Interior Health

Phased Dementia Pathway – Mild Cognitive Impairment

Clinical Practice Recommendations
Early Recognition of Cognitive-Related Changes

The following Clinical Practice Recommendations were created as part of the IH Phased Dementia Pathway. These recommendations are evidence-informed or "best practice", and were created by the process described in the IH Dementia Care website*. Clinical Practice Recommendations for the Mild Cognitive Impairment phase of the pathway highlight the need for interdisciplinary health professionals to recognize cognitive-related changes in the early stages, understand the clinical and ethical challenges related to early diagnosis and disclosure, and be able to meet the support needs of the client and caregiver throughout the uncertainty of this phase.

Levels of Evidence and Strength of Recommendations

The SORT research grading tool† emphasizes client-oriented outcomes – outcomes that matter to clients and help them live longer or better lives, including reduced morbidity, mortality or symptoms, improved quality of life and lower cost of health care services. Levels of evidence are ranked "**1, 2, 3"** based on the validity (quality) of the study design. Where existing relevant guidelines were found, they are cited as **"G"** in the level of evidence. Strengths of recommendations (**A, B, C**) are based on grading the quantity and consistency of the body of evidence. Ratings are listed following each recommendation or group of recommendations as needed.

Levels of Evidence and Strength of Recommendations Taxonomy

Levels of Evidence are ranked 1-3 based on the validity (quality) of the study design.
1 = Good quality client-oriented evidence
2 = Limited quality client-oriented evidence
3 = Other evidence

Evidence-based Recommendations are rated as follows:
A = consistent and good quality client-oriented evidence;
B = inconsistent or limited-quality client-oriented evidence;
C= evidence lacking, more research needed; based on expert consensus/usual practice

Qualitative Evidence

No comparable grading tool was found for qualitative research, however the well established criteria of *credibility, applicability (or fittingness), auditability and confirmability* are used. All four criteria must be met in order to be considered suitable evidence for practice recommendations. A designation of "Q" is given under level of evidence and source cited.

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† Ebell MH, Siwek J, Weiss BD, Woolf SH, Susman J, Ewigman B, & Bowman M. Simplifying the language of evidence to improve patient care: Strength of Recommendation Taxonomy (SORT): A patient-centered approach to grading evidence in the medical literature. *The Journal of Family Practice* 2004;53(2):111-120, available in the public domain from http://www.aafp.org/afp/20040201/548.pdf

Clinical Practice Recommendations

The Dementia Clinical Practice Working Group advises the following clinical practice recommendations concerning **early recognition of cognitive-related changes:**

1. **Education/Training**:

Provide interdisciplinary education regarding:	Level of Evidence (sources cited)	SOR‡
• the continuum of cognitive-related changes from normal aging to MCI to dementing disorders	Working Group Reports[1,2];Review[3]	C
• the use of "opportunistic recognition" of cognitive loss (as opposed to population screening) as a means to promote early detection and referral for follow-up investigation	Q[4]	C
• the challenges of assessing cognitive function in MCI such as: ○ the variability of specificity and sensitivity of traditional standardized measures of cognition (e.g., MMSE, Clock Drawing test) when used to detect MCI. ○ the appropriate decision and approach to using a standardized, validated assessment tool for MCI in clinical assessment practices. ○ the importance of referring clients to their physician for further (serial) assessment and possible neuropsychiatric evaluation when there is clinical evidence of early cognitive changes.	1[5,6]; 2[6,7] Guidelines[17,18]	A C A
• the use of clinical data such as observed declines over time in cognition, function (***complex*** ADL and IADL), behaviour, or mood as key clinical indicators of cognitive related change.	2[8,9,10,11,12,13] 3[14	B
• the need to listen and assess client and caregiver reports of cognitive, functional, behavioral and/or emotional changes as first line evidence towards developing an index of suspicion for cognitive change.	1[8,15,16] Guidelines[17,18,24,]	A
• the importance of monitoring reported changes or difficulties over time to assess trends.	Working Group Reports[1,2], Review[20], Guidelines[17, 18,]	A

‡ Strength of Recommendation

2. **Information**:

a) Communicate the following key information about Mild Cognitive Impairment to relevant clinical managers and front-line interdisciplinary professional staff:	Level of Evidence (sources cited)	SOR‡
• Mild Cognitive Impairment describes the cognitive changes between normal healthy aging and clinically recognizable early dementia. Current research indicates that the early cognitive changes that precede dementias are very subtle and heterogeneous in presentation. This area of knowledge is dynamic and requires frequent review of current research literature to ensure clinical currency;	Meta Analysis[19]	C
• Mild Cognitive Impairment does not yet have a consensus of diagnostic criteria, and reported presentation is often variable, cryptic, and difficult to distinguish from early dementia, or cognitive losses associated with major depression, etc. This can lead to diagnostic uncertainty by physicians. The diagnostic process involves a detailed history and physical examination and is best monitored by serial assessment over time to further evaluate observed or reported changes in thinking, function (complex ADL, IADL), mood, and behaviours. Interdisciplinary health professionals have a role in recognizing and reporting clinical changes in cognition, function, behaviour and mood over time to assist physicians in initial and ongoing investigation.	2[(1,2,19,20)]	C
• Early recognition of cognitive-related changes can be detected clinically by assessment and investigation of cognitive, functional, behavioural and mood changes over time. Such cognitive-related changes may have multiple etiologies, some of which are reversible. Reporting such changes may aid earlier detection and improve brain health and quality of life (reversal of cognitive losses) for clients with MCI and their caregivers.	Meta-analysis[(19)]; Guidelines[(18,24)]	A
• It is important to not presume or equate any cognitive loss with a dementing disorder, as many other conditions such a physical illness, delirium, depression, anxiety and medications may result in similar losses.	Guideline[21]	A
• Cognitive impairment or loss should always be presumed to be due to a reversible cause until ruled out otherwise by physician. Reporting and referral of concerns by non-physician professional staff is a critical role in early detection and diagnosis.	Guideline[17]	B
b) Communicate the following key information about Mild Cognitive Impairment to the general public to increase awareness and decrease stigma regarding the importance of cognitive changes in mid and later life:		
• Provide public information that individuals should take identifiable changes in memory, thinking, mood, or ability to problem solve/ function in everyday life seriously and seek medical advise for further investigation.	Working Report[1]; Meta-analysis[19]	C
• Provide public information that it is never too late to make lifestyle changes that reduce known dementia risk and promote healthy brains and healthy aging, even when memory loss is evident.	3[(22, 23)]	C

3. Program Planning:

It is recommended that the following information about Mild Cognitive Impairment is used for clinical program planning across disciplines and sectors:	Level of Evidence (sources cited)	SOR‡
• Incorporate basic knowledge of MCI, its risk factors, and the importance of early recognition of cognitive-related changes into routine cognitive assessment in all sectors.	3[22,23]	C
• Utilize knowledge of primary dementia prevention strategies (see Pre-clinical Phase modules from the Phased Dementia Pathway) as opportunities for secondary prevention in MCI (slow or delay the rate of cognitive decline by mitigating lifestyle risk factors)	Guideline[18]	C

4. Provision of Care:

Interdisciplinary professionals in all sectors are encouraged to use the following practice recommendations to guide assessment, problem-solving, decision-making and all aspects of direct care related to clients with Mild Cognitive Impairment and their family/caregivers.	Level of Evidence (sources cited)	SOR‡
• While there is insufficient evidence to recommend for or against routine screening for cognitive losses in older adults, it is recommended that interdisciplinary professionals use "opportunistic recognition" of cognitive loss during routine care assessments as a means of promoting early detection and referral for follow-up investigation	Q[4]	C
• Given the increased risk for MCI to convert to dementia, and given the seriousness of the burden of dementia for clients and caregivers, it is important for interdisciplinary health professionals to assist family physicians in early detection efforts by maintaining a high index of suspicion for cognitive-related changes such as:	Guideline[24]	A
○ reported or observed functional decline in *complex* ADL/IADL;	2[8,9,10,16]	B
○ reported or observed cognitive changes such as memory loss, loss of attention or self-awareness, language or visuo-spatial losses (e.g., haphazard driving);	2[11,15,16, 25]	B
○ reported or observed mood changes (e.g., apathy, irritability, depression);	1[26, 27]; 2[11,15,16]	B
○ reported or observed behavioural changes (e.g., changes in sleep, weight, social patterns, gross vs fine motor changes. gait changes, etc.)	1[26]; 2[16,28,29,30]	B
• Assessment of cognitive function requires interdisciplinary professionals to:		
○ use knowledge about the continuum of cognitive-related changes from normal aging to MCI to dementing disorders to guide appropriate cognitive assessment.	Working Group Reports[1,2], Review[3]	C
○ evaluate clinical data such as observed declines over time in cognition, function (complex ADL and IADL), behaviour, or mood as key clinical indicators of cognitive- related change.	2[8,9,10,11]	B

○ listen carefully to client and caregiver reports of cognitive, functional, behavioral and/or emotional changes as first line evidence towards developing an index of suspicion for cognitive change;	1[15,16]; Guidelines[31,18,21,24]; Q[32]	A
○ make decisions regarding the appropriate selection of, and approach to, using a standardized, validated assessment tool for MCI in clinical assessment practices.	2[6,7]	C
○ recognize the importance of referring clients to their physician for further (serial) assessment and possible neuropsychiatric evaluation when there is clinical evidence of early cognitive changes.	Guidelines[17,18]	A
○ understand the importance of monitoring reported changes or difficulties over time to assess trends. Interdisciplinary professionals are advised to utilize regular annual or semi-regular client re-evaluations as opportunities to assess for patterns of cognitive-related change over time (e.g., primary care nurses, community case managers, mental health counsellors).	Working Group Reports[1,2], Review[20], Guidelines[17, 33]	B
• Suggested selection, approach and use of assessment techniques and tools appropriate for MCI: ○ The use of tools such as MMSE and CDT in general cognitive assessment remain the accepted standard to reliably detect cognitive losses associated with early to mid-stage dementias. However, the MMSE and CDT are *not* reliable clinical tools to detect MCI due to variable sensitivity and specificity depending on subtype presentation.	1[5,6]	A
○ If the results of an MMSE are within normal range, but other presenting clinical data is suggestive of cognitive loss, it is appropriate to consider the use of an alternate tool to assist in further multi-domain assessment.	1[19], Guideline[17]	B
○ The purpose for using additional multi-domain screens or tests is to supplement routine clinical assessment to confirm a suspicion of cognitive loss based on other presenting (often subtle) clinical evidence (e.g., positive history of risk factors, client or informant report, observed deficit). Upon confirmation of suspicion it is essential that a referral be made to the physician for diagnostic evaluation.	1[19]; Guidelines[17]	A
○ A standardized, validated screening tool for MCI that meets these requirements is the Montreal Cognitive Assessment (MoCA)[34], fully available for clinical use and available in the public domain at: http://www.mocatest.org/. Interdisciplinary staff who choose to access this tool are urged to fully read the accompanying instructions.	1[34]	A
○ An alternative approach is to use a *composite* of existing validated screening tools rather than any single screening instrument in isolation. Examples of single screening tools that can be combined together[7] include the following: ▪ Working memory and concentration such as the Letter Sorting Test (e.g., spelling 5 digit words forwards, backwards and in alphabetical order in less than a minute)	2[6,7]	C

▪ Delayed free and cued recall of four items such as the Memory Impairment Screen (see screen for original scoring) ▪ Cognitive flexibility and speed of access to semantic information such as Verbal Fluency tests (e.g., generate as many categorical words (e.g., animal, colour) as possible within 1 minute, impairment cutpoint = 20) ▪ Visuo-constructional abilities such as the Clock Drawing Test (this test however also requires language comprehension, numerical knowledge, strategy planning and memory) (see screen for original scoring).		
• Cognitive-related changes as outlined above may have multiple etiologies, some of which are reversible. Changes should be presumed reversible until ruled-out otherwise.	Guideline[17]	B
• Subjective (client) memory complaints should be taken seriously, assessed and reported to physician or referred to specialist team (e.g., mental health) for further investigation and follow-up as required.	Guidelines[18,21,24]	A
• Family and/or caregiver reports of changes in cognition, behaviour, mood or function should be taken seriously, assessed and reported to physician or referred to specialist team (e.g., mental health) for further investigation and follow-up as required	Guidelines[18,21,24] Q[32]	A
• When known dementia life-style risk factors are identified (cardiovascular risk factors and co-morbidities, alcohol, tobacco and activity – See Pre-clinical phase of Dementia Pathway), health professionals are encouraged to provide counselling, support or referral services to assist in secondary prevention for MCI and dementia.	Guideline[18]	C

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