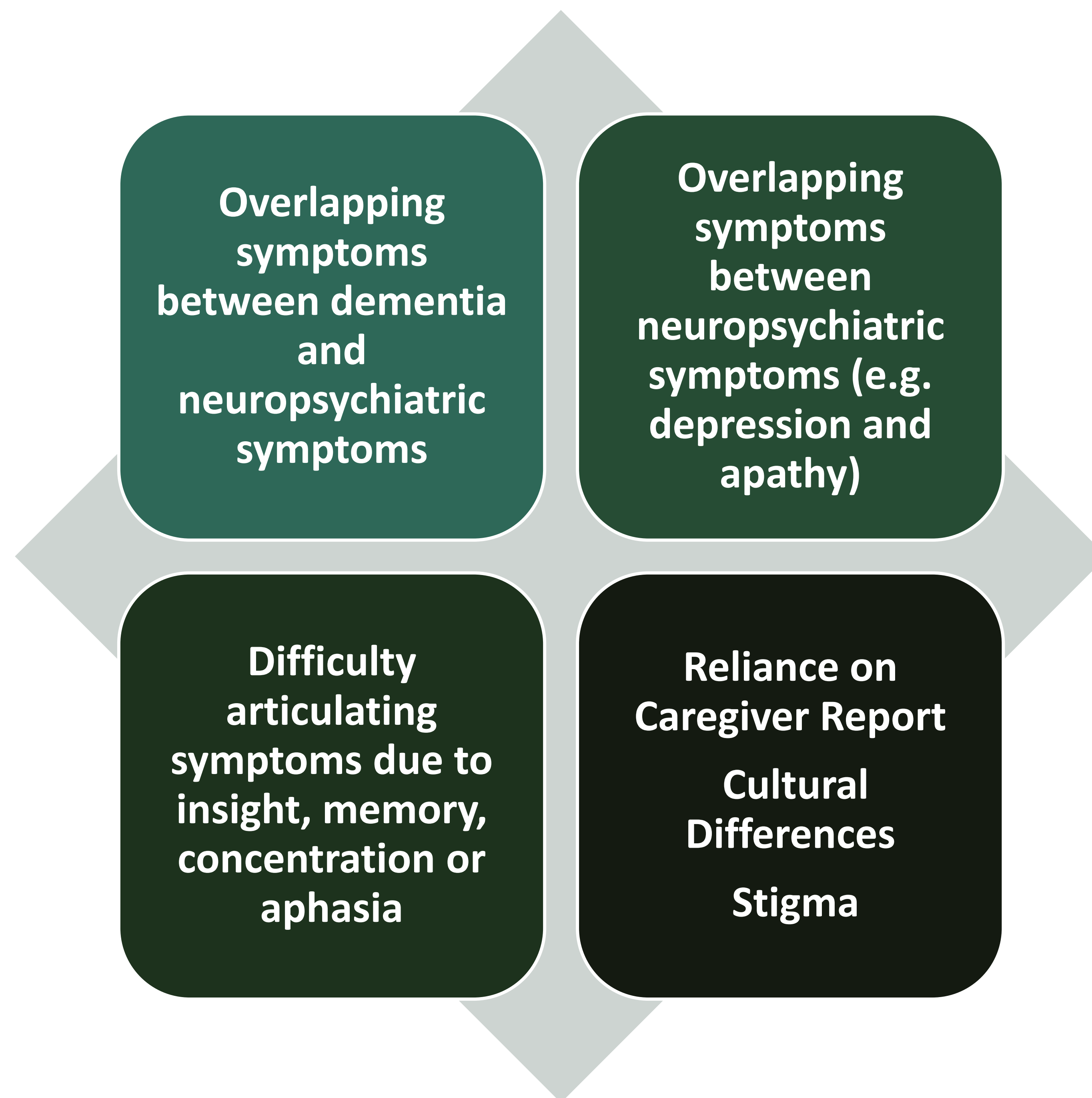
Asmer MS, Kirkham J, Newton H, Ismail Z, Elbayoumi H, Leung RH, Seitz DP. Meta-Analysis of the Prevalence of Major Depressive Disorder Among Older Adults With Dementia. J Clin Psychiatry. 2018 Jul 31;79(5).
https://secure.cihi.ca/free_products/ccrs_depression_among_seniors_e.pdf

Mood Syndromes Lead to Poor Outcomes

- **Reduced Quality of Life**
- **Worsened Memory**
- **Worsened Function**
- **Increased Mortality**
- **Increased Caregiver Burden & Depression**

Livingston G, Sommerlad A, Orgeta V, Costafreda SG, Huntley J, Ames D, Ballard, C, Banerjee S, Burns A, Cohen-Mansfield J, Cooper C, Fox N, Gitlin LN, Howard R, Kales HC, Larson EB, Ritchie K, Rockwood K, Sampson EL, Samus Q, Schneider LS,, Selbæk G, Teri L, Mukadam N. Dementia prevention, intervention, and care. Lancet. 2017 Dec 16;390(10113):2673-2734.

Scarce Mental
Health Resources



Goodarzi ZS, Mele BS, Roberts DJ, Holroyd-Leduc J. Depression Case Finding in Individuals with Dementia: A Systematic Review and Meta-Analysis. J Am Geriatr Soc. 2017 May;65(5):937-948

What tools should be used to case find for depressive symptoms in persons living in LTC or with dementia ?

Depression Detection Tools: LTC

- 23 tools found vs. reference standard

- **GDS-15, cut of 6**
  - Sensitivity was 73.6% (95% CI 43.9%–76.5%)
  - Specificity was 76.5% (95% CI 62.9%–86.7%)
  - area under the curve was 0.83
  - Significant Heterogeneity

- **CSDD** highest sensitivity (67.0%–90.0%) in those with dementia

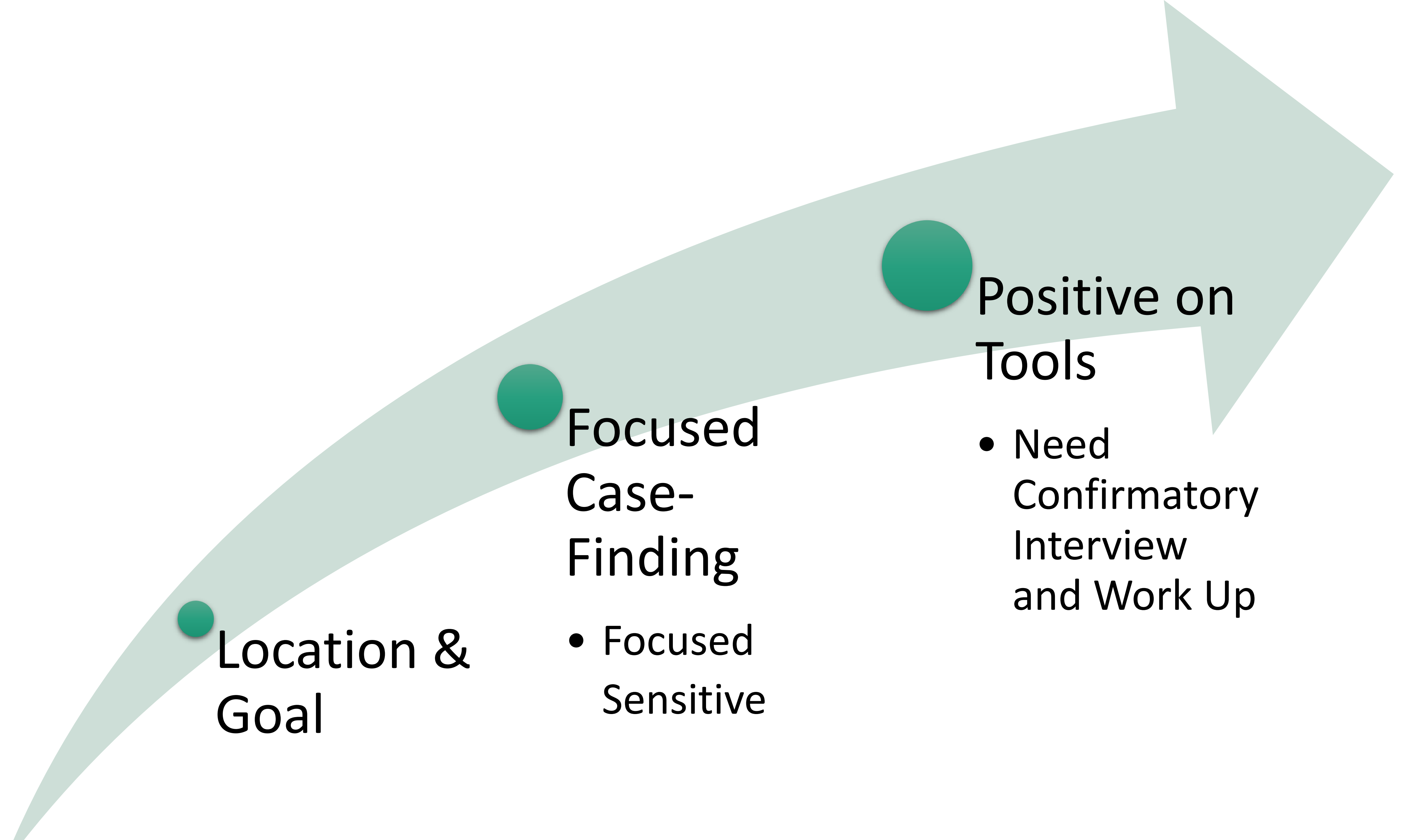
- DOI: 10.1093/ageing/afac039

Cornell Scale for Depression in Dementia

Depression Detection Tools: Dementia

- At a cut off of 6 (n= 10 studies)
  - **Sensitivity of 91%**
  - **Specificity of 73%**
- 19 Item tool
- Between Caregiver and Patient
- Anxiety, Suicidality, Physical and Psychological Symptoms
- There is a 4 item version (81% Sensitive)
- <u>20-30 Minutes</u>

Goodarzi ZS, Mele BS, Roberts DJ, Holroyd-Leduc J. Depression Case Finding in Individuals with Dementia: A Systematic Review and Meta-Analysis. J Am Geriatr Soc. 2017 May;65(5):937-948



•DOI: 10.1093/ageing/afac039

Patient Label

Cornell Scale for Depression in Dementia

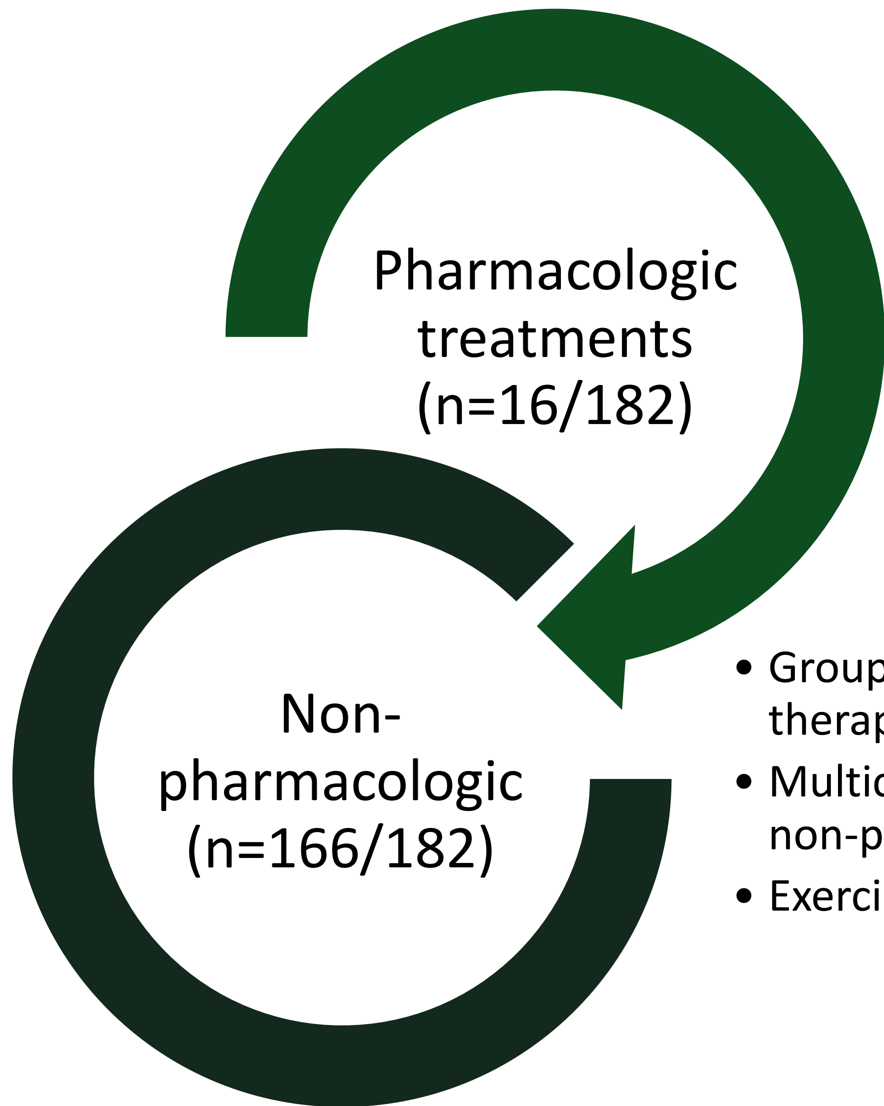
Instructions: We aim to have the best understanding of our patient's symptoms, please review and answer the following questions regarding the patients mood. Please consider symptoms they may have felt over the past week.

	Unab3 Ωle	Absent	Mild Occasional	Severe Frequent
1. **Anxiety**: Have they been feeling anxious this past week, been worrying about things they may not ordinarily worry about, or ruminating?	a	0	1	2
2. **Sadness**: Have they been feeling down, sad, or blue this past week?	a	0	1	2
3. **Lack of reactivity to pleasant events:** Does mood affect their ability to enjoy activities that used to give them pleasure?	a	0	1	2
4. **Irritability**: Have they felt short-tempered, easily annoyed, irritable, impatient, or angry this week?	a	0	1	2
5. **Agitation**: Have they been fidgety/restless this past week (can't to sit still for ≤ 1hr)?	a	0	1	2
6. **Slowing**: Have they been talking/moving more slowly than is normal?	a	0	1	2
7. **Multiple Physical Symptoms:** In the past week, have they had any new physical symptoms, more than normal? (Score 0 if stomach/abdominal only)	a	0	1	2
8. **Loss of interest**: Are they less involved in usual activities? (Score only if <1 month.)	a	0	1	2
9. **Appetite loss**: How has their appetite been this past week vs. normal?	a	0	1	2
10. **Weight loss:** Have they lost any weight in the past month that s/he has not meant to or been trying to lose? (Score 2 if > than 5 lbs. in 1 month.)	a	0	1	2
11. **Lack of energy**: How has their energy been this past week vs. normal?	a	0	1	2
12. **Diurnal variation of mood**: Are their mood symptoms worse in the morning?	a	0	1	2
13. **Difficulty falling asleep**: Have they had trouble falling asleep this past week? (Score 1 if a few nights, 2 if every night)	a	0	1	2
14. **Multiple awakenings during sleep:** Have they been waking up in the middle of the night this past week? (Score 1 if occasional, 2 if every night)	a	0	1	2
15. **Early morning awakening**: Have they been waking up any earlier this week than s/he normally does (without an alarm clock or someone waking him/her up)?. (Score 1 if able to go back to sleep, 2 if doesn't return to bed)	a	0	1	2
16. **Suicide**: During the past week, have they had any thoughts that life is not worth living or that they would be better off dead (Score 1)? Had any thoughts of hurting or even killing themselves (score 2)?	a	0	1	2
17. **Poor self-esteem**: How have they been feeling about themselves this past week? Self-blame, feelings of failure? (Score 1 for loss of self esteem, 2 for feeling "worthlessness")	a	0	1	2
18. **Pessimism**: Have they felt pessimistic or discouraged about their future this past week? (Score 1 if can be reassured, 2 if unable to re-assure)	a	0	1	2
19. **Change in Thoughts**: Have they been having ideas that others may find strange?	a	0	1	2

• DOI: 10.1016/0006-3223(88)90038-8

Practice, resources and evidence on how to treat depression for those in LTC and in persons with Dementia varies.

What are the most efficacious
treatments?



- Antidepressants 8/182

- Group reminiscence therapy 22/182
- Multicomponent non-pharm 22/182
- Exercise 18/182

horticulture

cognitive behavioral therapy

animal therapy

group reminiscence

multi-component

exercise

socialization

Studies of anti-depressants were small or used drugs we no longer use in older adults.

Overall, a need for more high-quality trials

Does this differ if we focus solely on those with dementia?

256 Studies (101 in LTC)

Includes 28, 483 Persons with Dementia

Mean age approximately 70 years old

23 % Mixed pathology, 41 % Alzheimer’s pathology

Most had mild to moderate Dementia symptoms

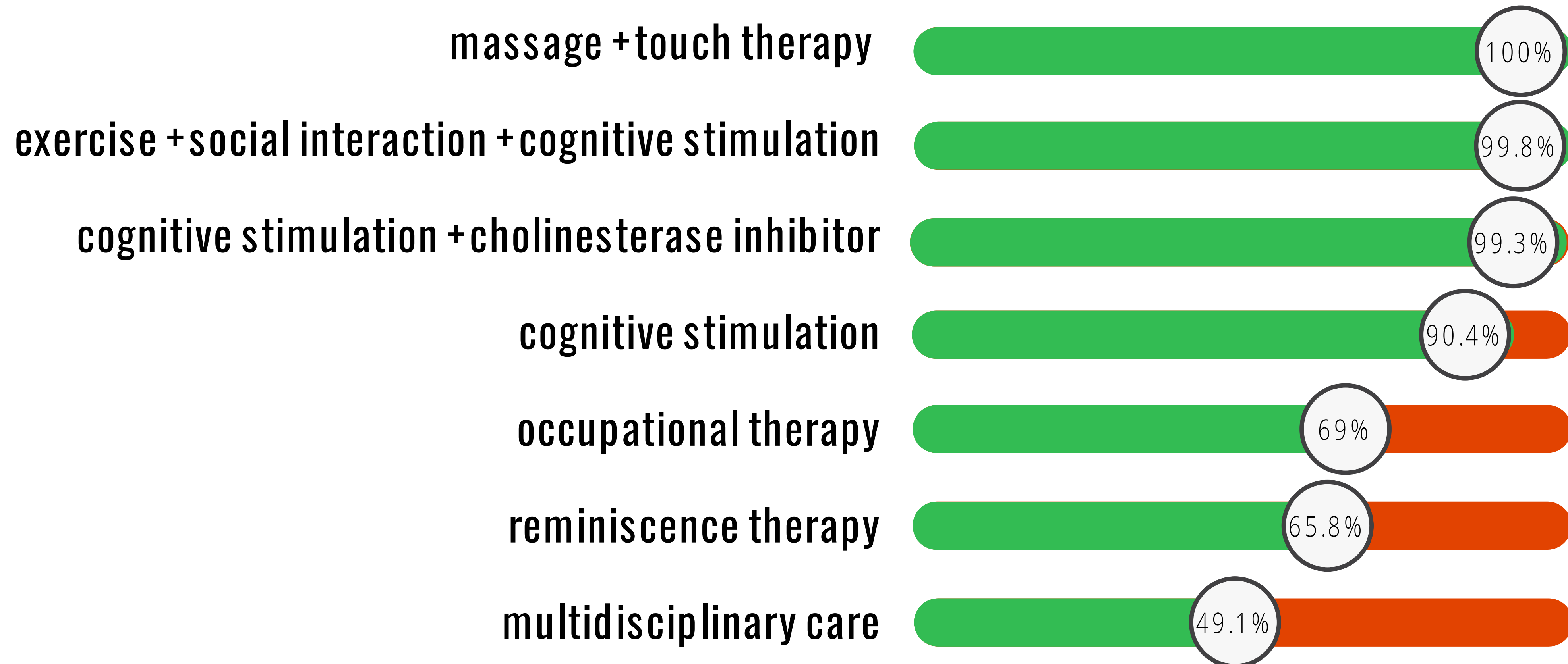
41% Living in community, 39.5% Living in long term care

To determine the best evidence we need to know what studies exist

BMJ 2021;372:n532

HRT
TCS
HYP
MDC
COG
CST
PRED
CG SUP
EXE+EDU CG PWD
ADL
CG EDU
CHEI
CHEI+CST
PSY+EDU PWD CG
MSS+REM+EXE
MAS
MUS+REM+ORT
APSY
PLA
CST+EXE+SOC
MUS+ORT+MSS
EDU CG PWD
EXE+PSY+SUP
EDU PWD
EXE+EDU CG
PSY+REM+ENV
ENV+REM+REC+MSS
DEP+CHEI
REM+REC
STA
MSS
ANM
REC
REX
DBS
EXE
MUS
STIM
MAS+ARO
DMQ
ARO
ENV
LIP
APSY+DEP
MEM+DEP
MUS+OT
COMT
MEM
LIG
UC
OT
DEP
ADL+SOC
SOC
REM
REM+ORT
EXE+ADL
EDU+SUP CG PWD
ETA
PSY
MIC

The percent represents the probability that an intervention will decrease depressive symptoms in a clinically meaningful way for people with dementia.



Watt J A, Goodarzi Z, Veroniki A A, Nincic V, Khan P A, Ghassemi M et al. Comparative efficacy of interventions for reducing symptoms of depression in people with dementia: systematic review and network meta-analysis *BMJ* 2021; 372 :n532 doi:10.1136/bmj.n532

The percent represents the probability that an intervention will decrease depressive symptoms in a clinically meaningful way for people with dementia.

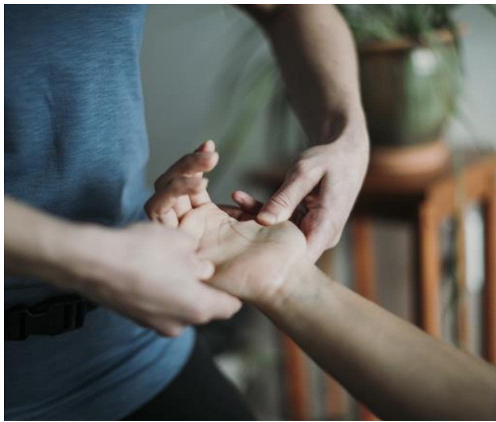
When each intervention is compared to usual care in pairwise meta-analysis

Watt J A, Goodarzi Z, Veroniki A A, Nincic V, Khan P A, Ghassemi M et al. Comparative efficacy of interventions for reducing symptoms of depression in people with dementia: systematic review and network meta-analysis *BMJ* 2021; 372 :n532 doi:10.1136/bmj.n532

Table 9. Pairwise Meta-Analysis: Subgroup Analyses for the Outcome of Depressive Symptoms in Persons with Dementia (without a Major Depress Disorder) where Treatment Effects Met the Threshold for Statistical Significance

Treatment Comparison	No. of Studies (No. of Patients)[#]	MA SMD (95% CrI)	MA SMD Re-Expressed as MD on CSDD (95% CrI)	Probability of MA MD >0.4SD*	MA SMD (95% PrI)
Long-Term Care or Assisted Living Setting (n=90 studies)					
Common within-network between-study variance 0.14 (95% CrI 0.071 to 0.26)					
Animal Therapy vs. Social Interaction	1 (55)	0.55 (0.02 to 1.07)	2.81 (0.12 to 5.48)	0.0	0.55 (-0.37 to 1.47)
Animal Therapy vs. Usual Care	1 (23)	-0.94 (-1.75 to -0.15)	-4.82 (-8.92 to -0.76)	90.6	-0.95 (-2.04 to 0.16)
Massage Therapy vs. Usual Care	2 (167)	-2.16 (-2.77 to -1.54)	-11.03 (-14.15 to -7.89)	100.0	-2.16 (-3.14 to -1.18)
Music Therapy + Occupational Therapy vs. Usual Care	1 (119)	-0.42 (-0.78 to -0.06)	-2.13 (-3.97 to -0.3)	53.4	-0.42 (-1.25 to 0.44)
Psychotherapy + Reminiscence Therapy + Environmental Modification vs. Usual Care	1 (51)	-0.99 (-1.53 to -0.45)	-5.06 (-7.8 to -2.31)	98.4	-0.99 (-1.92 to -0.06)
Reminiscence Therapy vs. Usual Care	9 (434)	-0.59 (-0.9 to -0.27)	-3.01 (-4.61 to -1.35)	87.2	-0.59 (-1.42 to 0.24)
Social Interaction vs. Music Therapy	1 (165)	0.57 (0.22 to 0.93)	2.92 (1.13 to 4.73)	0.0	0.57 (-0.27 to 1.41)

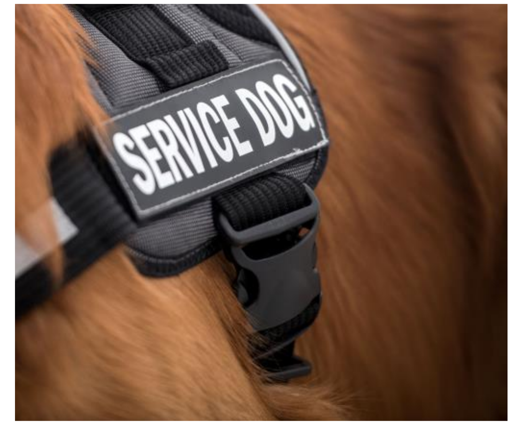
Watt J A, Goodarzi Z, Veroniki A A, Nincic V, Khan P A, Ghassemi M et al. Comparative efficacy of interventions for reducing symptoms of depression in people with dementia: systematic review and network meta-analysis *BMJ* 2021; 372 :n532 doi:10.1136/bmj.n532



Massage therapy

Psychotherapy

Environmental Modification



Animal Therapy

Reminiscence Therapy

Music Therapy

Occupational Therapy

Photos are Stock images from Microsoft

Cognitive Stimulation

Structured therapy (e.g. one or two sessions per week, for a defined number of hours) with sessions aimed at promoting cognitive function (e.g. orientation, reminiscence, art therapy, games)

Environmental Modification

Any modification to the living environment or place where care is provided

Exercise

Active engagement in aerobic, resistance, or balance training

Massage & Touch Therapy

Any activity involving Massage, acupressure, or therapeutic touch

Multidisciplinary Care

A care plan developed by more than one health care provider (e.g. physician, nurse, occupational therapist)

Watt J A, Goodarzi Z, Veroniki A A, Nincic V, Khan P A, Ghassemi M et al. Comparative efficacy of interventions for reducing symptoms of depression in people with dementia: systematic review and network meta-analysis *BMJ* 2021; 372 :n532 doi:10.1136/bmj.n532

Occupational Therapy

Case management or activities to enhance functional independence, delivered by an occupational therapist

Psychotherapy

Cognitive behavioral therapy, counseling, validation therapy, problem adaptation therapy, supportive therapy, or psycho-dynamic interpersonal therapy

Social Interaction

Interactions with caregivers or others, beyond the provision of usual care

Reminiscence Therapy

Any activity to give reminders of a patient's past or family members

Animal Therapy

Any activity involving spending time with animals

Watt J A, Goodarzi Z, Veroniki A A, Nincic V, Khan P A, Ghassemi M et al. Comparative efficacy of interventions for reducing symptoms of depression in people with dementia: systematic review and network meta-analysis *BMJ* 2021; 372 :n532 doi:10.1136/bmj.n532

So why don’t best practices
happen?

Barriers to Diagnosis

- Diagnostic Criteria for Mood in Dementia Vary
- Varied Responses in Different Types of Dementia
- Cognitive Impairment Effects Diagnosis
- Need for Expertise to Diagnose
- Difficulty with Suicide Assessment
- Reliability of Collateral History
- Caregiver Burden
- Difficulty Expressing Symptoms
- Symptomatic Overlap
- Heterogeneity in Practice
- Narrative History Instead of Tools
- Lack of Awareness or Experience of Certain Tools
- Cultural and Social Issues
- Tools have limitations

Goodarzi Z, Hanson HM, Jette N, Patten S, Pringsheim T, Holroyd-Leduc J. Barriers and Facilitators for Guidelines with Depression and Anxiety in Parkinson's Disease or Dementia. Can J Aging. 2018 Jun;37(2):185-199.

Perception About Benefit of Tool Use

Perception About Utility or Benefit of Tool Use

HCPs' Perspectives

- Facilitate the process of detection, treatment and referral process
- Facilitate communication between patient and care provider by focusing on depression symptoms
- Provide objective assessment, quantitative data, and complementary data to interview

Pts and CGs' perspectives

- Draw Pts' and CGs' attention to symptoms and direct them to seek help

HCP Choice of Tools

Characteristics and Psychometric Properties of the Tool

- Validity
- Specificity
- Sensitivity

- Widely used

Patients' Factors

- Perceptions
- Culture
- History

HCP and Organization factors

- Perceptions
- Colleagues
- Experience
- Knowledge
- Specialty

- Administration

Barriers to Use of Tool

Facilitators to Tool Use

Health Care Professionals

-Experience
-Awareness
-Confidence
-A part of a treatment pathway
-Guided by Other HCPs

Patients and Care Givers

-Pts' Preference
-Patients' capability
-Patients' needs
-Tools specific to collateral
-Type of questions

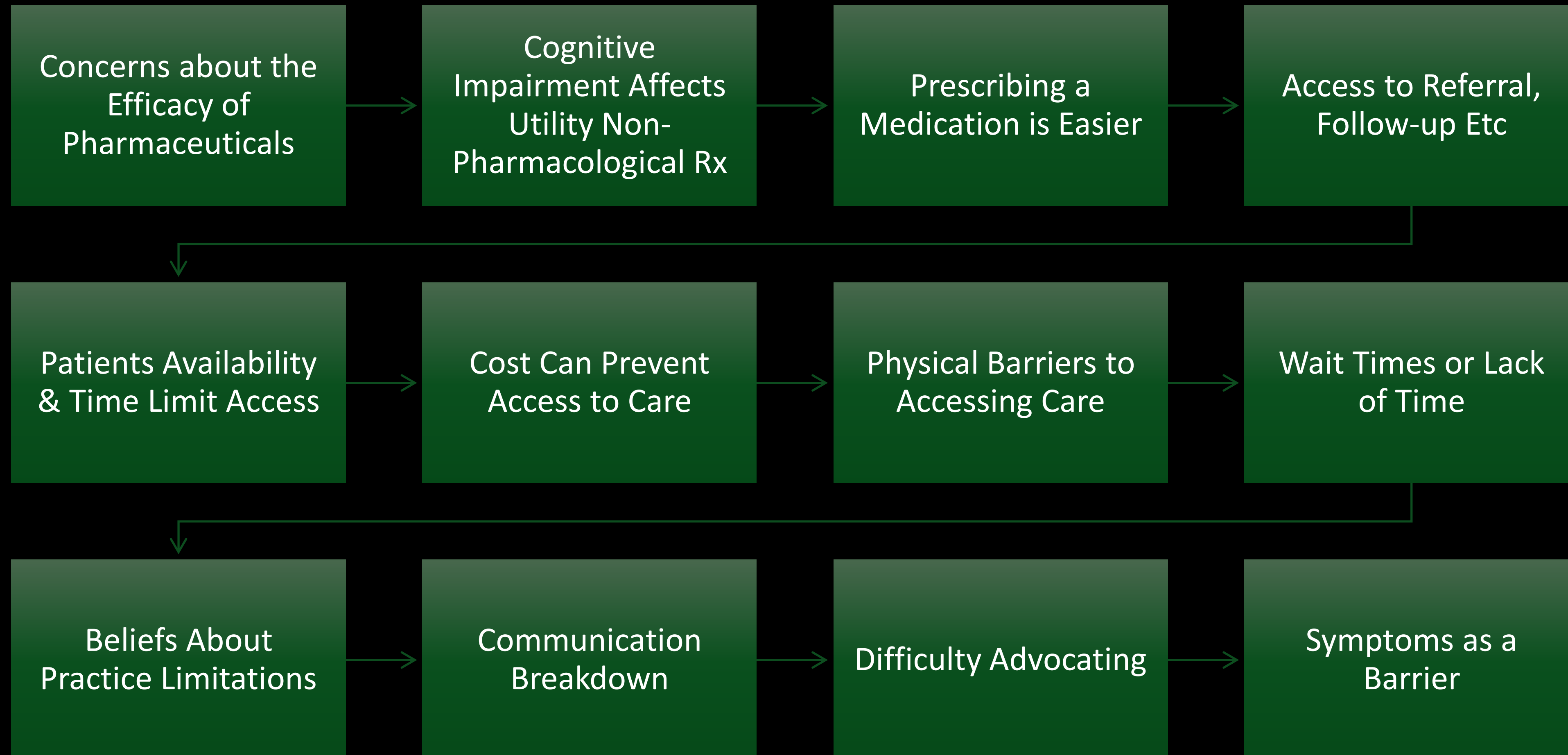
Tool's Characteristics

-Tool comprehensiveness
-Available psychometric properties information
-Ease of use of the tool
-Minimum training requirement
-Electronic version of tools
-Self-Rated Tools

Organization

-Practice set up
-Its use as a routine
-Approved by Drs and by management
-Increased clinic follow up
-Informed and involved manager

Barriers to Management



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What do guidelines say?

Canadian Clinical Practice Guidelines for Assessing and Managing Behavioural and Psychological Symptoms of Dementia (BPSD)

2024

https://ccsmh.ca/areas-of-focus/dementia/clinical-guidelines/

We recommend the National Institutes of Mental Health – depression in Alzheimer's disease criteria to diagnose depression in dementia. (Strong recommendation, low-quality evidence)

https://ccsmh.ca/areas-of-focus/dementia/clinical-guidelines/

Recommendation #37

We recommend the Cornell Scale for Depression in Dementia (CSDD) for detecting depressive symptoms in dementia in specialty clinics. (Strong recommendation, moderate-quality evidence)

and

We suggest the CSDD for detecting depressive symptoms in dementia in long-term care homes. (Conditional recommendation, moderate-quality evidence)

and

We suggest the CSDD for detecting depressive symptoms in dementia in primary care. (Conditional recommendation, low-quality evidence).

https://ccsmh.ca/areas-of-focus/dementia/clinical-guidelines/

Recommendation #40

We suggest robotic pets for the management of depressive symptoms in dementia. (Conditional recommendation, moderate-quality evidence)

Recommendation #41

We recommend cognitive stimulation therapy for the management of depressive symptoms in mild-to-moderate dementia in community and long-term care settings. (Strong recommendation, moderate-quality evidence)

https://ccsmh.ca/areas-of-focus/dementia/clinical-guidelines/

Recommendation #42

We recommend massage and touch therapy for management of depressive symptoms in dementia in community and long-term care settings (Strong recommendation, moderate-quality evidence)

and

We suggest massage and touch therapy for the management of depressive symptoms in severe dementia in community and long-term care settings. (Conditional recommendation, low-quality evidence)

Recommendation #43

We recommend physical exercise for the treatment of depressive symptoms in dementia in community and long-term care settings. (Strong recommendation, moderate-quality evidence)

https://ccsmh.ca/areas-of-focus/dementia/clinical-guidelines/

Recommendation #44

We recommend reminiscence therapy for the management of depressive symptoms in dementia in long-term care settings. (Strong recommendation, moderate-quality evidence)

and

We suggest reminiscence therapy for the management of depressive symptoms in dementia in community settings. (Conditional recommendation, low-quality evidence)

Recommendation #45

We suggest occupational therapy for the treatment of depressive symptoms in dementia in community and long-term care settings. (Conditional recommendation, low-quality evidence)

https://ccsmh.ca/areas-of-focus/dementia/clinical-guidelines/

Recommendation #47

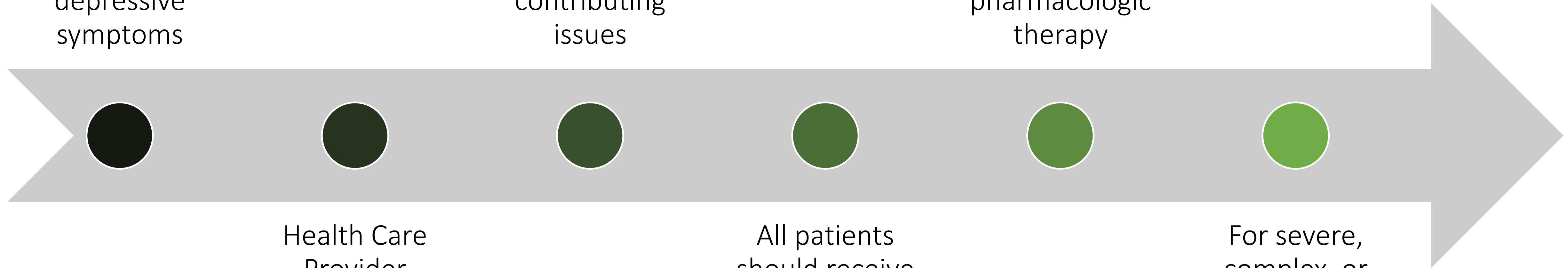
We suggest home-based problem-based therapy and behaviour therapy for the management of depression in dementia in community settings. (Conditional recommendation, low-quality evidence)

Recommendation #48

We suggest antidepressants for the treatment of moderate-to-severe depression in dementia that has not responded to psychosocial interventions. (Conditional recommendation, low-quality evidence)

https://ccsmh.ca/areas-of-focus/dementia/clinical-guidelines/

Patients Values, Beliefs and Needs



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