Assessment of the Geriatric Patient: A Practical Approach

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With the aging of the U.S. population, physicians are treating more persons aged 65 years and older in their practices. Many of these persons have limitations in their overall health and functioning as a result of physical, mental, or socioeconomic problems. Comprehensive geriatric assessment is a method of screening for and diagnosing physical and psychosocial impairment and functional disabilities in older persons. Such assessments are made in order to develop a comprehensive plan for prevention, treatment, and rehabilitation. The value of comprehensive geriatric assessment has been evaluated in inpatient, outpatient, and home settings and among programs that provide primary or consultative care. These studies have demonstrated that certain types of geriatric assessment programs can reduce mortality, are associated with a higher likelihood of living at home, and improve patients’ physical and cognitive functional status [1].

The domains that typically comprise the comprehensive evaluation of an older person include not only the traditional history and physical examination but also assessments of cognition and affect, functional status (ie, basic, instrumental, and advanced activities of daily living), the presence and extent of social support, economic status, safety of home environment, advance directives, and health-promoting and disease-preventing behaviors and activities. The benefits of comprehensive assessment notwithstanding, when examining elderly patients it may seem impossible to identify and attend to the multiple problems that adversely affect their health and functioning. However, a variety of methods may be used to evaluate older patients efficiently without reducing the quality of care provided. In the following sections, we describe several brief screening and evaluation strategies to facilitate efficient assessment of the geriatric patient.

Prescreening

Older patients should be instructed to bring their medical records to the first visit as well as all the medications (both prescription and nonprescription) that they use. In addition, they can complete previsit questionnaires targeted to older persons. If they do not receive the questionnaire prior to the visit, they may start completing it while in the waiting room. The screening questionnaire may include the usual information collected as part of a standard initial office visit (ie, reason for visit, past medical history, social history, and so on); however, to fully evaluate older persons, it is important to ask questions specifically about factors that commonly affect health and functioning (Table 1). The screening questionnaire should include a question indicating who completed it.

Functional Assessment by Observation

Much may be learned about patients by simply observing them during the visit. For example, if someone other than the patient fills out the questionnaire, it may be a clue that the patient has some limitation in reading, writing, and/or comprehending. Such limitations may be due to problems with vision (eg, macular degeneration), manual dexterity (eg, arthritis or stroke), or cognition (eg, dementia or drug toxicity). During the interview, the clinician may observe whether the patient can see, hear, walk normally, and get on the examining table without assistance. The clinician may observe if the patient is well groomed (eg, Are clothes clean? Does the patient smell of urine or body odor? Is the patient shaved or is his or her hair groomed? Does he or she have reasonable dentition?). Being poorly groomed may also indicate problems with vision, physical function, or cognition. Finally, in speaking with the patient, the clinician may observe whether he or she is able to give detailed replies to questions (ie, lower likelihood of dementia) and has a normal affect (eg, is not slowed or agitated).

Targeting and Prioritizing the Assessment

The clinician may save time by targeting the evaluation of an older person to specific problems and concerns noted in the prescreening questionnaire and observed during the visit. Certain aspects of the physical examination should be included in the assessment of older patients because hearing, vision, gait and balance, mood, memory, skin, and urinary continence impairments are prevalent in this group. By not specifically asking about these impairments, the clinician can...
miss them during routine examinations. Patients may not report them because they may not recognize that these symptoms are indicative of medical problems (e.g., falls), because they are embarrassed to mention them (e.g., incontinence), or because they believe that their symptoms are normal aspects of aging that cannot be helped (e.g., hearing loss).

**Utilizing Brief Screening Measures**

Most older persons do not need an extensive evaluation at the time of initial assessment or consultation. Clinicians may employ brief screening measures for conditions commonly seen in older persons and perform a more comprehensive evaluation in those patients who have potential problems identified by the screening. It is important to be sure the screening measures are accurate (e.g., have reasonable sensitivity and specificity) and reliable (e.g., high inter-rater or test-retest reliability). Many instruments may be either self-administered or administered by a nonphysician office staff member. In the following section, we describe the rationale for screening for particular impairments and the instruments that can be used to screen for them in busy clinical settings (Table 2).

**Vision Loss**

More than 90% of older persons wear eyeglasses, and more than 20% of persons older than age 85 years have difficulty seeing even when they wear glasses. The 4 most common causes of visual impairment in the elderly are age-related macular degeneration, cataracts, diabetic retinopathy, and glaucoma. Although most older persons see eye care specialists, it is important to assess their visual acuity and ascertain whether they have any limitations in their daily activities because of vision loss. The gold standard for visual acuity is the wall-mounted Snellen eye chart. Patients are asked to read a series of letters of varying sizes at a distance of 20 feet. A hand-held version, the Jaeger eye card, is used similarly but at a distance of 14 inches. Patients unable to read the 20/40 line are considered to have visual impairment. A number of self-reported instruments have been developed to measure the functional impact of decreased vision. The Activities of Daily Vision scale (32 items), the Visual Function 14 (14 items), and the National Eye Institute Visual Function Questionnaire (51 items) all measure patients’ perceptions of visual impairment [2–4]. However, none of these self-report instruments is used commonly in primary care practice. Based on questions from the Activities of Daily Vision scale, we developed a single question to assess the impact of vision loss on functioning: “Do you have difficulty driving or watching television, or reading, or doing any of your daily activities because of your eyesight?” If the patient wears corrective lenses, add “Even while wearing your glasses?” [5].
Persons with reduced visual acuity may be referred to an eye care specialist (if they do not already see one or if the vision loss is new). Persons who report difficulties in functioning as a result of their vision may be referred to low vision services for assistive devices to improve their functioning, such as clocks that announce the time and magnification devices.

**Hearing Loss**

Hearing impairment is common among the elderly, with prevalence rates of 23%, 33%, and 48% in those aged 65 to 74 years, 75 to 85 years, and 85 years and older, respectively. The most common cause of hearing loss among older persons is presbycusis, or high-frequency sensorineural hearing loss. Hearing loss can cause declines in functional status, social isolation, and depression. Amplification with binaural hearing aids improves the quality of life of elderly patients with presbycusis.

Both performance-based and self-reported measurements are used to evaluate hearing loss. The whispered voice test is a performance-based test that has been shown to have adequate sensitivity and specificity to be used for screening [5]. To perform the whispered voice test, the examiner asks the patient to repeat a series of 3 to 6 random words (numbers, words, or letters). Then the examiner stands out of sight, occludes one of the patient’s ears, and whispers one of the words at a distance of 12 inches from the patient’s unoccluded ear. Patients pass the screen if they are able to correctly repeat at least 50% of the whispered words [6]. Another performance-based instrument

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**Table 2. Brief Measures for Geriatric Assessment**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Instrument</th>
<th>Estimated Administration Time, min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>Snellen eye chart</td>
<td>1–2</td>
</tr>
<tr>
<td></td>
<td>Jaeger card</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Do you have difficulty driving, watching television, reading, or doing any of your daily activities because of your eyesight? Even while wearing glasses?</em></td>
<td>1</td>
</tr>
<tr>
<td>Hearing</td>
<td>Whispered voice test</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Welch-Allyn audioscope</td>
<td>1–2</td>
</tr>
<tr>
<td></td>
<td>Hearing Handicap Inventory for the Elderly–Screening Version</td>
<td>2</td>
</tr>
<tr>
<td>Dementia</td>
<td>Recall of 3 items</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Clock-drawing test</td>
<td>1–2</td>
</tr>
<tr>
<td></td>
<td>Serial-7s test</td>
<td>1–3</td>
</tr>
<tr>
<td></td>
<td>Time and change test</td>
<td>1–2</td>
</tr>
<tr>
<td></td>
<td>Mini-Mental State Examination</td>
<td>5–10</td>
</tr>
<tr>
<td>Depression</td>
<td>Geriatric Depression Scale (5-item version)</td>
<td>1–2</td>
</tr>
<tr>
<td></td>
<td><em>Do you feel worthless the way you are now?</em></td>
<td></td>
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<tr>
<td></td>
<td><em>Do you often get bored?</em></td>
<td></td>
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<tr>
<td></td>
<td><em>Do you often feel helpless?</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Are you basically satisfied with your life?</em></td>
<td></td>
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<tr>
<td></td>
<td><em>Do you prefer to stay at home rather than going out and doing new things?</em></td>
<td></td>
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<tr>
<td></td>
<td>Geriatric Depression Scale (15-item version)</td>
<td>5</td>
</tr>
<tr>
<td>Urinary incontinence</td>
<td><em>In the last year, have you ever lost your urine and gotten wet?</em></td>
<td>&lt; 1</td>
</tr>
<tr>
<td></td>
<td><em>Have you lost urine on at least 6 separate days?</em></td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Mobility</td>
<td><em>During the past 12 months, have you fallen all the way to the ground or fallen and hit something like a chair or a stair?</em></td>
<td>&lt; 1</td>
</tr>
<tr>
<td></td>
<td>Timed up and go test</td>
<td>1–2</td>
</tr>
<tr>
<td></td>
<td>Functional reach</td>
<td>&lt; 1</td>
</tr>
<tr>
<td></td>
<td>Performance-Oriented Assessment of Mobility</td>
<td>1–2</td>
</tr>
<tr>
<td>Function</td>
<td>Katz Index of Independence in ADL Scale</td>
<td>1–5</td>
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<tr>
<td></td>
<td>Older Americans Resources and Services Multidimensional Function Assessment Questionnaire</td>
<td>1–5</td>
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<tr>
<td></td>
<td>Hierarchical Scale of Physical Function</td>
<td>5</td>
</tr>
</tbody>
</table>

ADL = activities of daily living.
Dementia is the most common cause of cognitive impairment in older persons. Its incidence increases with age, with approximately 5% to 10% of those older than 65 years and 15% to 47% of those older than 85 years having some degree of dementia. Therefore, the yield of screening for cognitive impairment increases as the population ages. Because its initial manifestations are subtle, dementia can be overlooked even by experienced clinicians. Early detection of cognitive impairment has many benefits. Families get time to plan for the anticipated increase in care that their affected relatives will require. Further, a number of behavioral and pharmacologic interventions have been shown to improve patients’ cognition, behavior, and function and to delay placement in nursing homes for patients with moderate Alzheimer’s disease [9,10].

Four very brief screens can predict the presence of dementia [11–13]: recall of 3 items test, the clock-drawing test, the serial-7s test, and the time and change test. In the recall of 3 items test, the examiner asks the patient to repeat the names of 3 items and then remember them [14]. After 1 minute, the examiner asks the patient to recall the 3 items. Patients who cannot remember at least 2 items are more likely to be cognitively impaired. In the clock-drawing test, the patient is asked to draw a clock and place the hands at a specified position [15,16]. This test evaluates visual-spatial construction, abstract conceptualization, and numeric and verbal memory. In the serial-7s test, the examiner asks the patient to subtract 7 from 100 five times [17]. In the time and change test, patients are shown a clock and asked to tell what time is depicted. They are also given 3 quarters, 7 dimes, and 7 nickels and asked to count out 1 dollar. The instrument’s sensitivity is improved by adding a timed cutoff point; taking longer than 3 seconds to correctly identify the time or taking longer than 10 seconds to correctly count change indicates the need for further cognitive evaluation [13]. If these screening measures are abnormal, the clinician may follow them with the Mini-Mental State Examination (MMSE) [14]. This widely used measure to identify cognitive impairment takes 5 to 10 minutes to complete. It assesses a number of cognitive domains: orientation, registration, attention, calculation, language, recall, and visual-spatial orientation.

Depression
More than 10% of community-dwelling elderly have symptoms of depression that cause them to have difficulty performing their daily routines [18]. Major risk factors for depression among ambulatory older persons include chronic illness, having experienced a functional or cognitive decline, multiple unexplained somatic complaints, having experienced or perceived a recent loss, personal or family history of depression, and suffering from sleep disorders. Because many depressed patients respond to pharmacotherapy, psychotherapy, or both, it is important to identify depressed elders and prescribe adequate treatment. The Geriatric Depression Scale (GDS) is a self- or interviewer-administered screening questionnaire that has been validated in a 5-, 15- and 30-item form [19–21]. Compared to depression scales developed for younger persons, the GDS does not rely heavily on the presence of somatic symptoms because older persons have a high incidence of comorbid medical disorders, which may make somatic symptoms less useful in identifying depression. Also in contrast to other scales, the GDS asks questions about cognitive impairment because depressed older persons may complain of cognitive impairment more often than younger persons.

Urinary Incontinence
Urinary incontinence affects 10% to 30% of community-dwelling elderly adults. The prevalence of weekly or more frequent urine loss is 3% to 11% in this group. Affected persons are predisposed to perineal rashes, pressure ulcers, lower extremity cellulitis, urinary tract infections, and falls; in addition, they frequently feel embarrassed, isolated, stigmatized, and depressed due to incontinence. Many interventions to cure or improve urinary incontinence are available.

A validated screen for incontinence consists of 2 questions: (1) “In the last year, have you ever lost your urine and gotten wet?” and (2) “Have you lost urine on at least 6 separate days?” Positive answers to both questions indicate a potential problem with urinary incontinence [22,23].

Problems with Gait and Balance
Disorders of gait and balance affect 15% to 20% of elderly community-dwelling persons. Approximately 20% of persons aged 75 years and older require help from a person or an assistive device to transfer out of a chair. Each year, one third of community-dwelling elderly persons aged 75 years and older...
Functional Limitations

Functional status has been defined as “a person’s ability to perform tasks and fulfill social roles associated with daily living across a broad range of complexity” [28]. Assessing functional limitations in older persons may be useful for detecting disease and dysfunction, selecting appropriate treatments or other interventions, and evaluating the effects of these interventions. Three levels of function are typically evaluated in older persons: basic activities of daily living (BADL) [29], instrumental activities of daily living (IADL) [30], and advanced activities of daily living (AADL) [31]. Almost 13% of community-dwelling elderly have deficits in 1 or more BADLs. These are the tasks that people must perform in order to provide basic self-care. Katz describes 6 such activities: bathing, dressing, feeding, toilet activities, transferring, and continence [29].

Approximately 25% of community-dwelling elderly have at least 1 impairment of the IADLs. These are the tasks that people must perform in order to manage an independent household, such as managing finances, cooking, cleaning, shopping, driving or using public transportation, using the telephone, and taking medication. If individuals are unable to perform tasks at this level, they will require an assisted living facility, in-home support, or community resources.

Anywhere between 10% and 70% of community-dwelling elderly have AADL disabilities. These activities represent the highest level of functional tasks and include working, traveling, and attending church. Completion of these activities requires the successful integration of multiple lesser tasks. Thus, activities at this level may be the first to be affected by changes in health condition.

The ADLs tend to follow a hierarchical pattern. Thus, clinicians can efficiently assess functional status by inquiring about the most complex levels first. The Hierarchical Scale of Physical Function uses this approach to measure functional status [32].

Using Guidelines and Patient Education Materials

Many guidelines and patient education materials regarding treatment of common conditions in older persons (eg, falls, incontinence, dementia, hearing loss, and others) are now available in print formats or via the internet. Having this information available for reference may increase the efficiency with which the clinician can further assess and address disorders such as Alzheimer’s disease, presbycusis, and urinary incontinence. Consumer-targeted guidelines and educational materials may also be distributed to patients and their families and/or caregivers to improve their understanding of, and therefore adherence to, recommendations. Further, if the clinician regularly prescribes certain medications (eg, oxybutynin for urge incontinence) or behavioral interventions (eg, balance exercises for gait and balance problems), he or she may save time by having preprinted instructions available for patients.

Summary

It is possible to assess older patients, including those with multiple complaints, efficiently and effectively in office practice. The specific methods one chooses to use in assessing these patients depend on the individual practice setting, the staff available, and the patient population. Developing a previsit questionnaire that may include selected self-administered screening measures, using office staff to conduct parts of the assessment, screening only selected patients (eg, those who have difficulty with IADLs may be screened for problems with
memory), and having preprinted guidelines as reference and instructions for patients may all save time while improving quality of care for older persons in ambulatory practices.

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