Dementia Management Updated, CCCDTD5

What You Need to Know in LTC

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Faculty/Presenter Disclosure

- **Faculty:** Dr. Nicole Didyk

- **Relationships with financial sponsors:**
  - **None**

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  - None

Mitigating Potential Bias

Dr. Nicole Didyk, MD

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Learning objectives

1. Overview updates in the 5th CCCDTD and consider the implications for long-term care
2. Get an update on definition of VCI and its management and prevention
3. Review the latest updates about discontinuation of cognitive enhancers
4. Review latest recommendations about psychosocial and non-pharmacological interventions for dementia

Dementia

- aka Major Neurocognitive Disorder (MNCD)
- Impairment in one of:
  - Learning and memory
  - Language
  - Executive function
  - Complex attention
  - Perceptual-motor function
  - Social cognition
- Change from previous
- Affects function
- Not due to delirium
- Not due to another medical disorder (i.e. depression)

Dementia

- Alzheimer's Disease is most common cause
- Other causes are:
  - Dementia with Lewy bodies
  - Vascular dementia
  - Frontotemporal dementia
  - Parkinson's disease dementia
  - Mixed etiology
  - Other causes: alcohol related, NPH, CJD, HIV, CTE, etc.
- In long-term care 58-64 % of residents are living with dementia

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PERSPECTIVE

Recommendations of the 5th Canadian Consensus Conference on the diagnosis and treatment of dementia

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Diagnosis and Treatment of Dementia (CCCDTD4)

Serge Gauthier, MD, Christopher Patterson, MD, Howard Chertkow, MD, Michael Gordon, MD, Nathan Herrmann, MD, Kenneth Rockwood, MD, Pedro Rosa-Neto, MD, PhD, and Jean-Paul Soucy, MD, on behalf of the CCDTD4 participants*

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Abstract

Go to:

The 4th CCCDTD convened in May 2012 in Montreal with the primary aim of updating the previous diagnostic approach to AD, taking into account the revised diagnostic criteria proposed by the International Working Group (IWG) and the recommendations made by the National Institute on Aging—Alzheimer Association workgroups.

Keywords: consensus, dementia, Alzheimer, diagnosis, imaging, symptomatic treatments

INTRODUCTION

Go to:

Since 1989, three Canadian Consensus Conferences on the Diagnosis and Treatment of Dementia (CCCDTD)[1,2,3] have led to evidence-based recommendations on the diagnosis and treatment of Alzheimer's disease (AD) and related dementias. Previous CCCCDTDs have attempted to make recommendations relevant to health professionals of all disciplines treating dementia (e.g., primary care practitioners, as well as neurologists, geriatricians, and psychiatrists). Recommendations have been published in medical journals reaching out to a wide readership (such as the *Canadian Medical Associatio*

How many C's in this acronym???

5th CCCDTD

- Held 5 times since 1989, recently in October 2019
- Goal to provide evidence-based recommendations on dx and rx of dementia
- Consensus group of Canadian Geriatricians, Primary Care Physicians, Psychiatrists, Neurologists, and Researchers

5th CCCDTD

- Delphi process, working groups, review and feedback of >50 experts, then a voting process, and acceptance if 80% consensus
- “Organizations relevant to the care of people with dementia rep-resenting industry, government, international experts, and other dementia guideline organizations” had non-voting observers
- No one with lived experience was reported as being involve in the process

5th CCCDTD

- Consensus-based guidelines:
  - Allow consideration of all evidence (not just RCT's)
  - Evidence is interpreted in context of shared values
  - Considers evidence in a more reality-based way (What would most clinicians do?)

- **Evidence vs Consensus in Clinical Practice Guidelines** Djulbegovic & Guyatt, *JAMA.* 2019;322(8):725-726. doi:10.1001/jama.2019.9751

5th CCCDTD

- AGREE II guidelines (Advancing Guideline Development, Reporting and Evaluation in health care, 2010, Brouwers, Kho & Browman)
- GRADE (Grades of Recommendation, Assessment, Development, and Evaluation, 2011 Guyatt and Tugwell)

Strength of Recommendation	Criteria
Strong (1)	Factors influencing the strength of the recommendation included the quality of the evidence, presumed patient-important outcomes, and cost
Weak (2)	Variability in preferences and values, or more uncertainty. Recommendation is made with less certainty, or higher cost or resource consumption
Quality of Evidence	**Criteria**
High (A)	Further research is unlikely to change confidence in the estimate of the clinical effect
Moderate (B)	Further research may change confidence in the estimate of the clinical effect
Low (C)	Further research is very likely to impact confidence on the estimate of clinical effect

CCCDTD5 Topics

(1) Utility of the National Institute on Aging (NIA) research framework for clinical AD dx;

(2) Updating diagnostic criteria for vascular cognitive impairment (VCI) and its management;

(3) Dementia case finding and detection;

(4) Use of neuroimaging and fluid biomarkers in diagnosis;

(5) Use of non-cognitive markers of dementia for better dementia detection;

(6) Risk reduction/prevention;

(7) Psychosocial and nonpharmacological interventions;

(8) Deprescription of meds for treatment of dementia

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(8) Deprescription of meds for treatment of dementia

Vascular Cognitive Impairment (VCI)

TABLE 2 Diagnosis and treatment of vascular cognitive impairment

1. Magnetic resonance imaging (MRI) is recommended over computed tomography (CT) for investigating vascular cognitive impairment. 2C (98%)
2. Use of standardized criteria (one of: the Vascular Behavioral and Cognitive Disorders [VAS-COG] Society criteria,[10] Diagnostic and Statistical Manual of Mental Disorders [DSM5],[16] Vascular Impairment of Cognition Classification Consensus Study,[17] or the American Heart Association consensus statement)[18] are recommended for the diagnosis of vascular mild cognitive impairment and vascular dementia. 1C (100%)

Table 1 A summary of the criteria for vascular cognitive disorders (VCDs) and vascular dementia (VaD)

	VASCOG mVCD/VaD [8]	DSM-5 major/mild NCD [9]	VICCCS mVCI/VaD
Concern	Level of decline mild for mVCD, substantial for VaD	Significant decline for major NCD, mild decline for mild NCD	–
Cognitive impairment	Impaired in at least 1 domain. mVCD: 3rd to 16th percentile; VaD: below the 3rd percentile	Decline in at least 1 domain. Major NCD: substantial impairment; mild NCD: modest impairment	Impaired in at least 1 select domain.[a] VaD: the impairment must involve clinically significant deficits of sufficient severity (includes moderate severity)
Independence	Preserved IADLs for mVCD. For VaD needs help with at least IADLs	Deficits do/do not interfere with independence in everyday activities for major/mild NCD	Mild to no impairment of IADLs or ADLs for mVCI. Severe disruption to IADLs/ADLs for VaD
Evidence for predominantly vascular aetiology	Significant neuroimaging evidence and temporal relationship or prominent decline in select domains[a] accompanied by gait disturbance, urinary symptoms, or personality and mood changes	Temporal relationship, as well as neuroimaging or both clinical and genetic evidence for *probable* vNCD. Prominent evidence for decline in select domains[b] and evidence from history or physical examination for *possible* vNCD	Diagnosis is *probable* if only CT evidence, and *possible* if no CT or MRI evidence

European Journal of Neurology / 26(9)
The Vascular Behavioral and Cognitive Disorders criteria for vascular cognitive disorders: a validation study
P. S. SachdevD. M. LipnickiJ. D. CrawfordH. Brodaty
September 2019, Volume26(Issue9)Results page, p.1161To - 1167

Vascular Cognitive Impairment (VCI)

TABLE 2 Diagnosis and treatment of vascular cognitive impairment

3a. Because treatment of hypertension may reduce risk of dementia, clinicians should assess, diagnose, and treat hypertension according to guidelines from Hypertension Canada.[13] 1B (98%)

3b. For patients with cognitive disorders in which a vascular contribution is known or suspected, antihypertensive therapy should be strongly considered for average diastolic blood pressure readings ≥90 mmHg and for average systolic blood pressure readings ≥140 mmHg. 1B (96%)

3c. In middle-aged and older persons being treated for hypertension who have associated vascular risk factors a systolic BP treatment target of <120 mmHg may be associated with a decreased risk of developing mild cognitive impairment and should be considered when deciding on the intensity of their therapy.[14] 2C (83%)

4. All patients with cognitive symptoms or impairment should receive guideline-recommended treatments to prevent first-ever or recurrent stroke, as appropriate. 1B (98%)

Implications for long-term care

- Blood pressure management still vital
  - BP goals in frail elderly can be individualized
  - SPRINT (JAMA 2016), adults 75 and older with SBP≥ 142mmHg, 815 frail
    - At 3.1 years, rates of both the primary cardiovascular endpoint and all-cause mortality were significantly lower among those assigned more intensive (mean SBP 123) vs less intensive (SBP 135) blood pressure lowering (2.6 versus 3.8 percent and 1.8 versus 2.6 percent, respectively).
    - The benefit from more intensive blood pressure control was present in both fit and frail older adults.
    - Serious adverse events were similar in the two treatment groups and did not depend upon frailty.

Vascular Cognitive Impairment (VCI)

TABLE 2 Diagnosis and treatment of vascular cognitive impairment

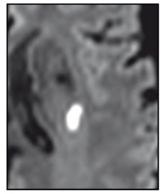
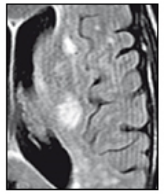
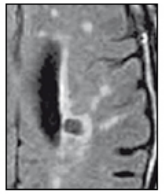
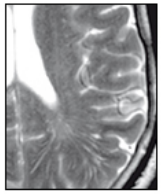
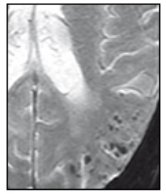
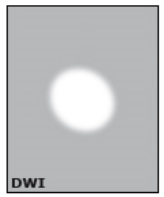
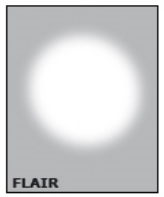
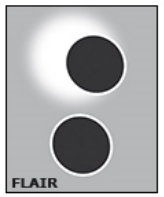
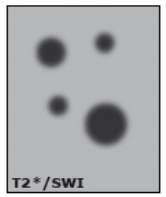
5a. The use of aspirin is not recommended for patients with MCI or dementia who have brain imaging evidence of covert white matter lesions of presumed vascular origin without history of stroke or brain infarcts. 2C (96%)

5b. The effects of aspirin on cognitive decline in patients with MCI or dementia who have covert brain infarcts detected on neuroimaging without history of stroke has not been defined. The use of aspirin in this setting is reasonable, but the benefit is unclear. 2C (86%)

Implications for long-term care

- Stroke history and timing of cognitive impairment is critical
    - If there's no clear VaD diagnosis, may be able to discontinue antiplatelet therapy
    - Unclear from the CCCDTD5 how much of a burden of white matter change could be considered an "infarct"
    - Need a definition of "silent cerebrovascular disease"

STRIVE criteria for classifying brain lesions caused by cerebral small vessel disease

	Recent small subcortical infarct	White matter hyperintensity	Lacune	Perivascular space	Cerebral microbleed
Example image					
Schematic					
Usual diameter	≤20 mm	Variable	3 to 15 mm	≤2 mm	≤10 mm
Comment	Best identified on DWI	Located in white matter	Usually have hyperintense rim	Most linear without hyperintense rim	Detected on GRE sequence, round or ovoid, blooming
DWI	↑	↔	↔(↓)	↔	↔
FLAIR	↑	↑	↓	↓	↔
T2	↑	↑	↑	↑	↔
T1	↓	↔(↓)	↓	↓	↔
T2*-weighted GRE	↔	↑	↔(↓ if hemorrhage)	↔	↓↓

↑ Increased signal
↓ Decreased signal
↔ Iso-intense signal

The table shows examples (first row) and schematic representation (second row) of MRI features for changes related to small vessel disease, with a summary of imaging characteristics for individual lesions.

DWI: diffusion-weighted imaging; FLAIR: fluid-attenuated inversion recovery; T2*: T2-star; SWI: susceptibility-weighted imaging; GRE: gradient-recalled echo; MRI: magnetic resonance imaging.

Unclear from the CCCDTD5 how much of a burden of white matter change could be considered an “infarct”

Review > Stroke. 2017 Feb;48(2):e44-e71. doi: 10.1161/STR.0000000000000116.
Epub 2016 Dec 15.

Prevention of Stroke in Patients With Silent Cerebrovascular Disease: A Scientific Statement for Healthcare Professionals From the American Heart Association/American Stroke Association

Eric E Smith, Gustavo Saposnik, Geert Jan Biessels, Fergus N Doubal, Myriam Fornage, Philip B Gorelick, Steven M Greenberg, Randall T Higashida, Scott E Kasner, Sudha Seshadri, American Heart Association Stroke Council; Council on Cardiovascular Radiology and Intervention; Council on Functional Genomics and Translational Biology; and Council on Hypertension

PMID: 27980126 DOI: 10.1161/STR.0000000000000116

Abstract

Two decades of epidemiological research shows that silent cerebrovascular disease is common and is associated with future risk for stroke and dementia. It is the most common incidental finding on brain scans. To summarize evidence on the diagnosis and management of silent cerebrovascular disease to prevent stroke, the Stroke Council of the American Heart Association convened a writing committee to evaluate existing evidence, to discuss clinical considerations, and to offer suggestions for future research on stroke prevention in patients with 3 cardinal manifestations of silent cerebrovascular disease: silent brain infarcts, magnetic resonance imaging white matter hyperintensities of presumed vascular origin, and cerebral microbleeds. The writing committee found strong evidence that silent cerebrovascular disease is a common problem of aging and that silent brain infarcts and white matter hyperintensities are associated with future symptomatic stroke risk independently of other vascular risk factors. In patients with cerebral microbleeds, there was evidence of a modestly increased risk of symptomatic intracranial hemorrhage in patients treated with thrombolysis for acute ischemic stroke but little prospective evidence on the risk of symptomatic hemorrhage in patients on anticoagulation. There were no randomized controlled trials targeted specifically to participants with silent cerebrovascular disease to prevent stroke. Primary stroke prevention is indicated in patients with silent brain infarcts, white matter hyperintensities, or microbleeds. Adoption of standard terms and definitions for silent cerebrovascular disease, as provided by prior American Heart Association/American Stroke Association statements and by a consensus group, may facilitate diagnosis and communication of findings from radiologists to clinicians.

Keywords: AHA Scientific Statements; anticoagulants; brain infarction; cerebrovascular disorders; prevention and control; white matter.

Need a definition of
“silent cerebrovascular disease”

Vascular Cognitive Impairment (VCI)

TABLE 2 Diagnosis and treatment of vascular cognitive impairment

6. Cholinesterase inhibitors (donepezil, galantamine, rivastigmine) and the N-methyl-D-aspartate (NMDA) receptor antagonist memantine may be considered for the treatment of vascular cognitive impairment in selected patients. 2B (89%)

Implications for long-term care

- May reconsider use of cholinesterase inhibitors (either start or stop)
  - If you think there's a component of AD, could try a ChI
  - If clear deficit after a stroke and no progression, probably no role for ChI

Deprescription of anti-dementia drugs

TABLE 8 Deprescription of anti-dementia drugs

1. Decisions related to deprescribing of cognitive enhancers should take into consideration the patient's preferences (for individuals who are capable of making treatment decisions), their prior expressed wishes (if these are known), and in collaboration with family or substitute decision makers for individuals who are incapable of providing informed consent. 1C (98%)
2. For individuals taking a cholinesterase inhibitor (ChEI) for Alzheimer's disease (AD), Parkinson's disease dementia (PDD), Lewy body dementia (DLB), or vascular dementia (VD) for >12 months, discontinuation should be considered if: (a) there has been a *clinically meaningful* worsening of dementia as reflected in changes in cognition, functioning, or global assessment over the past 6 months in the absence of other *medical conditions* (eg, presence of delirium, significant concomitant medical illness) *or environmental factors* (eg, recent transition in residence) that may have contributed significantly to the observed decline; (b) no clinically meaningful benefit was observed at any time during treatment (improvement, stabilization, decreased rate of decline); (c) the individual has severe or end-stage dementia (dependence in most basic activities of daily living, inability to respond to environment or limited life expectancy); (d) development of intolerable side-effects (eg, severe nausea, vomiting, weight loss, anorexia, falls); (e) medication adherence is poor and precludes safe ongoing use of the medication or inability to assess the effectiveness of the medication. 1B (98%)
3. For individuals prescribed ChEI for indications other than AD, PDD, DLB, or VD (eg, frontotemporal dementia, other neurodegenerative conditions), ChEI should be discontinued. 1B (93%)

Deprescription of anti-dementia drugs

TABLE 8 Deprescription of anti-dementia drugs

4. For individuals taking memantine for AD, PDD, DLB, or VD for >12 months, discontinuation should be considered if: (a) there has been a clinically meaningful worsening of dementia as reflected in changes in cognition, functioning, or global assessment over the past 6 months in the absence of other medical conditions (eg, presence of delirium, significant concomitant medical illness) or environmental factors (eg, recent transition in residence) that may have contributed significantly to the observed decline; (b) no clinically meaningful benefit was observed at any time during treatment (improvement, stabilization, decreased rate of decline); (c) the individual has severe or end-stage dementia (dependence in most basic activities of daily living, inability to respond to environment or limited life expectancy); (d) development of intolerable side effects (eg, confusion, dizziness, falls); (e) medication adherence is poor and precludes safe ongoing use of the medication or inability to assess the effectiveness of the medication. 1C (96%)

Deprescription of anti-dementia drugs

TABLE 8 Deprescription of anti-dementia drugs

5. For individuals prescribed memantine for indications other than AD, PDD, DLB, or VD (eg, frontotemporal dementia, other neurodegenerative conditions), memantine should be discontinued. 1C (91%)
6. Deprescribing of ChEIs or memantine should occur gradually and treatment reinitiated if the individual shows clinically meaningful worsening of cognition, functioning, neuropsychiatric symptoms, or global assessment that appears to be related to cessation of therapy. 1B (98%)
7. Dose reduction during deprescribing should follow general guidelines for deprescribing of medications with a reduction of dose by 50% every 4 weeks until the initial starting dose is obtained. After 4 weeks of treatment on the recommended starting dose, the cognitive enhancer could be discontinued. 2C (96%)

Deprescription of anti-dementia drugs

TABLE 8 Deprescription of anti-dementia drugs

8. Cholinesterase inhibitors should not be discontinued in individuals who currently have clinically meaningful psychotic symptoms, agitation, or aggression until these symptoms have stabilized unless these symptoms appear to have been worsened by the initiation of a ChEI or an increase in ChEI dose. 2B (78%, 100%)
9. Individuals who have had a clinically meaningful reduction in neuropsychiatric symptoms (eg, psychosis) with cognitive enhancers should continue to be treated with the cognitive enhancer even if there is evidence of cognitive and functional decline. 2B (96%)
10. Cholinesterase inhibitors and memantine should be deprescribed for individuals with mild cognitive impairment. 1B (89%)

Implications for Long-term Care

Factors Associated With Deprescribing Acetylcholinesterase Inhibitors in Older Nursing Home Residents With Severe Dementia

Joshua D. Niznik, PharmD,[†‡] *Xinhua Zhao, PhD,*[*‡] *Meiqi He, MS,*[*]
Sherrie L. Aspinall, PharmD, MS,[*‡§] *Joseph T. Hanlon, PharmD, MS,*[†‡] *David Nace, MD, MPH,*[†]
Joshua M. Thorpe, PhD, MPH,[‡¶] *and Carolyn T. Thorpe, PhD, MPH*[‡¶]

BACKGROUND/OBJECTIVE: Uncertainty regarding benefits and risks associated with acetylcholinesterase inhibitors (AChEIs) in severe dementia means providers do not know if and when to deprescribe. We sought to identify which patient-, provider-, and system-level characteristics are associated with AChEI discontinuation.

DESIGN: Analysis of 2015 to 2016 data from Medicare claims, Part D prescriptions, Minimum Data Set (MDS), version 3.0, Area Health Resource File, and Nursing Home Compare. Cox-proportional hazards models with time-varying covariates were used to identify patient-, provider-, and system-level factors associated with AChEI discontinuation (30-day or more gap in supply).

SETTING: US Medicare–certified nursing homes (NHs).

PARTICIPANTS: Nonskilled NH residents, aged 65 years and older, with severe dementia receiving AChEIs within the first 14 days of an MDS assessment in 2016 (n = 37 106).

RESULTS: The sample was primarily white (78.7%), female (75.5%), and aged 80 years or older (77.4%). The most commonly prescribed AChEIs were donepezil (77.8%), followed by transdermal rivastigmine (14.6%). The cumulative incidence of AChEI discontinuation was 29.7% at the end of follow-up (330 days), with mean follow-up times of 194 days for continuous users of AChEIs and 105 days for those who discontinued. Factors associated with increased likelihood of discontinuation were new admission, older age, difficulty being understood, aggressive behavior, poor appetite, weight loss, mechanically altered diet, limited prognosis designation, hospitalization in 90 days prior, and northeastern region. Factors associated with decreased likelihood of discontinuation included memantine use, use of strong anticholinergics, polypharmacy, rurality, and primary care prescriber vs geriatric specialist.

CONCLUSION: Among NH residents with severe dementia being treated with AChEIs, the cumulative incidence of AChEI discontinuation was just under 30% at 1 year of follow-up. Our findings provide insight into potential drivers of deprescribing AChEIs, identify system-level barriers to deprescribing, and help to inform covariates that are needed to address potential confounding in studies evaluating the potential risks and benefits associated with deprescribing. **J Am Geriatr Soc 67:1871-1879, 2019.**

Key words: cholinesterase inhibitors; dementia; deprescribing; Medicare; nursing home

JAGS 2019

- US study of data from 2015-16
- Mostly white, female, over age 80
- ChI discontinuation at 1 year was 29.7%

Implications for Long-term Care

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Joshua D. Niznik, PharmD,[*†‡] *Xinhua Zhao, PhD,*[*‡] *Meiqi He, MS,*[*]
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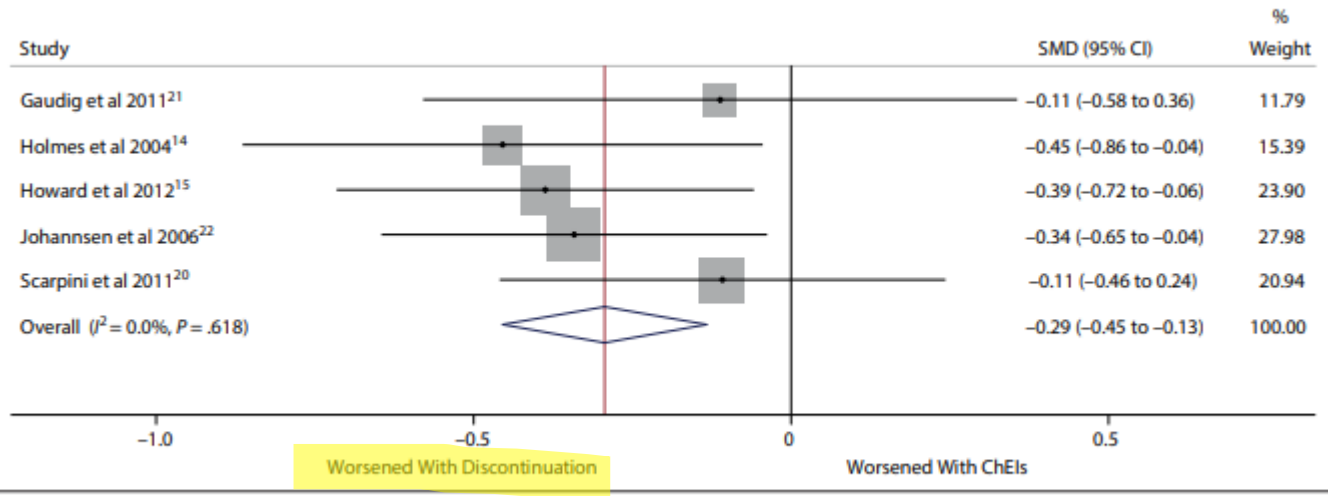
Key words: cholinesterase inhibitors; dementia; deprescribing; Medicare; nursing home

- Factors that ↑ discontinuation:
  - Older age
  - Aggression
  - Poor appetite
  - Weight loss
  - Minced diet
  - Limited prognosis
  - Having had hospitalization in prev 90 days
- Factors that ↓ discontinuation:
  - Memantine
  - Use of strong anticholinergics
  - Polypharmacy
  - Rurality
  - Primary care vs Specialist

Implications for Long-term Care

- Meta-Analysis of ChI Discontinuation
  - O'Regan J, Lanctot KL, Mazereeuw G, et al: *Cholinesterase inhibitor discontinuation in patients with Alzheimer's disease: a metaanalysis of randomized controlled trials.* J Clin Psychiatry 2015; 76:1424–1431 7.
  - 5 RCT's, 650 patients
  - ChI discontinuation seemed to worsen cognition and neuropsychiatric symptoms Most of deterioration happened in first 6 weeks
  - Excluded long-term care and/or advanced dementia
  - Did not report on CGIC and inferred clinical relevance

Figure 1. Effects of Cholinesterase Inhibitor (ChEI) Discontinuation on Global Cognitive Performance (Mini-Mental State Examination score) Over Trial Duration[a]



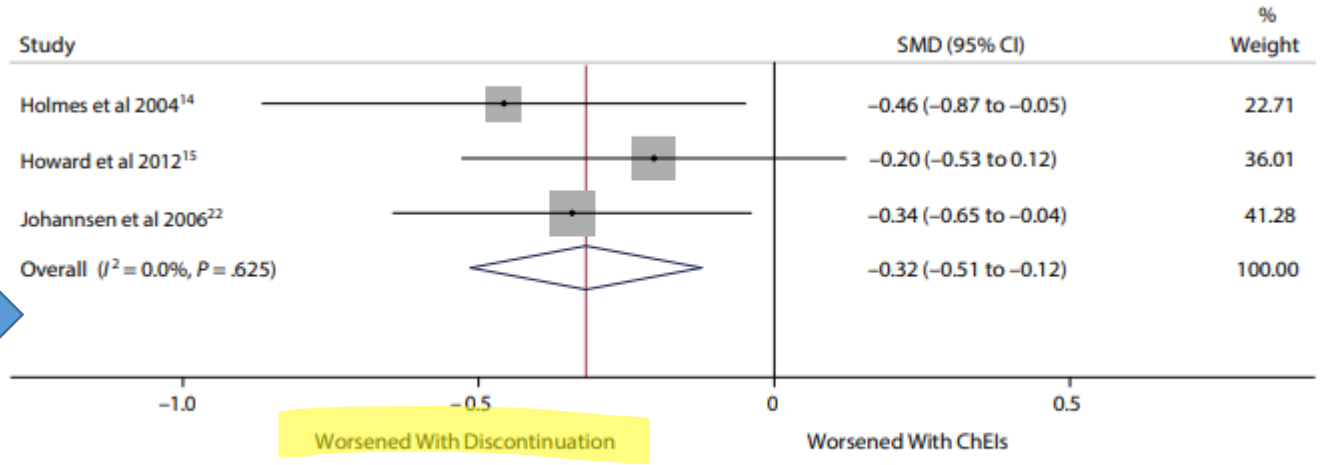
[a]Effect sizes are calculated using standardized mean differences (SMDs) in a fixed-effects model. Summary statistics: n = 300 ChEI continuation groups/307 ChEI discontinuation groups; SMD = −0.29 (−0.45 to −0.13), Z = 3.56, P < .001; heterogeneity: Q = 2.62, df = 4, I^2 = 0.0%, P = .618.

O'Regan J, Lanctot KL, Mazereeuw G, et al: Cholinesterase inhibitor discontinuation in patients with Alzheimer's disease: a metaanalysis of randomized controlled trials. J Clin Psychiatry 2015; 76:1424–1431 7.

Cognition

Responsive Behaviour

Figure 2. Effects of Cholinesterase Inhibitor (ChEI) Discontinuation on Neuropsychiatric Symptoms (Neuropsychiatric Inventory score) Over Trial Duration[a]



[a]Effect sizes are calculated using standardized mean differences (SMDs) in a fixed-effects model. Summary statistics: n = 199 ChEI continuation groups/211 ChEI discontinuation groups; SMD = −0.32 (−0.51 to −0.12), Z = 3.19, P = .001; heterogeneity: Q = 0.94, df = 4, I^2 = 0.0%, P = .625.

Implications for Long-term Care

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Original Study

A Randomized Placebo-Controlled Discontinuation Study of Cholinesterase Inhibitors in Institutionalized Patients With Moderate to Severe Alzheimer Disease

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- 40 patients
- MMSE 15 or less
- In long-term care in Canada
- Mean age 89.3
- Had been on ChI for 2 years or more
- Stable dose of psychotropics for at least 1 month

Implications for Long-term Care

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Table 3
Change Scores (Baseline to 8 Weeks)

Parameter	Placebo			Cholinesterase Cont.			*P* Value
	BL (Mean ± SD)	Endpoint (Mean ± SD)	Change (Mean ± SD)	BL (Mean ± SD)	Endpoint (Mean ± SD)	Change (Mean ± SD)	
CGI	3.5 ± 0.7	3.6 ± 0.4	−0.1 ± 0.5	3.8 ± 0.6	3.8 ± 0.8	0.0 ± 0.4	.64
CGI-C*	n/a	n/a	3.6 ± 1.1*	n/a	n/a	3.4 ± 1.2*	.55
Weight (kg)	67.1 ± 14.9	66.9 ± 15.2	−0.4 ± 2.2	74.8 ± 13.4	74.4 ± 12.5	−0.4 ± 4.1	.84
sMMSE	10 ± 5.1	8.8 ± 5.6	−1.0 ± 4.0	6.4 ± 4.8	7.1 ± 5.8	0.7 ± 3.1	.19
SIB	63.7 ± 28.0	57.2 ± 34.7	−6.5 ± 21.3	50.8 ± 3.1	49.5 ± 35	−1.3 ± 14.6	.25
NPI-NH	20.3 ± 18	23.8 ± 3.6	3.6 ± 12.6	21.9 ± 14	20.9 ± 18.4	−1.1 ± 8.9	.24
NPI-disruption	7.8 ± 7.3	8.8 ± 9.8	1.0 ± 4.2	8.0 ± 5.7	7.8 ± 7.0	−0.2 ± 6.3	.28
CMAI	44.1 ± 12.4	43.8 ± 9.1	−0.3 ± 7.3	49.6 ± 4.6	52.3 ± 19.3	2.5 ± 11.2	.90
AES	52.4 ± 12.7	54.2 ± 12.5	1.8 ± 7.6	59 ± 8.7	62.3 ± 5.9	3.3 ± 5.5	.32
ADCS-ADL-sev	14.2 ± 10.9	14.1 ± 11.1	−0.1 ± 3.8	11.3 ± 9.1	11.3 ± 9.1	0.0 ± 3.4	.54
QUALID	20.1 ± 6.6	20.4 ± 7.2	0.3 ± 3.1	23.0 ± 7.7	22.9 ± 8.5	−0.1 ± 4.8	.92

ANCOVA, analysis of covariance; cont, continuation; n/a, not applicable (change score only); sMMSE, Standardized Mini-Mental State Examination; SD, standard deviation; SIB, Severe Impairment Battery.
Asterisk (*) denotes that the reported CGI-C score is reported as the score provided by the study physician at study endpoint. This score represents how the patient has improved or worsened clinically, from baseline. Because this score was taken from a single point in time, a Mann-Whitney U test was used to compute the *P* value. For all other measures, a repeated measures ANCOVA, controlling for BL MMSE scores, was used to compute the *P* values.

Implications for Long-term Care

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Original Study

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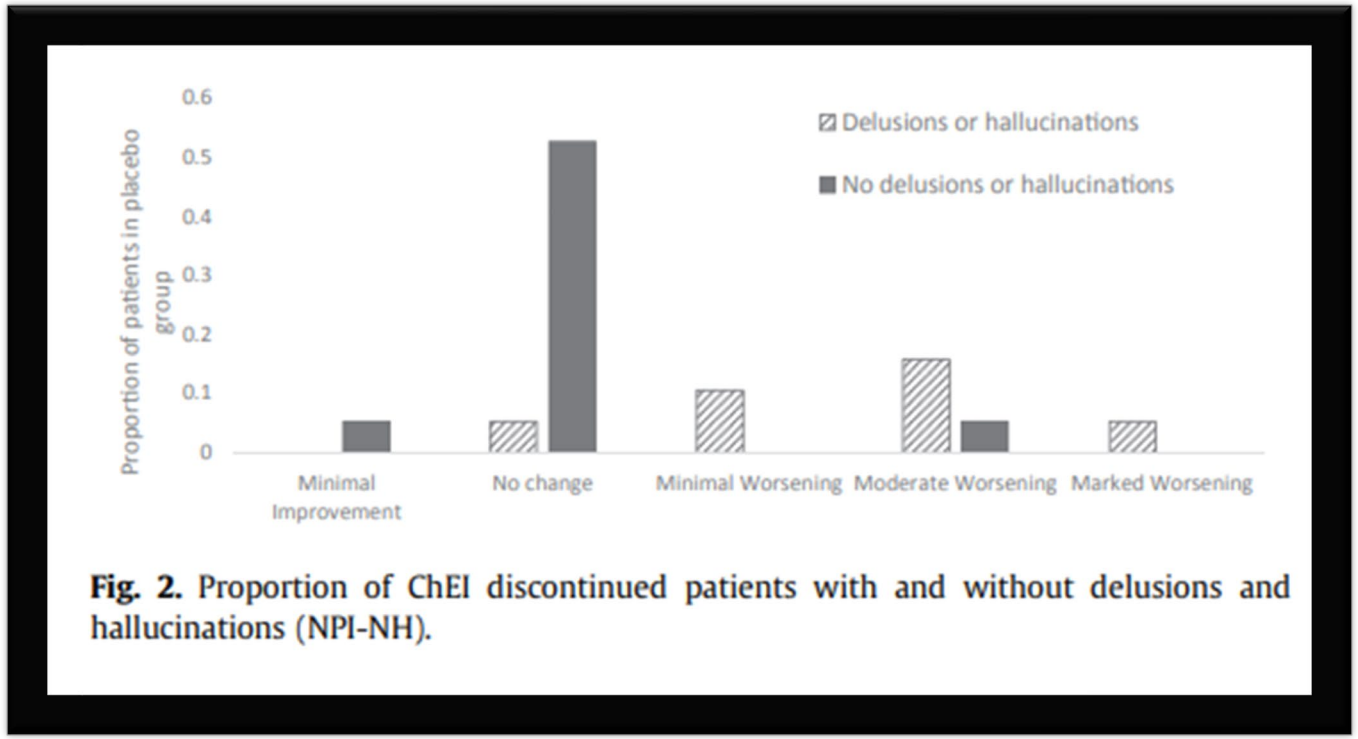

Fig. 2. Proportion of ChEI discontinued patients with and without delusions and hallucinations (NPI-NH).

- In placebo group, presence of hallucinations predicted worsening after ChI discontinuation
- Recommend close monitoring of patients with psychosis when ChI stopped

Implications for Long-term Care

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BMC Palliative Care

RESEARCH ARTICLE Open Access

Caregivers' perspectives and experiences of withdrawing acetylcholinesterase inhibitors and memantine in advanced dementia: a qualitative analysis of an online discussion forum

Carole Parsons[1*] and Sarah Gamble[1,2]

Abstract

Background: There is considerable uncertainty surrounding the medications used to delay the progression of dementia, especially their long-term efficacy and when to withdraw treatment with these agents. Current research regarding the optimal use of antidementia medication is limited, contributing to variability in practice guidelines and in clinicians' prescribing practices. Little is currently known about the experiences encountered by caregivers of people with dementia after antidementia medication is withdrawn.

Aim: To investigate the experiences and perspectives of carers and family members when antidementia medications (cholinesterase inhibitors and/or memantine) are stopped, by analysing archived threads and posts of an online discussion forum for people affected by dementia.

Methods: Archived discussions from Talking Point, an online discussion forum hosted by the Alzheimer's Society UK, were searched for threads discussing antidementia medication withdrawal and relevant threads were analysed thematically using the Framework method. Participant demographics were not established due to usernames which ensured anonymity.

Results: Four key themes emerged: (1) expectations about withdrawal, (2) method of withdrawal, (3) clinical condition on withdrawal, and (4) the effect of withdrawal on caregivers.

Conclusions: Online discussion forums such as Talking Point provide dementia carers with an outlet to seek help, offer advice and share experiences with other members. The study findings highlight the complexity surrounding optimising dementia pharmacotherapy and antidementia medication withdrawal, highlighting the need for treatment to be person-centred and highly individualised.

Keywords: Dementia, Medication, Withdrawal, Carer(s), Online discussion forum

- Thematic analysis of online forum posts by caregivers
- Many felt clinical worsening after withdrawal
- Some noted improvement or a trade off
- Ambiguity about natural history vs effects of withdrawal

Psychosocial Interventions

TABLE 7 Psychosocial interventions

Individual Level
1. We recommend exercise (group or individual physical exercise) for people living with dementia.[98-101] We cannot recommend any specific exercise duration or intensity at this time. 1B (93%)
2. Group cognitive stimulation therapy is an intervention for people with dementia which offers a range of enjoyable activities providing general stimulation for thinking, concentration, and memory usually in a social setting, such as a small group. We recommend considering group cognitive stimulation therapy for people living with mild to moderate dementia.[101-104] 2B (96%)
3. Psychoeducational interventions for caregivers aim at the development of problem-focused coping strategies while psychosocial interventions address the development of emotion-focused coping strategies. These can include education, counseling, information regarding services, enhancing carer skills to provide care, problem solving, and strategy development. We recommend considering psychosocial and psychoeducational interventions for caregivers of people living with dementia.[105-110] 2C (96%)

Psychosocial Interventions

TABLE 7 Psychosocial interventions

Community Level
4. Dementia friendly organizations/communities are defined as the practice and organization of care/communities that is aware of the impact dementia has on a person's ability to engage with services and manage their health. It promotes the inclusion of people living with dementia and their caregiver in decisions and discussions with the aim of improving outcomes for the persons living with dementia and their caregivers. We recommend considering the development of dementia friendly organizations/communities for people living with dementia.[111-114] 2C (91%)
5. Case management is defined as the introduction, modification, or removal of strategies to improve the coordination and continuity of delivery of services which includes the social aspects of care. We recommend considering the use of case management for people living with dementia.[115-118] 2B 93%

Implications for Long-term Care

- Recommendations aimed at community dwellers
- Group cognitive stimulation and exercise
- Caregiver support
- “Case management”

Implications for Long-term Care

- “Case management”
  - Intervention delivered in the community (not in hospital or residential care settings) for the planning and co-ordination of care of the person with dementia.
  - Usually a nurse or social worker to arrange and monitor an optimum package of long-term care services
  - May be organized according to:
    - Functions (co-ordination and linkage)
    - Goals (maintaining vulnerable people at home or independently)
    - Core tasks (case finding, assessment, etc)
    - Target group
    - Differentiating features (intensity of involvement, breadth of services overseen, duration of involvement)
    - Multilevel response (client level goals and system-level goals)

Implications for Long-term Care

- 2015
- 13 RCTs
- 9615 participants
- US, Canada, Finland, Netherlands, Hong Kong, India and the UK;

Case Management evidence

- Reduction in proportion of individuals institutionalised at 6 months, but not at 12 months, at 18 months but not at 24 months
- Improved QoL for caregivers at 12 months , but not 3 or 6 months
- Reduced neuropsychiatric symptoms at 18 months

Summary of findings for the main comparison. Case management versus usual care for people with dementia

Case management versus usual care for people with dementia

Patient or population: people with dementia
Settings: community
Intervention: case management[1]
Comparison: treatment as usual, standard community treatment, other non-case management or waiting list controls

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE **)	Comments
	Assumed risk	Corresponding risk				
	treatment as usual, standard community treatment, other non-case management or waiting list controls	case management				
Institutionalised (number of participants admitted to residential or nursing homes) at 10 - 12 months	**189 per 1000**	**198 per 1000** (169 to 211)	**OR 0.95** (0.83 to 1.08)	5990 (9 studies)	⊕⊕⊝⊝ **low**[2,3]	No significant advantage in the case management group. When a sensitivity analysis was performed upon 5 studies (Chien- Hong Kong 2008; Chien - Hong Kong 2001; Chu - Canada; Eloniemi-Sulkava 2001; Eloniemi-Sulkava 2009) where the goals of the intervention were focused upon delaying institutionalisation, those in the case management group were significantly less likely to be institutionalised (OR 0.29, 95% CI 0.15 to 0.55, n = 464, I^2 = 0%, P = 0.0002).
Time to institutionalisation at 12 months	See comment	See comment	Not estimable	125 (1 study)	⊕⊕⊝⊝ **low**[4,5]	Only one trial reported the length of time until participants were institutionalised (Eloniemi-Sulkava 2009) and showed a non-significant difference between the two groups (HR: 0.66%, 95% CI 0.38 to 1.14, P = 0.14).

						ence between the two groups (HR: 0.66%, 95% CI 0.38 to 1.14, P = 0.14).
Hospital admission (number of participants admitted) at 12 months	**236 per 1000**	**213 per 1000** (131 to 264)	OR 0.87 (0.59 to 1.3)	585 (5 studies)	⊕⊕⊕⊙ **moderate**[7]	No significant advantage in the case management group.
Mortality (number of deaths) at 12 months	**80 per 1000**	**80 per 1000** (68 to 95)	OR 1.00 (0.83 to 1.2)	6112 (8 studies)	⊕⊕⊕⊕ **high**	No significant advantage in the case management group.
Quality of life (participants) at 12 months		The mean quality of life (participants) - At 12 months in the intervention groups was **0.05 standard deviations higher** (0.13 lower to 0.22 higher)	SMD 0.05 (-0.13 to 0.22)	511 (3 studies)	⊕⊕⊕⊕ **high**	No significant differences between groups were detected
Quality of life (carers) at 12 months		The mean quality of life (carers) - At 12 months in the intervention groups was **0.21 standard deviations higher** (0.06 to 0.37 higher)	SMD 0.21 (0.06 to 0.37)	681 (5 studies)	⊕⊕⊕⊙ **moderate**[6]	Quality of life was significantly improved or higher in the intervention group. This difference did not remain when the two studies (Chien- Hong Kong 2008; Chien - Hong Kong 2001) were removed. .
Carer burden at 10 - 12 months		The mean carer burden - At 10 - 12 months (change from baseline / end point) in the intervention groups was **0.05 standard deviations lower** (0.12 lower to 0.01 higher)	SMD -0.05 (-0.12 to 0.01)	3772 (7 studies)	⊕⊕⊙⊙ **low**[7,8]	Outcome favours case management although not to a significant extent.

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).
CI: Confidence interval; **OR:** Odds ratio; **HR:** Hazard ratio;

**GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

Implications for Long-term Care

- Upstream involvement of case managers may:
  - Delay admission to long-term care
  - Reduce caregiver burden in the community

Take home points

- Consider diagnosis of VaD
  - Hypertension management
  - ASA
  - ChI
- Case management for pre-long-term care
- Deprescription of ChI
  - Avoid during an exacerbation of responsive behaviours or hallucinations/delusions
  - Taper over 4-8 weeks

ANY QUESTIONS

ANY QUESTIONS