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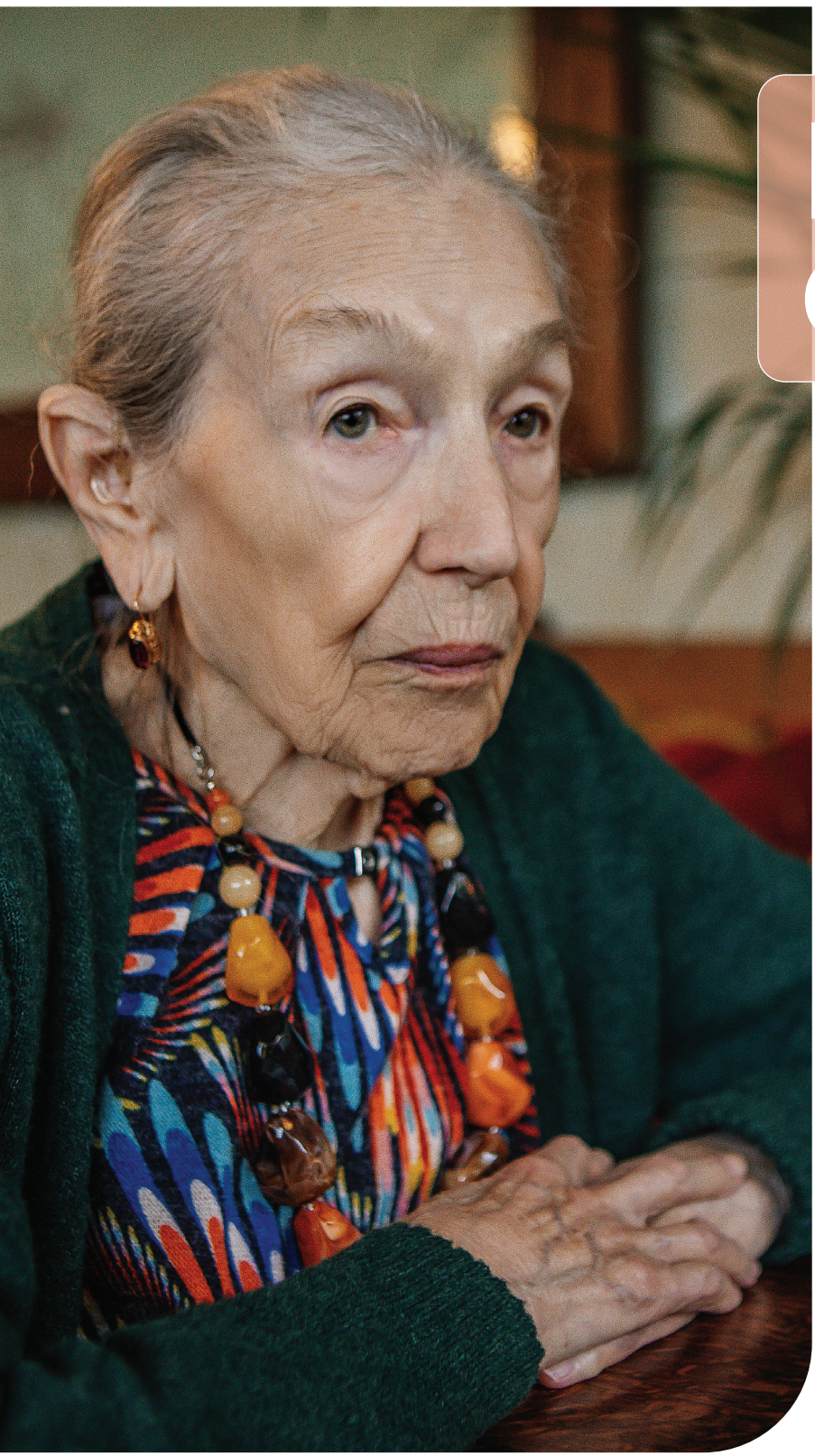

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MedicineToday
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FOREWORD FROM THE SUPPLEMENT EDITOR

Although many older people fear dementia, few realise that much can be done to reduce their risk of developing this fatal disease. Clinicians, GPs and specialists alike can lead the way in raising awareness and this Focus on Dementia supplement will help us to do that. We should no longer accept that many individuals with cognitive disorders remain undiagnosed or are inaccurately diagnosed. We need to identify who is most at risk, including people with diabetes, and ensure they receive the best postdiagnostic care and support.

There is significant overlap between depression and cognitive disorders, and clinicians are responsible for disentangling and managing both conditions. Although current treatment options for dementia have been limited, they are now expanding. Amyloid-targeted therapies are already in extensive use overseas and one, donanemab, has very recently received TGA approval and is now available on private prescription for people with mild cognitive impairment or mild dementia due to Alzheimer's disease. Meanwhile, the four symptomatic drugs we have available can be more extensively and effectively used. From the conspiracy of silence to detection, accurate diagnosis and increasingly effective therapies, cognitive disorders are now following the same trajectory seen with cancer diagnosis and treatment 50 years ago. As clinicians, we need to stay informed and engaged in this journey because some 1.5 million Australians with cognitive disorders are relying on us.

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PEER REVIEWED FEATURE 1.5 CPD HOURS

Mild cognitive impairment and dementia

Detection and diagnosis

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Dementia affects one in 12 people aged over 65 years. GPs and practice nurses have an important role in detection and assessment, and GPs in the diagnosis of dementia.

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KEY POINTS

- Over 400,000 people in Australia had dementia in 2023, and an estimated 50% of these do not have a formal diagnosis.
- GPs and practice nurses have a key role in detection and assessment, and GPs in the diagnosis of dementia.
- The presentation might include functional difficulties or behavioural changes, in addition to cognitive complaints. These might be noticed by the GP, practice nurse or receptionist, or reported by the person themselves or by a family or friend.
- Any member of the primary care team may identify issues and raise concerns that prompt the need to investigate further whether a person has mild cognitive impairment or dementia. An annual health assessment for people aged older than 75 years is a good opportunity to identify issues and concerns that could be related to mild cognitive impairment or dementia.
- A comprehensive assessment can take place over several visits and include both a personal and collaborative history, physical examination and investigations, including blood tests and CT scans.
- Any reversible and treatable causes, such as delirium, depression, drugs or other organic causes of symptoms, should be excluded.
- If uncertain, mild cognitive impairment may be considered as a diagnosis and the patient monitored over time.

Dementia affects one in 12 people aged over 65 years. Population ageing means that more Australians will live with dementia. An estimated 411,100 people in Australia were living with dementia in 2023, and this number is projected to more than double by 2058.[1] In 2022, dementia was the second leading cause of burden and injury, and the second leading cause of death in Australia. In 2021, dementia caused 10% of all deaths in Australia.[1]

Only half of all people living with dementia have received a formal diagnosis. We estimate that about 50% of people in Australia with dementia have not received a formal diagnosis (i.e. between 231,720 and 283,200 people). An Australian primary care study found 55% of people with dementia were undiagnosed and international meta-analysis pooling data from 23 studies reported that 62% of people with dementia were not diagnosed.[2,3]

This article provides an overview of the detection and diagnosis of mild cognitive impairment (MCI) and dementia.

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Dementia: types and associated neuropathology

Dementia is an umbrella term for neurodegenerative diseases resulting in cognitive decline and functional difficulties. Alzheimer's disease is the most common form of dementia (affecting 50 to 70% of cases).

Vascular dementia (affecting up to 20% of cases), Lewy body dementia (affecting 10 to 15% of cases) and frontotemporal dementia (affecting 2% of cases) are also common forms. Each of these types of dementia is characterised by a different type of neuropathology. Amyloid plaques and neurofibrillary tangles are hallmarks of Alzheimer's disease; white matter ischemia and infarctions reflect vascular dementia; focal frontal lobe degeneration occurs in frontotemporal dementia; and Lewy bodies (as seen in Parkinson's disease), amyloid plaques and neurofibrillary tangles are seen in Lewy body dementia. Notably, neuropathological studies show that most community-dwelling older people with dementia have a mixture of different types of neuropathology.[4]

18F-fluorodeoxyglucose positron emission tomography (PET) brain scans (which are Medicare Benefits Schedule [MBS] rebatable) are sometimes used to determine the aetiology of a dementia. Amyloid PET brain scans (which are not MBS rebatable) are used in specialist clinics to determine or confirm whether a dementia is caused by Alzheimer's disease. This will likely be a prerequisite once monoclonal antibodies become available in Australia. Amyloid PET is also starting to be used to help diagnose preclinical Alzheimer's disease, although the benefits and harms of patients being given a preclinical diagnosis are not clear.[5]

Mild cognitive impairment

MCI is a syndrome in which an individual has subjective cognitive complaints and objective impairment, but the impairment is not sufficient to cause significant difficulty in day-to-day function.[6,7]

A meta-analysis showed that people with MCI are 3.3 times (95% CI, 2.5-4.5) more likely to progress to dementia compared with others their age with normal cognition.[6] Furthermore, of those diagnosed with MCI in population samples, 14.9% (95% CI, 11.6%-19.1%) developed dementia within two years of diagnosis.[6] However, 14 to 38% returned to normal cognition and the remainder were stable.[6] MCI represents an opportunity to intervene earlier to address treatable causes or slow underlying disease processes before the onset of functional impairment.

Only about 8% of patients in primary care older than 65 years of age with MCI have a formal diagnosis of MCI.[8] Confirming the diagnosis of MCI allows the primary care team, together with the patient and their family, to implement brain health strategies and to monitor cognition and function regularly. Although there may be negative effects when patients are informed about cognitive decline, providing active risk reduction strategies and emphasising the uncertainty of progression can help alleviate negative effects, such as anxiety, and allow patients and their families to take control of their brain health.

Diagnosis of mild cognitive impairment or dementia

The diagnostic criteria for MCI and dementia are presented in Box 1.

Benefits of a timely diagnosis

A timely diagnosis occurs when the cognitive or functional changes begin to affect the individual or their families.[9] Diagnosing MCI provides an opportunity to acknowledge the possibility of cognitive changes while using this often negatively perceived diagnosis as an opportunity to improve general health, rationalise medication use, forward plan, normalise discussions about cognitive changes and possibly resolve the presentation.

The benefits of a dementia diagnosis include:

- an explanation for the symptoms (some say it is a relief to know the cause)
- access to available treatments, including rehabilitation to improve quality of life
- lifestyle changes that may slow disease progression
- access to education and support for people living with dementia and their families or carers
- access to services to support independent living at home
- the opportunity for management planning
- the ability to consider cognitive impairment in the management of other medical conditions.[10]

1. DIAGNOSTIC CRITERIA FOR MILD COGNITIVE IMPAIRMENT AND DEMENTIA

Mild cognitive impairment

- Cognitive impairment and decline that do not interfere with day-to-day function

Dementia

- Cognitive impairment in at least one of the following cognitive domains:
  - complex attention
  - executive function
  - learning and memory
  - language
  - perceptual-motor control
  - social cognition
- Cognitive impairment that interferes with day-to-day function
- Cognitive impairment that does not have another cause

Possible negative effects of a diagnosis

Dementia is the second most feared health condition because of the anticipated social, practical, emotional and legal impacts.[11] Some people with dementia and their families react strongly negatively when given the diagnosis, including grief and fear relating to actual or anticipated losses.[12] After the diagnosis, people can reduce their social activities and engagement.[13] Self-stigma related to dementia means that people with dementia are at a higher risk of suicide, particularly immediately after diagnosis.[14] Diagnosis has particularly strong negative impacts on people with young-onset dementia, as the diagnosis has effects on continued employment and finances.[15]

Diagnosis should be timely, and cognitive concerns should not be dismissed when they are raised. There may be instances where it is reasonable to not formally diagnose MCI or dementia (i.e. if the patient or their family is not expressing any concerns related to cognition, function or behaviour, or to avoid the negative effects of diagnosis). However, this choice must be weighed against the potential benefits of confirming a diagnosis.

2. EXAMPLES OF PHRASES THAT GPS MAY USE TO SUGGEST AN ASSESSMENT FOR POSSIBLE COGNITIVE IMPAIRMENT

- 'How have your memory and thinking been lately?'
- 'How have you been doing managing technology/appointments/banking and other paperwork?'
- 'I've noticed that you haven't seemed your usual self lately. I'm wondering if there have been things you've been finding more difficult at home?'
- 'It's good that we've talked about this, because now we can figure out what's going on and things that we can do.'

There has been a gradual increase in the availability of dementia support services and nonpharmacological interventions in Australia that can help mitigate some of the negative effects. Some examples are the MCI Thinking Ahead program offered by Dementia Australia (https://www.dementia.org.au/get-support/mild-cognitive-impairment-thinking-ahead), and the 12-week, multicomponent, Sustainable Personalised Interventions for Cognition, Care and Engagement (SPICE) rehabilitation program for people with dementia offered by Canberra Health Service (https://www.canberrahospitalfoundation.org.au/blog/spice_program). The arguments for and against using these programs may change over time, particularly with the availability of more effective treatments, such as monoclonal antibodies.[16]

Clinical presentations that can suggest mild cognitive impairment and dementia

Cognitive difficulties often manifest as functional difficulties, although people with MCI may apply compensatory strategies to overcome such difficulties (e.g. written reminders, routines, etc.).[17] The person may complain about having trouble concentrating on tasks, completing tasks or with mood regulation. Dementia may also present as changes in behaviour and personality, such as a loss of interest and initiation in activities they previously enjoyed, loss of insight or blunting of affect. Primary care staff may notice that the person is forgetting appointments, having trouble managing their medications and other healthcare tasks, having trouble understanding instructions and relying on family members increasingly.

It is important that GPs and practice nurses detect signs of possible cognitive impairment and raise concerns when they are noticed, even if the person does not raise the concerns themselves. People with dementia often minimise or deny difficulties. Anosognosia (lack of awareness of deficits) is a symptom of dementia. It may also be because of embarrassment or shame, or fear of having dementia and losing independence.

Carers and family are the most common initiators of medical help-seeking for dementia. Family members are also in the position to notice subtle changes in function, behaviour and personality, which might not be observable during a brief medical appointment. Some carers contact the GP directly and ask that the GP not mention this to the patient to protect the patient–carer relationship. GPs might ask the carer to come in with the patient and raise concerns during an appointment, or seek an opportunity to suggest an assessment.

Understandably, GPs can find it difficult to raise the issue of possible cognitive impairment.[18] Raising concerns may require graduated conversations over several visits. Suggesting a general health check, such as an annual health assessment for those aged 75 years and older, may be less alarming to patients than a memory or dementia assessment. The conversation might be framed around issues that the patient is worried about and emphasise that treatments and support are available once a cause is identified. Box 2 lists some examples of wording that might be used by GPs to suggest an assessment.

Assessments for suspected dementia or mild cognitive impairment

Assessment decision pathways for patients with suspected cognitive impairment are presented in the Flowchart. Assessment usually takes place over several visits and ideally includes history taking with a family member or support person who

3. ASSESSMENTS FOR PATIENTS WITH SUSPECTED COGNITIVE IMPAIRMENT[19-23]

History taking

Physical examination

- Weight
- Temperature
- Blood pressure and pulse
- Focused neurological examination and examination of other systems if history suggests these are needed

Cognitive assessment tools

- Mini Mental State Examination combined with the clock drawing test
- Montreal Cognitive Assessment or General Practitioner assessment of Cognition
- Rowland Universal Dementia Assessment Scale for people from a non-English speaking background
- Kimberley Indigenous Cognitive Assessment Tool for Indigenous Australians

Review of medications

- Consider a home medication referral

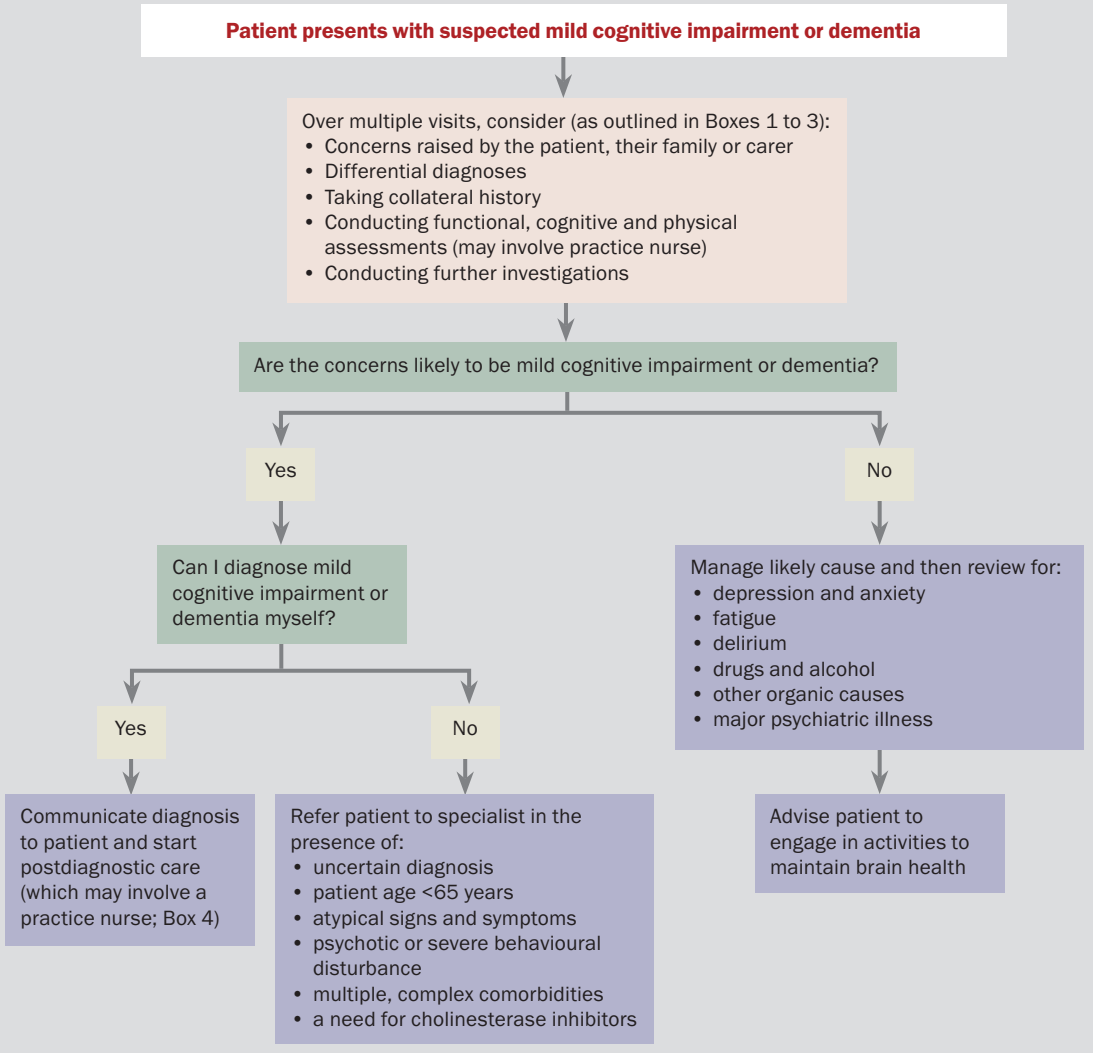
Laboratory tests

- Haematology
  - full blood count
  - erythrocyte sedimentation rate
  - C-reactive protein levels
- Biochemistry
  - electrolytes, urea and creatinine
  - calcium levels
  - liver function tests
  - blood glucose levels
- Thyroid function test
- Vitamin B12 levels
- Folate levels
- Fasting lipid levels
- Iron studies
- Urine microscopy, culture and sensitivity

Other investigations

- If indicated:
  - chest x-ray
  - syphilis test
  - HIV test
- Electrocardiography
- Brain imaging
- CT without contrast

GP ASSESSMENT DECISION PATHWAYS FOR PATIENTS WITH SUSPECTED COGNITIVE IMPAIRMENT



knows the patient well, preferably together and then separately. Some points to ask about are the following:

- changes in memory or thinking
- time course of changes – gradual onset and persistent over months or years, or sudden onset
- changes in function – including the use of technology (e.g. phones, computers, remote controls), shopping, driving and transport, banking, hobbies, medications, etc.
- mood changes and any changes in behaviours
- impacts of any changes on patient and family quality of life
- history of head injury, alcohol consumption, infections (e.g. COVID-19), etc.

Other assessments include physical examination, cognitive assessments, medications review, blood and urine laboratory tests and brain imaging (Box 3).[19-23]

Making the diagnosis of dementia or mild cognitive impairment

GPs and practice nurses are critical in recognising possible cognitive and functional changes and initiating assessment. GPs are encouraged to develop the confidence to diagnose dementia, particularly in regions where there is limited access to specialists.

After reviewing the findings of the assessments, consider differential diagnoses, such as delirium and depression, and reversible causes of cognitive impairment. These may include the use of medications that can impair cognition, polypharmacy, thyroid excess or deficiency, vitamin B12 deficiency, infection, toxicity, iron deficiency and electrolyte imbalances.

4. PRACTICE POINTS FOR GPS TO COMMUNICATE A DIAGNOSIS OF DEMENTIA TO PATIENTS

- Provide the diagnosis in graduated language, tailored to the patient's insight and concerns, and willingness to learn the diagnosis.
- Be compassionate, validate feelings and reassure.
- Convey hope, focus on the patient's strengths and provide information about treatments and support.
- Provide a written summary and plan follow up.

GPs report that they find delivering a dementia diagnosis difficult and complex.[24,25] GPs are encouraged to invite the patient to bring a family supporter to the appointment but talk directly to the patient. Some practice points for communicating the diagnosis of dementia are presented in Box 4.

If a GP feels confident that the patient meets the criteria for dementia, then they can deliver the diagnosis themselves. GPs may consult with specialists to support their diagnosis, such as a memory clinic specialist, geriatrician, old age psychiatrist or neurologist. GPs may decide to refer a patient to a specialist for the following reasons:

- Mini-Mental State Examination (MMSE) score of 25 or higher, with a history of cognitive or functional decline
- age younger than 65 years with concerns of cognitive impairment
- atypical clinical presentation
- psychotic features or severe behavioural disturbance – these patients should be referred to an old age psychiatrist
- multiple complex comorbidities – these patients should be referred to a geriatrician
- need for specialist confirmation for suspected Alzheimer's dementia or mixed dementia including Alzheimer's dementia, in order to prescribe antidementia medications. Confirmation of a diagnosis by a specialist is required for prescribing cholinesterase inhibitors or memantine for patients with a diagnosis of Alzheimer's dementia or mixed dementia including Alzheimer's dementia, as listed on the PBS. Prescriptions of donepezil, galantamine and rivastigmine require an MMSE score of 10 or higher, and memantine requires an MMSE score of 10 to 14, inclusive. After six months, a report of improvement is required for treatment continuation.

Conclusion

Timely diagnosis of MCI and dementia accompanied by ongoing management and support by the primary care team is beneficial for the patient and their family while mitigating some of the negative consequences of being given the diagnosis. The primary care team must be alert for possible signs of cognitive difficulties in order to detect dementia when the issue is not raised by patients themselves. GPs can diagnose MCI and dementia and refer more complex cases to specialists. MT

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A list of references is included in the online version of this article (https://medicinetoday.com.au/mt/2025/may/supplements/focus-dementia-collection).

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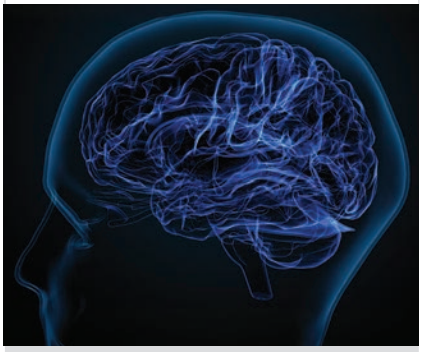
List at least four benefits of a dementia diagnosis.



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Mild cognitive impairment and dementia

Detection and diagnosis

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Mild cognitive impairment and dementia

Postdiagnostic and ongoing care

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A diagnosis of mild cognitive impairment or dementia should be followed by establishing a multidisciplinary care plan that is aimed at risk reduction and minimising cognitive decline. This care plan must be reviewed regularly to provide ongoing support to people living with dementia and family carers.

KEY POINTS

- Mild cognitive impairment (MCI) is a syndrome defined by cognitive decline without functional decline sufficient to meet a diagnosis of dementia. People with MCI are at a higher risk of developing dementia.
- People given a diagnosis of MCI may not understand the implications of the diagnosis and, therefore, may benefit from education and support to help reduce their risk of progression to dementia.
- Regular reviews for people with MCI should emphasise brain health strategies and monitoring cognition and function.
- Immediately after diagnosis, people with dementia and their families need help to adjust, with the offer of frequent check-ins to plan holistic care and attend to other issues, such as legal matters.
- Dementia has impacts on multiple domains: cognition, function, mental health, behaviour, physical health and family carers. Regular reviews for people with dementia should focus on areas that matter to the patient and their family carers and consider the domains affected by dementia. A multidisciplinary plan should refer to allied health, dementia and aged care services as needed.

Mild cognitive impairment (MCI) is a syndrome involving identifiable cognitive decline that does not have an impact on complex activities of daily living. A diagnosis of MCI provides opportunities to minimise factors that might contribute to cognitive impairment, engage in cognitive activities and behaviours that may reduce the risk of dementia, prevent comorbid complications and monitor cognition over time. Dementia describes a syndrome of cognitive decline interfering with daily function. It is usually progressive and affects physical health, psychological health, behaviours and social function.

This article provides an overview of postdiagnostic and ongoing care for people with MCI and dementia, following on from our previous article in the May 2024 issue of *Medicine Today* discussing the assessment and diagnosis of these conditions.[1]

Prevalence of mild cognitive impairment and dementia

More than 411,100 people in Australia were estimated to be living with dementia in 2023.[2] MCI is a relatively new diagnostic entity,

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1. MANAGEMENT CHECKLIST THAT MAY BE USED BY THE PRIMARY CARE TEAM FOR PEOPLE WITH MCI

Immediate postdiagnostic review (six to eight weeks)

☐ Goals for care*
- Consider person with MCI as well as family and care partners

☐ Education*
- Answer questions about MCI diagnosis, prognosis and risk reduction
- Refer to Dementia Australia (https://www.dementia.org.au/professionals/gps-and-other-referrers/refer-someone-your-care): Thinking Ahead (https://www.dementia.org.au/get-support/mild-cognitive-impairment-thinking-ahead) small group program for MCI

☐ Brain health*
- Discuss the importance of exercising, staying cognitively and socially active, limiting alcohol consumption and drug use, ceasing smoking and consuming a healthy diet
- Ask patients to complete CogDrisk (https://cogdrisk-tool.neura.edu.au/), which offers personalised recommendations for reducing risk
- Recommend BrainHQ (https://www.brainhq.com/) or Cognifit (https://www.cognifit.com/) evidence-based computerised training (payment required)

☐ Medications
- Review current medications, especially those with anticholinergic load

☐ Legal planning*
- Review will, enduring powers of attorney (legal or financial, lifestyle, medical), advance care directives

☐ GP management plan or team care arrangement*
- Update or develop plan considering MCI diagnosis

Regular review

☐ Reassess cognition and function*
- Update or develop considering MCI diagnosis

☐ Revisit items on the immediate postdiagnostic checklist as required

Abbreviation: MCI = mild cognitive impairment.
*Practice nurse may assist with these tasks.

first defined in the late 1990s, and officially recognised in the ICD-10 in 2018.[3] MCI is a syndrome wherein a person has subjective cognitive complaints and objective impairment without functional impairment or difficulties as a result of cognitive impairment.[4] It has a prevalence of 15.56% (95% confidence interval [CI], 13.24–18.03%) in community-dwelling people aged 50 years and older based on a systematic review and meta-analysis.[5] People with MCI are 3.3 times more likely to develop dementia than people of the same age with normal cognition. In a study of participants seen in a specialist clinic, 14.9% of people diagnosed with MCI developed dementia within two years.[4] Similar to dementia, MCI has many causes. It is important to understand that in 60% of people with MCI, the condition will remain the same or improve.

Postdiagnostic care for people with mild cognitive impairment

Postdiagnostic care for people with MCI is aimed at reducing cognitive impairment and minimising the risk of progression to dementia. Much of the potential to improve cognition in people with MCI arises from management of known contributing factors of cognitive impairment. These include polypharmacy (e.g. high anticholinergic load), mood disorder (e.g. depression and anxiety), obesity and its complications (e.g. poorly controlled diabetes), poor sleep (e.g. obstructive sleep apnoea), cerebrovascular risk factors and hearing loss. Patients with multiple contributing factors have a clear potential to improve cognition. The CogDrisk (https://cogdrisk.neura.edu.au/) is a validated Australian tool that can be used to tailor risk reduction advice for people with MCI.[6] The patient completes a detailed online risk questionnaire, and the tool produces a personalised report identifying modifiable risk factors.

There are many studies of people with MCI showing that individual interventions can improve cognition. For instance, multicomponent exercise (combined aerobic, endurance, balance and flexibility) improves global cognition and executive function in people with MCI.[7] Computerised cognitive training improves specific cognitive domains (e.g. memory, executive function).[8] Multidomain interventions (e.g. combination of physical activity, socialisation, cognitive training and nutritional advice) are better than individual interventions in improving cognition.[9] Studies evaluating whether multidomain interventions in people with MCI reduce the risk of progression to dementia are ongoing.

Receiving a diagnosis of MCI may be beneficial for some people, but not for others. Research suggests that people with MCI often find the diagnosis confusing or hard to understand.[10] They may have a range of reactions. Some people will feel relief that they do not have dementia, whereas others will experience fear of developing dementia in the future. Many people with MCI do not know what to do after the diagnosis.[11] When discussing MCI, it is important to differentiate it from dementia and highlight the opportunities for dementia risk reduction.[12]

Dementia Australia offers the 'Thinking Ahead' program (https://www.dementia.org.au/get-support/mild-cognitive-impairment-thinking-ahead) for people with MCI, which is based on the Healthy Brain Ageing Cognitive Training Program.[13] This involves online group psychoeducation on cognitive strategies and modifiable risk factors, as well as computer-based cognitive training. A nutritional supplement containing ingredients (e.g. uridine monophosphate, choline, omega 3 fatty acids) intended to support memory and cognitive function in people with Alzheimer's disease (AD) has shown small but inconsistent benefits in terms of specific cognitive outcomes without slowing disease progression.[14] The supplement costs about $150 per month.

A management checklist for immediate postdiagnostic and regular review of MCI is presented in Box 1.

2. BEST PRACTICES FOR COMMUNICATING A DIAGNOSIS OF DEMENTIA[18]

- Show compassion and empathy
- Tailor information based on what the person wishes to know
- Instil realistic hope
- Provide practical strategies
- Provide education and resources, including those for carers
- Provide written summaries of the diagnosis

Postdiagnostic care for dementia

Postdiagnostic care for people with dementia is aimed at effective communication and enablement. Some people may say that the diagnosis is a relief, whereas many people with dementia and their carers find that being given the dementia diagnosis is a negative experience and report being unable to process any additional information after being told it is dementia.[15] Kate Swaffer, a prominent dementia advocate, described her experience as 'prescribed disengagement', saying that the way her diagnosis was communicated led to her withdrawing from work and society, and developing increased feelings of fear, defeat and depression.[16] Self-stigma around dementia means that people with dementia may be at a small but higher risk of suicide, particularly immediately after diagnosis; therefore, offering hope is an important part of the process of delivering a diagnosis.[17] GPs giving the diagnosis can communicate this over several appointments using graduated language. Some strategies that can be used when communicating a diagnosis of dementia are listed in Box 2.[18]

Timely and appropriately targeted postdiagnostic support can help patients and family members adjust to the dementia diagnosis and support access to additional services. In Australia, postdiagnostic care services can be difficult to navigate as there are many different stakeholders and service providers that vary enormously across the country. Some memory clinics have limited capacity to provide postdiagnostic support, often leaving this to the person's GP.[19-21] Community services through My Aged Care have their own challenges, with long waiting lists and limited services to support the needs of people with dementia and their care partners.

Some people and family carers will value frequent follow-up appointments to provide advice and information about dementia. These visits are an opportunity to discuss and address concerns that may be affecting the patient's and their carers' quality of life adversely. People often look to their doctors for this advice. Timely and ongoing treatment and support in primary care may improve care and mitigate some of the negative impacts of a dementia diagnosis. A management checklist for people recently diagnosed with dementia is presented in Box 3.

Ongoing dementia management

Ongoing dementia management involves addressing multiple domains to maximise the person's quality of life. Clinicians must take a proactive, patient-centred, evidence-based approach to ongoing dementia support. Goals of care should maximise quality of life through maintaining the person's independence while ensuring their safety and comfort as the condition progresses. Although each person with dementia and their family carer is different, this typically involves the following:

- optimising the management of comorbidities
- managing risk factors to slow progression
- supporting function and social participation in early-stage dementia
- attending to behavioural expressions of unmet needs and safety in mid-stage dementia
- ensuring comfort in late-stage dementia.[22]

A checklist of assessments and actions grouped by the domains impacted in dementia is presented in the Table.

3. IMMEDIATE POSTDIAGNOSTIC MANAGEMENT CHECKLIST THAT MAY BE USED BY THE PRIMARY CARE TEAM FOR PEOPLE WITH DEMENTIA (SIX TO EIGHT WEEKS, COVER OVER MULTIPLE VISITS)

☐ Goals for care*
- Consider person with dementia as well as family and care partners

☐ Education*
- Answer questions about the diagnosis, prognosis and treatments
- Refer to Dementia Australia (https://www.dementia.org.au/professionals/gps-and-other-referrers/refer-someone-your-care) and Forward with Dementia (https://forwardwithdementia.au/)
- Provide local dementia information (produced by each primary health network)

☐ Brain health*
- Discuss the importance of exercising, staying cognitively and socially active, limiting alcohol consumption and drug use, ceasing smoking and consuming a healthy diet

☐ Medications
- Discuss what to start and what to stop, possible benefits and side effects
- Consider starting specific medications for dementia
- Review and consider stopping current medications, especially those with anticholinergic load

☐ Driving
- Discuss driving and planning for driving cessation (refer to: https://austroads.com.au/publications/assessing-fitness-to-drive/ap-g56/neurological-conditions/dementia)

☐ Legal planning*
- Review enduring power of attorney and guardianship (legal or financial, lifestyle, medical), will, advance care directives

☐ GP management plan or team care arrangement*
- Update or develop plan considering dementia diagnosis

☐ Family and care partner support*

* Practice nurse may assist with these tasks.

TABLE. DEMENTIA REGULAR REVIEW CHECKLIST

Domain	Assessments	Role of general practice team	Possible referrals*
Cognition	• Memory • Planning • Judgement • Communication	☐ Encourage physical activity, mental stimulation and social engagement ☐ Work with Enduring Power of Attorney	☐ Local dementia activity group ☐ Dementia Australia programs for people with dementia (https://www.dementia.org.au/professionals/gps-and-other-referrers/refer-someone-your-care)
Function	• Daily function • Social participation • Hobbies • Meaningful activities • Driving	☐ Encourage rehabilitative strategies to maintain skills and continue usual activities ☐ Conduct home hazards assessment ☐ Provide family education	☐ My Aged Care (https://www.myagedcare.gov.au/) ☐ Home medication review – Webster pack ☐ Occupational therapy – meaningful engagement, home safety ☐ Speech pathology (communication)
Mental health	• Depression • Anxiety • Hallucinations • Delusions • Paranoia	☐ Review mental health treatment plan ☐ Provide family and carer education ☐ Consider medications	☐ Dementia Australia for family education (https://www.dementia.org.au/professionals/gps-and-other-referrers/refer-someone-your-care) ☐ Old age psychiatrist
Behaviours	• Agitation • Frustration • Apathy	☐ Provide family or carer education on de-escalation, distraction and meaningful engagement strategies ☐ Consider psychosocial and psychotropic management	☐ Dementia Support Australia (https://www.dementia.com.au/) ☐ Dementia Australia for family education (https://www.dementia.org.au/professionals/gps-and-other-referrers/refer-someone-your-care) ☐ Old age psychiatrist
Physical health	• Walking • Balance • Coordination • Hearing • Vision • Dentition • Swallowing • Continence	☐ Manage other chronic conditions ☐ Review medications ☐ Review falls risk ☐ Review dietary habits and monitor weight ☐ Assess frailty	☐ Exercise physiology and physiotherapy ☐ Local seniors exercise or falls prevention program ☐ Continence aids support ☐ Speech pathology (swallowing)
Carer needs	• Stress • Mood • Social support	☐ Encourage carer to self-care, take breaks and consider respite ☐ Involve extended family	☐ Dementia Australia (https://www.dementia.org.au/professionals/gps-and-other-referrers/refer-someone-your-care) ☐ Local dementia support groups ☐ Forward with Dementia (https://forwardwithdementia.au/for-carers/) ☐ Carer Gateway (https://www.carergateway.gov.au/)

* Possible referrals to be offered repeatedly. Each primary health network's dementia pathway will list local services.

Cognition

Decline in cognition is one of the defining features of dementia. Cognitive decline precedes functional decline and affects memory, language, attention, executive functioning and visuospatial functioning, with different patterns of deficits seen in different types of dementias.[23]

Cholinesterase inhibitors and memantine result in modest reductions in cognitive decline in people with AD, mixed AD and other dementias, although they are not currently indicated for MCI.[24,25] They should be considered symptomatic treatments as opposed to disease-modifying agents. These agents are listed on the PBS for specialist-confirmed AD as single agents on authority script, and both drug types cannot be concurrently claimed through the PBS. To qualify, patients must have a baseline Mini-Mental State Examination

score of 10 or higher for cholinesterase inhibitors and 10 to 14 for memantine.

Cognitive training involves practising structured cognitive tasks (e.g. a memory or attention game) usually administered via a computer or handheld device to improve or maintain cognition. A Cochrane review found that, compared with non-specific activities, cognitive training has benefits in terms of overall cognition and some specific cognitive abilities, which last for at least a few months in people with early- to mid-stage dementia.[26]

Cognitive stimulation therapy involves engagement in a range of activities (e.g. bowling, memory games) and discussions (e.g. articles in today's newspaper, reminiscence), usually in a group setting aimed at general enhancement of cognitive and social functioning. In people with mild to moderate dementia, it has small benefits in terms of cognition, communication, interaction, daily function and mood, compared with usual care or structured activities.[27] There remains an evidence gap in relation to the clinical significance of the benefits of longer-term cognitive stimulation therapy. Cognitive stimulation groups are offered by aged care providers, often as part of day respite.

Physical activity slows the decline in global cognition and executive function in people with dementia; however, there are differences between the findings of systematic reviews on whether aerobic exercise, resistance exercise or multicomponent exercise (e.g. combined aerobic, balance flexibility) may be more beneficial.[7,29-30] There are few exercise groups specifically for people with dementia. Exercise physiologists and seniors' gyms can help people with dementia exercise safely.

Function

Decline in function is a core feature of dementia. Occupational therapy and reablement approaches can maintain or improve function.[7,31-33] Physical activity can also help maintain activities of daily living in people with dementia living in the community and in residential aged care.[7,34]

Occupational therapy interventions typically involve working with the person with dementia and carer in their own home over multiple sessions and may involve environmental modifications, development of tailored activities and education enabling better function.[31] For example, the Care of the Older Person in their Environment (COPE) program (https://copeprogram.com.au/therapists/) is a home-based, structured occupational therapy program involving the person with dementia and their carer. The program has been shown to improve function and engagement in people with dementia, as well as carer wellbeing and confidence in providing meaningful activities.[35] The COPE program has been adapted and implemented in Australia and is available through some health services and home care package providers.[36]

Mental health

People with dementia have poorer mental health than those of the same age without dementia. A meta-analysis of 20 studies found pooled prevalence rates of 39% for depression (95% CI, 34–44%), 39% for anxiety (95% CI, 33–45%) and 54% for apathy (95% CI, 47–61%), with no differences by stage or type of dementia.[37] A Swedish registry study found that people with dementia are much more likely to be given a new diagnosis of a psychiatric disorder (e.g. depression, anxiety, stress-related disorders, substance use, psychotic disorders) in the three years before dementia diagnosis and immediately after the diagnosis.[38]

It is important to differentiate depression symptoms that are predominantly caused by dementia from symptoms that are caused by a major depressive disorder. Cognitive behavioural therapy reduces depression symptoms in people with MCI and AD who were able to participate in the trials.[39] Clinical trials suggest that antidepressants are less effective in treating depression in dementia.[40] Clinicians should 'start low and go slow', monitor

4. POSTDIAGNOSTIC DEMENTIA RESOURCES

- **Care finders (https://www.myagedcare.gov.au/help-care-finder#how-do-I-contact-a-care-finder-organisation)** are face-to-face services that help people who need extra support to navigate the My Aged Care Portal and access aged care and other services. Care finders help older people who do not have a support person and have cognitive impairment. They may also qualify for help if they urgently need services or have poor literacy or English proficiency
- **Multicultural aged care connectors (https://fecca.org.au/encompass/)** provide face-to-face aged care navigation support to culturally and linguistically diverse communities
- **Services Australia (https://www.servicesaustralia.gov.au/aged-care-specialist-officer-my-aged-care-face-to-face-services)** have face-to-face Aged Care Specialist Officers that older people can speak to at some Services Australia offices
- **The Dementia Australia helpline (phone 1800 100 500; https://www.dementia.org.au/)** is a one-stop shop for telephone advice including advice on government services and connections to Dementia Australia services and programs
- **Dementia Support Australia (https://www.dementia.com.au/; phone 1800 699 799)** offers help with changed behaviours and a GP advice line (email: gpadvice@dementia.com.au)
- **A Clinician's BPSD Guide app (https://cheba.unsw.edu.au/clinicians-bpsd-guide-app)** provides easy access to key information relevant to the most commonly presenting behaviours and psychological symptoms associated with dementia
- **Care4Dementia app (https://cheba.unsw.edu.au/Care4Dementia-App)** provides information and support for carers in their role of caring for people with behavioural changes that can occur in dementia
- Primary health networks have online local dementia pathways and accompanying consumer resources

closely for adverse effects and deprescribe if the treatment is not helpful.

Behaviour

People with dementia can exhibit behavioural changes. These are often referred to as behavioural and psychological symptoms of dementia (BPSD), but the preference of people with dementia and family carers is to call them 'behaviour changes' to emphasise that changes can arise because of unmet needs.[41]

Nonpharmacological measures should be first-line management, and antipsychotics should only be prescribed to manage behaviour changes in people with dementia as a last resort for symptoms such as distressing psychotic symptoms, agitation or aggression that is a direct threat to themselves or others.[22,42,43] Nonpharmacological strategies should be tailored to meet any unmet needs and may include environmental changes, engaging activities, carer education and assessment. Dementia Support Australia is a national service offering a GP advice line, 24/7 advice and support for family carers and aged care staff, and home and facility visits (see Box 4). A barrier to the use of nonpharmacological strategies in some residential aged care facilities is a lack of staff, high staff turnover and inconsistent training. GPs might be pressured to prescribe psychotropics before an adequate trial of nonpharmacological strategies.[44]

If antipsychotics are prescribed, then it should only be for a trial for the short-term management of behaviour changes in people with dementia (12 weeks). Informed consent must be obtained and documented. The literature suggests benefits in 20 to 30% of patients in terms of symptoms of aggression and psychosis. Antipsychotics are associated with an increased risk of cerebrovascular events, falls and mortality. Patients should be reviewed regularly for efficacy and adverse events, and treatment should be ceased if they do not respond.[43] Antipsychotics should not be used for symptoms such as wandering or calling out. Clinicians are advised to 'start low and go slow'. There are specific guidelines for the use of antipsychotics in residential care.[42]

Physical health and comorbidities

People with dementia have an average of 4.6 other chronic illnesses.[45] Dementia is associated with an increased risk of many conditions including delirium, weight loss and malnutrition, epilepsy, frailty, sleep disorders, oral disease and visual problems.[46] Furthermore, dementia has impacts on gait and balance, increasing a person's risk of falls.[47] Acute exacerbations of comorbidities, such as cardiac and respiratory diseases and recurrent urinary infections, can precipitate delirium, especially if the condition is sufficiently severe to require hospital admission; this can result in an irreversible decline in cognitive performance even after the delirium has resolved.

Although people with dementia often have additional chronic diseases (e.g. cardiovascular diseases, diabetes), there is relatively little research or guidance on managing these intercurrent illnesses.[48] People with dementia should have equivalent access to diagnosis, treatment and care services for comorbidities to those for people without dementia.[49] It is the functional impact of dementia and patient wishes that should inform the intensity of the management of comorbidities. For example, in late-stage dementia when the monitoring of treatment or control of diet is more difficult, simplifying diabetes medication regimes might be appropriate to avoid hypoglycaemia and associated complications in diabetes.[50] Management strategies need to consider the person's cognitive abilities and involve family and professional carers. In addition, with the permission of the patient, all healthcare professionals involved in care should be made aware of the dementia diagnosis so that care provided can be modified appropriately. This includes non-GP specialists, practice nurses, the pharmacist, the podiatrist, the optometrist, the audiologist and other allied healthcare providers.

Family carers

The most commonly reported needs of carers of people with dementia are knowledge and information about the disease and care options, support from others (e.g. professionals, friends and family), formal care, care co-ordination and continuity, financial support, inclusion in care planning and training in communication skills.[51] Psychosocial interventions, particularly those with both educational and therapeutic components that are delivered in groups, have positive impacts on depression and burden, and delay institutionalisation of the person with dementia.[52] Family carers tend to need more support as dementia progresses and should be monitored for depression and burnout. Dementia Australia (https://www.dementia.org.au/get-support) offers carer programs, and other supports can be accessed through the carer gateway (https://www.carergateway.gov.au/).

Australian system constraints on supporting people with dementia

Unfortunately, dementia services in Australia are fragmented, difficult to navigate and differ by region. For this reason, primary care plays a crucial role in dementia support providing ongoing education, care co-ordination and navigation, and support.[53] Resources to help older people obtain dementia services are listed in Box 4.

Conclusion

People with dementia and family carers require ongoing review and support given the many domains affected by dementia. Their primary care team can provide continuity of care, ongoing information and advice and referrals to services when required are listed in Box 4. MT

References

A list of references is included in the online version of this article (https://medicinetoday.com.au/mt/2025/may/supplements/focus-dementia-collection).

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Mild cognitive impairment and dementia

Postdiagnostic and ongoing care

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Diabetes and cognitive impairment

A forgotten association?

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Cognitive impairment and dementia are common but insidious and under-recognised complications of diabetes. However, hypoglycaemia is also a risk factor for dementia, with implications for glycaemic control in patients with diabetes. It is important to remain alert to the possibility of cognitive decline in patients with diabetes and to take an individualised approach to glycaemic control.

Key points

- **Cognitive impairment is an under-recognised complication of diabetes.**
- **Recurrent hypoglycaemia is also associated with cognitive decline.**
- **Poor glycaemic control is a risk factor for impaired cognition.**
- **Cognitive impairment can interfere with self-management of diabetes, such as self-monitoring of blood glucose levels and medication frequency.**
- **Clinicians should remain aware of the impact of diabetes and recurrent hypoglycaemia on cognitive function, have a low threshold for further investigation into any cognitive deficits and refer patients to a geriatrician.**

Significant strides have been made in our understanding and management of diabetes, including in recognising, preventing and managing its micro- and macrovascular complications. However, cognitive impairment and dementia remain common yet under-recognised complications of diabetes, with awareness of these lagging considerably behind other well-established complications.

The prevalence of diabetes is rising, with projections estimating 693 million people living with the disease by 2045, including an increasing number of older people.[1] As such, a better understanding of the cognitive complications of diabetes is urgently needed. Cognitive impairment can detrimentally affect self-management of diabetes by interfering with the daily activities required for adequate management (e.g. self-monitoring of blood glucose levels and medication frequency).

Association between diabetes and cognitive impairment

Several longitudinal studies have shown that diabetes is a risk factor for dementia and cognitive decline.[2,3] In people with mild cognitive impairment, diabetes is associated with an accelerated risk of progression to dementia.[3] Poor glycaemic control, defined by increased glycated haemoglobin (HbA_{1c}) levels, has also been associated with impaired cognition.[4] Moreover, midlife obesity, which is often present before or comorbid with a diagnosis of diabetes, is a risk factor for

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cognitive impairment and dementia.[5] An 18-year longitudinal study found that an increase of one point in body mass index in 70-year-old women was associated with a 36% increase in the risk of Alzheimer's disease.[6] Metabolic syndrome has also been associated with an increased risk of cognitive dysfunction.[7]

Although poor glycaemic and metabolic control are risk factors for cognitive impairment, it is uncertain if tight glycaemic control could lead to improved cognitive function and delay dementia. In the Action to Control Cardiovascular Risk in Diabetes–Memory in Diabetes (ACCORD–MIND) study, intensive glycaemic control did not lead to less cognitive decline, although the follow-up period was limited to 40 months.[8] The patients recruited to this trial had a lengthy duration of diabetes (mean of nine years), which is itself a risk factor for cognitive impairment.

Both vascular dementia and Alzheimer's disease have been associated with diabetes. A meta-analysis found that diabetes was associated with a roughly 60% increased risk of dementia, with relative risks of 2.3 in women and 1.7 in men for vascular dementia, and 1.5 in both sexes for nonvascular dementia.[9] It has been suggested that Alzheimer's disease may result from cerebral insulin resistance and glucose dysregulation.[10] In a cohort study of 6370 people older than 55 years, 126 participants developed dementia during an average follow-up of 2.1 years, and 89 of these had Alzheimer's disease.[11] Diabetes doubled the risk of dementia, with participants who were receiving insulin being at four times the risk.[11] However, patients using insulin typically have a long duration of diabetes.

Association between hypoglycaemia and cognitive impairment

Recurrent hypoglycaemia, which can be associated with insulin or sulfonylurea therapy, has also been linked to cognitive impairment and is a risk factor for dementia.[12] Any cognitive deficit may then further increase the risk of hypoglycaemia and affect the patient's treatment adherence, mood and overall prognosis.

Similarly, it has been suggested that severe hypoglycaemic episodes (i.e. those that require the assistance of another person) are associated with cognitive impairment and increased risk of dementia in people with type 2 diabetes.[13] Studies in patients with type 1 diabetes have shown similar findings. In particular, the results of the Diabetes Control and Complications Trial (DCCT) and follow-up Epidemiology of Diabetes Interventions and Complications (EDIC) study indicated that the number of severe hypoglycaemic episodes was associated with significant cognitive decline during a 32-year follow up.[14] Cognitive decline was also associated with higher HbA_{1c} levels. Interestingly, this association was not seen in earlier DCCT or EDIC studies. At the 18-year follow up, hypoglycaemic events were not associated with cognitive decline, whereas poorly controlled diabetes, as defined by elevated HbA_{1c} levels, did show this association.[15] This suggests that severe hypoglycaemic episodes and poorly controlled diabetes are associated with cognitive decline later in life, or after a longer duration of diabetes or a greater number of severe hypoglycaemic episodes.

The association between recurrent nonsevere hypoglycaemic episodes (i.e. where the plasma glucose level is ≤3.9 mmol/L and the assistance of another person is not needed) and cognitive function is less clear.[16] As nonsevere hypoglycaemic episodes are typically self-managed and do not require hospitalisation or assistance, they often go unrecognised, leading to under-reporting. Retrospective recall of mild hypoglycaemic episodes is also poor, with estimates suggesting accurate recall of these events lasts no longer than a week. Other factors complicating accurate quantification of the effects of mild hypoglycaemic episodes include significant heterogeneity in the measurement and definition of cognitive impairment between studies and limited data regarding other comorbidities, the severity and duration of diabetes and the duration of hypoglycaemic events. Moreover, as nonsevere episodes do not cause acute cognitive impairment, it is not clear if they result in chronic cognitive effects. Further clinical studies are needed to elucidate the relationship between recurrent nonsevere hypoglycaemia and cognitive function. Every effort should nevertheless be made in clinical practice to minimise the risk of hypoglycaemia, as even nonsevere recurrent events are a risk factor for severe hypoglycaemic episodes.

In animal models, recurrent prolonged hypoglycaemia has been linked to worsening of cognitive function. Impairment in long-term recognition memory and spatial memory has been observed in behavioural tests, with mitochondrial dysfunction, neuronal injury, astrocyte overactivation, oxidative stress and impaired counter-regulatory response to oxidative damage thought to be involved in the underlying pathophysiology of cognitive impairment.[17-19] Dysfunction of transient receptor potential canonical channel 6 has been linked to Alzheimer's disease, and its expression was found to be repressed in diabetic mice with recurrent hypoglycaemia, leading to cognitive impairment, neuronal loss and neuronal activity.[20] In rodent models, glycaemic fluctuation and recurrent hypoglycaemia were observed to alter the expression of an NRG1-ErbB receptor signalling pathway, which is involved in neuronal regeneration.[21]

Implications for patients with diabetes

Patients with diabetes can have deficits in multiple cognitive domains, including verbal memory and processing speed.[22] Often, however, these deficits may not be apparent to the clinician, or even to the patient.

Cognitive impairment can substantially affect a patient's quality of life and autonomy. For people with diabetes, this can also mean a heightened risk of future hypoglycaemic episodes, as well as a detrimental effect on treatment adherence, which is crucial to diabetes management. Self-monitoring blood glucose levels at home, self-administering the appropriate amount of insulin and self-monitoring diet are all important aspects of diabetes management that can be negatively affected when a patient has cognitive impairment.

Mood may also be detrimentally affected, contributing to deteriorating treatment adherence, quality of life and autonomy.[23] Overall prognosis and life expectancy are reduced in patients with diabetes and cognitive impairment, compared with those with diabetes but without cognitive impairment.[24]

Management recommendations for GPs

Awareness of the cognitive complications associated with diabetes lags behind that for other established complications and needs to improve. Management priorities to minimise cognitive decline in patients with diabetes are summarised in the Box.

Avoidance of hypoglycaemia, especially severe episodes, should be a priority in the care of patients with diabetes. Where possible, medications that carry a low risk of hypoglycaemia should be used to achieve the appropriate individualised glycaemic target, although therapies such as insulin and sulfonylureas may be needed for some patients. Optimising glycaemic control is a priority, not only to reduce organ complications but potentially also to decrease cognitive impairment and dementia, although definitive studies are needed.

A position statement from the American Diabetes Association and European Association for the Study of Diabetes emphasises that a patient-centred approach should be used, weighing the benefits of improved glycaemic control with the risks of hypoglycaemia in the context of a patient's cognitive function, other comorbidities and functional status.[25] In particular, considering the risks of hypoglycaemia, intensive glycaemic control may not be recommended for older patients with diabetes.[26] It may be preferable to de-intensify therapy and create regimens that are less complex and minimise the risk of hypoglycaemia, to avoid patient-associated medication errors and potential deficits in self-care caused by cognitive impairment.

Avoidance of hypoglycaemia, especially severe episodes, should be a priority

Tight blood pressure control in patients with diabetes, but not overly tight (to avoid hypotension), may help prevent vascular dementia. Regular aerobic and resistance exercise may also reduce the risk of both vascular dementia and Alzheimer's disease. Dealing with other potential contributors to cognitive decline, such as lipid levels and smoking, should also be priorities in caring for patients with diabetes.

Clinicians should be aware of the potential for cognitive impairment in people with diabetes and carefully monitor for it, particularly in those with recurrent hypoglycaemic episodes. Cognitive impairment in patients with diabetes may present as forgetfulness about their appointments, medications and day-to-day management. A careful and comprehensive social history, with collaborative history from family members, may be helpful in further assessing the patient's level of functioning at home.

There are also established neuropsychological tests, such as the Mini-Mental State Examination and the Montreal Cognitive Assessment, that can be used to screen for the subtle decrements in cognition triggered by diabetes, as these may progress perniciously. Timely referral for psychogeriatric assessment of possible neurocognitive decline can be invaluable, as can targeted community support for patients with chronic cognitive decline living in nonresidential aged care. This can include programs such as the National Dementia Support Program, which aims to improve awareness of dementia and educate patients and their families on the support services available.

There is some interest in using metformin to prevent cognitive decline in patients with diabetes, although this remains unproven. As long-term metformin therapy can cause vitamin B12 deficiency, patients receiving ongoing metformin for diabetes should have routine (e.g. annual) blood level testing to exclude this. The glucagon-like peptide-1 receptor agonists are a more recent class of glucose-lowering therapy attracting considerable interest for treating people with type 2 diabetes. This medication class has shown potential benefits in animal models, with further research ongoing in humans.[27]

Management priorities to minimise cognitive decline in patients with diabetes

- Where possible, use diabetes medications with a low risk of hypoglycaemia
- Optimise glycaemic control
- Carefully control blood pressure and advise regular aerobic and resistance exercise
- Address other potential contributors to cognitive decline, such as lipid levels and smoking
- Monitor for cognitive impairment, particularly in patients with recurrent hypoglycaemic episodes
- Assess level of cognitive functioning at home through social history, with input from family members
- Use tests such as the Mini-Mental State Examination and the Montreal Cognitive Assessment to screen for cognitive impairment
- Consider referring patients for psychogeriatric assessment of neurocognitive decline

Conclusion

Diabetes is associated with subtle cognitive dysfunction that progresses insidiously. Timely detection of early cognitive decline in a person with diabetes can be difficult, often leading to delays in identification until deficits are frank and irreversible. Helping a patient with diabetes to maintain a physically active body and mind will minimise the risk of cognitive decline, as will managing their blood pressure, lipid levels, body weight and smoking. To sustain quality of life and safety, personalised approaches to glycaemic control are a cornerstone of care for people with diabetes who have evidence of cognitive decline. **ET**

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A list of references is included in the online version of this article (https://medicinetoday.com.au/mt/2025/may/supplements/focus-dementia-collection).

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Depression

Recognising the signs in older people and in dementia

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Depression often presents differently in older people compared with younger populations, and in the setting of dementia, differences can be even greater, making diagnosis challenging. Treatment of depression in older people is similar to that of any patient, albeit with particular consideration of the effects of medications on age-specific factors, such as falls risk, balance, confusional states and orthostatic hypotension.

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Depression is a major source of health burden globally, with the lifetime risk of major depression exceeding 30%.[1,2] The risk of depression rises with age. However, this is not because of ageing itself; rather, it is the result of risk factors associated with depression that become more prevalent with age.[3] Such risk factors include chronic pain, chronic illness, polypharmacy, stigma, bereavement, social isolation and loneliness, disability, cognitive impairment, economic deprivation, loss of role and abuse of any kind. Once these factors are controlled for, the excess of depressive diagnoses in old age disappear.

Depressive disorders run the spectrum, from the classic major depressive disorder (MDD) through to persistent depressive disorder (PDD; previously known as dysthymic disorder). The presence of depressive symptoms that fall short of meeting diagnostic criteria for a disorder but still cause significant distress and impairment is also common.

The prevalence of depression in old age

The prevalence of depression in old age depends largely on the population. Community surveys using validated diagnostic instruments suggest that the prevalence of MDD in community-dwelling older people is about 3% and the prevalence of any depressive disorder is as high as 10%. In similar diagnostic surveys of older people attending general practice, the prevalence of MDD rises to 10% and that of any depressive disorder to 30%. In older general medical inpatient populations, the prevalence of MDD and any depressive disorder increases again to 30% and 50%, respectively.[4] High-quality data on the prevalence in nursing

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homes are lacking, but more than 50% of residents may meet diagnostic criteria for MDD at any one time.[5] The rates of MDD in elderly carers are similarly high.[6]

In light of these data, clinicians should reflect on the rates of diagnosed depression in the populations seen in clinical practice. In 2011, 24% of women and 15% of men over the age of 75 years received at least one prescription for an antidepressant each year (Figure 1).[7] However, not all antidepressants prescribed in older people are for the treatment of depression, with data suggesting that tricyclic antidepressants comprised 35% of antidepressants prescribed in older people, often at subtherapeutic doses and for issues unrelated to mood, including nocte sedation, chronic pain and incontinence.[8] Such statistics suggest that, despite the high prevalence of depression in older people, making diagnosis and initiating treatment are challenging.

KEY POINTS

- Presentations of depression differ in older people, often appearing as prominent lethargy or hypochondriacal concerns, insomnia, anxiety, nervousness and irritability.
- Older people are less likely to self-identify as having a depressed or low mood.
- The presence of symptoms, including sleep and appetite changes, decreased psychomotor activity, poor concentration, indecision and fatigue, are more likely to be seen as part of a major depression in older people.
- An older person presenting with a change in mood with no obvious precipitant should be assessed for a cognitive diagnosis.
- Treatment for older people with depression is similar to that for any patient, and medication selection should be based on the patient's symptoms and drug factors.
- Measurable and observable traits, such as changes in sleep and appetite, can help in diagnosing depression in older people with dementia.

Why diagnosing depression is difficult

Current society stigmatises ageing, with older people often reporting they feel invisible. Indeed, older people are less visible in advertising and entertainment, particularly in positive portrayals, perpetuating the ideology that old people are less valuable and old age is something to be feared and is, in itself, 'depressing'. Medical practitioners are not immune to these unconscious biases,[9] which can result in a tendency to normalise depressive symptoms in older patients and make the judgement that older patients either do not merit, or will not respond to, treatment.

Older people themselves are likely to have similar biases towards their own ageing, in a process of self-stigmatisation.[10] They may therefore also normalise any depressive symptoms they experience and not disclose these to their GP. Current older generations have aged within a social framework of lower mental health literacy and greater stigmatisation of mental health issues, which further decreases the likelihood of them disclosing symptoms.

The time pressure of busy acute care hospital and general practice environments might provide a disincentive to enquiring about the presence of depressive symptoms in older patients, and is compounded by financial disincentives imposed by the Medicare Benefits Schedule (MBS) on longer consultations.[11] Finally, ways in which the presenting symptoms of depression differ in old age compared with what clinicians are taught in medical school can make diagnosing depressive symptoms difficult and time consuming.

How does the presentation of depression differ in older people?

Compared with younger patients, older people are more likely to experience prominent lethargy or hypochondriacal concerns,

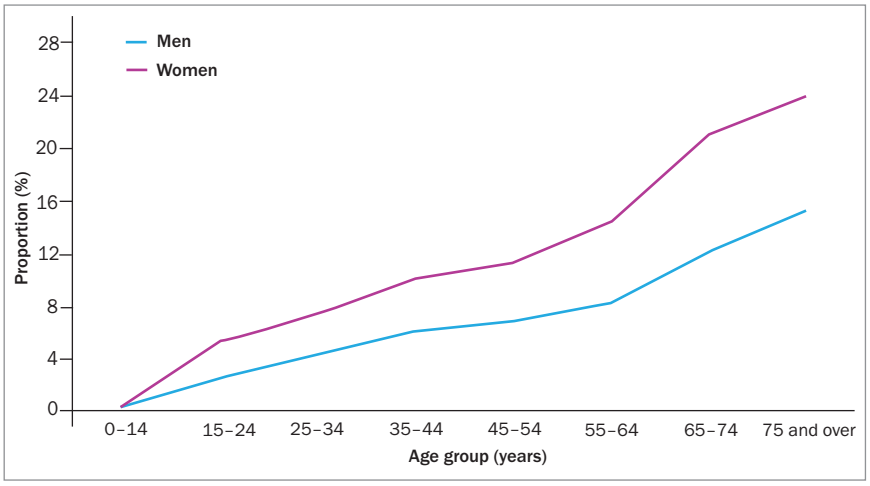

Figure 1. Proportion of the population accessing PBS-subsidised antidepressant medications in 2011.

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insomnia, anxiety, nervousness and irritability; however, they are less likely to report having a depressed mood.[12,13] This is important, given that many clinicians are taught that the best screening question for the presence of depression is 'Do you think you are depressed?' The over-representation of hypochondriacal concerns is often a clinical red herring in a general practice population that is frequently beset by multiple medical comorbidities, while a subjective complaint of nervousness or anxiety might lead a well-meaning clinician down the path of anxiety management rather than focusing on the possibility of depression.

Other symptoms that are common in an elderly population may also mislead the clinician, including sleep and appetite changes, psychomotor slowing, poor concentration, indecision and fatigue. These are common symptoms in older people who are not depressed and are also more likely to occur as part of MDD in older persons, but are often not recognised as such.[14] Certain depressive subtypes, such as melancholic depression, agitated depression and psychotic depression, are more frequently seen in older people with MDD than in younger age groups.

Differential diagnosis

Organic illness should always be excluded in older patients. Central nervous system disorders, such as Parkinson's disease and unrecognised stroke, should be considered, along with endocrine disorders such as thyroid disease and diabetes.

A cognitive diagnosis should be considered in all older patients presenting with their first depressive episode, particularly when the change in mood has no obvious precipitant. It is a mistake to think that the neurological changes associated with dementia will have impacts that are limited solely to cognition and, in fact, noncognitive presentations of dementia are quite common in clinical practice. Depression appears to be a significant risk factor for dementia, with evidence suggesting the existence of a depressive prodrome in certain individuals prior to the recognition of cognitive decline.[15,16] A basic cognitive assessment should be performed as part of the initial assessment for depression in an older patient, ideally along with some form of neuroimaging to assess for the presence of infarcts or significant small vessel disease.

Other psychiatric disorders can present with episodes of low mood. A diagnosis of persistent depressive disorder (dysthymia) requires the presence of subthreshold depressive symptoms for at least two years. Anxiety disorders (obsessive-compulsive disorder, generalised anxiety disorder, panic disorder and post-traumatic stress disorder), along with a complicated grief reaction, should also be considered. A history of clinically significant periods of elevated mood should also be sought, in light of the possibility of bipolar depression being present. Drug-induced depressive episodes can arise with the use of certain prescription medications (e.g. beta blockers, sedatives, steroids, varenicline), as well as from alcohol and substance misuse.

Apathy merits special mention as, in addition to being a common depressive symptom, it can have a variety of other causes when it presents in the absence of depressed mood. People who are apathetic will often exhibit signs, such as psychomotor retardation, increased response latency and bradykinesia, which those close to them may interpret as depression. However, patients with discrete symptoms of apathy usually retain pleasure in, but lose the motivation and drive to initiate, activities. Those experiencing apathy in this context will usually deny the presence of low mood. Apathy is common in frontal lobe disorders and stroke, and following a head injury.

Treatment of depression in old age

The treatment for MDD in older people should follow a similar pathway as that for younger people, but with some important caveats. Although selective serotonin reuptake inhibitor (SSRI) antidepressants are recommended as first-line pharmacotherapy at any age, they are associated with an increased risk of falls in older people, a finding possibly related to their contributions to hyponatremia, poor balance, confusional states and orthostatic hypotension.[17] Many clinicians may wisely choose to initiate antidepressants in their

older patients at a lower dose to mitigate these problems. An awareness should remain, however, that the target antidepressant therapeutic dose remains the same as in younger groups.

The choice of antidepressant, otherwise, should be based on patient symptoms and drug factors. For instance, mirtazapine can be a useful choice for older patients, particularly those with insomnia and loss of appetite. Sedation and increased appetite are side effects of this drug, and these particular symptoms can be improved early by virtue of this fact, often well in advance of the true antidepressant effect becoming evident. However, the usual strategy of 'start low, go slow' may create issues when applied to mirtazapine because of its pharmacological profile, whereby serotonin receptors are engaged at low doses (and noradrenergic receptors progressively engaged as the dose increases), making it more sedating at low doses than at higher doses.[18] The author's frequent practice is, therefore, to initiate the drug at the 30 mg nightly dose.

Tricyclic antidepressants should generally be avoided in older people because of their anticholinergic side effect profile, which may result in dry eyes, dry mouth, blurred vision, constipation, urinary retention, confusion and falls. It should be noted that the minimum effective antidepressant doses of these agents are an order of magnitude greater than those used for pain management or for urinary incontinence.

Neurostimulation in the form of transcranial magnetic stimulation (TMS) or electroconvulsive therapy (ECT) also has a role in old-age depression. Patients presenting with melancholic, agitated and psychotic subtypes of depression are particularly responsive to ECT, which can be a life-saving intervention for patients in these states.

The role of psychotherapy in managing late-life depression is frequently overlooked. Although there is no evidence that psychotherapy is any less effective in older people for managing mild to moderate depression, the rates at which older people are referred for psychological interventions is very low. Data show that in any given year, people aged over 85 years are the least likely age group to receive a mental health-specific service (as delivered by a GP, psychiatrist, psychologist or other allied health professional), with the exception of children aged 0 to 4 years (Figure 2).[19] It is worthwhile contrasting these data with the rates of antidepressant prescription by age in Figure 1.

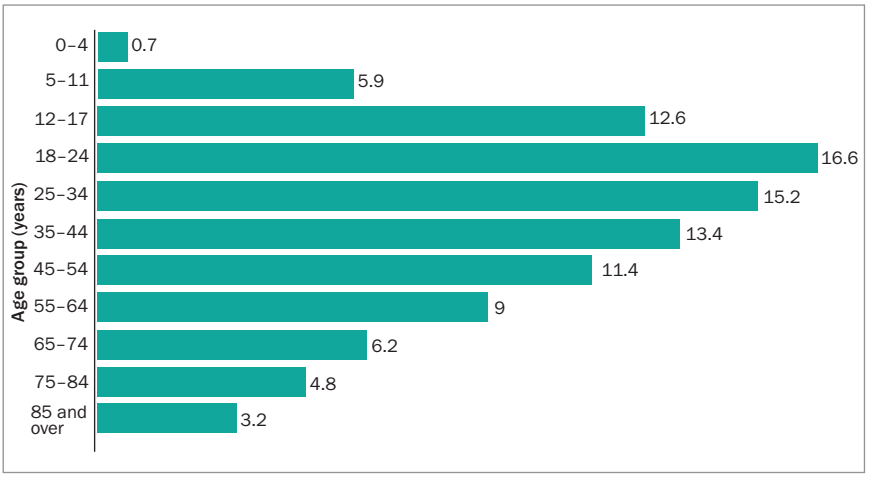

Figure 2. Percentage of the population receiving Medicare-subsidised mental health-specific services (2022-23).

Produced under a Creative Commons Attribution 4.0 International licence using data from: AIHW. Medicare mental health services 2022-23.[19]

Suicide in older people

The highest rates of suicide in Australia occur in those over the age of 85 years.[20] The ratio of attempted to completed suicide has been reported as 4:1 in people aged over 60 years compared with 20:1 in those aged 20 to 40 years.[21] Therefore, any suicide attempt in an older person should be taken seriously and, in the author's view, any older person who has attempted suicide should undergo a period of psychiatric evaluation in hospital. Older men, in particular those experiencing chronic pain and who are faced with increasing dependency, are at greater risk of suicide.[22] Other relevant risk factors include bereavement, increasing social isolation and chronic illness.[12]

Depression in dementia: the clinical dilemma

The diagnosis of MDD requires the presence of a number of specific symptoms, including complaints of depressed mood, fatigue, feelings of worthlessness or guilt, decreased concentration and thoughts of death or suicide. In other words, the diagnosis lies primarily in the ability of a person to self-report their symptoms. Reliable self-reporting is often not possible in the setting of dementia, particularly as the condition becomes more advanced.

Although reliable tools for the assessment of depression in dementia, such as the Cornell Scale for Depression in Dementia (CSDD), are widely used in nursing homes across Australia, no validation studies of these tools have been done in people living with dementia who have a Mini Mental-State Examination (MMSE) score below 10 (indicating severe dementia).[23] The true prevalence of depression in this group is thus unknown, and there is no broad agreement about the diagnostic criteria for depression in those with dementia. Therefore, when considering the diagnosis of MDD in those with severe cognitive impairment, the author's practice is to rely on those symptoms that might be at least observable to, or measurable by, others. For example, for patients living in

residential care, sleep charts can capture a recent change in sleep pattern, and oral intake charts or weight charts can reflect changes in appetite. Psychomotor changes and loss of interest can also be observed by carers to the extent that these might be reliably reported. Sleep and appetite disturbances, behavioural changes and loss of interest are all invariable accompaniments of a progressive dementia. However, these symptoms progress over months to years when dementia is the underlying cause, but may develop over days to weeks in the case of depression.

The possibility of depression should be considered whenever a clinician is faced with a recent behavioural change in the setting of significant dementia. Guidelines for the management of behavioural and psychological symptoms in dementia (BPSD) recommend a range of nonpharmacological interventions as first line, followed by a trial of the SSRI citalopram as a first-line pharmacological intervention.[24] The benefits of SSRI antidepressants in managing 'behaviour' may more likely reflect the management of unrecognised depression, rather than them having any specific effect on BPSD.

A trial of an SSRI will usually be better tolerated than alternatives such as antipsychotic medications in these circumstances. It may then be worth asking the question 'Could this be depression?' when faced with any new behavioural change in the setting of severe dementia.

Efficacy of antidepressant treatment in the setting of dementia

The evidence for the efficacy of antidepressant use in people with dementia is unclear. A Cochrane review identified only four studies that could be included in a meta-analysis, with a combined number of participants of only 137.[25] Participants in these four studies all had mild to moderate Alzheimer's dementia, and only two of the studies examined the efficacy of tricyclic antidepressants.

The most influential study published after the Cochrane review enrolled 326 patients from specialist old-age psychiatry services in the UK and found no difference in outcomes between those allocated to placebo, sertraline or mirtazapine after 39 weeks, using the cross-sectional standard deviation (CSSD) as the primary outcome measure.[26] All three groups improved by a similar amount. Largely as a result of this *Lancet* study, it continues to be stated that 'there is no evidence of therapeutic efficacy' of antidepressants in this group.[27]

Although this statement is technically true, an absence of evidence of effect does not equate to evidence of an absence of effect, and the *Lancet* study, in which the average participant MMSE score was 18.1, has been critiqued on the basis of:

- unrepresentative sampling
- a low threshold on the CSSD for the definition of 'caseness'
- recruitment being restricted to those with Alzheimer's dementia
- the high rates of spontaneous remission within six months that can be expected in mildly depressed patients as part of the natural history of untreated depressive episodes
- exclusion of 'critically depressed' patients (e.g. those with suicide risk) from the study.[28]

Conclusion

Depression in older people is an important and treatable cause of morbidity in general practice. It can be difficult to diagnose in busy medical settings, particularly in the presence of severe dementia, where standardised diagnostic criteria can be difficult to apply. Data on the efficacy of antidepressants in dementia are inconclusive. MT

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A list of references is included in the online version of this article (https://medicinetoday.com.au/mt/2025/may/supplements/focus-dementia-collection).

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Depression in old age

Recognising the signs in older people and in dementia

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Mild cognitive impairment and dementia

The treatment landscape

MICHAEL WOODWARD AM, MB BS, FRACP

The treatment landscape for cognitive disorders continues to evolve. New disease-modifying therapies are available in many countries, but in Australia only symptomatic therapies are currently available for people with mild cognitive impairment and dementia. These symptomatic therapies, however, remain valuable and can cause a modest improvement in symptoms.

What do we want to achieve?

The ideal therapy for mild cognitive impairment (MCI) and dementia would restore brain function to the predisease state; However, this is impossible to achieve because too much damage has already occurred before symptoms begin. Disease-modifying therapies, which target the underlying pathology, are not currently available in Australia, but are expected to slow or delay the clinical progression of the disease in most people with dementia.

In Australia, only therapies that improve symptoms are available for people with MCI and dementia. These therapies cause a modest improvement in symptoms, including memory loss, executive dysfunction, attention, mood and personality changes and impaired function.[1] These symptoms will, however, progress after time, because these symptomatic therapies are not targeting underlying disease processes. Nevertheless, a six- to 12-month period of reduced symptoms, achieved in some people, is worthwhile.

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KEY POINTS

- Treatments for mild cognitive impairment and dementia are rapidly expanding.
- New therapies targeting the underlying disease processes are not yet approved by the TGA in Australia.
- Only therapies that improve symptoms are currently available in Australia for people with mild cognitive impairment and dementia. These therapies cause a modest improvement in memory loss, executive dysfunction, attention span, mood and personality changes and impaired function.
- GPs can initiate currently available therapies; however, they are often under-prescribed.

At what stage of dementia are therapies effective?

Preclinical stage

The pathological changes in neurocognitive diseases, such as Alzheimer's disease, begin up to two decades before any symptoms appear (Figure). Yet, this preclinical stage is when disease-modifying therapies might prevent symptomatic disease, before too much synaptic damage has occurred. Trials of therapies that remove amyloid, and concurrently modify tau deposition, have so far failed but are still ongoing, using new monoclonal antibodies such as lecanemab and donanemab.[2] The current symptomatic therapies do not have any benefits at this preclinical stage.

Mild cognitive impairment stage

MCI, in which there are cognitive and often behavioural changes but function is preserved, is an obvious target for both disease-modifying and symptomatic therapies. Symptomatic therapies have not shown benefit at this stage and, in fact, suggested harm through increased cardiovascular deaths.[3] This may be because

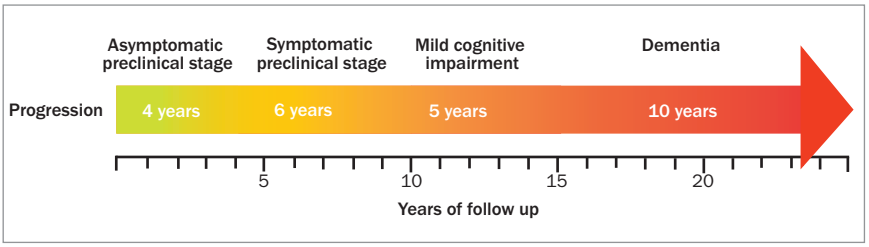

Figure. The progression of mild cognitive impairment to dementia.

the trials were conducted 20 years or more ago when biomarker-based evidence of disease was not required. Thus, potentially up to 30% of trial participants did not have the disorder being tested, and thus, the potential of the drug to show benefit over placebo was reduced.[4] These trials are unlikely to be repeated with better defined target populations because the drugs are now mostly generic; therefore, manufacturers have little incentive to fund the large, expensive trials that this would require.

Dementia stage

Cholinesterase inhibitors and memantine have shown benefit in the dementia stage of the disease. This is true even though the pivotal trials potentially included people without the diagnosis being targeted, suggesting these drugs may have shown greater effect if the population had been better defined. Cholinesterase inhibitors are most effective in the mild-to-moderate stage of dementia, but can have benefit if initiated in the more severe stage of dementia caused by Alzheimer's disease. Memantine has shown benefit in the moderately severe stage of Alzheimer's disease.[1]

How do we measure efficacy in clinical trials?

The trials of symptomatic therapies for MCI and dementia had endpoints that focused on memory and attention, overall clinical severity and functional status.[1] Some also measured caregiver burden and patient quality of life. Most of the trials looked for changes compared with placebo by three months and extended to 18 to 24 months. Some clinicians, therefore, concluded that the drugs were only effective for up to 12 to 24 months, but this is incorrect as symptoms naturally begin worsening around this time. Some patients remained above the (projected) placebo arm beyond the trial endpoint; however, time to death has not been shown to be extended. Time to institutionalisation was positively impacted in some but not all trials.

In ongoing trials using disease-modifying therapies, the aim is to identify an increasing difference in the severity of measured cognitive and functional endpoints between placebo and therapy arms. In addition, reductions in the levels of biomarkers of the disease process, including amyloid and tau levels, are expected and have so far been found.

What therapies are currently available in Australia?

Souvenaid

Souvenaid, a medical food consisting primarily of polyunsaturated fatty acids, uridine, choline and other vitamins and minerals, has been formulated to enhance synaptic formation, which is important in a brain undergoing neurodegeneration where these precursors of the synapse are often deficient. It has shown benefit in a three-year randomised, placebo-controlled trial in people with biomarker-defined MCI caused by Alzheimer's disease (prodromal Alzheimer's disease).[5] Significant reductions in decline were observed for the primary endpoint, the Neuropsychological Test Battery 5-item composite score, which translated to a 'time saved' metric of about nine months compared with the placebo group. The study was small and only a fraction reached the three-year point. In other smaller trials with Souvenaid, there has been a suggestion of benefit if initiated during the mild dementia stage of Alzheimer's disease.[6]

It is the recommendation of this author that Souvenaid be started when a diagnosis of MCI caused by Alzheimer's disease is made, and preferably when this diagnosis is supported by a biomarker such as 18F-fluorodeoxyglucose uptake on positron emission tomography. If initiated during the prodromal stage then it should be continued into the dementia stage. Souvenaid should be used daily for a minimum of three years to enhance the likelihood of benefit. It can be used safely with cholinesterase inhibitors and has very few adverse effects. It costs about $4 per day, but for patients with Department of Veterans' Affairs Veteran Gold Card or Community Aged Care Packages, it is funded if prescribed or recommended by a doctor.

Cholinesterase inhibitors

Cholinesterase inhibitors boost acetylcholine levels through inhibiting the enzyme, acetylcholinesterase, which breaks it down. This neurotransmitter is deficient in people with Alzheimer's disease or Lewy body disease, and this deficiency likely contributes to the cognitive and behavioural symptoms. The three available cholinesterase inhibitors in Australia are donepezil, rivastigmine and galantamine (Table). All have been shown to be beneficial for people with mild-to-moderate dementia caused by Alzheimer's disease, and donepezil has shown benefit when initiated in the severe stage of dementia caused by Alzheimer's disease.[7] Rivastigmine also boosts butyrylcholine levels; this neurotransmitter may play a greater role in more severe stages of the disease.

The main adverse effects are gastrointestinal, insomnia and cardiac (bradycardia effects), such that about 20% of

TABLE. DOSES, TITRATION AND TIMING OF CHOLINESTERASE INHIBITORS AND MEMANTINE

Drug	Formulations, doses and titration	Suggested maximum dose	Timing
Donepezil	Tablets: 5 and 10 mg • Start at 5 mg daily. Uptitrate after 4 weeks to 10 mg once daily	Only proceed to 15 mg if 10 mg was well tolerated and response was insufficient. Both doses are subsidised on the PBS	Have after a meal
Rivastigmine	Patch: 4.6, 9.5 and 13.3 mg/24 hours • Start with 4.6 mg/24 hours and uptitrate after 4 weeks Tablets: 1.5, 3.0, 4.5 and 6.0 mg • Start at 1.5 mg twice daily. Increase to 3 mg twice daily after 2 weeks, then 4.5 mg and 6 mg twice daily based on tolerability after a minimum of 2 weeks at each dose. However, tablets are not recommended because of increased risk of adverse effects	Only proceed to 13.3 mg/24 hours patch if 9.5 mg/24 hours patch was well tolerated and response was insufficient. All doses are subsidised on the PBS	Not important
Galantamine	Modified-release capsules: 8, 16 and 24 mg • Start at 8 mg daily. Uptitrate to 16 mg daily after 4 weeks	Only proceed to 24 mg daily if 16 mg was well tolerated and response was insufficient. All doses are subsidised on the PBS	Not important
Memantine	Tablets: 10 and 20 mg • Start at 5 mg once daily (half a 10 mg tablet), then increase to 10 mg daily in week 2, 15 mg/day in week 3 and then the target dose of 20 mg/day from week 4	Maximum dose is 20 mg per day. Both doses are subsidised on the PBS	Not important

patients cannot tolerate them. As such, only about 50% of people remain on these therapies beyond six months. Another cholinesterase inhibitor may be tolerated if one is not, so it is often worth trying at least two cholinesterase inhibitors if adverse effects occur.

Donepezil, rivastigmine and galantamine are available on the PBS for people with mild to moderately severe Alzheimer's disease with a Mini-Mental State Examination (MMSE) score of 10 or above, or an MMSE score below 10 for reasons other than Alzheimer's disease, such as prominent aphasia or an inability to communicate adequately because of a lack of competence in English (in people of non-English speaking background). After the initial six-month trial, a clinician needs to decide whether there has been a meaningful response before continuing subsidy on the PBS. The patient's response can include an improvement on the MMSE score, obvious symptom improvement or, more controversially, an assessment that the rate of decline has attenuated.

None of the cholinesterase inhibitors are subsidised for conditions other than Alzheimer's disease, but there is trial evidence for benefits of cholinesterase inhibitors in people with dementia with Lewy bodies, Parkinson's disease dementia and mixed Alzheimer's or vascular dementia.[8,9]

Memantine

Memantine acts on the glutamate receptor and favourably attenuates the 'signal to noise' ratio, increasing the effectiveness of neurotransmitted signals. Other mechanisms have also been detected. In clinical trials, it has been found to be effective for moderately severe dementia caused by Alzheimer's disease, not for the milder stages of dementia caused by Alzheimer's disease.[1] Common adverse effects include dizziness and agitation. It is best started at 5 mg once a day (halving the 10 mg tablets), then increased to 10 mg and then 20 mg daily, increasing every two to four weeks (Table). It can be used in combination with a cholinesterase inhibitor, but only one drug at a time can be subsidised by the PBS. It is preferable to have memantine subsidised, as it is usually the most expensive. Memantine is listed on the PBS for people with moderately severe Alzheimer's disease with a baseline MMSE score of 10 to 14.

Atypical antipsychotics

Atypical antipsychotics include risperidone, olanzapine, quetiapine, aripiprazole and brexpiprazole. They can be effective for agitation, aggression and psychosis associated with Alzheimer's disease and Parkinson's disease, with some evidence also of benefit for hallucinations in Lewy body disease.[10] Olanzapine, quetiapine and aripiprazole are all off-label uses for agitation, aggression and psychosis associated with Alzheimer's disease. The greatest supportive evidence is for risperidone in people with Alzheimer's disease.[11,12] Atypical antipsychotics have a considerable adverse effect profile, including sedation, parkinsonism, stroke and cardiovascular events, but are much safer than the typical antipsychotics. They should be used after nonpharmacological approaches have failed, although they are often prescribed without such a trial. Indeed, there is great concern about their overuse, as chemical restraint, especially in residential care facilities.

The minimum dose should initially be used (e.g. 0.25 mg once or twice daily for risperidone), and maximum doses should be low (e.g. 2 mg/day for risperidone). Only risperidone is PBS listed for behavioural disturbances in patients with dementia of the Alzheimer type, but brexpiprazole is TGA approved for agitation in people with Alzheimer's disease. They should be used for a maximum of 12 weeks, then a withdrawal trial is often successful.

Other psychoactive drugs

Benzodiazepines are sometimes used for anxiety and agitation, but evidence of benefit is lacking for people with cognitive disorders, and the risk of adverse effects, including oversedation, falls and injuries, is considerable.

Hypnotics are also best avoided, although slow-release melatonin, which can facilitate the effects of common hypnotics, is likely safe. Tricyclic antidepressants should not be used as hypnotics because they have anticholinergic activity.

Depression in people with cognitive disorders can be refractory to pharmacological therapy but many clinicians trial newer drugs such as escitalopram, sertraline and vortioxetine because they are safer and have less adverse effects. Counselling may be just as effective, even in people with cognitive disorders.

Other psychoactive drugs, including valproate, carbamazepine and pregabalin, sometimes used for challenging behaviours, have not been shown to be effective in people with MCI or dementia. Similarly, antiandrogen therapies have not been demonstrated to be effective for challenging sexual behaviours, although there is some evidence for effects of medroxyprogesterone acetate and cyproterone acetate as a third-line agent in aggressive and fantasy sexuality of dementia.

Can GPs initiate these drugs?

All drugs mentioned above can be initiated and repeat prescriptions given by GPs. Cholinesterase inhibitors and memantine require a specialist to confirm the diagnosis, but this can be by telephone call.

When to cease these therapies

Generally, when the dementia becomes severe, it is preferable to deprescribe, including drugs specifically initiated for symptoms of neurocognitive disorders.[13] Patients who are bed bound, fail to recognise loved ones and have difficulty swallowing are unlikely to benefit from such therapies.

Other natural and nondrug therapies

There is little to no evidence to support the use of micronutrients and so-called 'natural' therapies. These include ginkgo biloba, Brahmi, ginseng and many other products on the shelves of health food and other shops. Poor nutrition should, however, be managed, and a Mediterranean diet has been shown to reduce the risk of dementia and may be useful in delaying symptom progression as a part of a 'brain health' program.[14]

A range of nondrug therapies is being trialed but these all lack evidence of sustained benefits. These include transcranial magnetic stimulation, transcranial electric stimulation, various light therapies and cranial ultrasound.

Conclusion

Ultimately, we will detect the first pathological changes of neurocognitive disorders well before symptom onset and will have therapies that remove and neutralise the effects of the toxic processes (including accumulation of proteins such as amyloid and tau) before symptoms arise. The therapies used in asymptomatic patients must be safe and ideally not required lifelong. Until then, modestly effective drugs are available and should be trialled in appropriate patients. MT

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