DEMENTIA: What Do You Do Once You've Made the Diagnosis?

Samir K. Sinha MD, DPhil, FRCPC
Peter and Shelagh Godsoe Chair in Geriatrics and
Director of Geriatrics, Mount Sinai and the University Health Network Hospitals

Assistant Professor of Medicine
University of Toronto and the Johns Hopkins University School of Medicine

Provincial Expert Lead
Ontario's Seniors Strategy

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Conflict of Interest Disclosures

None related to the contents of this presentation.

I prepared my own slides. I have no financial interest in any of the companies whose drugs may be mentioned.

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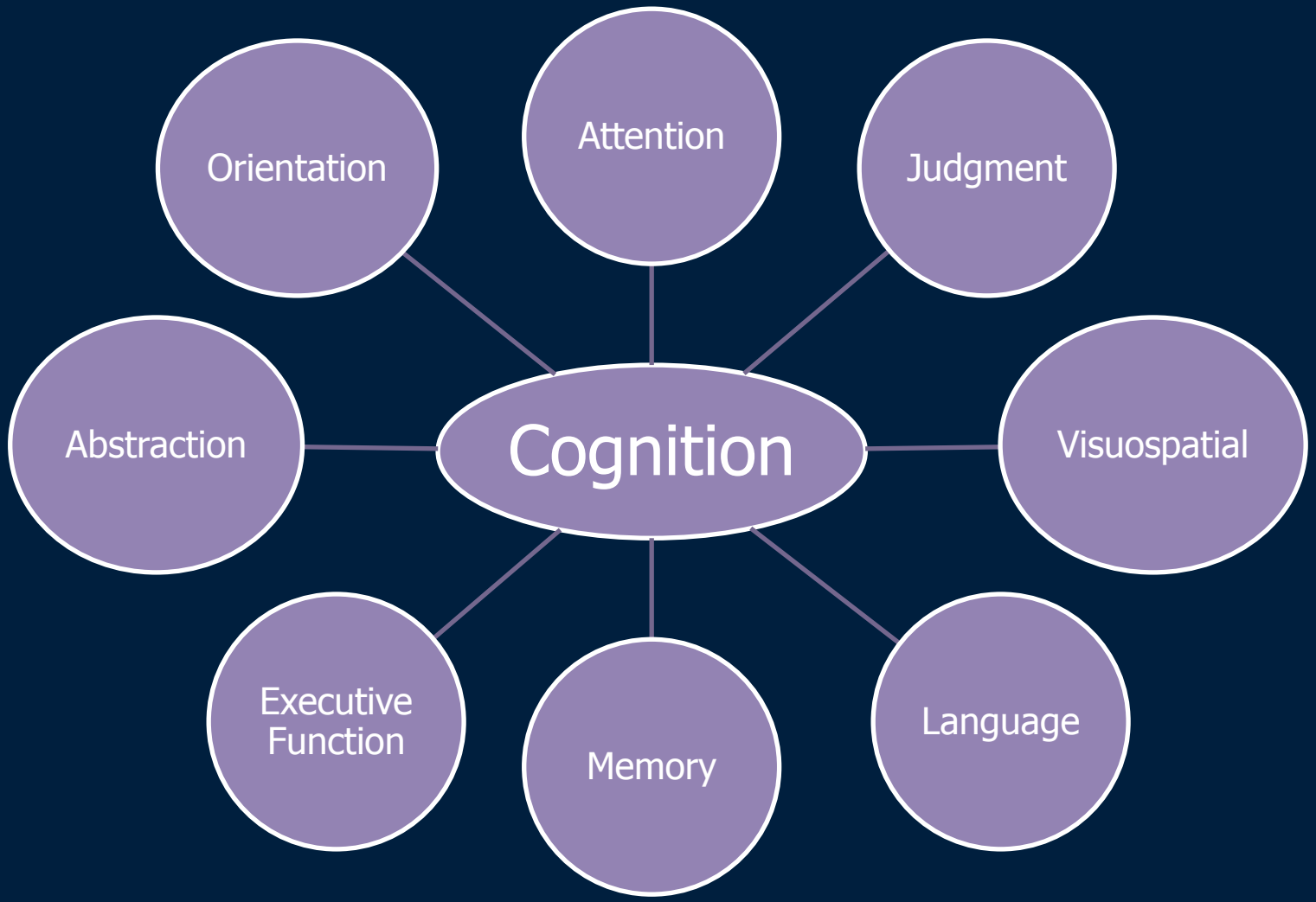
Presentation Objectives

1. Understand the Common Types of Cognitive Impairment and Dementia, their Staging and Features.

2. Review a Practical Framework to Discuss the Diagnosis, Prognosis, Goals of Care, Considerations for the Future and Driving in less than 10 Minutes with a Patient and their Family and Caregivers.

3. Introduce an Approach to Discuss Available Treatments for Dementia and BPSD Symptoms.

Cognitive Domains



Reversible Cognitive Impairment?

1. Severe Anemia
2. B12 Deficiency
3. Hypothyroidism
4. Anticholinergic Use (Detrol, Gravol etc.)
5. Acute Delirium
6. Cerebral Hypoperfusion (Aggressive HTN Mx)

- Allow at least 3-6 Months after a complete resolution of results or symptoms before reassessing to consider a diagnosis of dementia.

Defining Dementia

DIAGNOSTIC CRITERIA FOR DEMENTIA

1. Presence of acquired memory impairment associated with one or more cognitive domains
2. Cognitive impairment is severe enough to interfere with social/occupational function.

DIAGNOSTIC CRITERIA FOR MILD COGNITIVE IMPAIRMENT (MCI)

1. Presence of acquired memory impairment associated with one or more cognitive domains
2. Cognitive impairment doe **NOT** interfere with social/occupational function.

Defining Dementia

DEMENTIA SEVERITY IS BASED ON FUNCTIONAL STATUS

1. **MILD** – Minor IADL Impairments / ADLs Usually Intact
2. **MODERATE** – Major IADL and Minor ADL Impairments
3. **SEVERE** – Major IADL and ADL Impairments

IADLS INCLUDE:

Housework; Medications Management; Managing Money; Shopping; Using Transportation, Telephones and Technology

IADLS INCLUDE SELF CARE TASKS:

Transferring; Ambulating; Toileting, Bathing, Personal Hygeine, Dressing and Eating

Dementia Types

1. Alzheimer Disease
2. Vascular Dementia
3. Mixed Dementia
4. Frontotemporal Dementia
5. Dementia associated with Parkinson disease or with Lewy bodies
6. Other (HIV, CJD, NPH, etc.)

Alzheimer's Diseases

1. Dementia established clinically with cognitive testing
2. Progressive worsening memory and other cognitive domains
3. No disturbance of consciousness
4. Absence of systemic disorders / other brain diseases that could account for progressive cognitive decline
5. Supportive features: altered behaviour, family history
6. Less likely if sudden onset, focal neurological findings, early gait disturbance or early seizure

Vascular Dementia

KEY DIFFERENTIATING FACTORS

1. Typically stepwise or sudden onset, but can also progress insidiously
2. Dysexecutive syndrome (Cognitive/Emotional/Behavioural)
3. Focal neurologic findings early in disease course

Frontotemporal Dementia

KEY DIFFERENTIATING FACTORS

1. Younger age of onset than Alzheimer disease
2. Prominent behavioural changes (Classic FTD)
3. Prominent language impairment (Semantic Dementia)

Dementia with Parkinson's Disease or Lewy Bodies

KEY DIFFERENTIATING FACTORS

1. Extra-pyramidal symptoms like parkinsonism with gait instability and therefore falls
2. Visual hallucinations
3. Fluctuations in disease course
4. Neuroleptic hypersensitivity

- In DLB – Dementia Preceded Parkinsonian Features
- In Parkinson's Dementia – Dementia is Preceded by PD

To CT or NOT to CT: That is the Question.

Cranial computed tomography scanning is recommended if one or more of the following criteria are present:

– Age < 60 years
– Rapid (e.g., over 1–2 months) unexplained decline in cognition or function
– Short duration of dementia (< 2 years)
– Recent and significant head trauma
– Unexplained neurologic symptoms (e.g., new onset of severe headache or seizures)
– History of cancer (especially types that metastasize to the brain)
– Use of anticoagulants or history of bleeding disorder
– History of urinary incontinence and gait disorder early in the course of dementia (as may be found in normal pressure hydrocephalus)
– Any new localizing sign (e.g., hemiparesis or a Babinski reflex)
– Unusual or atypical cognitive symptoms or presentation (e.g., progressive aphasia)
– Gait disturbance

There is fair evidence to support the use of structural neuroimaging with computed tomography or magnetic resonance imaging to rule in concomitant cerebrovascular disease that can affect patient management.

Dementia Management

NON-PHARMALOGICAL APPROACH

1. State Diagnosis and Prognosis (What to Expect)
2. Start Goals of Care Discussions Early
   …a good offence is a great defense.
3. Establish Advance Directives, POAs etc.
4. Establish Links to Community Supports
   1. Alzheimer Society (First Link Program)
   2. Home Care (CCAC) Case Management and Services
   3. Community and Caregiver Support Services

Dementia Management

DRIVING IN DEMENTIA

1. Establish Driving Status and Determine if an Intervention is Required

ABSOLUTE CONTRAINDICATIONS

1. Severe Dementia
2. Inability, for cognitive reasons, to independently perform multiple IADLs or any basic ADLs
3. Lewy Body Dementia (with hallucinations and visuospatial impairment)
4. Frontotemporal Dementia, behavioural variant

Dementia Management

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Candrive.ca

No single brief cognitive test or combination of brief cognitive tests has sufficient sensitivity or specificity to be used as a sole determinant of driving ability.

10 MINUTE OFFICE BASED DEMENTIA AND DRIVING CHECKLIST

(Based on Clinical Opinion and Experience not Evidence. Development lead by and copyright held by Dr. W. Dalziel).

The checklist can take 10 minutes or less to complete as it is not necessary to complete all 10 items if it is obvious the patient is unsafe to drive based on early items.

PROBLEM

☐ 1. Dementia Type:
Generally Lewy Body dementia (fluctuations, hallucinations, visuospatial problems) and Frontotemporal dementias (if associated behaviour or judgment issues) are unsafe.

☐ 2. FUNCTIONAL IMPACT of the Dementia - According to *CMA guidelines* Unsafe if:
- impairment of more than 1 Instrumental ADLs due to cognition
(IADLs = SHAFT: Shopping, Housework/Hobbies, Accounting, Food, Telephone / Tools)
- OR impairment of 1 or more Personal ADLs due to cognition (PADLS = DEATH: Dressing, Eating, Ambulation, Transfers, Hygiene)

☐ 3. Family Concerns: (ask in a room separate from the person)
Family feels safe/unsafe (make sure family has recently been in the car with the person driving)
* The grand daughter question - Would you feel it was safe if a 5 year old grand daughter was in the car alone with the person driving (often different response from family's answer to previous question)
Generally if the family feels the person is unsafe they are unsafe. If the family feels the person is safe, the person may still be unsafe as family may be unaware or may be protecting patient.

☐ 4. Visuospatial: (intersecting pentagons/clock drawing numbers)
If major abnormalities – likely unsafe

☐ 5. Physical inability to operate a car (often a "physical" reason is better accepted):
Medical/Physical concerns such as musculoskeletal problems, weakness/multiple medical conditions (neck turn, problems in the use of steering wheel/pedals), cardiac/neurologic (episodic "spells")

☐ 6. Vision/Visual Fields:
Significant problems including visual acuity, field of vision.

☐ 7. Drugs: (if associated with side effects: drowsiness, slow reaction time, lack of focus)
Alcohol/Benzodiazepines/Narcotics/Neuroleptics/Sedatives
Anticholinergic–antiparkinsonian/muscle/relaxants/tricyclics/antihistamine(OTC)/antiemetics/antipruritics/antispasmodics/others

PROBLEM

☐ 8. Trailmaking A&B: (available at www.rgpeo.com)
Trailmaking A - Unsafe = > 2 minutes or 2 or more errors
Trailmaking B - Safe = < 2 minutes and < 2 errors (0 or 1 error)
Unsure = 2-3 minutes or 2 errors: (consider qualitative dynamic information regarding HOW the test was performed: slowness/hesitation/anxiety or panic attacks/impulsive or perseverative behaviour /lack of focus/multiple corrections/forgetting instructions/inability to understand test etc.)
Unsafe = > 3 minutes or 3 or more errors

☐ 9. Ruler Drop Reaction Time test (Accident Analysis & Prevention 2007; 39(5): 1056 – 1063): The bottom end of a 12" ruler is placed between thumb and index finger (1/2" apart) let go and person tries to catch ruler (normal = 6-9"/abnormal = 2 failed trials)

☐ 10. Judgement/Insight (Ask the person):
What would you do if you were driving and saw a ball roll out on the street ahead of you?
With your diagnosis of Dementia, do you think at some time you will need to stop driving?

CONCLUSION: Safe → Reassess 6-12/12 | Unsafe → Report to Provincial Registrar | Unsure → If only driving an issue – refer to Specialized On Road Assessment; If driving and other dementia related issues refer to specialized dementia assessment services.

MOT Form

It is a requirement that this be completed if a real concern around driving exists.

Medical Condition Report

Ontario

Section 203 of the Highway Traffic Act requires that all legally qualified medical practitioners must report to the Registrar of Motor Vehicles the name, address and clinical condition of any patient sixteen years of age or older who, *"is suffering from a medical condition that may make it dangerous for the person to operate a motor vehicle"*. To simplify the reporting process, the Ministry of Transportation has created this form. Mail or fax to: Registrar of Motor Vehicles, Medical Review Section, Ministry of Transportation, 2680 Keele Street, Downsview, ON M3M 3E6. Tel. No.: 416-235-1773 or 1-800-268-1481. Fax No.: 416-235-3400 or 1-800-304-7889.

Patient Information

Last Name | First Name | Middle Initial | Fee Schedule Code (K035)

Street No. and Name or Lot, Con. and Twp. | Apt. No.

City, Town or Village | Postal Code

Date of Birth (Y / M / D) | Male | Female | Driver's Licence No. (if available)

For your convenience, the following is a list of the more common medical conditions that are reported to MTO, to be marked with an "X". If the condition you are reporting is not listed, please indicate it in the section marked "Other".

- ☐ Alcohol Dependence
- ☐ Drug Dependence
- ☐ Seizure(s)-Cerebral
- ☐ Seizure(s)-Alcohol related
- ☐ Heart disease with Pre-syncope/Syncope/Arrhythmia
- ☐ Blackout or Loss of consciousness or Awareness
- ☐ Stroke/TIA or head injury with significant deficits
- ☐ Both Visual Acuity and Visual Field Impairment
- ☐ Visual Acuity Impairment
- ☐ Visual Field Impairment
- ☐ Diabetes or Hypoglycemia or other metabolic diseases-Uncontrolled
- ☐ Mental or Emotional Illness-Unstable
- ☐ Dementia or Alzheimer's
- ☐ Sleep Apnea-Uncontrolled
- ☐ Narcolepsy-Uncontrolled
- ☐ Motor Function/Ability Impaired
- ☐ Other (specify):_____

Optional

To expedite your patient's file, please provide further elaboration of clinical condition (if available) or attach as a separate report: Diagnosis; Other Relevant Clinical Information (i.e current status - including results of investigations, medication(s), treatment and prognosis); and whether or not the condition is a serious risk to road safety, threat to road safety is unknown or condition is temporary - weeks/months.

Date of examination upon which this report is based: (Y / M / D) | How long has this person been your patient? _____

- ☐ Patient is aware of this report.
- ☐ I wish to be notified if my patient requests a copy of this report, as releasing this report pursuant to a request under the Freedom of Information Act may threaten the health or safety of the patient or another individual.

For MTO Use Only 030

Physician's Last Name, First Name and Middle Initial

Street No. and Name or Lot, Conc. and Township | Apt. No.

City, Town or Village | Postal Code | Telephone. No.

☐ Family Physician ☐ Emergency Room Physician ☐ Specialist _____ (Specialty) ☐ Other _____

Doctor's Signature _____ **Date of Report** (Y / M / D)

Dementia Management

PHARMACOLOGICAL Mx: CHOLINESTERASE INHIBITORS

	Donepezil	Galantamine	Rivastigmine
Trade Name	Aricept	Reminyl ER	Exelon
Starting Dose	5 mg po od	8 mg po od	1.5 mg po bid
Optimal Dose	10 mg po od	24 mg po od	6 mg po bid
Other Features			available as a patch

1. Cochrane Meta-Analysis results showed a 2.7 point improvement in the ADAS-Cog (70 Point Scale) in treated Alzheimer's Disease .
2. 4 point improvement is considered clinically significant).
3. NNT – 7-12 (Stabilization, Cognitive Improvement)

Dementia Management

CHOLINESTERASE INHIBITORS: SIDE EFFECT PROFILE

- Nausea (5-47%),
- Diarrhea (6-19%),
- Vomiting (3-31%),
- Anorexia (3-17%)
- Headache (3-17%)
- Fatigue (3-8%)
- AbN dreams/Insomnia (5-14%)
- Dizziness (2-21%)
- Muscle Cramps (3-8%)
- Syncope (2-10%)

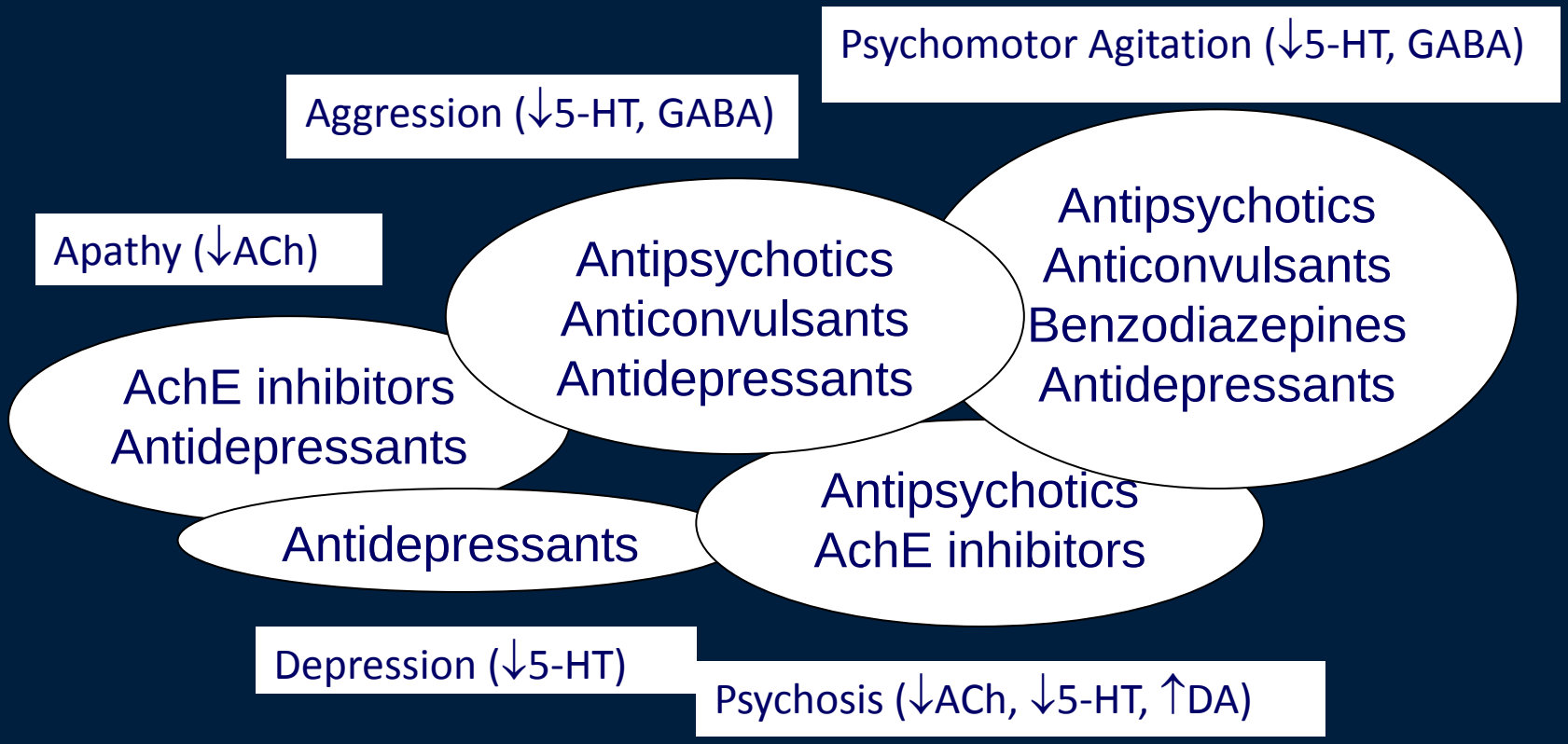
Dementia Management

BEHAVIOURAL AND PSYCHIATRIC SYMPTOMS

Symptoms Which Respond to Behavioural Approach	Symptoms Which MAY Respond to Pharmacological Intervention
Wandering	Depression
Pacing	Apathy
Repetitive Questioning	Paranoid and Delusional Ideation
Inappropriate Defecation/Urination	Hallucinations
Inappropriate Undressing	Aggression
Repetitive Vocalization	Sleep-Rhythm Disturbance
Hiding/Hoarding	Anxiety
Eating Unedibles	

Dementia Management

BEHAVIOURAL AND PSYCHIATRIC SYMPTOMS



BPSD Management

RISKS ASSOCIATED WITH ANTISPYCHOTICS

1. Death OR 1.7
2. Cerebrovascular Event OR 3.6
3. Extrapyramidal Symptoms OR 1.8
4. Somnolence OR 2.4
5. Falls OR 2.4

Tapering and discontinuation should be tried at least q 3months or whenever a new baseline is established.

BPSD Management

IF MEDICATING…START LOW AND GO SLOW

TYPICALS ARE FINE IN THE SHORT TERM

1. **Atypicals are no more effective than Typicals**
2. **If long-term use or high doses use Atypicals**
3. Match Dosing with Timing of Symptoms!
    1. ie qhs prn 0.5 mg Haldol or 12.5 mg Quetiapine **for night time agitation**
    2. **ie. bid standing** 0.5 mg Haldol or 12.5 mg Quetiapine for consistent agitation

Tapering and discontinuation should be tried at least q 3months or whenever a new baseline is established.

When and Who to Consult

GERIATRIC MEDICINE / NEUROLOGY

- If unsure of the diagnosis, or there are atypical features, or a complex interplay of health and social care issues

GERIATRIC PSYCHAITRY

- If significant BPSD Issues that need a more tailored approach to their management.

SOCIAL WORK / HOME CARE CASE MANAGER

- To provide support for the Patient and Caregiver around decision making and understanding the community supports available.

Question 1

Are Cognitive Enhancing Medications Effective in Treating Mild Cognitive Impairment?

A. Yes
B. No
C. Maybe

Question 2

Does a Diagnosis of Dementia Mean a Person Should Have their License Suspended?

A. Always
B. No
C. In Specific Cases

Question 3

The Side Effect Profile is Quite Minimal with Acetylcholinesterase Inhibitors.

A. **True**
B. **False**

Question 4

The Evidence Tell Us That It Is Best to Withhold the Diagnosis of Dementia From A Patient to Prevent Worse Outcome.

A. True
B. False

Questions?

Samir K. Sinha MD, DPhil, FRCPC
Director of Geriatrics
Mount Sinai and the University Health Network Hospitals

416-586-4800 x7859
ssinha@mtsinai.on.ca