

The Chinese University of Hong Kong The Nethersole School of Nursing CADENZA Training Programme

CTP 004 – Evidence-based Practice for Dementia Care

Web-based Course
Module II

for Professional Social and Health Care Workers



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Chapter 2

Chapter 2: Functional assessment for older people with dementia

Content

- Common functional impairments of people with dementia
- Stages of functional loss of people with dementia
- The aims of functional assessment for people with dementia
- Functional assessment of people with dementia
 - Barthel Index
 - IADL scale

The definition of dementia

- A syndrome characterised by cognitive and non-cognitive symptoms.

(Ballard et al., 2001)

- The significant loss of intellectual abilities such as memory capacity, severe enough to interfere with social or occupational functioning.

MedicineNet (2011)

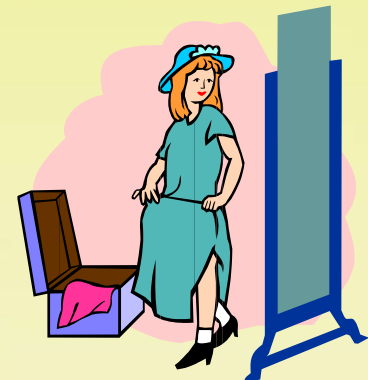
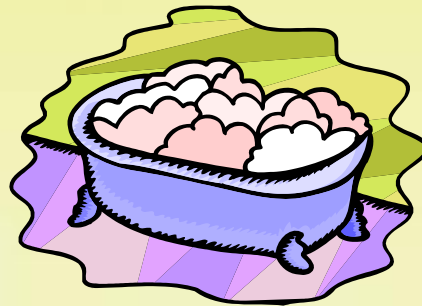
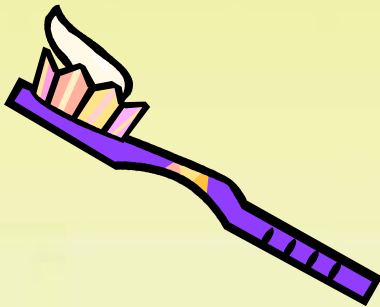
Dementia is...

- Symptoms of dementia include cognitive (intellectual), functional and psychiatric (behavioural) aspects.
- Cognitive symptoms include intellectual deficits such as amnesia or aphasia.
- Functional impairments include inability to perform common activities of daily living (ADL).
- Psychiatric symptoms include behavioural and psychological symptoms of dementia.



Activities of Daily Living (ADL)

- ADL consists of
 - basic ADL: self-maintenance skills, such as feeding and bathing
 - instrumental ADL (IADL): the complex higher order skills, such as food preparation and handling finances



Can we use functional assessment in detecting dementia?

Functional Assessment

- When cognition impairment (e.g., memory, language, calculation) is becoming more severe, the functional performance of patients will be also affected.
- Thus, the assessment of function is an essential aspect of an assessment for dementia.

(Rockwood & MacKnight , 2001)



Functional Assessment in Detecting Dementia

- Juva (1996) studied the use of different functional scales in detecting dementia in a population study.
- Four functional scales were included in the study:
 - the index of activities of daily living (Barthel Index)
 - the modified Blessed dementia scale (DS)
 - the instrumental activities of daily living scale (IADL)
 - the Functional Assessment Questionnaire (FAQ)

(Juva, 1996)

Functional Assessment in Detecting Dementia

- Juva (1996) revealed that functional scales can be used in detecting dementia when functional assessment is already used for other purposes, such as among older patients.
- Functional assessment is also recommended to establish a diagnosis of dementia.

(Juva, 1996)

**Can we use functional
assessment in
defining the stage of
dementia?**

Stage of Dementia

- ‘Stages of dementia’ refer to how far a person's dementia has progressed.
- Defining the stage of dementia can determine the most appropriated treatment approach and aid the communication between health providers and caregivers.

Dementia Care Central (2010)



Progression

Communication

Stages of Dementia

- Reisberg (2002) suggested that some common patterns of functional performance correlate to the symptom progression.
- The functional assessment scales reflect the patterns of behaviours that are found at different stages of dementia.
- These staging systems provide guidelines and a reference for understanding the progression of the disease and the prognosis.

(Reisberg et al., 2002)

Stages of Dementia

- The most commonly used staging scale is the ***Global Deterioration Scale for Assessment of Primary Degenerative Dementia (GDS)***.
- *GDS* has divided the process of dementia into seven stages according to the amount of cognitive decline and functional performance.
- For Alzheimer's disease, *GDS* is most relevant for people as some other types of dementia (i.e., fronto-temporal dementia) may not include memory loss.

Stages of Dementia

- Functional assessment of individuals with dementia is essential to define the stage of dementia as well as the treatment, care plan and the continuity of care.
- Periodical functional assessment can provide information on the disease progression.

You can assess the following link to read the seven stages of GDS
([Dementia Central Care, 2010](http://www.dementiacarecentral.com/node/540))

<http://www.dementiacarecentral.com/node/540>

Dementia Assessment

Dementia Assessment

- Apart from cognitive assessment, functional assessment and defining the stage of dementia, the assessment of dementia patients should include:
 - a clinical history
 - physical examination
 - neurological examination
 - mental status examination
 - laboratory finding

Dementia Assessment

- The health care professional should understand the most common cognitive loss diseases among older people so as to avoid any confusion with symptoms of dementia.

Ageing

- Cognition

¹ Dementia

Dementia Assessment

- It is necessary to start with a detailed clinical history to determine the accurate features of cognitive loss.
- Some older people neglect their memory problems as they attribute them to memory dysfunction in old age.

Dementia Assessment

- Health care professionals should record the occurrence and duration of symptoms.
- The clinical history also provides evidence for cognitive loss when inquiring about activities of daily living such as bathing, grooming.

Functional Assessment

- Barthel Index (BI)
- Instrumental Activities of Daily Living Scale (IADL)

Aims of Functional Assessment

- The information derived from observed behaviours in functional assessment reflect areas of cognitive impairment.
- These assessments are administered in two ways:
 - observation of functional performance
 - interview with client and caregiver
- These assessments and scales are essential tools for healthcare professionals in determining the level of impairment.

Barthel Index

Barthel Index

- Bathel Index (BI) is a common and a reliable functional assessment tool for the activities of daily living.
- The Barthel Index is a quick objective measurement tool for assessing a person's mobility and ability to perform daily self care tasks.
- The index is useful in not only revealing the present disability of the patient but also estimating the capability of extension as well as determining when a patient will begin to need help.

Barthel Index

- Barthel Index was originally developed for use only during inpatient hospitalisation and rehabilitation.
- This tool is used extensively in other clinical settings.
- The Barthel Index is easy to use and the information can be derived from patient interviews and other parties if the patient's cognition is incapable of self-report, for example the patient's relatives.

(Juva et al., 1996)

Barthel Index

- Barthel Index should be applied periodically to monitor the disease progression and also revise the treatment plan.
- It aims to measure the degree of independence from any help, physical or verbal, however minor and for whatever reason.
- The Index should be used as a record of what a patient is currently doing, not as a record of what a patient is able to do.

(Juva et al., 1996)

Guidelines

- Barthel Index contains a total of 10 items to be scored. The scoring system provides 0, 1 and 2. Usually the higher the score, the higher the independence.
- For each item, select the score that most closely correlates to the patient's current level of ability.
- Patients needing supervision should not be considered independent.

(Collin et al., 1988)

Guidelines

- Usually, it is important to record the performance in the preceding 24-48 hours, but longer periods will still be relevant in occasional situations.
- Unconscious patients should score '0' throughout, even if not yet incontinent.
- Use of aids to complete the task independently is allowed.

(Collin et al., 1988)

Ten Items in Barthel Index

Click here for details

(Sansoni J. et al., 2010)

[http://www.health.gov.au/internet/main/publishing.nsf/Content/B806570749DC1C79CA2572FB001D6366/\\$File/ECRG%20Final%20Report.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/B806570749DC1C79CA2572FB001D6366/$File/ECRG%20Final%20Report.pdf)

Barthel Index

Scoring:

- Sum the patient's score for each item. Total possible scores range from 0-20.
- The lower the score, the higher the disability.
- If used to measure improvement after rehabilitation, changes of more than two points in the total score reflect a probable genuine change, and change on one item from fully dependent to independent is also likely to be reliable.

(Collin et al., 1988)

Instrumental Activity of Daily Living Scale

Instrumental Activities of Daily Living scale (IADL)

- The Lawton IADL was originally developed to assess the complex ADL necessary for living in the community. (Lawton & Brody, 1969)
- The IADL is currently used: (Cromwell et al., 2003)
 - to assess the activities related to independent functioning in eight compound activities
 - to evaluate objectively the ability to perform these functions
 - to assess the level of assistance required by patient for each activity

Instrumental Activities of Daily Living Scale (IADL)

- The result of IADL assessment can also be used to indicate the services needed by the patient.
- The more a patient's abilities are impaired, the more the services will be necessary to maintain that patient in the community.

(Cromwell et al., 2003)

Instrumental Activities of Daily Living (IADL)

- The IADL scale is a tool to facilitate the formulation, implementation and evaluation of treatment plans.
- It is especially useful for older people in the community and provides information about a patient's needs regarding supporting services. The information can be obtained by both the patient and caregiver.

(Lawton & Brody, 1969)

Guidelines

- Choose the scoring point for the statement that most closely correlates to the patient's current functional ability for each task.
- The assessor should complete the scale based on information about the patient obtained from the patient him/herself, caregiver or relative, and other health records.

(Lawton & Brody, 1969)

Eight Components in Instrumental Activities of Daily Living

Click here for details

The Lawton and Brody IADL Scale is available
freely online at
<http://www.abramsoncenter.org/PRI/scales.htm>

Instrumental Activities of Daily Living (IADL)

Remarks

- The IADLs may be affected by a patient's cultural and family background. For instance, some older people may never expect to do laundry.
- Therefore, it is essential to assess an individual's potential ability to complete a task if required rather than to determine whether the individual is currently doing it.

Instrumental Activities of Daily Living (IADL)

Scoring

- The patient obtains a score of 0 to 1 for each item. The total score may range from 0-8. A lower score indicates a higher level of dependence.

Conclusion

- The assessment of ADL abilities of cognitively impaired patients can predict caregiver burden and psychological distress, with informant-based measures having the greatest association with patient impairment.
- Functional assessment is also important for the healthcare professional to offer counselling in response to safety issues and caring needs.

Conclusion

- Informant- and observation-based ADL tests should be administered to patients with dementia whenever possible.
- Caregivers' own feelings of burden may affect their subjective ratings of the patient's abilities.

Conclusion

- If a patient is incapable of performing some IADLs, assistance will be needed in areas such as shopping, meal preparation.
- If caregiver support is not enough and the patient becomes at risk, a change in the current situation, such as a move to assisted living or a nursing home, may be necessary.

End

References

- Ballard, C.G., O'Brien, J., James, I. & Swann, A. (2001) *Dementia: management of behavioural and psychological symptoms*. New York: Oxford University Press.
- Collin, C., Wade, D.T., Davies, S., Horne, V. (1988). The Barthel ADL Index: a reliability study. *International Disability Studies*, 10(2), 61-6.
- Cromwell, D.A., Eagar, K., Poulos, R.G. (2003). The performance of instrumental activities of daily living scale in screening for cognitive impairment in elderly community residents. *Journal of Clinical Epidemiology*. 56(2), 131-137.
- Juva, K., Makela, M., Erkinjuntti, T., Sulkava, R., Yukoski, R., Valvanne, J. & Tilvis, R. (1996) Functional assessment scales in detecting dementia. *Oxford Journals: Age and Ageing*. 26(5), 393-400.

References

- Lawton, M.P., & Brody, E.M. (1969). Assessment of older people: self-maintaining and instrumental activities of daily living. *Gerontologist*. 9(3),179-186.
- Medicine Net (2011). *Dementia* . Retrieved May 19, 2011, from <http://www.medicinenet.com/dementia/article.htm>
- Sansoni J., Marosszeky N., Fleming G. & Sansoni E (2010) Selecting tools for ACAT assessment: a report for the expert clinical reference group, aged care assessment program, department of health and aging. Centre for Health Service Development, University of Wollongong, Australian Government Department of Health and Aging, Canberra. [http://www.health.gov.au/internet/main/publishing.nsf/Content/B806570749DC1C79CA2572FB001D6366/\\$File/ECRG%20Final%20Report.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/B806570749DC1C79CA2572FB001D6366/$File/ECRG%20Final%20Report.pdf)

References

- Reisberg, B., Franssen, E.H., Souren, L.E.M., Auer, S.R., Akram, I., & Kenowsky, S. (2002). Evidence and mechanisms of Retrogenesis in Alzheimer's and other dementias: management and treatment Import. *American Journal Alzheimer's Disease & Other Dementias*,17(4),202-212.
- Reisberg, B., Ferris, S.H., De Leon, M.J. & Crook, T.(1982) The Global Deterioration Scale for assessment of primary degenerative dementia. *American Journal of Psychiatry*. 139(9),1136-1139.
- Rockwood, K. & MacKnight,C. (2001). *Understanding Dementia: A Primer of Diagnosis and Management*. Retrieved from Dementia Guide :http://www.dementiaguide.com/aboutdementia/understanding/impaired_function/
- Dementia Care Central (2010).Stage of Dementia. Retrieved from 19 May, 2011, from <http://www.dementiacarecentral.com/node/540>