Recommendations on Screening for Cognitive Impairment in Older Adults 2015

Canadian Task Force on Preventive Health Care (CTFPHC)

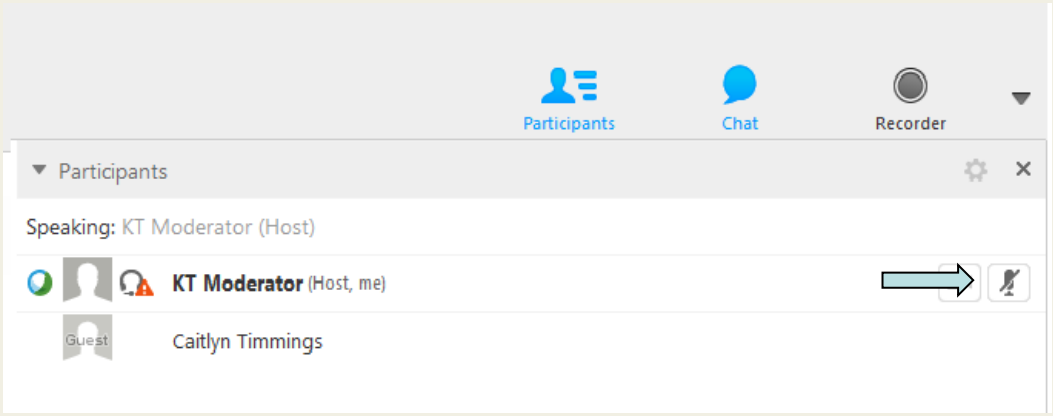
Putting Prevention into Practice

Canadian Task Force on Preventive Health Care
Groupe d'étude canadien sur les soins de santé préventifs

WebEx – How can I participate today?

Audio option- you can ask questions and participate directly in the discussion by unmuting your audio.

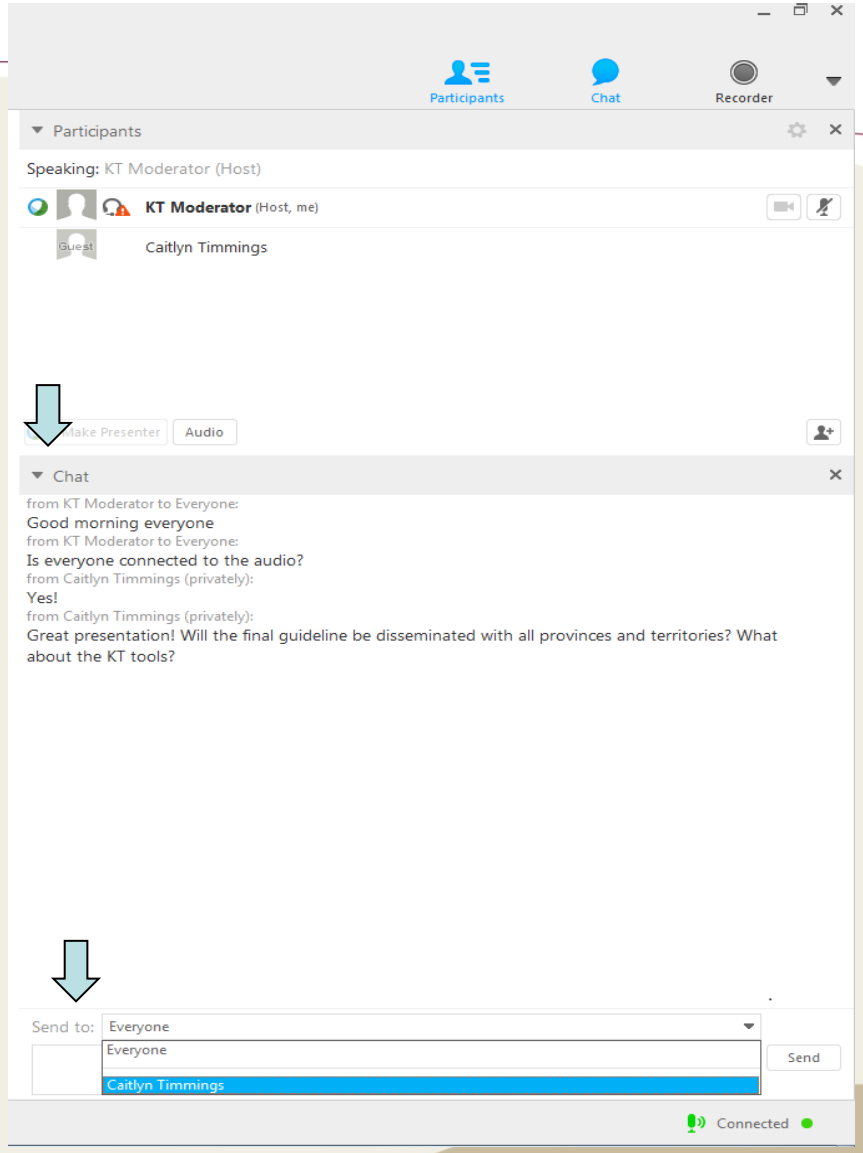
- Mute or unmute your audio on your phone or by clicking on the microphone next to your name in the participant list.



WebEx – How can I participate today?

Chat Box option- you can also type your questions or comments into the chat box.

1. You can send comments to everyone
2. You can send comments directly to the KT moderator (to read to the group) or to individual participants



Use of slide deck

- These slides are made available publicly as an educational support to assist with the dissemination, uptake and implementation of the guidelines into primary care practice.
- Some or all of the slides in this slide deck may be used in educational contexts.
- The Screening for Cognitive Impairment Guideline was published online November 2015.

Cognitive Impairment Working Group

CTFPHC Members:

- Kevin Pottie (Chair)
- Richard Birtwhistle
- Marcello Tonelli
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- Ainsley Moore*

Public Health Agency:

- Alejandra Jaramillo*

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- Donna Fitzpatrick-Lewis*
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**non-voting member*

Overview of Presentation

- Background on Cognitive Impairment
- Methods of the CTFPHC
- Recommendations and Key Findings
- Implementation of Recommendations
- Conclusions
- Questions and Answers

Screening for Cognitive Impairment

BACKGROUND

Background

- Cognitive impairment occurs on a continuum that includes aging related cognitive decline, mild cognitive impairment (MCI), and dementia
- Studies from the United States have reported prevalence of MCI ranging from 9.9% to 35.2% for adults aged 70 or older
- The incidence of dementia in Canadian adults aged 65 to 79 years is 43 per 1000 persons and rises with age (to 212 per 1000 in Canadians aged 85 and older)
- Available treatments for cognitive impairment include medications (e.g., cholinesterase inhibitors), dietary supplements/vitamins and non-pharmacological interventions

Screening Tools for Cognitive Impairment

- Mini Mental State Examination (MMSE)
  - A 30-point questionnaire available with a fee ($68.00 US for 50 test forms)
  - Scored out of 30, cut-point varies based on age and education level:
    - Cognitive impairment = below 23
- Montreal Cognitive Assessment (MoCA)
  - A free, quick test that assesses different cognitive domains
  - Scored out of 30 and provides interpretive guidance as follows:
    - Mild cognitive impairment = between 18-26
    - Moderate cognitive impairment = between 10-17
    - Severe impairment = less than 10
- Alzheimer's Disease Assessment Scale cognition subscale (ADAS-Cog)
  - Often used in clinical trials, consists of 11 tasks measuring disturbances of memory, language, praxis, attention and other cognitive abilities
  - Takes up to 45 minutes to conduct

Cognitive Impairment 2015 Guidelines

This guideline provides recommendations for practitioners on preventive health screening in a primary care setting:

- This guideline applies to screening asymptomatic community dwelling adults ≥65 years for cognitive impairment
- This guideline does not apply to men and women who:
  - Are concerned about their cognitive performance
  - Are suspected of having cognitive impairment by clinicians, family or friends.
  - Have symptoms suggestive of cognitive impairment
    - E.g., loss of memory, language, attention, visuospatial, or executive functioning, or behavioural or psychological symptoms

Screening for Cognitive Impairment

METHODS

Methods of the CTFPHC

- Independent panel of:
  - Clinicians and methodologists
  - Expertise in prevention, primary care, literature synthesis, and critical appraisal
  - Application of evidence to practice and policy
- Cognitive Impairment Working Group
  - 6 Task Force members
  - Establish research questions and analytical framework

Methods of the CTFPHC

- Evidence Review and Synthesis Centre (ERSC)
  - Undertakes a systematic review of the literature based on the analytical framework
  - Prepares a systematic review of the evidence with GRADE tables
  - Participates in working group and task force meetings
  - Obtain expert opinions

CTFPHC Review Process

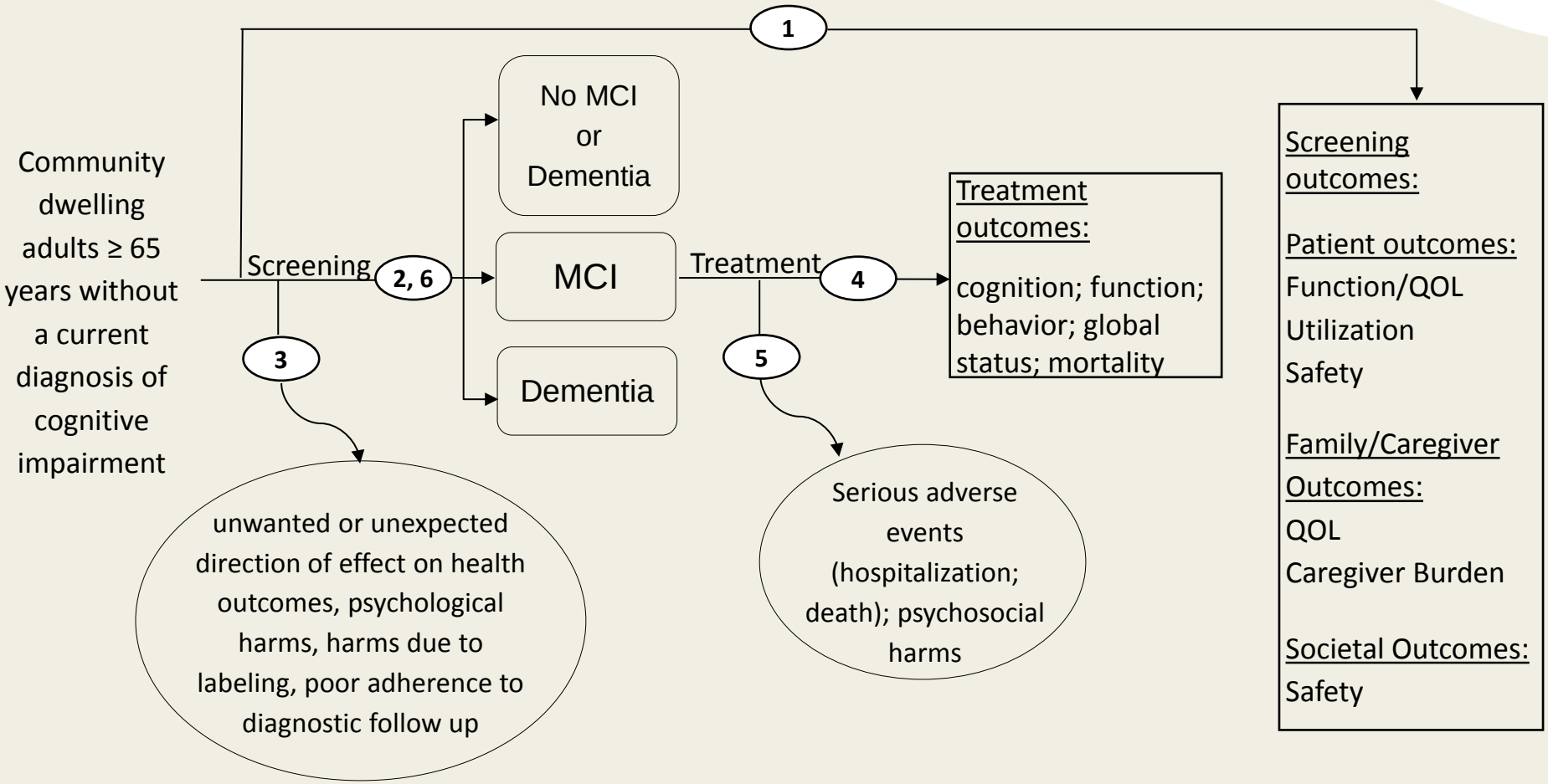
- Internal review process involving guideline working group, Task Force, scientific officers and ERSC staff
- External review process involving key stakeholders
  - Generalist and disease specific stakeholders
  - Federal and P/T stakeholders
- CMAJ undertakes an independent peer review journal process to review guidelines

Research Questions

- The systematic review for screening for cognitive impairment included:
  - (2) key research question with (0) sub-questions
  - (4) supplemental or contextual questions
- The systematic review for the treatment of cognitive impairment included:
  - (6) key research question with (4) sub-questions
  - (6) supplemental or contextual questions

For more detailed information please access the systematic review
www.canadiantaskforce.ca

Analytical Framework: Screening



Eligible Study Types

- **Population**: community dwelling older adults (≥65 years of age) who do not have symptoms suggestive of cognitive impairment (such as loss of memory, language, attention, visuospatial, or executive functioning, or behavioural or psychological symptoms) and who are not suspected of having cognitive impairment by clinicians or non-clinicians such as family or friends.
- **Language**: English, French
- **Study type:** Randomized control trials (RCTs) with at least 6 months of follow-up data from baseline
- **Outcomes:** patient important outcomes and the scales used to measure such outcomes were based on those selected and prioritized by Canadian clinicians and policymakers

How is Evidence Graded?

The "**GRADE**" System:

- **G**rading of **R**ecommendations, **A**ssessment, **D**evelopment & **E**valuation

What are we grading?

1. Quality of Evidence

- Degree of confidence that the available evidence correctly reflects the theoretical true effect of the intervention or service.
- high, moderate, low, very low

2. Strength of Recommendation

- the balance between desirable and undesirable effects; the variability or uncertainty in values and preferences of citizens; and whether or not the intervention represents a wise use of resources.
- strong and weak

How is the Strength of Recommendations Determined?

The strength of the recommendations (strong or weak) are based on four factors:

- **Quality** of supporting evidence
- Certainty about the **balance between desirable and undesirable** effects
- Certainty / variability in **values and preferences** of individuals
- Certainty about whether the intervention represents a **wise use of resources**

Interpretation of Recommendations

Implications	Strong Recommendation	Weak Recommendations
For patients	• Most individuals would want the recommended course of action; • only a small proportion would not.	• The majority of individuals in this situation would want the suggested course of action but many would not.
For clinicians	• Most individuals should receive the intervention.	• Recognize that different choices will be appropriate for individual patients; • Clinicians must help patients make management decisions consistent with values and preferences.
For policy makers	• The recommendation can be adapted as policy in most situations.	• Policy making will require substantial debate and involvement of various stakeholders.

Screening for Cognitive Impairment

RECOMMENDATIONS & KEY FINDINGS

Screening For Cognitive Impairment

- **Recommendation: We recommend not screening asymptomatic adults (≥65 years of age) for cognitive impairment**
  - *Strong recommendation; low quality evidence*

Basis of the recommendation:

- The findings of the evidence review highlight:
  - The lack of high quality studies evaluating the benefits and harms of screening for cognitive impairment;
  - The lack of effective treatment for mild cognitive impairment
    - The effect of treatment on MCI was measured as most pathology detected would likely be MCI when screening for cognitive impairment in asymptomatic populations

Efficacy of Screening Tools

The likelihood of a false positive result from the most common screening tools are as follows:

- MMSE:
  - 10% to 14% when screening for dementia
  - 13% when screening for MCI
- MoCA
  - 25% when screening for MCI
- ADAS-Cog
  - Diagnostic accuracy was not reported as this tool is not used in primary care settings, but for research purposes

Benefits of Treatment for MCI on Cognition: Effect measured with ADAS-Cog

Treatment Intervention	**Effect** Mean Difference (95% CI)	**No. Participants Treatment**	**No. Participants Control**	**No. Studies**	**Quality**
AChEIs	-0.33 (-0.73 to 0.06)*	2078	2110	4	Low
Donepezil	-0.60 (-1.35 to 0.15)*	632	637	2	Low
Rivastigmine	0 (-0.7987 to 0.7987)*	508	510	1	Low
Galantamine	-0.21 (-0.80 to 0.38)*	938	963	1	Low
Dietary Supplements	0.85 (-0.32 to 2.02)*	257	259	1	Low
Non-pharma	-0.60 (-1.44 to 0.24)*	47	45	1	Moderate

*Not statistically significant

Note:

- Negative and positive effects are outcome measure dependent
- A decrease in score (negative values) indicates and improvement

Benefits of Treatment for MCI on Cognition: Effect measured with MMSE

Treatment Intervention	**Effect** Mean Difference (95% CI)	**No. Participants Treatment**	**No. Participants Control**	**No. Studies**	**Quality**
AChEIs	0.17 (-0.13 to 0.47)*	1140	1147	3	Low
Donepezil	0.24 (-0.19 to 0.66)*	632	637	2	Low
Rivastigmine	0.10 (-0.32 to 0.52)*	508	510	1	Low
Dietary Supplements	0.20 (-0.04 to 0.43)*	511	519	4	Low
Non-pharma	1.01 (0.25 to 1.77)	221	187	1	Moderate

*Not statistically significant

Note:

- Negative and positive effects are outcome measure dependent
- An increase in score (positive values) indicates and improvement

Harms and Benefits for Screening and Treatment

- No high quality studies evaluating the harms and benefits of screening for cognitive impairment
- No evidence demonstrating clinically meaningful benefits of treatment of mild cognitive impairment
- Possible harms related to screening include:
  - False positives that could result from the MoCA or MMSE
  - The cost of conducting unnecessary medical care
  - Opportunity cost lost because practitioners could spend their time instead on interventions that have been proven to be effective

Comparison of Screening for Cognitive Impairment Recommendations

- Our recommendations on screening are consistent with those of other international guideline groups who recommend to **not screen** for cognitive impairment in asymptomatic adults:
    - NICE (2011)
    - BC Ministry of Health (2014)
    - USPSTF (2014)

Screening for Cognitive Impairment

IMPLEMENTATION OF RECOMMENDATIONS

Values and Preferences

- Limited evidence available: one international study examined the willingness to be screened among first-degree relatives of persons with Alzheimer's disease
- 32% were willing to be screening within the next year, 42% during the next 5 years
  - Willingness mainly related to obtaining help to prepare for the future
- Factors that influenced participants' willingness to be screened included:
  - Planning for future treatments and planning for their life
  - Dealing with the problem if there was one
  - Cost of evaluation and time

Knowledge Translation Tools

- The CTFPHC creates KT tools to support the implementation of guidelines into clinical practice
- A clinician FAQ has been developed for the cognitive impairment guideline
- After the public release, these tools will be freely available for download in both French and English on the website: www.canadiantaskforce.ca

Screening for Cognitive Impairment

CONCLUSIONS

Conclusions

- The CTFPHC recommends physicians to remain alert when patient, family members, or caregivers express concern about possible cognitive impairment and undertake appropriate diagnostic inquiry as warranted
- There is a lack of direct evidence concerning the benefits of screening for cognitive impairment in asymptomatic adults
- There is an absence of effective treatments for mild cognitive impairment
- Improved screening tools for mild cognitive impairment are needed.
  - Available screening tools for mild cognitive impairment may incorrectly classify individuals as positive

Update: CTFPHC Mobile App Now Available

- The app contains guideline and recommendation summaries, knowledge translation tools, and links to additional resources.
- Key features include the ability to bookmark sections for easy access, display content in either English or French, and change the font size of text.

Update: CTFPHC on Social Media

- The CTFPHC is venturing into social media!
- A Twitter policy and strategy is currently being developed
- CTFPHC Twitter is expected to be released late 2015/early 2016
- Please check the CTFPHC website for updates: http://canadiantaskforce.ca/

More Information

For more information on the details of this guideline please see:

- Canadian Task Force for Preventive Health Care website: http://canadiantaskforce.ca/?content=pcp

Questions & Answers

Thank you