

ABSTRACT

General Practitioners (GPs) play an important role in early detection and initiation of the diagnostic process of dementia. A consideration of barriers and enablers of this process can aid the diagnostic process. Early referral for Specialist evaluation is an important step. The GP can also provide additional advice and support to the patient and caregiver during diagnosis.

Keywords: barriers, enablers, educational needs, early referral

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INTRODUCTION

Early diagnosis of dementia and the General Practitioner (GP) in Singapore are inextricably linked. As the first point of reference in the community, the GPs are in the vanguard of early detection of dementia and have considerable influence on the subsequent diagnostic process and clinical care that the person with dementia (PWD) receives. Post-GP consult however, it is likely that a proportion of patients in the community with cognitive and/or neuropsychiatric complaints do not get referred to a tertiary centre for evaluation of these complaints. A World Alzheimer Report commissioned by Alzheimer's Disease International in 2011 on the benefits of early diagnosis and intervention estimated that only 20-50% of cases of dementia were routinely recognised and documented in primary care case note records.¹ A systematic review published in 2009 to ascertain the prevalence and contributing factors for missed and delayed dementia diagnoses among primary care physicians revealed that sensitivity of providers' diagnoses appeared to be strongly related to dementia severity.² In the review, for patients with few or mild symptoms of dementia, primary care providers' diagnostic sensitivity ranged from 0.09 to 0.41. In contrast, for patients with "severe" dementia, overall sensitivity was 0.26 to 0.69.

The importance of early diagnosis

From the patient's perspective, it is important to note that the cause of his/her cognitive complaints may not be due to dementia. Non-dementia states include Mild Cognitive Impairment (MCI) (an at risk pre-dementia stage),³ subjective cognitive impairment (SCI) or age associated memory impairment (AAMI). Oftentimes, it provides much reassurance and relief to the patient and their family members that the patient does not have dementia

(yet) after a thorough evaluation. In addition, non-dementia states provide opportunities to promote healthy brain ageing interventions through cognitive activity, cognitive stimulation and regular cognitive surveillance. Cognitive impairment may also be due to organ illness, nutritional deficiencies or other undetected illnesses; giving further reasons on the need for early thorough evaluation of cognitive complaints. Other important elements and benefits of early diagnosis with reference to the patient, family or caregiver, general practitioner, healthcare policy makers and socioeconomic savings are summarised in Table 1. In addition, through early diagnosis, studies have shown that collaborative care between primary care doctors, specialists and community care providers can improve quality of care, reduce behavioural symptoms, increase access to community services and reduce caregiver stress and depression.^{4,5}

BARRIERS TO EARLY DIAGNOSIS

Having considered the benefits of early detection and early evaluation of cognitive complaints, it is then important to consider the barriers to this process in the primary care setting. Factors to consider include (1) Time constraints (2) Heterogeneity of clinical presentation (3) Lack of corroborative history (3) Patient/caregiver factors (4) Healthcare provider factors.

Regarding health provider factors, in a survey of Australian family carers, general practitioners were perceived as the most helpful health professional but yet, paradoxically, were the recipient of most of the complaints about lack of diagnosis, management and information.⁶ A subsequent survey of Australian GPs found that they were not making a diagnosis because of insufficient knowledge, lack of time, lack of suitable screening tools for assessing memory complaints, uncertainty of management and lacked of confidence.⁷

A systematic review² in 2009 of publications related to factors contributing to missed or delayed diagnosis of dementia in the primary care setting classified healthcare provider factors into the following:

(1) Demographics

One study showed that younger providers outperformed older physicians on a test of dementia knowledge, although older physicians had greater confidence in their ability to diagnose dementia.⁸

(2) Educational needs

The review demonstrated that lack of education about dementia was a real concern. Targetted training needs included: (a) lack of knowledge about what changes are "normal" in aging, (b) perceived difficulty in detecting

TABLE 1. THE BENEFITS AND IMPORTANCE OF EARLY DIAGNOSIS OF DEMENTIA

Patient	<ul style="list-style-type: none"> • It may not be dementia! • The right to a dignified diagnosis¹ • Early care planning including healthcare preferences (advance care planning), legal, financial, living arrangements, spiritual and other needs as deemed important to the patient. • Appointment of lasting power of attorney (donee) under the Mental Capacity Act, Singapore (2008)(if able to make decisions). • Lifestyle changes including adjustments at work and driving. • Detection and treatment of reversible causes of cognitive impairment e.g. depression, delirium, organ disease, hypothyroidism, B12 deficiency, anemia etc. Drug induced causes of cognitive impairment e.g. postural hypotension would also be included in this category and a review of medications would be essential. • Management of behavioural and psychological changes related to dementia. • Management of comorbid conditions e.g. DM, hypertension, coronary artery and stroke disease etc • Improved quality of care and life. • Cognitive engagement and rehabilitation programmes. • Early enrolment and utilization of community services e.g. dementia care programmes and dementia care centres. • Early pharmacological treatment (as appropriate) to slow cognitive decline. • Participation in clinical trials for disease modifying therapies (if suitable).
Family / Caregiver	<ul style="list-style-type: none"> • Relief and understanding that cognitive complaints are due to dementia and not due to any other disease. • Management of comorbid conditions including vascular risk factors. • Caregiver education. • Care planning. • Management of behavioural and psychological symptoms. • Person centred interventions. • Support and interventions to reduce caregiver stress, depression and burden.
General Practitioner	<ul style="list-style-type: none"> • Clarity of diagnosis. • Participation in collaborative care with Specialist Physician and community care providers in management of dementia and comorbid conditions.
Healthcare Policy makers	<ul style="list-style-type: none"> • Enables forward planning in allocation of healthcare resources to persons with dementia (PWD) and the caregivers.
Socioeconomic savings	<ul style="list-style-type: none"> • In high income countries, the costs of high quality dementia diagnosis and early intervention are more than likely offset by projected future savings from delayed institutionalization¹ • Greater cost effectiveness through improved health and quality of life of carers and PWD¹

and/or managing dementia, (c) perception that specialists rather than primary care providers were more appropriate for making the diagnosis.

(3) Concern about consequences of misdiagnosing of dementia

The review remarked that physicians were presumably reluctant to make a diagnosis because of concerns of the negative impact on patient and family; hence diagnosis was deferred till they were more certain.

(4) Attitudes towards dementia

Concerns cited included potential stigmatization from the diagnosis, doubts about usefulness or desirability of early diagnosis, perception of limited treatment options, unwillingness of physician to discuss cognitive function with patient or caregivers, low prioritisation of cognitive problems relative to physical health problems and avoidance of pressure for intervention once diagnosis was made. Primary care physicians also expressed concerns of formally giving the diagnosis and being responsible for the care of patients with dementia with consequent strain of resources of their practices.

(5) Testing for dementia

Barriers cited included physicians' discomfort in administering assessment instruments and reluctance to seek specialty consultation or referrals.

(6) Communication problems

Issues included perceived difficulty in disclosure or explanation of diagnosis, language barriers, poor communication skills and providers' difficulty in discussing or explaining dementia specifically.

ENABLERS OF EARLY DIAGNOSIS

Can the barriers to early diagnosis be overcome? What then are the enablers of early detection and subsequent diagnosis of dementia in the primary care setting? Useful enablers⁹ in our local setting include:

(1) Time

The use of multiple short office visits is advocated. In a time limited setting, obtaining and re-visiting complaints over several short visits would be practical and useful. As cognitive complaints can be varied, multiple visits over time

can enable the GP to obtain better and consistent picture of the cognitive symptoms. The GP would also be less pressured to obtain a sweeping cognitive history in one visit.

(2) Family member (and/or foreign domestic helper [FDH]) corroboration of activities of daily living (ADL) and investigation of memory problem

Oftentimes, the primary family caregiver may not be present at the first visit and another family member or foreign domestic helper is present. At other times, the patient may present alone in the clinic. In such office encounters, it is important to identify the family caregiver who is familiar with the patients. Such a person may not be the principal decision maker but the familiarity with PWD and observations of the symptoms displayed by the patient would be crucial. The family caregiver can then be asked to come to the GP's clinic at the next visit whereby corroborative history can be obtained. This also emphasises the utility of multiple visits to glean the cognitive history. If the FDH is present, use the opportunity to enquire about the patient through her observations. Not uncommonly, the FDH can be the only person most familiar with the behaviour, habits and function of the patient; and thus becomes a very valuable source of information. If the FDH is not present, one can ask the family to bring her/him along at the next clinic visit.

(3) Other staff reporting

Observations by the clinic staff can be useful in providing further information of the patient while waiting to see the doctors. Repeated visits would also enable the staff to be familiar with the patient and caregiver.

(4) Use of assessment tools

Short screening tools such as the locally validated abbreviated mental test¹⁰ (AMT) (performed by doctor) or 8-item Ascertain Dementia tool^{11,12} (AD8) (informant or self rated) can be used in the GP clinic. These are short and do not take more than 5-7 min to use. Screening for depression should also be done.

(5) Initial laboratory investigations

At the primary care level, haematological and biochemical investigations including full blood count, renal panel (with calcium, magnesium and phosphate), liver function, vitamin B12, folate and thyroid function. HIV and syphilitic serology can also be done if appropriate. These will reduce the investigational process at the Memory Clinic when the patient is referred to the tertiary centres.

(6) Use of guidelines

The clinical practice guidelines on dementia is published and updated every 5 years. The recent edition has been published in April 2013 and available at the Ministry of Health, Singapore website.¹³

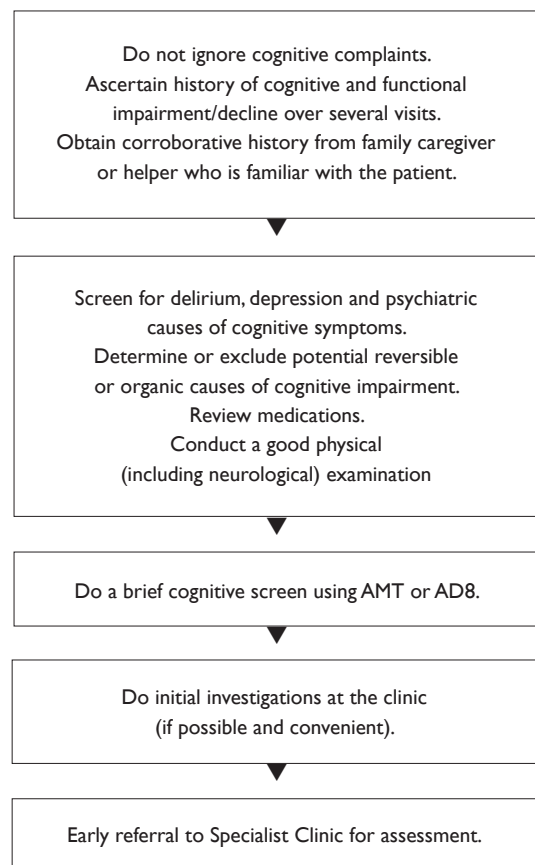
http://www.moh.gov.sg/content/moh_web/healthprofessionalsportal/doctors/guidelines/cpg_medical/2013/cpgmed_dementia_revised.html

(7) Early referral to Specialist Clinics for assessment and intervention

Early referrals can be made to any neurology, psychiatry or geriatric medicine clinic specialising in assessment of cognitive complaints or disorders especially there is strong clinical suspicion or there is significant caregiver stress, burden or depression.

A WORKFLOW PROCESS FOR INITIAL EVALUATION OF COGNITIVE COMPLAINTS AND EARLY REFERRAL AT THE GP CLINIC

A practical guide on the steps taken to assess cognitive complaints in the primary care setting is as follows:



ADDITIONAL TIPS FOR GPs

- Inform the patient and caregiver that the evaluation and diagnostic process at the Specialist will entail several steps over several visits including cognitive assessment, blood investigations (if not done), brain imaging and neuropsychological assessment (if deemed necessary by the Specialist). This will enable patients and caregivers to be mentally prepared.

- Encourage the patient and caregiver to attend the Specialist appointment as delays would not be beneficial and prolong the diagnostic process.
- Cognitive engagement and stimulation. If a neurodegenerative process is highly suspected, then helping the patient cognitively would be useful. Use of memory aids e.g. diaries, note books, Sudoku, IPAD games/calendars can be suggested. Making the home elder friendly would also be useful.
- For the caregiver, early referral to community services such as Alzheimer's Disease Association (ADA) (Singapore) would be useful to help relieving caregiver stress and burden.
- For families with foreign domestic helpers, enquiring on their welfare and stress in caring for the PWD would be important as they can be the silent sufferers while doing the physical caregiving. Referral to agencies for training of helpers in dementia care can also be initiated. This would also help the FDH understand the disease and perhaps be more empowered and motivated to help the PWD. A list of agencies can be found on the ADA website (www.alz.org.sg)
- Use of remote teletechnology. The use of web-based cameras (webcams) has increased over the years and family caregivers who stay away from the PWD have used them to help monitor the safety and movement of their loved one at home. They can also be used as a visual check on medication taking and hence ensure compliance. Other assistive technology devices such as bed fall detectors, motion sensor lights can also be considered to help with home safety. Certain tracking technologies for those who wander can also be purchased commercially.
- If unsure, one can always call the Specialist Doctor or Specialty Nurse Clinician (Dementia) at the hospitals for advice.

CONCLUSION

As the number of PWD increases in rapidly ageing Singapore, early detection and diagnosis of dementia is crucial step in helping the patient, caregiver and physician understand and manage the disease. Early person-centred and caregiver interventions can be initiated thereby improving the quality of care and reducing caregiver stress, depression and burden. For those in the early stages of disease, it is also important for them to realise that life does not stop after the diagnosis and there is much to live for. The GP, being at the forefront, will continue to play a pivotal role in initiating this process in the years ahead.

REFERENCES

1. Alzheimer's Disease International World Alzheimer Report 2011. The benefits of early diagnosis and intervention. <http://www.alz.co.uk/research/WorldAlzheimerReport2011.pdf>
2. Bradford A, Kunik ME, Schulz P, Williams SP, Singh H. Missed and delayed diagnosis of dementia in primary care: prevalence and contributing factors. *Alzheimer Dis Assoc Disord* 2009;23:306-14.
3. Petersen RC, Smith GE, Waring SC, Ivnik RJ, Tangalos EG, Kokmen E. Mild cognitive impairment: clinical characterization and outcome. *Arch Neurol* 1999; 56(3):303-8.
4. Callahan CM, Boustani MA, Unverzagt FW, Austrom MG, Damush TM, Perkins AJ, et al. Effectiveness of collaborative care for older adults with Alzheimer disease in primary care: a randomized controlled trial. *JAMA* 2006;295:2148-57.
5. Reuben DB, Roth CP, Frank JC, Hirsch SH, Katz D, McCreath H, et al. Assessing care of vulnerable elders—Alzheimer's disease: a pilot study of a practice redesign intervention to improve the quality of dementia care. *J Am Geriatr Soc* 2010;58:324-9.
5. Code of Practice of the Mental Capacity Act 2008. <http://www.opg.gov.sg/Portals/0/Guides/COP%20guide.pdf>
6. Brodaty H, Griffin D, Hadzi-Pavlovic D. A survey of dementia carers: doctors' communications, problem behaviours and institutional care. *Australian and New Zealand Journal of Psychiatry* 1990;24(3):362-70.
7. Brodaty H, Howarth G, Mant A, Kurrle S.E. General practice and dementia: A national survey of Australian GPs. *Medical Journal of Australia*, 1994;160:10-4.
8. Rubin SM, Glasser ML, Werckle MA. The examination of physicians' awareness of dementing disorders. *J Am Geriatr Soc* 1987 December;35(12):1051-8. [PubMed: 3680837]
9. Family physicians and dementia in Canada: Part 2. Understanding the challenges of dementia care Nicholas JG, Pimlott, Malini Persaud, Neil Drummond, Carole A. Cohen, James L. Silvius, Karen Seigel, Gary R. Hollingworth, William B. Dalziel. *Can Fam Physician*. 2009 May;55(5):508-9.e7.
10. Sahadevan, Lim PPJ, Tan NJL, Chan SP. Diagnostic performance of two mental status tests in the older Chinese: influence of education and age on cut-off values. *Int J Geriatr Psychiatry* 2000; 15: 234-41.
11. Dong Y, Pang WS, Lim LB, Yang YH, Morris JC, Hilal S, Venketasubramanian N, Chen CL. The informant AD8 is superior to participant AD8 in detecting cognitive impairment in a memory clinic setting. *J Alzheimers Dis*. 2013 Jan 1;35(1):159-68. doi: 10.3233/JAD-122026.
12. Chin R, Ng A, Narasimhalu K, Kandiah N. Utility of the AD8 as a Self-Rating Tool for Cognitive Impairment in an Asian Population. *Am J Alzheimers Dis Other Dement*. 2013 May; 28(3):284-8. Epub 2013 Mar 14.
13. http://www.moh.gov.sg/content/moh_web/healthprofessionalsportal/doctors/guidelines/cpg_medical/2013/cpgmed_dementia_revised.html.

LEARNING POINTS

- **Early detection and evaluation of cognitive complaints in the GP clinic are important in the diagnosis of early dementia.**
- **While there are barriers to early diagnosis at the GP clinic, there are enablers which can help overcome these difficulties.**
- **GP can provide much advice and support to the patient and caregiver early in the diagnostic process.**