

# Comprehensive Geriatric Assessment in the Office

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## SUMMARY

Because of their increased incidence of illness and disability, geriatric patients require extra time and diligence to assess and track medical problems. This article describes a comprehensive geriatric assessment, organized on a one-page, easily updated checklist, that can be used to generate a medical and functional problem list and a risk assessment.

## RÉSUMÉ

A cause de l'incidence accrue de malaises et d'incapacités affectant les patients d'âge gériatrique, il faut consacrer plus de temps et de diligence pour évaluer et dépister les problèmes médicaux. Cet article décrit un modèle permettant une évaluation gériatrique globale, regroupé sur une seule page et comportant une liste d'éléments facilement mis à jour qui pourra servir à générer une liste des problèmes médicaux et fonctionnels et à évaluer les risques.

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**B**Y ITS VERY NATURE, CARING for the elderly requires more time and effort from the family physician than many other areas of medicine. The elderly have more illnesses and physical limitations and take more medications. They have more health risks and require more support services. A systematic organized approach is required to provide optimal health care.

The geriatric assessment itself has been well defined.<sup>1,2</sup> It includes the usual history and physical examination, as well as an evaluation of mental, functional, and nutritional status; of social supports; and of pertinent risks. The purpose of the assessment is to identify problem areas and appropriate interventions to keep the patient healthy and living independently as long as possible. This includes early diagnosis of illness to prevent disability, detecting disability when it does occur, arranging necessary support systems, and monitoring and upgrading those supports as needed. Whether a patient can live independently is determined not by the presence or absence of illness, but by its effects on mental, social, and physical functioning.

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A comprehensive geriatric assessment can be divided logically into several areas and can be completed over a series of office visits. An assessment recorded on one sheet of paper is easily scanned, and gaps are readily apparent. The office nurse can record some data, such as activities of daily living and instrumental activities of daily living.

Table 1 shows one possible format for organizing this information. It is intended to be the first sheet in a geriatric patient's chart and allows updating over a 5-year period. The information noted is weighted to reflect the disorders and risk factors of this age group. Assessments need not start at age 65, but should be considered whenever there is any evidence of decline in physical or mental function or any question of the patient's ability to live alone.

The assessment can be used to generate a current medical and functional problem list, allowing identification of high-risk patients. The development of a treatment plan for the patient follows naturally.

## Geriatric assessment

Rather than cover all the components of the assessment in detail, we will highlight the factors most pertinent to this age group.

An elderly patient's history will often need to be augmented by a caregiver, especially for cognitive and functional

Table 1. POSSIBLE FORMAT FOR CHART OF GERIATRIC PATIENT

NAME		Date chart started	CHECK FOR DETERIORATION	DATES	
Date of birth		Sex	<b>NUTRITION STATUS</b>		
<b>ALLERGIES</b>			Weight		
			Tissue stores		
			Adequate diet		
			Dentition		
<b>CURRENT PROBLEMS (Dates)</b>  Medical   Functional			<b>ACTIVITIES OF DAILY LIVING</b>		
			Ambulation		
			Bathing		
			Continence		
			Dressing		
			Feeding		
			Completing one's toilet		
<b>MEDICATIONS</b>			<b>INSTRUMENTAL ACTIVITIES OF DAILY LIVING</b>		
			Shopping		
			Housekeeping		
			Cooking meals		
			Self-medication		
			Transport and driving		
<b>HISTORY</b>			<b>MENTAL STATUS</b>		
			Orientation		
			Memory		
			Calculations		
			Spatial relations		
<b>FAMILY HISTORY</b>			<b>Writing and reading</b>		
			Judgment		
			Affect		
<b>PERSONAL HISTORY AND SOCIAL SUPPORT SYSTEM</b> Married, widowed, divorced, or single      Family and friends Birthplace      Accommodation Education      Financial situation Occupation      Home care or life-line Hobbies or church      Meals on Wheels War service      Seniors groups			<b>SCREENING AND PREVENTION</b>		
			Influenza		
			Tetanus, diphtheria, pneumonia		
			Blood pressure while standing		
			Blood pressure while lying down		
			Vision		
			Hearing		
			Gait and balance		
			Flexibility		
			Foot problems		
<b>RISKS (Dates)</b> Sensory impairment      Cognitive impairment Multiple medical problems      Risk of falling Poor social supports      Medication or alcohol abuse More than 3 medications      Tobacco Mental health problems      Nutritional risk History of tuberculosis      Environmental hazards History of tuberculosis      Caregiver burden			<b>CANCER SCREENING</b>		
			Oral cavity		
			Breast		
			Cervix		
			Pelvis and prostate		
<b>RESUSCITATION (Dates)</b> Supportive care Cardiopulmonary resuscitation		<b>COUNSELING (Dates)</b> Smoking      Driving Alcohol      Exercise Sex      Caregiver		Skin	
<b>COMMENTS</b>			<b>LABORATORY TESTS</b>		
			Hemoglobin		
			Blood sugar		
			Creatinine		
			Albumin		
			Thyroxine (optional)		
	Urinalysis				

assessments. This can require phone contacts with relatives.

**Personal and social history.** The personal history can provide insight into an elderly person's present circumstances and his or her reactions to it. Document education, important life events, and work experience. An elderly person's description of a typical day can reveal problem areas. Social support systems often dictate the degree of a person's independence. Identify primary caregivers and the patient's use of community resources. Review appropriateness of accommodation.

**Family history.** While family history remains relevant with aging, the emphasis changes. Diseases such as Alzheimer's disease, Huntington's chorea, and breast and bowel cancer (more common in the elderly) have a hereditary component. The presence of these diseases in the family can be an unrecognized source of anxiety.

**Patient history.** A history of tuberculosis or rheumatic heart disease becomes more significant as the patient ages and immunity deteriorates. Past psychiatric illness should not be overlooked.

**Physical examination.** Sensory and neuromuscular examination play a larger role in the geriatric assessment.

Vision deficits are common. Screening should cover acuity, cataracts, night vision, macular degeneration, and presbyopia. Office tests are simple – Snellen's test types for far vision, normal print for near vision, a simple grid matrix for macular degeneration,<sup>3</sup> and peripheral field testing by confrontation.<sup>4</sup> These examinations are especially relevant if an elderly person wishes to continue driving. Simple tonometry is not recommended routinely.<sup>5</sup>

Hearing impairment increases with age, from 25% at 65 years to 50% at 85. It has been linked to social isolation and depression in the elderly.<sup>6,7</sup> The annual hearing assessment can include a Hearing Handicap Inventory<sup>8</sup> (a 10-item questionnaire), the Welch Allyn audioscope, and bedside free-field voice testing at 0.6m.<sup>9</sup> Although the greatest component of hearing loss involves word discrimination more than ac-

tual auditory threshold level, some rehabilitation is possible.<sup>10</sup> If appropriate, earlier introduction of a hearing aid allows better adaptation by the patient and often increased use.

Mobility and balance difficulties are common. Feet and footwear need to be examined for correctable problems. Gait and mobility can be assessed by "the get up and go test." Ask the patient to sit and then rise from an armless chair. Test balance with open and closed eyes. Push gently to test the ability to regain an upright posture. Ask the patient to walk across the room at a normal pace, turn 360°, and return to the chair at a rapid but safe pace; note any abnormalities. This test has a better correlation with gait and balance problems than the standard neurological examination.<sup>11</sup> A detailed scoring system has been developed by Tinetti.<sup>12</sup>

Limitations in range of motion due to previous strokes, arthritis, and Parkinson's disease can go unrecognized. Patients who, while seated, can put their hands behind their head and behind their back and can touch their toes have adequate range of motion to allow normal grooming and dressing.

Cardiopulmonary problems are more common in the elderly, but assessment is more difficult because of the general lack of fitness in this age group. Independence requires the physical fitness to comfortably perform normal activities, such as shopping, housework, and yard work. Thorough testing should be done before subjecting the patient to additional stresses, such as surgery. For example, the 2-minute supine bicycle exercise test has been shown to be a good predictor of operative risk.<sup>13</sup>

Screen for orthostatic hypotension (a drop of 20 mmHg or more systolic and 10 mmHg or more diastolic), which is a significant risk factor for falls. Ventricular arrhythmias have been associated with increased mortality in the elderly,<sup>14</sup> but treating an asymptomatic arrhythmia has not been shown to reduce mortality for patients who have not had sustained ventricular tachycardia or fibrillation.<sup>15</sup> Murmurs associated with calcification of the aortic valve are frequent, but usually can be distinguished by history and physical examination from significant aortic stenosis. Occasionally an echocardiogram is required.

Sexual dysfunction should be explored if the patient does not bring up the matter. Evaluation of incontinence will usually necessitate a separate visit, and several simple office investigational protocols are available.<sup>16,17</sup>



**COMPREHENSIVE ASSESSMENT IDENTIFIES RISKS FACED BY THE PATIENT:**

*Increased risks require more monitoring, more support services, and earlier intervention.*

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**Functional assessment.** Functional assessment is the cornerstone of a geriatric assessment. It consists of activities of daily living, instrumental activities of daily living, and mental status. Changes in functional status are usually significant.

While there are a variety of scales available for assessing activities of daily living,<sup>18</sup> the Katz is simple to master (bathing, conti-

nence, dressing, feeding, completing one's toilet, and transfers). Adding ambulation to the list produces an easily remembered mnemonic – ABCDFTT. It is a hierarchical scale, in that those who can bathe can usually perform all the other tasks. People unable to feed themselves will likely be dependent in other areas.

Instrumental activities of daily living determine independence in the community. Areas to check include housework, laundry, cooking, shopping, telephone use, driving, and financial management. An emergency system, such as life-line, can be discussed.

Medication compliance can be poor in the elderly.<sup>19</sup> Functional problems, such as memory impairment or the inability to read labels correctly or to open child-proof containers, are sometimes responsible.<sup>20</sup> The ability of an elderly person to self-medicate needs careful assessment.

**Mental status assessment.** Mental status can be difficult to assess, and the patient might try to hide deficits. An evaluation of the patient's affect and thought processes can be obtained while taking the history. A question about the state of a person's memory will sometimes allow initiation of detailed testing. A simple office test, the Folstein Mini-Mental State Examination,<sup>21</sup> checks memory, reading, writing, naming, calculations, and spatial relationship, but it is not very sensitive for subtle defects.

Supplemental information can be obtained by a few additional tests. Spatial relationship defects can be detected by the drawing of a clock face (useful in screening for Alzheimer's disease<sup>22</sup>). Abstract reasoning is tested by proverbs and word similarities. Language fluency and the ability to categorize information can be tested by word generation (eg, in 60 seconds, how many things can you name that one can buy at a grocery store?). Judgment can be assessed by problem-solving questions (eg, What would you do if a pan caught fire? Should you pay your bills if there is a mail strike?). Family members are probably the best source of information about a patient's judgment and decline in mental status.

Any significant or unexplained decline in cognitive status should prompt an investigation for reversible causes, although unfortunately only about 15% are reversible.<sup>23</sup>

**Nutritional status assessment.** Malnutrition is common among the elderly. Treatable causes include poorly fitting dentures, difficulties with shopping or meal preparation, and problems with swallowing or digestion.<sup>24</sup> Nutritional status can be monitored through weight and biochemical markers, such as serum albumin and total lymphocyte count. Tissue stores of fat and protein can be visually assessed. A diet history can reveal deficiencies of protein, vitamins, minerals (especially calcium), and fibre.<sup>25</sup>

### Screening

With the exception of hypertension and cancer, screening is controversial, as no clear benefit has been demonstrated in most areas.

**Hypertension.** Hypertension is an important risk factor for cardiovascular and cerebrovascular disease, and this risk does not decline with age. Morbidity from these diseases decreases significantly with reduced blood pressure.<sup>26</sup> Treatment of isolated systolic hypertension is currently recommended if the level is higher than 180 mmHg if there is end organ damage.<sup>27</sup>

**Cancer.** Half of all cancers and 60% of all cancer deaths occur in the geriatric population. The most common sites are the cervix, bowel, lung, breast, and prostate. While screening is relatively easy, efficacy has not always been well established.

A rectal examination and stool sample to test for occult blood are usually recommended annually in this age group. It should be noted, however, that rectal examinations detect only 10% of bowel cancers and that occult blood testing misses up to 55% of cancers.<sup>28</sup> Routine sigmoidoscopy has poor compliance and may not be cost effective. Whether screening for bowel cancer actually reduces mortality is disputed.<sup>29</sup>

The rate of cervical cancer is low in the elderly. While the American College of Obstetricians recommends annual lifelong screening, the Canadian Task Force on the Periodic Health Review recommends that screening be discontinued at age 60 for low-risk women. Any woman who has not been screened in the past should be

screened annually for at least 2 years. High-risk women and women with previously abnormal results from Pap smears need to be screened annually.<sup>30</sup>

Breast examinations should still be done monthly by the patient and yearly by a health professional. Mammography, which is more sensitive than palpation for detecting early cancer, has been shown to reduce mortality.<sup>31</sup> This test is recommended every 2 to 3 years starting at age 50. The American Geriatric Society recommends that this should be continued until age 85,<sup>32</sup> but the value of screening this age group has not yet been well established.

While screening for prostate cancer is simple and is done while checking for rectal cancer, the efficacy is not great. In a study by Andriole and Catalona,<sup>33</sup> only 45% of prostate cancer cases were actually suspected on the basis of a rectal examination.

**Alcohol.** The elderly are more sensitive to the effects of alcohol. Alcohol abuse can contribute to insomnia, anxiety, falls, and a decline in cognitive function. Alcohol problems are often minimized or concealed by both the patient and the family. Early identification can require diligent and specific questioning.<sup>34</sup>

**Laboratory tests.** Laboratory values change minimally in the healthy geriatric patient.<sup>35-37</sup> The Health Maintenance Guide suggests that routine blood analysis is discretionary. Baseline values (hematology, biochemistry, and urinalysis), however, are useful. Some tests have other functions: medication dosage depends on renal function, and total lymphocyte count and serum albumin are markers of malnutrition.

Age-related changes in blood glucose values make the diagnosis of diabetes or glucose intolerance more difficult. Normal fasting blood sugars rise minimally (0.06 mmol/L each decade), while postprandial levels rise significantly (0.5 mmol/L each decade).<sup>38-41</sup> However, it is worthwhile to screen for abnormally high levels; Grobin<sup>42</sup> has suggested that early intervention can prevent progression of disease.

Other screening laboratory tests are more controversial. Hypercholesterolemia is a risk factor in the elderly,<sup>43,44</sup> but screening and treating it have not been shown to

improve morbidity or mortality.<sup>45-47</sup> Routine thyroid screening is not recommended, although a high index of suspicion needs to be maintained, as thyroid disease can be subtle<sup>48</sup> and can be an unrecognized cause of depression.

Erythrocyte sedimentation rate is not a useful screening tool in the elderly.<sup>49</sup>

### **Counseling**

As with any other age group, lifestyle affects health and independence. Counseling patients to change bad habits and adopt healthy ones is just as important for old as for young people.

Regular exercise improves flexibility, strength, cardiovascular fitness,<sup>50</sup> and glucose tolerance, even in the frail elderly.<sup>51</sup> It should be tailored for specific handicaps.<sup>52</sup>

Immunizations should be kept up to date. The influenza vaccine has only 60% efficacy in this age group, but it can still prevent or attenuate infection.<sup>53</sup> It should be administered annually. The pneumococcal vaccine is of questionable efficacy but need be given only once.<sup>54</sup>

Elderly smokers should be encouraged to quit, as they have a 52% higher risk of coronary heart disease and death than non-smokers. This risk declines rapidly after quitting, resulting in a life expectancy increase of 2 to 4 years.<sup>55,56</sup>

Alcohol and prescription drug abuse are often difficult to detect in the elderly.<sup>57,58</sup> Counseling must include family members, who can be unwitting supporters of the problem.

Patients should be consulted, while they are still well and mentally capable, about what therapeutic or resuscitative intervention they would want under various circumstances. Ideally, the patient's family should be included in this discussion. A living will can be used to record a person's wishes.<sup>59</sup>

Many elderly people are kept in the community by the efforts of others, and the caregivers' burden can be immense. Counseling can be offered to these people and should include information on alternative support services.

### **Risk assessment**

The comprehensive assessment leads naturally to an assessment of the risks faced by the patient. Increased risks lead to the need for additional monitoring, more support ser-

vices, and earlier medical intervention. Accurate assessment of these risks can require input from the family and a visit by a home care nurse or occupational therapist.

Many factors affect the risk a person faces, but some are more common to the geriatric age group. As medical problems increase, management becomes more complicated and the outcome becomes worse. More medical problems often means more drugs, increasing the risk of drug interactions.<sup>60</sup> Sensory impairment, poor balance, and orthostatic hypotension lead to falls.

An old case of tuberculosis can become active again as the immune system deteriorates with age (a particular concern in long-term care settings). New conversions from an unrecognized case is not uncommon.<sup>61</sup>

Lifestyle risks, such as living alone, absence of social supports, smoking, and drug and alcohol use, should be highlighted. Caregiver burden needs to be assessed, as it is an independent predictor of both use of home services and nursing home placement.<sup>62</sup>

Environmental and safety risks need to be considered, but are often best assessed at a home visit by either the physician or a nurse.

Cognitive impairment is an ongoing risk. Patients must be closely monitored for deterioration, and arrangements for future care should be made well in advance. Affective disorders often reoccur – anyone with previous episodes of mania or depression is at risk for future episodes.

### **Conclusion**

Comprehensive geriatric assessment is within the capability of every family physician. The effort and time required can be minimized by collecting information efficiently over several office visits, having the office nurse fill in parts of the form, and using others, such as a home care nurse and the family, as information sources. Recording the information on a single form on the front of the chart makes it readily accessible. With appropriate effort and organization of time, use of this type of assessment will improve the quality of geriatric care. ■

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## ENTEX® LA

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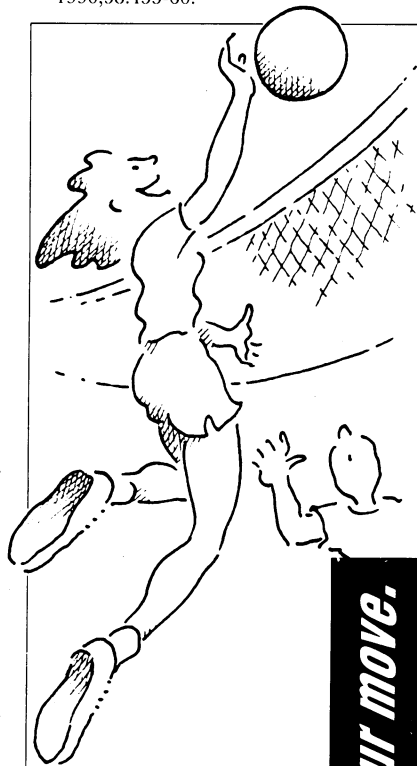
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**PARTICIPACTION**

**Make your move.**