

In this article...

- Why it is crucial to assess the functional aspects of older people's health
- Tools and tests to measure physical and cognitive function in older people
- Interventions used to improve or maintain function and independence

Assessment of older people 3: assessing the functional domain

Key points

Function is one of five key health domains to cover when assessing older people

Older people's function is assessed based on their ability to undertake activities of daily living (ADLs)

There are several tools using ADLs to assess function

Aspects involved in assessing function are the risk of falls, cognition and nutrition

Functional assessment needs to be ongoing, multidisciplinary and holistic

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Abstract Many older people experience a gradual loss of ability to perform activities of daily living, which reveals a decline in function. The functional domain is, therefore, one of the five key domains that need to be explored when assessing the health of older people (the other four being physical, psychological, social and spiritual domains). This third article in a six-part series explains why function is such an important aspect of health, describes tools used to assess it and explores interventions used to maintain or improve it. Ongoing, multidisciplinary and holistic assessment of function allows health professionals to draw up care plans tailored to the individual person's needs.

Citation Kendall N, Wiltjer H (2019) Assessment of older people 3: assessing the functional domain. *Nursing Times* [online]; 115: 7, 52-55.

The assessment of an older person should cover, as a minimum, the five main domains of health, which include the functional domain. Functional health can be defined as the ability to perform self-care activities such as bathing, dressing, using the toilet, grooming and feeding oneself – known as the activities of daily living (ADLs) (Roper et al, 2000). This article, the third in a six-part series on the assessment of older people describes key aspects of the assessment of functional health, suggests useful tools, tests and interventions, and highlights the need for a comprehensive and multidisciplinary approach.

Age and function

As people age, their ability to perform ADLs may progressively decline. This can be due to a number of factors including:

- Poorer physical condition;
- Diminished cognitive function;
- Changes in social circumstances – such as the death of a partner, or siblings or children moving away – that increase a

person's risk of social isolation or reduce their support networks;

- Environmental changes, such as a move into residential or nursing care, that reduce independence and increase dependence on others (Bonder and Dal Bello-Haas, 2018).

To age well, people must be resilient, disease free and retain good function well into older age (DiPietro, 2012). Coulter et al (2013) pointed out that long-term conditions (LTCs) can bring about physical decline and, therefore, negatively affect function. However, LTCs do not inevitably lead to functional decline, especially if they are managed effectively using health promotion, care management and self-care interventions (Meerabeau and Wright, 2011).

A continuous process

The functional health of older people needs to be assessed at regular intervals, as functional decline is both gradual and variable – not only between people, but also for one person. Thorough assessment followed by any interventions needed will

help the person maintain function and continue to live independently, thereby avoiding admission to a care setting.

The assessment of function needs to be complemented by an evaluation of the individual's needs and the process has to be continuous, so health professionals can gauge the effectiveness of interventions and modify care plans accordingly (Walker Seaback, 2013). Such an approach will increase the individual's confidence and self-esteem, especially after rehabilitation (Department of Health, 2001).

For functional assessment to be patient oriented, health professionals need a thorough understanding of objective and subjective data. Understanding the impact of disease and physical factors will help them recognise functional decline, while understanding a person's wishes will help them provide interventions tailored to the individual, thereby encouraging adherence with the care plan (Dougherty and Lister, 2011). To gather information about the patient, health professionals need effective communication skills (Kourkouta and Papatheanasiou, 2014), especially as functional decline itself can be a barrier to communication (Dougherty and Lister, 2011). Interventions to increase function need to be set at an achievable level (Bonder and Dal Bello-Haas, 2018). There are limits to what can be achieved, especially in the presence of frailty.

Frailty can be defined as a reduction in function that negatively affects health outcomes but the exact definition is unclear; there is no single tool that can determine frailty (Shears et al, 2017). The British Geriatrics Society's (2014) guidance on the assessment of older people living with frailty in community and outpatient settings suggests a multidimensional, interdisciplinary approach that accounts for an individual's functional, psychological and social status. The aim is to maintain or increase independence, especially in the presence of reversible medical conditions.

Assessment tools

Function is usually assessed based on the ability to carry out ADLs (Holland et al, 2008; Roper et al, 2000). The ADLs model, which is based on the Roper-Logan-Tierney Model for Nursing, uses 12 areas to assess the ability to function (Holland et al, 2008; Roper et al, 2000). Using the ADLs model ensures a comprehensive approach, as it takes into account the individual's capability across the lifespan.

Another tool commonly used to assess function is the Barthel Index (Martinson

Box 1. Gordon's 11 functional health patterns

- Health perception/health management
- Nutritional/metabolic
- Elimination
- Activity/exercise
- Cognitive/perceptual
- Sleep/rest
- Self-perception/self-concept
- Role/relationship
- Sexuality/reproductive
- Coping/stress tolerance
- Value/belief

Source: Adapted from Gordon (1994)

“Robust and ongoing assessment of both physical and cognitive function in older people is essential”

and Eksborg, 2006; Mahoney and Barthel, 1965), which features 10 items covering ADLs. Scalzitti (2013) suggested the Barthel Index – which has become known as the Functional Independence Measure (Gupta and Rehman, 2008) – is a reliable assessment tool leading to interventions that support independence. It is widely used in rehabilitation centres.

The Instrumental Activities of Daily Living (IADL) Scale, developed by Lawton in 1969 (Lawton and Brody, 1969), assesses the functional level of the person in the community and includes activities such as shopping, cooking, transport and dealing with finances. Even though it is quite old, it is still widely used (Loretz, 2005).

Gordon's 11 functional health patterns (Box 1) is another comprehensive, systematic method of assessing function. Dougherty and Lister (2011) recommended this method because it looks at the individual's perceived level of fitness and ability, and relates it to the observation of any presenting symptoms.

Risk of falls

Older people are at increased risk of falls and hip fracture leading to hospitalisation, which may start a vicious cycle of declining health, loss of function and loss of independence. As such, assessing falls risk is an essential component of the functional assessment. It is extensively covered by national guidance and local policy.

Health professionals carrying out a falls assessment need sufficient knowledge to assess the individual's risk of falls and

recommend interventions likely to reduce it (National Institute for Health and Care Excellence, 2013). Interventions can include referral to a falls-prevention team and prescription of equipment, such as low beds, step detectors and crash mats.

Bonder and Dal Bello-Haas (2018) have identified that people who are at risk of falls usually have some decline in cognitive and physical function. Older people who have a diagnosed LTC, cognitive dysfunction and visual impairment are more likely to fall. When assessing the risk of falls, it is essential to explore the modifiable risk factors relevant to the individual (Bonder and Dal Bello-Haas, 2018).

To reduce the risk of falls associated with visual impairment, eyesight should be routinely assessed. Windsor and Dix (2017) highlighted that eyesight checks are essential for hospital patients at risk of falls. The *Look out! Bedside Vision Check for Falls Prevention* tool (Royal College of Physicians, 2017) can be used to conduct a quick bedside visual assessment.

Medication is another factor that can have a detrimental effect on function. Many common drugs, such as antihypertensives and antidepressants, have been linked to an increased risk of falls (Park et al, 2015). Part 2 of this series discusses how to conduct medication reviews.

Cognition

Function relates not only to physical ability but also to cognition. There is an assumption that cognitive function declines with age, but evidence shows there is no difference in cognitive function in older and younger age groups – in all age groups, there is evidence of fluctuation (Schmiedek et al, 2013). It is essential to determine an individual's baseline cognition, then re-assess them regularly. Various tools can be used for that, including the mini-cog assessment (Borson et al, 2000), which has been shown to effectively identify not only cognitive impairment, but also delirium (Capezuti et al, 2008).

Another commonly used tool is the Mini Mental State Examination, which evaluates cognitive functioning. However, it does not provide a holistic picture of the person's cognitive needs, so should not be used as the sole method of assessment (Arevalo-Rodriguez et al, 2015). An alternative is the Montreal Cognitive Assessment tool, which is particularly helpful in assessing people with vascular dementia. However, it does not give a definitive diagnosis and should be used in conjunction with other methods (Nasreddine et al, 2005).

Box 2. Reflection exercise: functional domain assessment in hospital

James Fuller* is 80 years old and has Parkinson's disease. He lives at home with his wife Martha, who supports him. He takes his medication as prescribed and normally manages to wash and dress independently. At home, he moves around using furniture to support him, and when he is out he uses a stick.

Over the past few weeks, his condition has deteriorated, especially in terms of mobility. This morning, he fell in the kitchen while making a hot drink and scalded his left hand. He has been admitted to the accident and emergency department and you have been asked to dress his wound. You notice he has a tremor he is unable to control.

- What are the physical symptoms of Parkinson's disease?
- What impact may the condition have on Mr Fuller's psychological, social and physical wellbeing?
- What could be the concerns in Mr Fuller's case and how would you address them?
- What needs to feature in a tailored care plan that will ensure his safe discharge?
- Who should be involved in assessing and supporting Mr Fuller?

*The patient's name has been changed

People with reduced cognition may need to be given more time and/or extra support to consider their options and make decisions (Meiner, 2015). Dementia and other conditions that negatively affect cognition need to be taken into consideration (Moody, 2005). If health professionals suspect a person may lack mental capacity, they need to conduct a mental capacity assessment (Department for Constitutional Affairs, 2007). Cognition will be further explored in part 4.

Nutrition

Approximately 10% of adults aged >65 years are malnourished, while 25-34% of people admitted to hospital and around 14% of people living in sheltered housing are at risk of malnutrition (BAPEN, 2018; European Nutrition for Health Alliance, 2006). It is essential to monitor the nutritional status of older people, as there is a link between nutritional status and functional decline (Sugiura et al, 2016).

Nutritional status is rarely monitored and more frequent monitoring could significantly improve function in older people (Gärtner et al, 2017). NICE's (2012) quality standard on nutrition support in adults suggests assessment should include monitoring body mass index using a tool such as the Malnutrition Universal Screening Tool (Bit.ly/MUST-tool) (see part 2).

Miles et al (2016) identified a link between ageing and vitamin B12 deficiency, while Wong (2015) showed that there is an increased prevalence of vitamin B12 deficiency in older adults, often with no presenting symptoms. Vitamin B12 deficiency can result in pernicious anaemia, a chronic condition for which

there is no cure but which can be medically managed if detected early (Frazier and Drzymkowski, 2016). A reliable nutrition screening tool should be used in older people; NICE (2012) suggested nutrition screening should be part of patient assessment in general practice. Part 2 in this series discussed how to assess and improve nutritional status in older people.

Environment

To ensure older people can function to their full capacity, their environment needs to be adapted to maximise their independence while keeping them safe (Bonder and Dal Bello-Haas, 2018). A holistic view of the environment is essential and should look beyond trip hazards and equipment to include the type of

accommodation and the support available in the home setting (Barker, 2013).

Available support is a key factor, as people who have less social interaction are at increased risk of reduced function and disease (Cotterell et al, 2018). Modifying the environment to reduce an individual's risk of falls requires a multidisciplinary approach that considers not only the surroundings, but also the cognition and function (including fine motor) of the individual (Bonder and Dal Bello-Haas, 2018).

Exercise and rehabilitation

Often, what hinders people's mobility as they age is not their risk of falling but their fear of falling (Bonder and Dal Bello-Haas, 2018). To alleviate such fears and encourage mobility, a behavioural and/or cognitive approach should be taken as well as the environment being modified. Exercise can improve posture, balance and gait, providing it is appropriate to the person's condition and abilities.

Older people may benefit from strength training to improve functional capacity and reverse age-related loss of muscle mass, while endurance training may improve their stamina and cardiovascular function (Goodman and Fuller, 2011). Touhy and Jett (2018) have suggested that, when planning exercise regimens for an older person, a screening tool is used to determine a regimen that is appropriate.

A lack of self-efficacy can result in functional decline, especially if the person is afraid of falling and/or experiences pain (NICE, 2015; Age UK, 2011). A rehabilitation programme can reduce that decline; as

Box 3. Reflection exercise: functional domain assessment in the community

Eleanor Thomson* is 72 years old and is waiting to be discharged from hospital, where she was admitted after a stroke. She has been referred to the community stroke rehabilitation team. You are a nurse on that team and, together with a physiotherapist, are assessing Ms Thomson to plan how she can manage at home, where she lives alone.

The referral indicates that Ms Thomson would benefit from a six-week rehabilitation programme. Currently, she can only be moved by two people using a turn table (one such table has been ordered for her home before she was discharged). She has a slight weakness in the left arm and leg. Her cognitive function is intact and she is able to communicate well.

- What impact could Ms Thomson's condition have on her physical, social and psychological wellbeing?
- What questions would you ask Ms Thomson regarding physical problems?
- What other issues and factors would you need to consider?
- Which tools or tests would you incorporate in your assessment?
- Which members of the multidisciplinary team would Ms Thomson benefit from seeing?
- What would you need to include in a moving and handling care plan for Ms Thomson?

*The patient's name has been changed

Clinical Practice Review

Box 4. Questions to assess the functional health of older people

- Have you had any slips, trips or falls in the past year?
- How do you normally move around the house?
- Who usually prepares your meals? Are you able to use a knife, fork and spoon?
- When you go out, do you need someone to come along with you?
- Do you have continence problems? When are they most likely to occur?
- Do you have family or carer support?
- Are you able to wash and dress yourself? If not, who helps you and what do they help you with?
- Do you have problems with short-term and/or long-term memory?

well as increasing physical functioning, good rehabilitation also improves cognition and boosts self-esteem (DH, 2001).

Conclusion

Robust and ongoing assessment of both physical and cognitive function in older people is essential, as is the tailoring of care plans and interventions to the individual. Boxes 2 and 3 offer reflective exercises on functional health assessment in hospital and in the community. Box 4 lists questions nurses can use to assess function.

When assessing the functional health of an older person, a holistic and multidisciplinary approach is needed. Nurses will deal with some aspects themselves, but their role will also be to refer patients to other members of the multidisciplinary team, such as physiotherapists (for falls risk assessment), occupational therapists (for environmental assessment), dietitians (for specialist nutrition advice), and so on.

Functional health is interlinked with all other domains of health, so when assessing an older person it is necessary to assess all domains of health with a view to provide holistic care. Part 4 of this series will focus on the psychological domain. **NT**

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