NICE National Institute for Health and Care Excellence

NICE Pathways

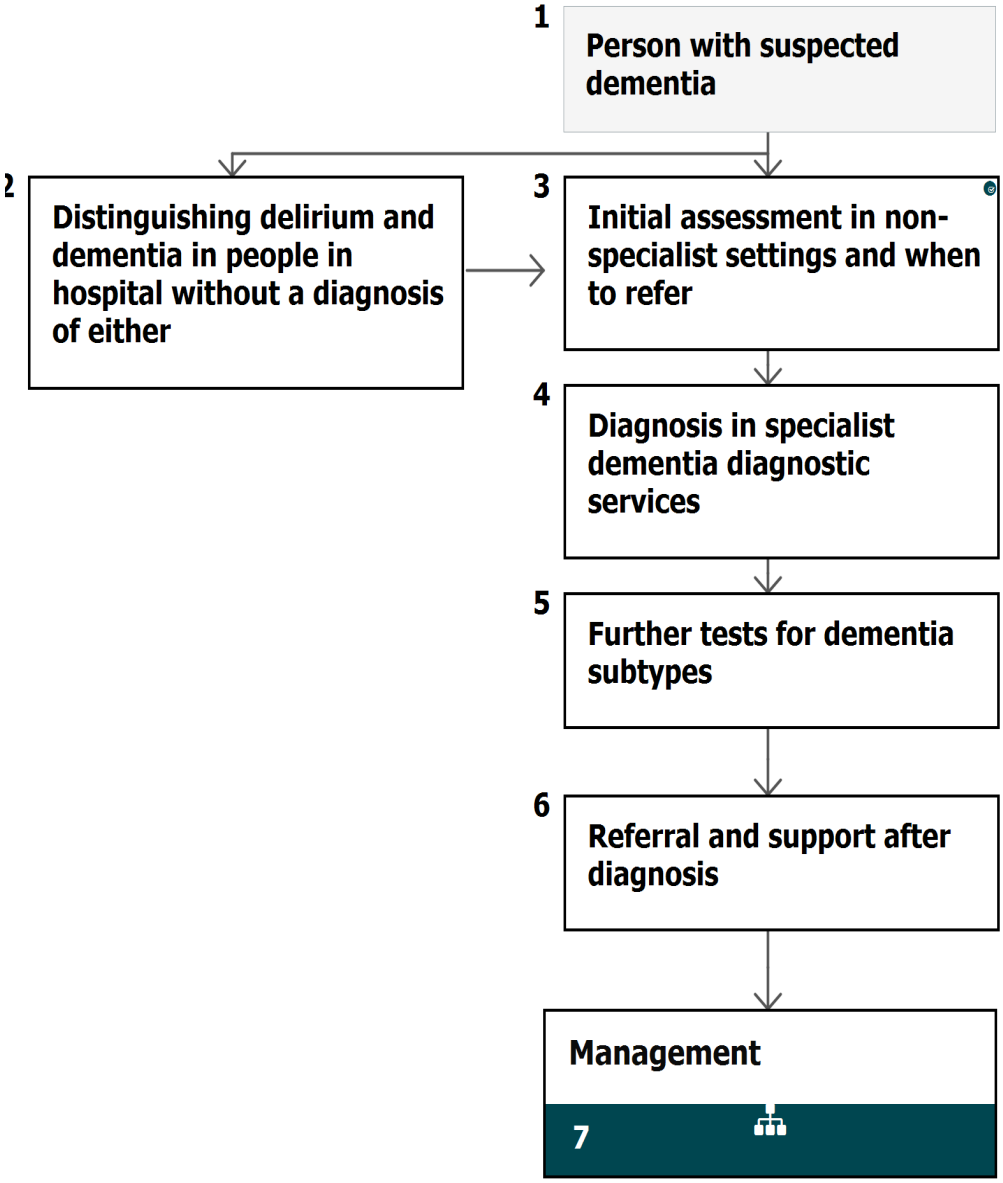
Dementia assessment and diagnosis

NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

http://pathways.nice.org.uk/pathways/dementia
NICE Pathway last updated: November 2018

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



1 Person with suspected dementia

No additional information

2 Distinguishing delirium and dementia in people in hospital without a diagnosis of either

For people who are in hospital and have cognitive impairment with an unknown cause, consider using one of the following to find out whether they have delirium or delirium superimposed on dementia, compared with dementia alone:

- the long confusion assessment method (CAM)
- the Observational Scale of Level of Arousal (OSLA).

Do not use standardised instruments (including cognitive instruments) alone to distinguish delirium from delirium superimposed on dementia.

If it is not possible to tell whether a person has delirium, dementia, or delirium superimposed on dementia, treat for delirium first. For guidance on treating delirium, see NICE's recommendations on delirium.

3 Initial assessment in non-specialist settings and when to refer

At the initial assessment take a history (including cognitive, behavioural and psychological symptoms, and the impact symptoms have on their daily life):

- from the person with suspected dementia **and**
- if possible, from someone who knows the person well (such as a family member).

If dementia is still suspected after initial assessment:

- conduct a physical examination **and**
- undertake appropriate blood and urine tests to exclude reversible causes of cognitive decline **and**
- use cognitive testing.

When using cognitive testing, use a validated brief structured cognitive instrument such as:

- the 10-point cognitive screener (10-CS)

- the 6-item cognitive impairment test (6CIT)
- the 6-item screener
- the Memory Impairment Screen (MIS)
- the Mini-Cog
- Test Your Memory (TYM).

Do not rule out dementia solely because the person has a normal score on a cognitive instrument.

When taking a history from someone who knows the person with suspected dementia, consider supplementing this with a structured instrument such as the Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE) or the Functional Activities Questionnaire (FAQ).

Refer [See page 9] the person to a specialist dementia diagnostic service (such as a memory clinic or community old age psychiatry service) if:

- reversible causes of cognitive decline (including delirium, depression, sensory impairment [such as sight or hearing loss] or cognitive impairment from medicines associated with increased anticholinergic burden) have been investigated **and**
- dementia is still suspected.

If the person has suspected rapidly-progressive dementia, refer them to a neurological service with access to tests (including cerebrospinal fluid examination) for Creutzfeldt–Jakob disease and similar conditions.

Medicines that may cause cognitive impairment

Consider minimising the use of medicines associated with increased anticholinergic burden, and if possible look for alternatives:

- when assessing whether to refer a person with suspected dementia for diagnosis
- during medication reviews with people living with dementia.

People with learning disabilities

For more guidance on assessing for dementia in people with learning disabilities, see NICE's recommendations on assessment of mental health problems in people with learning disabilities.

Case finding

Only conduct case finding [See page 9] for suspected dementia as part of a clinical trial that

also provides an intervention to people diagnosed with dementia.

Hearing assessment

For guidance on hearing assessments for people with suspected or diagnosed dementia, see assessment and referral in NICE's guidance on hearing loss.

Quality standards

The following quality statements are relevant to this part of the interactive flowchart.

Dementia: support in health and social care

2. Memory assessment services

Mental wellbeing of older people in care homes

3. Recognition of mental health conditions

4 Diagnosis in specialist dementia diagnostic services

Diagnose a dementia subtype (if possible) if initial specialist assessment (including an appropriate neurological examination and cognitive testing) confirms cognitive decline and reversible causes have been ruled out.

If Alzheimer's disease is suspected, include a test of verbal episodic memory [See page 9] in the assessment.

Consider neuropsychological testing if it is unclear:

- whether the person has cognitive impairment **or**
- whether their cognitive impairment is caused by dementia **or**
- what the correct subtype diagnosis is.

Use validated criteria to guide clinical judgement when diagnosing dementia subtypes, such as:

- International consensus criteria for dementia with Lewy bodies
- International FTD criteria for frontotemporal dementia (progressive non-fluent aphasia and semantic dementia)
- International Frontotemporal Dementia Consortium criteria for behavioural variant frontotemporal dementia

- NINDS-AIREN criteria (National Institute of Neurological Disorders and Stroke and Association Internationale pour la Recherché et l'Enseignement en Neurosciences) for vascular dementia
- NIA criteria (National Institute on Aging) for Alzheimer's disease
- Movement disorders Society criteria for Parkinson's disease dementia
- International criteria for Creutzfeldt-Jakob disease.

Offer structural imaging to rule out reversible causes of cognitive decline and to assist with subtype diagnosis, unless dementia is well established and the subtype is clear.

For information on when to consider further tests see further tests for dementia subtypes [See page 6].

People with learning disabilities

Consider supplementing an assessment of dementia with an adult with learning disabilities with:

- measures of symptoms, such as the Dementia Questionnaire for People with Learning Disabilities (DLD), the Down Syndrome Dementia Scale (DSDS) or the Dementia Screening Questionnaire for Individuals with Intellectual Disabilities (DSQIID)
- measures of cognitive function to monitor changes over time, such as the Test for Severe Impairment (TSI)
- measures of adaptive function to monitor changes over time.

Complete a baseline assessment of adaptive behaviour with all adults with Down's syndrome.

5 Further tests for dementia subtypes

When to consider further tests

Only consider further tests if:

- it would help to diagnose a dementia subtype **and**
- knowing more about the dementia subtype would change management.

Alzheimer's disease

If the diagnosis is uncertain and Alzheimer's disease is suspected, consider either:

- FDG-PET, or perfusion SPECT if FDG-PET is unavailable

or

- examining cerebrospinal fluid for:
  - either total tau or total tau and phosphorylated-tau 181 **and**
  - either amyloid beta 1-42 or amyloid beta 1-42 and amyloid beta 1-40.

If a diagnosis cannot be made after one of these tests, consider using the other one.

Be aware that the older a person is, the more likely they are to get a false positive with cerebrospinal fluid examination.

Do not rule out Alzheimer's disease based solely on the results of CT or MRI scans.

Do not use Apolipoprotein E genotyping or electroencephalography to diagnose Alzheimer's disease.

Be aware that young-onset Alzheimer's disease has a genetic cause in some people.

Dementia with Lewy bodies

If the diagnosis is uncertain and dementia with Lewy bodies is suspected, use ^{123}I-FP-CIT SPECT.

If ^{123}I-FP-CIT SPECT is unavailable, consider ^{123}I-MIBG cardiac scintigraphy.

Do not rule out dementia with Lewy bodies based solely on normal results on ^{123}I-FP-CIT SPECT or ^{123}I-MIBG cardiac scintigraphy.

Frontotemporal dementia

If the diagnosis is uncertain and frontotemporal dementia is suspected, use either:

- FDG-PET **or**
- perfusion SPECT.

Do not rule out frontotemporal dementia based solely on the results of structural, perfusion or metabolic imaging tests.

Be aware that frontotemporal dementia has a genetic cause in some people.

Vascular dementia

If the dementia subtype is uncertain and vascular dementia is suspected, use MRI. If MRI is unavailable or contraindicated, use CT.

Do not diagnose vascular dementia based solely on vascular lesion burden.

Be aware that young-onset vascular dementia has a genetic cause in some people.

6 Referral and support after diagnosis

After a person is diagnosed with dementia, ensure they and their family members or carers (as appropriate) have access to a memory service or equivalent hospital- or primary-care-based multidisciplinary dementia service.

Memory services and equivalent hospital- and primary-care-based multidisciplinary dementia services should offer a choice of flexible access or prescheduled monitoring appointments.

When people living with dementia or their carers have a primary care appointment, assess for any emerging dementia related needs and ask them if they need any more support.

7 Management

See Dementia / Dementia management

A strategy of actively assessing people who are at risk for a particular disease, before they present with symptoms and before there is clinical suspicion of the condition. It does not refer to situations such as assessing people for dementia after an acute episode of delirium, where clinical suspicion of dementia is likely to already be raised.

Episodic memories include information about recent or past events and experiences (rather than factual knowledge, or habits and skills). They may be recent, or from the distant past (remote or long-term episodic memory). Tests to assess episodic memory may use either verbal or visual material. Examples of verbal episodic memory tests include reading the person a list of words or a short story and asking them to recall this information, both immediately and after a delay.

A referral to a diagnostic service does not have to involve a clinic appointment. People can be seen in community settings (such as their home or a care home), or advice can be provided to the referrer without a formal appointment being made. The key issue is to ensure that dementia specialists are involved, both for advice on diagnosis and to ensure appropriate access to post-diagnostic support and treatment. Specialists are those with the appropriate knowledge and skills and include secondary care medical specialists (for example psychiatrists, geriatricians and neurologists) and other healthcare professionals (for example GPs, nurse consultants and advanced nurse practitioners) with specialist expertise in assessing and diagnosing dementia.

Glossary

AChE

acetylcholinesterase

cognitive stimulation

engaging in a range of activities and discussions (usually in a group) that are aimed at general improvement of cognitive and social functioning

cognitive training

guided practice on a set of standard tasks that are designed to reflect particular cognitive functions; there may be a range of difficulty levels, to fit the tasks to each person's level of ability

FDG-PET

fluorodeoxyglucose-positron emission tomography-CT

specialist clinician

(for the purpose of starting and monitoring treatment with cholinesterase inhibitors and memantine) those with appropriate knowledge and skills and include secondary care medical specialists (for example psychiatrists, geriatricians and neurologists) and other healthcare professionals (for example GPs, nurse consultants and advanced nurse practitioners) with specialist expertise in diagnosing and treating Alzheimer's disease

SPECT

single photon emission CT

Sources

Dementia: assessment, management and support for people living with dementia and their carers (2018) NICE guideline NG97

Mental health problems in people with learning disabilities: prevention, assessment and management (2016) NICE guideline NG54

Your responsibility

Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Medical technologies guidance, diagnostics guidance and interventional procedures guidance

The recommendations in this interactive flowchart represent the view of NICE, arrived at after

careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.