1

DETECTION AND DIAGNOSIS OF MCI[1]

The **'Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of MCI'** was developed to create recommendations on MCI diagnosis and management based on high-level contemporary evidence. In section 1 of this 4 part series, we summarise the recommendations for detecting and diagnosing MCI.[1]

Please note that these recommendations have been adapted from the Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of MCI 2022.[1]

Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of Mild Cognitive Impairment

Dementia is a growing global health challenge, with projections indicating that the number of people with dementia will increase from 50 million in 2015 to 150 million worldwide by 2050.[1]

Prior to the usual clinical symptoms of dementia, there can sometimes be changes in cognitive function that differ from the normal age-related cognitive decline. These manifest as decline on cognitive testing, yet the person remains functional in their daily activities, and thus do not meet criteria for dementia. This has been termed mild cognitive impairment (MCI).[1]

"It is important to recognise and diagnose MCI, as it is not normal ageing. An earlier diagnosis gives the patient and clinician opportunities to focus on factors that reduce the chance of progression to dementia, as well as planning for the future and perhaps participating in research trials that require an accurate diagnosis. In addition, if the patient with MCI is found to lack biomarker evidence of an underlying neurocognitive disorder, they can feel reassured that they have a lower risk of progression to dementia. Patients with all medical conditions deserve an accurate diagnosis, and MCI is no exception".

A/Professor Michael Woodward AM

Scan the QR code to access the full publication

Thanks to Associate Professor Michael Woodward AM for reviewing this material.

Reference: 1. Woodward M, *et al.* Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of Mild Cognitive Impairment. *J Alzheimers Dis.* 2022;89(3):803-809.

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DETECTION AND DIAGNOSIS OF MCI[1]

Obtain patient and collateral history from family or supports

Full blood exam

- Urea and electrolytes
- B12 and folate levels
- Thyroid and liver function test

Conduct CT scan of the brain*

CLINICAL HISTORY

Obtaining both a patient and (wherever possible) collateral history from family or supports is critical in classifying a person as having MCI

INITIAL INVESTIGATION

- Minimum investigation includes a computerized tomography (CT) scan of the brain* and full blood examination (including U&E, LFTs, TFTs, B12 and folate levels)

*Unless referring to specialist who will perform an MRI

Conduct Cognitive Assessement (e.g. MoCA, ACE-III, MMSE with CDT)

Additionally, for indigenous patients with MCI or those with poor English, alternative screening tests are available

COGNITIVE ASSESSMENTS

- A cognitive assessment should be conducted to determine the severity of MCI, e.g.:
  - » Montreal Cognitive Assessment (MoCA)
  - » Addenbrookes Cognitive Examination (ACE-III)
  - » Mini-Mental State Exam (MMSE) with Clock Drawing Test (CDT)
- Initial assessments may be conducted by other primary care HCPs such as nurses and allied health professionals who are trained in cognitive testing

Consider other differential diagnoses and referral to a specialist

Neuropsychological assessment may be considered for highly educated patients or difficult differential diagnosis

DIFFERENTIAL DIAGNOSIS AND REFERRALS

- When referring to a specialist provide the results of initial investigations and cognitive screening tool
- **Consider non-Alzheimer's neurodegenerative diseases and psychiatric conditions as potential causes of MCI**
- Neuropsychology may be helpful for cognitive rehabilitation and management planning (e.g., vocational functioning)

Consider further biomarker testing for persistent history of clear cognitive deterioration with no available PET scan results

Further specialist referrals

SPECIALTY INVESTIGATIONS

- Patients with clear cognitive deterioration over the past 6 – 12 months where PET scan is not available should be considered for other biomarker testing (PET scans are fluorodeoxyglucose or amyloid)
- **SPECT scans are NOT recommended due to insufficient accuracy**

Abbreviations: CT, computerised tomography; **MRI,** magnetic resonance imaging; **LFTs,** liver function tests; **TFTs,** thyroid function tests; **U&E,** urea and electrolytes; **MoCA,** Montreal Cognitive Assessment; **ACE- III,** Addenbrookes Cognitive Examination; **MMSE,** Mini-Mental State Examination, **CDT,** Clock-Drawing Test; **PET,** positron emission tomography; **SPECT,** single-photon emission computed tomography.

2 SHARING THE DIAGNOSIS, MONITORING, AND FOLLOW UP[1]

The ***'Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of MCI'*** was developed to create recommendations on MCI diagnosis and management based on high-level contemporary evidence. In section 2 of this 4 part series, we summarise the recommendations for sharing the diagnosis, monitoring, and follow-up.[1]

Please note that these recommendations have been adapted from the Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of MCI 2022.[1]

Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of Mild Cognitive Impairment: sharing the diagnosis, monitoring and follow up

Dementia is a growing global health challenge, with projections indicating that the number of people worldwide with dementia will increase from 50 million in 2015 to 150 million by 2050.[1]

Prior to the usual clinical symptoms of dementia, there can sometimes be changes in cognitive function that differ from the normal age-related cognitive decline. These manifest as decline on cognitive testing, yet the person remains functional in their daily activities, and thus do not meet criteria for dementia. This has been termed mild cognitive impairment (MCI).[1]

Whilst MCI is a high risk state for progression to dementia, for patients diagnosed with MCI, it is important to communicate that MCI is not dementia and that some patients with MCI remain stable and some improve.[2] A diagnosis of MCI provides a window of opportunity to address risk factors that may contribute to cognitive decline and implement lifestyle interventions that can help slow further decline along with regular monitoring and follow up.[1]

Scan the QR code to access the full publication

Thanks to Associate Professor Michael Woodward AM for reviewing this material.

Reference: 1. Woodward M, *et al.* Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of Mild Cognitive Impairment. *J Alzheimers Dis.* 2022;89(3):803-809. **2.** Petersen RC, *et al.* Practice guideline update summary: Mild cognitive impairment: Report of the Guideline Development, Dissemination, and Implementation Subcommittee of the American Academy of Neurology. *Neurology.* 2018 Jan 16;90(3):126–35.

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SHARING THE DIAGNOSIS, MONITORING, AND FOLLOW UP[1]

Openly discuss MCI diagnosis with the patient

SHARING THE DIAGNOSIS

- When sharing the diagnosis, with the patient's permission, other support or family should be invited to participate and written feedback must be provided
- It is important to discuss:
  - » The difference between normal aging, MCI and dementia
  - » The variability of the course of disease and strategies that may improve cognition or delay change
  - » Potential impacts on daily life (e.g., driving and work)

    Note: There is not an immediate need to routinely address driving unless risk has been identified

Provide information and advice around medication, lifestyle interventions, chronic disease management and research participation

MANAGEMENT

- At MCI diagnosis:
  - » Manage the patient's medication, chronic disease, evaluate for mood and offer lifestyle interventions ***(see Section 3. Practical Interventions to Potentially Delay Progression)***
  - » Inform the patient of the availability of research participation*

Review between 6 and 12 months

Cognitive assessment | Informant report | Functional assessment

If there is unexpected change, refer to specialist

MONITORING AND FOLLOW UP

- Patients should ideally be reviewed by their GP or specialist between 6 and 12 months
  - » Review no later than 18 months
  - » Certain circumstances may trigger an early review:
    - ▪ Patient or family concern; recent hospital admission; multi-domain amnestic MCI; neurological signs; mood or behavioural symptoms
- The following should be included in any follow-up visit:
  - » Validated cognitive scale that is consistently repeated
  - » Comparative structured informant report
  - » Comparative structured functional assessment

Useful links:

*Australia Dementia Network Screening and Trials - Australian Dementia Network - www.australiandementianetwork.org.au/initiatives/adnet-trials/

3

PRACTICAL INTERVENTIONS TO POTENTIALLY DELAY PROGRESSION[1]

The ***'Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of MCI'*** was developed to create recommendations on MCI diagnosis and management based on high-level contemporary evidence. In section 3 of this 4 part series, we summarise the recommendations for practical interventions to potentially delay progression.[1]

Please note that these recommendations have been adapted from the Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of MCI 2022.[1]

Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of Mild Cognitive Impairment

Dementia is a growing global health challenge, with projections indicating that the number of people with dementia will increase from 50 million in 2015 to 150 million worldwide by 2050.[1]

Prior to the usual clinical symptoms of dementia, there can sometimes be changes in cognitive function that differ from the normal age-related cognitive decline. These manifest as decline on cognitive testing, yet the person remains functional in their daily activities, and thus do not meet criteria for dementia. This has been termed mild cognitive impairment (MCI).[1]

The annual conversion rate of MCI to dementia is typically reported as 10–15%, although some patients with MCI remain stable or convert back to normal. Therefore, it is important to address risk factors to help improve cognition and delay further cognitive decline for patients diagnosed with MCI. Lifestyle approaches that target dementia risk reduction should be recommended.[1]

Scan the QR code to access the full publication

Thanks to Associate Professor Michael Woodward AM for reviewing this material.

Reference: 1. Woodward M, *et al.* Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of Mild Cognitive Impairment. *J Alzheimers Dis.* 2022;89(3):803-809. **2.** Soininen H, *et al.* 36-month LipiDiDiet multinutrient clinical trial in prodromal Alzheimer's disease. *Alzheimers Dement.* 2021;17:29-40.

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3

PRACTICAL INTERVENTIONS TO POTENTIALLY DELAY PROGRESSION[1]

Assess risk of cardiovascular disease and dementia at midlife

Assessment for indigenous groups/ Australians should be tailored to their needs and contexts

RISK ASSESSMENT

- Addressing the risks of CVD as early as midlife is recommended
- Everyone should be offered an assessment for dementia risk in midlife using a validated tool (e.g., Australian National University Alzheimer's Disease Risk Index)
- The 45-49-year-old health check is a good opportunity to undertake the risk assessment

Assess and manage risk factors that may be contributing to cognitive impairment

RISK MITIGATION

- Treating risk factors that may contribute to cognitive impairment should be the first steps in managing MCI
  - » Deprescribe medications that impair cognition, where possible
  - » Manage CVD risk
  - » Evaluate for depressed mood
  - » Detect and address hearing impairment
  - » Screen for sleep disorders
  - » Heavy and excess alcohol use should be treated
  - » Smoking cessation should be recommended
  - » Reduce exposure to air pollution

Encourage patients with MCI to undertake lifestyle interventions

LIFESTYLE INTERVENTIONS

Physical activity
People with MCI should be advised to undertake physical activity to the level advised by national guidelines

Nutrition
Nutrition should be optimised (Mediterranean diet, MIND diet)

Fortasyn Connect (Souvenaid)
Patients with MCI should be informed of the results of the LipiDiDiet 3 year RCT in those with prodromal AD and the availability of Souvenaid® in Australia†

Cognitive activity
Patients with MCI are advised to remain cognitively active

Social connection
Social engagement should be encouraged and social isolation avoided

Mindfulness
Mindfulness practice should be recommended

†For more information on Souvenaid please visit **hcp.souvenaid.com.au**

Abbreviation: AD, Alzheimer's Disease; **CVD,** cardiovascular disease; **RCT,** randomised controlled trial

4

PERSONALISING CARE – PLANNING ENGAGEMENT, AND MOTIVATION FOR THE LONG TERM[1]

The ***'Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of MCI'*** was developed to create recommendations on MCI diagnosis and management based on high-level contemporary evidence. In section 4 of this 4 part series, we summarise the recommendations for personalising care – planning engagement, and motivation for the long term.[1]

Please note that these recommendations have been adapted from the Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of MCI 2022.[1]

Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of Mild Cognitive Impairment

Dementia is a growing global health challenge, with projections indicating that the number of people with dementia will increase from 50 million in 2015 to 150 million worldwide by 2050.[1]

Prior to the usual clinical symptoms of dementia, there can sometimes be changes in cognitive function that differ from the normal age-related cognitive decline. These manifest as decline on cognitive testing, yet the person remains functional in their daily activities, and thus do not meet criteria for dementia. This has been termed mild cognitive impairment (MCI).[1]

Person-centred care – or the concept of the person's individual values, preferences and needs guiding all aspects of their care – is largely considered the gold standard of healthcare.[2] Person-centred care aims to improve aspects of healthcare such as safety, quality and coordination, as well as quality of life – all of which are essential components of care for people with MCI. Person-centred care can be achieved through active collaboration among the patient, those who are important to them, and all relevant healthcare providers.[2]

Scan the QR code to access the full publication

RESOURCES FOR PATIENTS WITH DEMENTIA AND THEIR CARERS

- Dementia Australia **www.dementia.org.au**
- Forward with Dementia **https://forwardwithdementia.au**
- Australian Dementia Network **https://www.australiandementianetwork.org.au/**

Thanks to Associate Professor Michael Woodward AM for reviewing this material.

Reference: 1. Woodward M, *et al.* Nationally Informed Recommendations on Approaching the Detection, Assessment, and Management of Mild Cognitive Impairment. *J Alzheimers Dis.* 2022;89(3):803-809. **2.** American Geriatrics Society Expert Panel on Person-Centered Care. Person-Centered Care: A Definition and Essential Elements. *J Am Geriatr Soc.* 2016;64:15–18.

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4 PERSONALISING CARE – PLANNING ENGAGEMENT, AND MOTIVATION FOR THE LONG TERM[1]

Offer a General Practitioner Management Plan (GPMP) to all eligible patients with MCI

MANAGEMENT

- All eligible people diagnosed with MCI should be offered a GPMP
- Work together with other healthcare providers to deliver comprehensive, patient-centered care
  - » Relevant providers could include: Practice Nurse, Audiologist, Pharmacist, Occupational Therapist, Physiotherapist, Exercise Physiologist, Dietitian, Dentist, Counsellor, Psychologist
  - » A Team Care Arrangement (TCA) may be applicable

Offer family assessment after diagnosis

Conduct annual assessments

Quality of life assessment

Health Check

ASSESSMENTS

- People diagnosed with MCI and their family should be offered a comprehensive family assessment after diagnosis to provide education and a care plan
- It is recommended that the following assessments be conducted annually:
  - » Standardised quality of life assessment to monitor the impact of MCI
  - » Health check to promote health and reduce risk factors of cognitive decline
    - ▪ Hearing and eye check; medication review; chronic disease management; assessment of lifestyle factors, in particular, physical and social activity; mental and emotional health assessment

Offer written information on useful contacts and services to patients with MCI

INFORMATION AND RESOURCES

- Every person with MCI should be offered written information on useful contacts and services, including:
  - » My Aged Care (65+ years)
  - » National Disability Insurance Scheme (NDIS) (under 65 years)
  - » Dementia Australia
  - » Forward with Dementia
  - » Carer Gateway (for carers)
- Offer information on substitute decision-making and Advance Care Directives
- Enduring Power of Attorneys in various domains should be recommended

Provide support to carers and/or family members of people with MCI

SUPPORT FOR FAMILY MEMBERS AND CARERS

- Carers and/or family members of people with MCI should be provided with support, including:
  - » Education to increase their capacity to support the person with MCI to live well
  - » Information about Dementia Australia and Carer Gateway
  - » Encouragement to maintain their own wellbeing

Abbreviations: GPMP, General Practitioner Management Plan; **NIDS,** National Disability Insurance Scheme; **TCA,** Team Care Arrangement