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Recognize Possible Dementia

- Patient, friend or relative reports a problem, usually memory.
- Physician notices suspicious changes in a known patient.

**Consider dementia when, for example:**

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<th>Cognitive changes:</th>
<th>New forgetfulness, trouble understanding spoken and written communication, difficulty finding words.</th>
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<td>Personality changes:</td>
<td>New inappropriate friendliness, social withdrawal, blunting or disinterest, easy frustration, explosive temper.</td>
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<td>Problem behaviours:</td>
<td>Wandering, agitation, noisiness, restlessness, up at night.</td>
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<td>Changes in day-to-day functioning:</td>
<td>New difficulty driving, getting lost, unable to make basic recipes, neglecting self-care, difficulty handling money, mistakes at work, unable to complete shopping tasks.</td>
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**Initial Steps**

- Pertinent history, accompanying persons and other health care providers.
- Collateral history usually is important.
- Anticipate several visits for history and physical examination, results review, diagnosis, disclosing the diagnosis and planning management.

**Diagnosis**

Dementia is a syndrome of diseases with global cognitive decline affecting memory and at least one other cognitive area with significant effects on day to day functioning.
The diagnosis of dementia requires that all four criteria are present:

1. Deficit in short- or medium-term memory, and
2. Deficit in at least one of:
   a. aphasia (understanding or finding words);
   b. apraxia (complex learned behaviours like dressing);
   c. agnosia (recognizing faces or objects and knowing their use); or
   d. executive functioning (problem-solving, sequencing, multi-tasking), and
3. Deficits are severe enough to interfere with social or occupational functioning, and
4. Decline from previously higher level of functioning.

**Rule out Delirium**

An acute medical disorder causing delirium may require urgent management. Consider drugs/medication, medical illness, toxin, head trauma or overstimulation.

- Acute onset of altered level of consciousness.
- Fluctuating altered level of consciousness (clouding).
- Strikingly short attention span.
- Disorganized thoughts.
- Disturbed hour-to-hour sleep and early disorientation.
- Mixed hypoactive and hyperactive psychomotor signs.

**Referral Cue:** Urgent or emergency acute care referral when acute delirium is suspected, appropriate investigations are not readily available, patient is not stable, or treatable cause is not immediately apparent.

**History and Physical Examination**

- **Obtain collateral history from family, friends and other health care providers.**
- Gather evidence for ruling in dementia and its underlying disorder.
- Explore mood to rule out depression or anxiety, which can mimic, mask or co-exist with dementia.
Check on hearing and vision, history of recent falls/head injury, medications, activities of daily living.

Pulse and blood pressure, localizing neurological signs (power, tone, reflexes, cerebellar signs), gait, tremor or movement disorders.

Office-Based Psychometric Tests

Brief screening tests help with assessing cognitive impairment.

Familiarize with two: one for mild impairment (eg, MoCA, Montreal Cognitive Assessment) and one for moderate to severe (eg, MMSE, Folstein Mini Mental Status Examination).

Screening tests may be falsely positive and negative, and are not diagnostic for dementia, so interpret screening test results in the context of other clinical information, including education, culture and sensory deficits.

Patients and families may misunderstand the non-diagnostic “screening” role of these tests and become upset if they misinterpret the results.

Administer over time in patients with MCI or CIND because they are at risk of developing dementia.

Administer over time to monitor progression of dementia.

MMSE: Mini Mental Status Examination.

- Good sensitivity, lower specificity.
- Affected by age and education.
- Tests many aspects of cognition but not executive functioning.
- Does not assess functional autonomy.
- Ceiling effect: May not detect mild-moderate dementia in some cases, and does not distinguish mild dementia from MCI.
- Floor effect: Does not distinguish moderate from severe dementia.
- Can be used to follow a patient over time.

MoCA: Montreal Cognitive Assessment.

- Also does not test executive functioning, but tests some frontal lobe functions.
- Use when MMSE score is normal but cognitive dysfunction is suspected.
- Better than MMSE in mild and early dementia.
If MoCA score is low but there is no functional impairment: Consider MCI (Mild Cognitive Impairment). Follow the patient for possible progression to dementia.

Use of MMSE and MoCA:
Memory complaints without functional problems: Start with MoCA:
- If > 26 then likely normal.
- If 20-25 then MCI more likely.
Memory complaints with functional problems: Start with MMSE:
- If < 24 then dementia more likely.
- If > 24 then use MoCA; If MoCA < 26 then dementia more likely.
- Consider confounding effects of age and education.

**Referral Cue:** Dementia clinic, geriatrician, neurologist, internist or geriatric psychiatrist for consideration of more detailed neuropsychological cognitive testing when the diagnosis is unclear.

**Bloodwork**

Complete blood count, thyroid stimulating hormone, serum electrolytes, creatinine/BUN, serum B12 (cobalamin), liver function tests, calcium and fasting glucose.

**Referral Cue:** Dementia clinic, geriatrician, neurologist, internist or geriatric psychiatrist if it is suspected that more specific biomarkers may be helpful to diagnose the type of dementia.

**When to Consider Cranial Computed Tomography (CT) or Magnetic Resonance Imaging (MRI)**

- Age < 60 yrs.
- Rapid unexplained decline in cognition or function, over e.g. 1–2 months.
- Dementia present < 2 yrs.
- Recent significant head trauma.
Unexplained neurological symptoms (e.g. new headache, seizure).
Cancer history especially types that metastasize to the brain.
Use of anticoagulants or history of bleeding disorder.
Urinary incontinence or gait disorder early in the dementia course (e.g. normal-pressure hydrocephalus).
New localizing neurological sign.
Unusual cognitive symptoms (e.g. progressive aphasia).
Gait disturbance.
To detect cerebrovascular disease that may affect patient management.

Referral Cue: Dementia clinic, geriatrician, neurologist, internist, or geriatric psychiatrist when optimum approach to workup is not clear.

When it is Not Dementia

Delirium: May be a medical emergency. See above.
Normal aging: May result in mild decrease in cognitive function. Simple stable memory loss without impairment in other cognitive domains. This is the most common diagnosis when elders report memory problems.
Mild Cognitive Impairment (MCI), or Cognitive Impairment No Dementia (CIND): Memory or cognitive impairment without change in functional ability, and no other medical cause for condition. MCI or CIND progress to dementia in an important proportion of cases. Monitor about every six months.
Psychiatric disorders: e.g. depression, anxiety, schizophrenia. Dementia-like symptoms and signs do not persist when these disorders are treated.
Focal syndromes of cognitive impairment: e.g. isolated amnesia, aphasia, apraxia and visuospatial impairments.

Referral Cue: Dementia clinic, geriatrician, neurologist, internist or geriatric psychiatrist when the diagnosis is unclear.
When it is Dementia – Determine the Most Likely Cause

Consider a reversible condition before one of the chronic causes of dementia.

**Alzheimer’s Disease (AD)**
- Insidious onset, gradual decline with plateaus over 7–10 yrs; with
- Continuing gradual memory decline, particularly short-term; and at least one other cognitive domain impairment not explained by other disorders.
- Most common dementing process.
- Many affected by depression and weight loss.

More likely Alzheimer’s
- Altered behaviours
- Family history

Less likely Alzheimer’s
- Early gait involvement
- Focal neurological deficits
- Sudden onset

**Vascular Dementia (VaD)**
- Abrupt onset.
- Stepwise or insidious decline.
- Associated with cerebrovascular disease.
- Impaired executive function.
- Gait disorder.
- Emotional lability.
- Diagnosis requires integrated clinical and investigation approach (history, vascular risk factors, physical exam, clinical course, neuroimaging, pattern of cognitive impairment).
- Pure vascular dementia is uncommon and possibly rare.
- Focal neurological deficits occur early, such as movement disorders similar to Parkinson’s.
Dementia due to multiple etiologies
- Alzheimer’s Disease and Vascular Dementia often occur together, more commonly than pure vascular dementia.
- Other dementias may occur together.

Dementia with Lewy body-related neurodegeneration (DLB)
- Progressive, markedly fluctuating cognitive decline.
- Hallucinations.
- Parkinsonism may be present, typically gait and balance problems and repeated falls are more common than tremor, and the dementia occurs early with the Parkinsonian signs.
- Parkinson Disease Dementia tends to occur in setting of well established Parkinson’s Disease.
- Hypersensitivity to neuroleptic medication.
- Third most common.
- May occur with Alzheimer’s Disease.

Frontotemporal Dementia (FTD)
- Rarer group of dementias than other types, includes Pick Complex Disease.
- Younger age.
- Features vary with the type of FTD.
- Insidious onset and slow progression of early behavioural changes such as: loss of social awareness and disinhibition; emotional blunting, mental rigidity, distractibility, loss of insight; declining hygiene.
- Prominent language changes including hyperorality and perseverance.

Other causes of dementia:
- Substance abuse.
- Normal pressure hydrocephalus: early gait apraxia or urinary incontinence.
- Creutzfeld-Jakob Disease: consider in rapidly progressive dementia.
- Other disorders: traumatic brain injury, endocrine, nutritional, infectious (e.g. HIV, neurosyphilis, cryptococcosis), autoimmune, renal or hepatic dysfunction, metabolic, neurological (e.g. multiple sclerosis, Parkinson’s, Huntington’s), and other structural brain lesions.
Disclosing the Diagnosis to Patients

- Ethicists recommend informing patients with dementia about their diagnosis.
- Perhaps start with, “What do you think is causing all this?”
- If the diagnosis is MCI/CIND, differentiate from dementia for the patient and family, but explain risk of progression.
- Use progressive disclosure as the clinical picture becomes clearer.
- There may be over-riding considerations in some cases, including worsening depression, suicide risk and anxiety over diagnostic uncertainty.
- Disclosure allows patient and family to plan and consider appropriate treatments.

Direct Early to Community Supports

Referral Cue: Most patients with dementia who consent should be directed early to community supports: Alzheimer Society, support groups, regional social services, community support services, credible Internet information sources and caregivers of their choice.

If a current list of community supports is not available, consider referral to an agency that has one.
Management

Management Mainstays

- Team approach and shared case management important.
- Validate, educate and support patient and caregivers.
- Treatment may improve quality of life.
- Promote a healthy lifestyle: diet, physical activity, cognitive activity, work or hobbies, social life.
- Identify and treat problem behaviours and complications.
- Anticipate decline: Stage the patient’s dementia to identify stage-related interventions.

Referral Cue: Consider early the value to patient and caregivers of specialized nursing, occupational therapy, physical therapy, psychology, social work, day programs, respite and supports for the client’s unique cultural needs.

Alter Progression of MCI/CIND or Dementia if Possible

- Lower the risk factors for vascular disease, in particular blood pressure (treat if systolic pressure > 160 mm Hg, aim for systolic pressure < 140 mm).
- Avoid NSAID, estrogen, Ginkgo biloba and Vitamin E in MCI.
- There is insufficient evidence to recommend cholinesterase inhibitors in MCI.

Maintain Function

- Arrange an individualized exercise program for patients with mild to moderate dementia.
- Behaviour modification.
- Scheduled routines, e.g. scheduled toileting and prompted voiding.
- Graded assistance, positive reinforcement.
- Structured environment.
- Anticipate onset of delirium in new environments (travel, hospitalization).
Identify Problem Behaviours

- Withdrawal, apathy, negativism.
- Physical aggressiveness.
- Verbal aggressiveness.
- Suspiciousness.
- Delusions and hallucinations.
- Wandering with agitation/aggression.
- Sexually inappropriate behaviour with agitation/aggression.
- Anxiousness, restlessness.
- Sadness, crying, anorexia.
- Benign aimless wandering.
- Inappropriate urination/defecation.
- Inappropriate dressing/undressing.
- Vocally repetitious behaviour.
- Hiding and hoarding.
- Eating inedible objects.
- Inappropriate isolation.
- Pushing around wheelchairs.
- Tugging and removing restraints (avoid restraints).

Treat Problem Behaviours

- Manage one problem at a time.
- Rule out medication side effects, occult medical disorder, environmental triggers.
- Find and control pain.
- Consider psychiatric diagnosis.
- Reassess medication if safety of patient or others at risk.
- Minimize polypharmacy. If must try a medication, start low, titrate gradually, watch for side effects, and taper off after 3 months to see if remains stable.
- Register in a “safe return program” if risk of wandering.
- Look for unintentional behaviour rewarding that can be eliminated.
- Modify environment (e.g. music, people, pets, wall colour, activity).
- Encourage walking and other light exercise.
- Remove ability to engage in conflict and dangerous behaviours.
- Eliminate provoking factors (e.g., urinary tract infection, certain staff interactions, unwanted routine events).
Treat Comorbidities and Complications

- Consider conditions that may worsen dementia, particularly hypertension, diabetes, depression.
- When patients with dementia experience symptoms from comorbid conditions, changes in behaviour may be the only signal they can provide.
- Screen for these often treatable conditions:
  - Mood problems, particularly depression and anxiety.
  - Medication effects.
  - Relationship problems.
  - Nutritional deficiencies.
  - Medication side effects.
  - Neurological deficits (motor, sensory).
  - Physical conditions that may be masked by the person’s dementia, e.g., urinary tract infections, constipation, skin lesions, painful musculoskeletal disorders, heart disease, and many more.
- Caregivers will need to supervise management of chronic conditions.

Referral Cue: Dementia clinic, geriatrician, psychiatrist, or home care nursing when behavioural problems are present and not readily managed.

Referral Cue: Dementia clinic, geriatrician, neurologist, internist or geriatric psychiatrist when comorbidities are difficult to distinguish or treat. Refer to mental health services for assistance with psychiatric comorbidities.

Medications

Principles

- Prescribe after trying non-pharmacologic interventions.
- Ensure patient’s prescription funding agency supports prescribed medication.
- Verify medications being consumed and identify compliance issues.
- Start medications in low doses, increase doses slowly and allow several weeks before deciding whether there is an effect at a given dose.
Consider contraindications and monitor for side effects.

Document response to medication trials.

Treatment

- Treat documented Vitamin B12 (cobalamin) and folate deficiencies.
- Depression:
  - Treat depression before starting a memory/cognitive enhancer.
  - Consider antidepressant if depression symptoms are present, non-pharmacologic measures are ineffective, and depression is significant.
  - Start with a selective serotonin reuptake inhibitor to minimize anticholinergic side effects, which may worsen cognitive deficits.
  - Continue trial for 2–3 months.

- Memory and cognitive impairment in dementia:
  - Cholinesterase inhibitors are modestly effective for mild to moderate Alzheimer’s Disease; consider contraindications and precautions.
  - Recall starting doses, titration regimens, contraindications, precautions and adverse effects of medications.
  - Trial 3-6 months and follow for effects on cognition and function using brief assessment tools and individualized problem targets, and for side effects.

- Aggression, agitation, psychosis or visual hallucinations in dementia: Review guidelines for limited use of low dose antipsychotics and alternatives.

- Insomnia:
  - Rule out contributing factors.
  - Use non-pharmacologic approaches first.
  - If required, consider limited short courses and lowest doses of short—intermediate—acting benzodiazepines.
Avoid or Caution

- Consider possibility that new problems are medication side effects.
- Avoid medications with anticholinergic effects.
- Use antipsychotic medication with caution, balancing potential benefit with risks of mortality and cerebrovascular incidents.
- Avoid neuroleptics in Dementia with Lewy Bodies (DLB): risk of worsening and mortality.
- Not recommended for dementia: high dose vitamin E (> 400 IU/day); vitamin B1, B6, B12 or folic acid if not deficient; anti-inflammatory for dementia symptoms; HMG-CA reductase enzyme inhibitor; hormone replacement therapy for cognitive impairment.

Referral Cue: Dementia clinic, neurologist, geriatrician, or geriatric psychiatrist to choose medications and assess response to medication when unclear.

Manage Social Issues

Social Issues to be Considered

Financial management: Assess capacity (see below), provide assistance and prepare for power of attorney.

Driving: Assess capacity, monitor and prepare for loss of driving.

Home care: Assess for need for yard and house maintenance, housekeeping and meal preparation.

Respite: Prepare for caregiver rest.

Placement: Prepare for loss of ability to live independently.

End of life issues: Will and resuscitation orders.

Referral Cue: Placement agency to plan for respite and long-term admission.

Referral Cue: Lawyer to assist with power of attorney, wills and other future legal matters. Legal issues vary significantly between provinces.
Assess Capacity

Family physicians may be expected to determine the capacity of a person with dementia to manage their finances, drive a car or live independently.

Capacity is the ability to …
- understand information necessary for a decision.
- understand risks and benefits associated with decision.
- use own value system to make appropriate decision.

Assess capacity to …
1. consent to care.
2. manage finances and a will.
3. live alone:
   - Able to understand they are being asked to describe what they need to live at home safely.
   - Able to understand the risk and benefits of accepting or rejecting required assistance.
   - Able to decide how they want to live and the consequences of their decisions.

Referral Cue: Dementia clinic, geriatrician, neurologist, or geriatric psychiatrist when capacity to live alone or manage finances is unclear.

Assess Capacity to Drive
- Ask patient and family about driving capability and history of accidents and near-misses.
- Mild dementia: Assess individually. Warn that loss of driving is inevitable. Reassess at least every 6–12 months.
- Driving contraindicated if unable to perform multiple independent activities of daily living (e.g. medications, banking, shopping), or any basic activity of daily living (e.g. hygiene, dressing).
- See the “Driving and Dementia Toolkit” in the Canadian Medical Association’s Determining Medical Fitness to Operate Motor Vehicles.
Driving competency may be difficult to determine in an office setting when dementia is not severe.

**Referral Cue:** Specialized health professional-based driving assessment when capacity to drive is not clear.

**Caregivers**

- Caregivers are an essential source of information for physicians and other members of the health care team.
- Caregivers need special attention:
  - Provide opportunities to ask questions and express needs.
  - Assess for stress and exhaustion.
  - Refer for education and support as required.
  - Caregiver support may delay institutionalization.

**Referral Cue:** Caregivers’ own physician or mental health referral if health is affected.

**Referral Cue:** Support organizations to allow patients and caregivers to find solutions to problems. Caregivers will need increasing assistance and training as dementia progresses.

**Manage Progression**

- Anticipate the progression that characterizes dementia.
- Follow patient regularly, establish schedule of visits.
- Regularly document progressive needs using the FAST-ACT tool or a similar measure of functional status.
- Obtain collateral information from family and caregivers.
- Plan ahead to the next phase of disability and loss of independence.
- Prepare family.
Prepare management options.
In severe dementia (total dependence on caregiver), reassess every 3 months: MMSE, medical status, behaviours, nutrition, safety and caregiver health.

**Referral Cue:** Dementia clinic, geriatrician, neurologist, or geriatric psychiatrist when progression, change in diagnosis or response to treatment is unclear.

**Referral Cue:** Support organizations to allow patients and caregivers to anticipate future problems and plan for solutions.

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**Dementia Requires a Team Approach**

Dementia is a challenge for patient, families, caregivers and doctors. Do not go it alone—be part of a team.

**Family Physicians and Veterans Affairs Canada**

Eligible clients of Veterans Affairs Canada may include still-serving and former members of the Regular and Reserve Canadian Forces, Royal Canadian Mounted Police, certain civilians who are entitled to benefits because of their wartime service, and family members who are survivors and dependents of military and civilian personnel. Clients may have access to case management, disability compensation or treatment benefits, depending on their eligibility.

Veterans Affairs Canada district office interdisciplinary client service teams welcome family physicians’ participation in client services. Depending on eligibility, Veterans Affairs Canada clients with dementia may have access to case management and various assessment or treatment services that may include nursing and occupational therapy assessments, medications, medical devices, home adaptations, mobility assistive devices, home care services and long-term care assistance. Treatment benefits may supplement but do not replace those provided by provincial agencies.
Communicating About Your Patient/Our Client

In order for Veterans Affairs Canada to consider a client’s request for various services and benefits, a client may be asked to submit a provider’s written prescription or report. Please complete Veterans Affairs Canada forms carefully, since written reports are important when client requests are assessed. Providers are encouraged to include additional information, as they see fit. There are several ways a health professional may contact a Veterans Affairs Canada interdisciplinary client services team regarding a patient who is a VAC client:

- Call the National Contact Center at 1-866-522-2122 (English) or 1-866-522–2022 (French). If your patient or client is a Veterans Affairs Canada client, it helps to provide their VAC Client Number, carried on their VAC client card.
- Send a referral letter to the Veterans Affairs Canada Interdisciplinary Client Services Team in the local District Office. The referral letter should contain these elements:
  - Reason for the referral, including types of assessment or services.
  - Indication that the Veteran has given consent for the referral.
  - Description of the problem.
  - Past medical history and medications.
  - Current treatment plans and names of other health care providers.
- Participate in Veterans Affairs Canada District Office Interdisciplinary Client Services Team case management.

More Information

Office screening tools:
- Mini Mental Status Examination (MMSE): www.parinc.com and search for MMSE.
- Montreal Cognitive Assessment (MoCA): www.mocatest.org
- FAST-ACT: MacDonald Connolly D, Pedlar D, MacKnight C, Lewis C,

Electronic copy of this Dementia Resource:
- An electronic version of this VAC Dementia Resource and a paper describing how it was developed are available on the VAC Web site at www.vac-acc.gc.ca.

Detailed guidelines from the 3rd Canadian Consensus Conference on Diagnosis and Treatment of Dementia:
- Visit www.cccdtd.ca and click on “Full Recommendations” for a list of all 142 recommendations, and “Articles” for the full text of the October 2007 issue of Alzheimer’s & Dementia.
- Visit www.cmaj.ca and search on “dementia” to find the series of papers that began in 2008.

Not a Guideline
This Dementia Resource is offered to family physicians and other health professionals who will decide individually whether it is useful in caring for patients with dementia, their families and caregivers. The tool is not a clinical practice guideline, does not define standard of care, does not replace clinical judgment and is not the only way to approach the diagnosis and management of dementia.
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