

Geriatric Assessment in the Primary Care Setting

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Learning Objectives

At the end of this session, the participant should be able to:

- 1) identify some time saving strategies for dealing with the elderly in the outpatient setting;
- 2) be familiar with some simple geriatric assessment instruments, their performance, and limitations;
- 3) identify some simple interventions that can be made if a deficit or geriatric syndrome is found.

Overview

The care of elderly patients can be challenging. Multiple comorbidities, sensory impairments, slow reaction times, slowness in getting into rooms and getting dressed and undressed, and cognitive impairment are some of the issues that can make a primary care encounter with an older person frustrating for a time pressured practitioner. Primary care physicians need the knowledge, skills, and attitudes that can help them deal effectively with the care of older patients.

Recent studies suggest that many patients over the age of 80 feel that their providers are not aware of their needs and goals as patients (Patterson 1998). Traditional medical training, which is focused on making a single unifying diagnosis, and treating that single diagnosis with the goal of cure and prolongation of life, does not prepare physicians for the reality of caring for elders. In the elderly, changes that are common with aging often coexist with multiple comorbidities to produce a decline in function or atypical presentation. The goals of the patient (improved function, comfort) may not be the same as the goals of the physician (reducing risk factors for disease, prolonging life).

The role of comprehensive geriatric assessment in outpatient medicine remains uncertain. However, it is likely that incorporation of some of the tools of geriatric assessment into primary care may improve physician recognition of common geriatric disorders, and as a result, outcomes (Moore 1996, Moore 1997, Lachs 1990). Armed with the correct tools and expectations, many physicians find that the care of the elderly can be gratifying rather than frustrating. However, for many, a paradigm shift is needed.

Approach to the Patient

In approaching the older patient, perhaps the most important key to having a therapeutic encounter is to understand the goals of the patient. Many older patients have explicit ideas about screening, life prolongation, willingness to undergo medical testing, and use of medications. Establishing the patient's goals early will help the physician focus the patient visit appropriately and utilize time and resources wisely. Some patients will not have clear-cut goals and will be guided by the physician's judgement. In other cases, stated goals may change after discussion with a physician.

Weighing Priorities

It is impossible for physicians to address every potentially important clinical issue in a typical primary care encounter. In the elderly, setting priorities should ideally be based upon the patient's goals for care, the patient's life expectancy, the prevalence of specific diseases, the performance of screening or diagnostic tests in detecting specific diseases, and the effectiveness of interventions to treat specific disease.

Using this framework, the priorities for the elderly are likely to be very different than for a younger population. For example, colon cancer screening in 75 year old men requires screening about 300 men over 5 years to prevent one death. For men aged 85+, with an average life expectancy of 5 years, colon cancer screening is unlikely to produce any benefit (Walter, unpublished). In the same age group, screening for falls requires screening 2-3 individuals to detect one fall, and if standard interventions are taken, the number needed to screen to prevent one fall would be about 20 over one year (Tinetti, 1994). The 75 year old may benefit from both screening interventions (although is numerically more likely to benefit from a screening for falls), but the 85 year old is likely to benefit only from the screening for falls.

Some interventions produce almost immediate benefit, and those interventions are likely to be useful at any age. Ample evidence supports that even the oldest old can benefit from beginning an exercise program (Fiatarone 1994, Province 1995, Elward 1992). Counseling patients on the benefits of physical activity is likely to be a good use of physician time at almost any age. However, the goals, values, and limitations of each individual patient need to be taken into account when such counseling takes place.

Memorizing average life expectancies or keeping a chart of average life expectancies in clinic can help make setting priorities easier.

Life Expectancy

Women

AGE	Top 25%	50%	Lowest 25%
70	21	15	9
75	17	12	7
80	13	9	5
85	9	7	3

Men

AGE	Top 25%	50%	Lowest 25%
70	18	13	7
75	14	10	5
80	11	7	3
85	8	5	2

Domains of assessment

Functional Assessment

Functional impairment is common in the elderly. About one-quarter of patients over the age of 65 have impairments in their IADLs (transportation, shopping, cooking, using the telephone,

managing money, taking medications, cleaning, laundry) or ADLs (bathing, dressing, eating, transferring, continence, toileting) and fully one-half of those over age 85 have impairments in ADLs (Gornick 1996). Functional information should be included in the assessment of all older people.

Health care providers should be aware that many functionally impaired people tend to *overestimate* their functional abilities, although at least one study suggests that some depressed elders may tend to *underestimate* their abilities. Caregivers tend to slightly *underestimate* the patient's abilities. Direct observation is the most accurate method of functional assessment, but is impractical in most health care settings (Reuben 1995, Sinoff 1997, Zanetti 1999, Lagnlois 1996, Katz 1963, Sager 1992). Averaging the information between patient and caregiver or simply being aware of the limitations of reported data is sufficient for most health care providers.

What should be done with functional information? It can be utilized in a number of different ways:

- 1) utilized as baseline information;
- 2) utilized as a measure of patient's need for support services or placement;
- 3) utilized as a possible indicator of caregiver stress;
- 4) utilized to determine medical (e.g. incontinence treatment, knee replacement surgery) or allied interventions (e.g., walkers, PT, exercise program, bathroom grab bars, bedside commode);
- 5) utilized as a potential marker of specific disease activity

Persons who are unable to perform IADLs independently are twelve times more likely to be demented than their independent counterparts, so functional information may help uncover a diagnosis of dementia (Barberger-Gateau 1992). In general, persons who need help with IADLs only may be aided by a chore worker, a day program, or placement in a board and care or assisted living situation. Although most persons with ADL impairments are able to stay home with appropriate services, a nursing home level of care is usually necessary if persons with ADL impairments require placement.

Caregiver issues

Providing primary care for a frail elder requires that attention be paid to the caregiver as well as the patient, as the health and well being of the patient and caregiver are intricately linked. High levels of functional dependence place an enormous burden on a caregiver. Burnout, neglect, and abuse are possible consequences of high caregiver loads. Asking the caregiver about stress, burnout, anger, and guilt is often instructive. For the stressed caregiver, a social worker can often help identify helpful programs such as caregiver support groups, respite programs, adult day care, or hired home health aids.

Direct questioning about abuse and neglect is wise, particularly under circumstances of high caregiver load. Clues to the possibility of elder abuse include observing behavioral changes in the presence of the caregiver, delays between injuries and sought treatment, inconsistencies between an observed injury and an associated explanation, lack of appropriate clothing or hygiene, and not filling prescriptions (Chodosh 1997).

Falls and Gait Impairment

Falls are the leading cause of nonfatal injuries and unintentional injury and death in older persons. Fractures, particularly hip fractures, are common precursors to functional impairment and nursing home placement. Further, falls or fear of falling may lead some elders to restrict their activities, initiating a downward spiral of functional decline. About one-third of people over the age of 65 fall each year, and about half of those are repeat fallers. Falls increase markedly with advancing age, and the frail elderly are at particular high risk for falls (Sattin 1992, Tinetti 1994, USPSTF 1997).

Every older person should be asked about falls, as many elders will not routinely volunteer such information. In addition, persons should be asked about perceived home hazards that might be remediable. Because gait impairments commonly co-exist with falls, a gait assessment is important to perform in older people, and is likely to be more sensitive for abnormalities (which are commonly multifactorial due to muscular weakness, arthritis, plus specific neurologic impairments) than a traditional neurologic examination.

A number of techniques for gait assessment are available to the primary care practitioner. The first, the "Get-up and Go" test involves asking a patient to get up from a chair without using arms, walk 10 feet, and turn around and sit down (Mathias 1986). The observer can look for problems with strength (inability to get up without using hands), gait, balance, judgement, and use of adaptive devices. A more refined version of this test, the "Timed Up and Go", adds a timing component. Slower times are correlated with impairments in ADLS and falls (Podsiadlo 1991). The Tinetti performance oriented mobility assessment uses a 28 point scale to assess specific components of gait and balance (Tinetti 1986). Lower scores on this scale are associated with an increased relative risk of falls. Many practitioners find this scale useful for refinement of diagnostic acumen in specific pattern recognition, following changes over time, and providing for more inter-reliability between exams than with more subjective examinations.

Interventions can reduce falls and reduce fall-related injuries. A gait assessment can help the practitioner focus interventions on strength training, balance training, or more effective use of adaptive equipment. High-risk fallers who cannot get up off the floor by themselves can often be taught techniques for getting up by a physical therapist. Resistance exercises have been shown to improve a number of intermediate outcomes in the elderly, though most studies have been underpowered to evaluate falls specifically. Any exercise appears to have some positive impact on falls, though in randomized controlled trials, balance exercises such as Tai Chi appear to offer the most dramatic benefit (Province 1995, Wolf 1996).

One study looked at a multifactorial risk intervention to reduce falls in persons who were at high risk but had not fallen. In one year of follow up, 35% of the intervention group vs. 47% of the control group had fallen (Tinetti, 1994). The risk factors and interventions are as follows.

Risk Factor

Postural hypotension
(>20mm Hg drop in systolic or SBP <90)

Targeted intervention

Behavioral recommendations, such as hand clenching, elevation of head of bed, discontinuation or substitution of high risk medications

Use of benzodiazepine or sedative-hypnotic	Education about sleep hygiene, discontinuation or substitution when possible
Use of >3 prescriptions medications	Review of medications
Inability to transfer safely	Training, environmental alterations such as grab bars
Environmental hazards detected	Appropriate changes (e.g., removal of hazards, installation of safety equipment)
<u>Assessed by PT</u>	
Gait impairment	Gait training, assistive devices, balance or strengthening exercises if indicated
Impairment in transfer or balance	Balance exercises, training in transfers, environmental alterations
Impairment in leg or arm muscle strength or ROM	Exercise with resistance bands or putty, increase resistance when subject able to do 10 repetitions though full ROM

Adapted from Tinetti, NEJM 1994

Another important consideration in patients who are at risk for falling is modification of risk factors that are likely to contribute to injury. Three areas are important to address specifically: 1) ability to get up after a fall; 2) fracture risk reduction; and 3) anticoagulation.

Ability to get up after a fall

Up to one-half of patients who fall may be unable to get themselves up without help (Tinetti 1993). These people are at particular risk for hypothermia, rhabdomyolysis, other injuries, and fear of falling. For this group of patients, health care providers can recommend physical therapy that is specifically geared toward teaching people to get up from a fall. Other helpful interventions may include Lifelines, portable telephones, phones placed on the floor. In high-risk circumstances, moving to a more supervised setting may be advisable.

Fracture Risk Reduction

Osteoporosis diagnosis and treatment should be considered in all elderly patients, particularly those who are at high risk for falling. Discussion of this topic is beyond the scope of this talk. However, supplementation with calcium and vitamin D should be considered in all elders. The ideal dosing regimen is not yet clear. In a randomized controlled trial of 389 community dwelling elders, those given 500mg calcium plus 700 IU of vitamin D for 3 years had a cumulative incidence of fractures of 5% versus 13% in the control group (Dawson-Hughes 1997). Supplementation with one multi-vitamin (400 IU vitamin D) and two combination calcium-vitamin D preparations (containing 500mg Calcium and 125 IU vitamin D) would be a reasonable choice.

Beyond osteoporosis screening, diagnosis, and treatment, elders who are at high risk for hip fractures should be considered for "hip padding" therapy. Randomized controlled trials suggest a significant reduction in hip fractures in elders using such pads. Patient acceptance and adherence are the major barriers to use (Kannus 2000, Lauritzen 1993).

Anticoagulation

Many elderly patients with atrial fibrillation are not anticoagulated because physicians fear injuries and secondary bleeding due to falling. Head injuries due to falls are usually the gravest concern, and occur in about 1% of falls, overall. Given the magnitude of stroke reduction with anticoagulation in most elders, the benefits of anticoagulation will outweigh the risks associated with falling in most instances. In recurrent fallers, those deemed to be at higher risk of head injury, or those with very low stroke risk, the risk might outweigh benefits. Of course, each instance must be evaluated individually for potential risks and benefits (Aronow 1999, Sattin 1992).

Vision Impairment

Vision impairment is common in the elderly. About 21% of those over age 75 have vision that is worse than 20/40. In one study, one third of elders had severe unrecognized visual loss (USPSTF 1997). Another 25% of elders are estimated to have incorrect visual correction (Stultz 1984). Visual impairment has been found to be an independent risk factor for falls, as well as having a significant impact on quality of life.

Some authors have advocated the use of screening questions for detection of visual impairment in the elderly (USPTF 1997, Moore, 1996). However, the sensitivity and specificity of such questions is variable. Direct visual testing with a Snellen eye chart and a hand held Jaeger card is believed to be the most sensitive and specific approach to visual screening. However, the performance of these instruments in the primary care setting is uncertain. Sending all older people for ophthalmologic screening has the advantages of improving the quality of the exam and allowing for glaucoma screening. However, costs and inconvenience may be barriers to this approach.

Hearing impairment

Over 33% of those over age 65 and half of those over age 85 have some hearing loss¹. Hearing loss is correlated with social and emotional isolation, clinical depression, and limited activity (Mulrow, 1991, USPSTF 1997).

The optimal screening method for hearing loss in the elderly is undetermined. The whispered voice test is easy to perform, with sensitivities and specificities ranging from 70-100%. Hand held audiometry is also available, but performance is probably dependent on the skill of the operator and the environment in which it is performed. Structured questionnaires such as the "hearing handicap for the elderly" (GRS 1999) are probably most useful for assessing the degree to which hearing loss interferes with functioning. The USPSTF recommends using screening questions about hearing loss in the elderly (USPSTF 1997).

Compliance with hearing amplification can be a challenge due to some patients perception of a "stigma" associated with hearing aid use and the cost of hearing amplification, which is not paid for under most Medicare plans. However, high compliance rates can be achieved with a pro-active approach, loaner aids for low-income persons, and professionals who are sensitive to the issues involved. Aside from hearing amplification with standard hearing aids, pocket amplifiers, special telephone amplifiers and amplifiers for television or radio are useful to many people. Behavioral strategies, such as lip reading, may help some people.

¹

A 1990 randomized controlled trial demonstrated a measured improvement in social, emotional, cognitive, and communication function from hearing aid use in a group of elderly veterans with previously documented hearing loss, supporting the concept that screening and intervention are of benefit to many (Mulrow).

Dementia

Dementia is common in the elderly, but is commonly missed by primary care practitioners (Valcour, 2000). As treatments become more effective for Alzheimer's and related disorders, early diagnosis becomes more important. At present, there is no consensus on whether older patients should be routinely screened for dementia. The USPSTF gave dementia screening a "C" recommendation, so screening for dementia is certainly not universally accepted (USPSTF 1997).

Dementia is present in only about 1% of people at age 60, but the prevalence doubles every five years, so that by age 85, 30-50% of the population has some degree of dementia. Dementia is a major cause of nursing home placement, morbidity, family stress, and is the fourth leading cause of death in the elderly (GRS 1999).

Benefits of early detection include finding potentially reversible causes for dementia, instituting disease modifying drugs when possible, planning for the future, discussing health care wishes while the patient is still able to participate, and modifying interventions for other diseases as required (i.e., simplifying drug regimens, reducing anticholinergic drugs).

The ideal screen would be simple, fast, cheap, sensitive, and specific. The Mini-Mental State Exam (MMSE, Folstein 1975) is too time consuming to make it practical for use in screening all elders. The combination of the clock draw and the 3 item recall can be performed fairly quickly (Siu 1991). When the patient is able to recall all 3 items at 3 minutes, the likelihood ratio for dementia is 0.06, which is helpful in ruling out the diagnosis. Conversely, a clock draw is helpful in ruling in the diagnosis. A clearly abnormally drawn clock is associated with a likelihood ratio of 24. The following table shows how these two tests can be used together to help rule dementia in or out.

Test	Result	Likelihood ratio	Post-test probability given given pretest probability of:			
			2%	10%	25%	50%
3 item recall	Recalls <2	3.1 (2.3-4.3)	6	26	51	76
	Recalls 2	.5 (.3-1.0)	1	5	14	33
	Recalls 3	.06 (.02-.2)	.1	.7	2	6
Clock draw	Abnormal	24 (7.5-74)	32	72	89	96
	Almost normal	.8 (.6-1.1)	2	8	21	44
	Normal	.2 (.2-.3)	.4	2	6	17

Adapted from Sui AL, Ann Int Med 1991

When patients fall into the intermediate range, further testing with the MMSE or other instruments can be performed. When should screening begin if we are to do it? Based on prevalence data, age 70 would be a reasonable time to begin, with younger patients screened only if suspicion were high.

All screening tests for dementia are challenging in patients of a different language or ethnicity. In some cases, functional information will be the most useful for determining the presence or absence of dementia. Formal neuropsychological testing is often useful when further evaluation information is required.

Incontinence

Incontinence in the elderly is common, and interventions can improve most patients with incontinence. Many patients with incontinence fail to tell their providers about the problem. A simple question about involuntary leakage of urine is a reasonable screen. The approach to diagnosis and treatment is beyond the scope of this talk, but is well outlined in the AHCPR guidelines. Incontinence screening receives no recommendation from USPHSTF (GRS 1999, AHCPR 1996).

Depression

Depression is commonly missed in primary care. Although major depression is no more common in the elderly than in younger populations, depressive symptomatology is actually more common. In ill and hospitalized elders, the prevalence of depression is quite high. A simple two-question screen has high sensitivity (96%) for detecting depression in a general population. Positive responses can be followed up with more comprehensive interviews, since the specificity of a positive response is not high (GRS 1999, Whooley 1997).

Malnutrition

Weight loss or poor nutritional status may be an indicator of functional decline, dementia, or medical illness. Although there is no agreement on how or who to screen, checking for weight, body mass index, and weight loss is easy and reasonable in a primary care setting. Most studies suggest that loss of more than 5% of body weight should trigger further evaluation. Loss of 5% of body weight in one month, or 10% of body weight over 6 months is associated with increased morbidity and mortality (GRS 1999, Reuben 1995, Barrett-Conner 1996, Sullivan 1995) .

Screening in the High Functioning Elder

For highly functional independent elders, standard functional screening measures will not be useful in capturing subtle functional impairments. Two techniques may be useful for these elders. The first is to identify and regularly query about a target activity, such as playing bridge, golf, fishing, or practicing law that the patient enjoys and regularly participates in. The term “advanced activity of daily living” has been used to describe this type of activity. If the patient begins to drop the activity, it may indicate an early impairment, such as dementia, incontinence, or worsening hearing loss. Of course, significant limitations in this approach exist, as the implication of dropping golf versus dropping a law practice are quite different. However, many geriatricians find this type of marker extremely helpful for following patient functioning.

A physical function screen has been developed that can help identify older people at risk for declining in function. Guralnik et al. used a 3 item physical performance measure in 1122 community

dwelling persons over age 70 who were functionally independent, able to walk one-half mile, and climb stairs with no difficulty. After four years, those scoring in the lowest tertile were 4 times more likely to become disabled in at least one ADL or in mobility than those in the highest tertile. It has not been determined whether interventions with exercise or other modalities can modify this, but it may be reasonable to screen high functioning elders and prescribe exercise interventions for those at highest risk (Guralnik 1995, see appendix).

Usefulness of a combined screening instrument

In 1990 Mark Lachs and others proposed a simple geriatric screening instrument for use in the primary care setting. Since that time, other similar instruments have been proposed, including one by Alison Moore and others in 1996. Although the literature has demonstrated that such instruments can increase the detection of common geriatric conditions, nobody has demonstrated an improvement in outcomes when these screens are used (to keep the playing field level, nobody has demonstrated an improvement in outcomes with the use of a standard review of systems, either). Common sense argues that an increase detection of common syndromes, if coupled with effective interventions, will improve outcomes.

The rationale of these instruments is to use a number of “sensitive” prescreening questions or instruments for common conditions, and to follow up abnormal responses with further testing or interventions. At UCSF, we have adapted the screening instruments developed by Mark Lachs et al. and Alison Moore et al, to fit our purposes. We have found our screening instrument to be easy to use, well accepted by practitioners and patients, and relatively quick to administer. The tool could be even more efficient if parts of it were administered by non-physician personnel.

Utilizing Time Efficiently

A number of strategies can guide a physician in using time wisely in an elderly patient. These include:

- 1) Knowing the patient’s goals and values for medical care;
- 2) Using brief assessment instruments, when appropriate;
- 3) Utilizing non-physician personnel to help perform standard geriatric assessments;
- 4) Omitting parts of the physical examination that are likely to be low yield;
- 5) Having portable amplifiers, large print information, and magnifying lenses available for visits;
- 6) Utilizing observations to help make diagnoses (observing gait as part of physical exam).

Getting Help

Geriatric care often requires the involvement of multiple team members. It is helpful to get other services such as social work, physical therapy, and psychology, involved early in complex cases. Some extremely complex patients may have to be turned over to a geriatric or home care team for ongoing care.

Summary

A systematic approach to elderly patients in the outpatient setting incorporating some of the tools of geriatric assessment can help providers use their limited time wisely and appropriately in the care of older patients. Many questions about the effectiveness of specific interventions in the elderly and the role of geriatric assessment in the outpatient setting remain unanswered.

References

1. **AGS.** *Geriatric Review Syllabus* Kendall-Hunt; 1999. (Cobbs, ed).
2. **AHCPR.** Acute and chronic incontinence clinical practice guidelines update. . AHCPR 96-0682; 1996.
3. **Alexander NB, Ulbrich J, Raheja A, Channer D.** Rising from the floor in older adults. *Journal of the American Geriatrics Society.* 1997;45(5):564-9.
4. **Andelin LC, Alessi CA, Aronow HU.** Reliability of screening for sensory impairment in depressed versus nondepressed older adults. *Journal of the American Geriatrics Society.* 1995;43(6):684-7.
5. **Barberger-Gateau P.** IADL as a screening tool for cognitive impairment and dementia in elderly community dwellers. *JAGS.* 1992;40:1129-34.
6. **Barberger-Gateau P, Fabrigoule C, Helmer C, Rouch I, Dartigues JF.** Functional impairment in instrumental activities of daily living: an early clinical sign of dementia? *Journal of the American Geriatrics Society.* 1999;47(4):456-62.
7. **Barrett-Connor E, Edelstein SL, Corey-Bloom J, Wiederholt WC.** Weight loss precedes dementia in community-dwelling older adults [see comments]. *Journal of the American Geriatrics Society.* 1996;44(10):1147-52.
8. **Boult C, Boult L, Morishita L, Smith SL, Kane RL.** Outpatient geriatric evaluation and management. *Journal of the American Geriatrics Society.* 1998;46(3):296-302.
9. **Carmeli E et al.** Muscle strength and mass of lower extremities in relation to functional abilities of older adults. *Gerontology* 2000; 46: 249.
9. **Chodosh J, et. al.** (University of Rochester Division of Geriatrics John A. Hartford Foundation). Geriatric assessment and the twenty minute visit. 1997.
10. **Crawford SL, Jette AM, Tennstedt SL.** Test-retest reliability of self-reported disability measures in older adults. *Journal of the American Geriatrics Society.* 1997;45(3):338-41.
11. **Dawson-Hughes B, et. al.** Effect of calcium and vitamin D supplementation on bone density in men and women 65 years of age or older. *New Engl J Med.* 1997;337:670-676.
12. **Elward K, et. al.** Benefits of exercise for older adults. *Clin Geri Med.* 1992;8:35-50.
13. **Engelhardt JB, Toseland RW, O'Donnell JC, Richie JT, Jue D, Banks S.** The effectiveness and efficiency of outpatient geriatric evaluation and management [see comments]. *Journal of the American Geriatrics Society.* 1996;44(7):847-56.
14. **Fiatarone M, et. al.** Exercise training and nutritional supplementation for physical frailty in very old people. *New Engl Journal of Med.* 1994;330.
15. **Fillenbaum GG, Landerman LR, Simonsick EM.** Equivalence of two screens of cognitive functioning: the Short Portable Mental Status Questionnaire and the Orientation-Memory-Concentration test. *Journal of the American Geriatrics Society.* 1998;46(12):1512-8.
16. **Folstein MF, et. al.** Mini-mental state. *J Psych Res.* 1975;12:189-198.
17. **Force TUPST.** *Guide to Clinical Preventive Services* International Medical Publishing; 1997.
18. **Froehlich TE, Robison JT, Inouye SK.** Screening for dementia in the outpatient setting: the time and change test [see comments]. *Journal of the American Geriatrics Society.* 1998;46(12):1506-11.
19. **Ganzini L, Smith DM, Fenn DS, Lee MA.** Depression and mortality in medically ill older adults. *Journal of the American Geriatrics Society.* 1997;45(3):307-12.
20. **Goldberg TH, Chavin SI.** Preventive medicine and screening in older adults [see comments]. *Journal of the American Geriatrics Society.* 1997;45(3):344-54.
21. **Gornick M, et. al.** Thirty years of Medicare. *Health Care Financing Review.* 1996;18:190.

22. **Guralnik J, et. al.** Lower extremity function in persons over the age of 70 as a predictor of subsequent disability. *New Engl J Med.* 1995;332:556-61.
23. **Judge JO, Schechtman K, Cress E.** The relationship between physical performance measures and independence in instrumental activities of daily living. The FICSIT Group. Frailty and Injury: Cooperative Studies of Intervention Trials. *Journal of the American Geriatrics Society.* 1996;44(11):1332-41.
24. **Kannus P et al.** Prevention of hip fracture in elderly people with use of a hip protector. *NEJM* 2000; 343: 1506.
25. **Koenig HG, Pappas P, Holsinger T, Bachar JR.** Assessing diagnostic approaches to depression in medically ill older adults: how reliably can professionals make judgments about the cause of symptoms? *Journal of the American Geriatrics Society.* 1995;43(5):472-8.
26. **Katz S.** The Index of ADL. *JAMA.* 1963:914-19.
6. **Kukull WA.** Problems in measuring and interpreting cognitive decline [editorial; comment]. *Journal of the American Geriatrics Society.* 1998;46(12):1578-9.
27. **Lachs M, et. al.** A simple procedure for general screening for functional disability in elderly patients. *Annals of Intern Med.* 1990;112:699-706.
28. **Langlois JA, Smith GS, Nelson DE, Sattin RW, Stevens JA, DeVito CA.** Dependence in activities of daily living as a risk factor for fall injury events among older people living in the community. *Journal of the American Geriatrics Society.* 1995;43(3):275-8.
29. **Langlois JA, Maggi S, Harris T, et al.** Self-report of difficulty in performing functional activities identifies a broad range of disability in old age. *Journal of the American Geriatrics Society.* 1996;44(12):1421-8.
30. **Larson EB.** Recognition of dementia: discovering the silent epidemic [editorial; comment]. *Journal of the American Geriatrics Society.* 1998;46(12):1576-7.
31. **Lauritzen JB, et. al.** Effect of external hip protectors on hip fractures. *Lancet.* 1993;341:11-13.
32. **Lichtenstein MJ, Hazuda HP.** Cross-cultural adaptation of the hearing handicap inventory for the Elderly-Screening Version (HHIE-S) for use with Spanish-speaking Mexican Americans. *Journal of the American Geriatrics Society.* 1998;46(4):492-8.
33. **Maggi S, Minicuci N, Martini A, et al.** Prevalence rates of hearing impairment and comorbid conditions in older people: the Veneto Study. *Journal of the American Geriatrics Society.* 1998;46(9):1069-74.
34. **Maki BE.** Gait changes in older adults: predictors of falls or indicators of fear [see comments]. *Journal of the American Geriatrics Society.* 1997;45(3):313-20.
35. **Mathias S, et. al.** Balance in the elderly patient: The "get up and go" test. *Arch Physy Med Rehab.* 1986;67:387.
36. **Miller DK, Brunworth D, Brunworth DS, Hagan R, Morley JE.** Efficiency of geriatric case-finding in a private practitioner's office. *Journal of the American Geriatrics Society.* 1995;43(5):533-7.
37. **Moore A.** Screening for common problems in ambulatory elderly: clinical confirmation of a screening instrument. *Am Journal of Med.* 1996;100:438-443.
38. **Moore A, et. al.** A randomized trial of office-based screening for common problems in older persons. *Am Journal of Med.* 1997;102:371-378.
39. **Mulrow C, et. al.** Screening for hearing impairment in the elderly. *JGIM.* 1991;6:249-58.
40. **Okumiya K, Matsubayashi K, Nakamura T, et al.** The timed "Up & Go" test and manual button score are useful predictors of functional decline in basic and instrumental ADL in community-dwelling older people [letter]. *Journal of the American Geriatrics Society.* 1999;47(4):497-8.
41. **Patterson J, et. al.** The population of people age 80 and older: A sentinel group for understanding the future of health care in the United States. *Journal of Ambulatory Care Management.* 1998;21:10-16.
42. **Podsiadlo D, et. al.** The Timed Up and Go: A test of basic funtional mobility for frail eldely persons. *JAGS.* 1991;39:142-148.
43. **Province M, et. al.** The effects of exercise on falls in elderly patients: A preplanned meta-analysis of the FICSIT trials. *JAMA.* 1995;273:1341-47.

44. **Rai GS, Kiniorns M, Wientjes H.** Falls Handicap Inventory (FHI)--an instrument to measure handicaps associated with repeated falls [letter]. *Journal of the American Geriatrics Society.* 1995;43(6):723-4.
45. **Reuben DB.** What's wrong with ADLs? [editorial; comment]. *Journal of the American Geriatrics Society.* 1995;43(8):936-7.
46. **Reuben DB, Greendale GA, Harrison GG.** Nutrition screening in older persons. *Journal of the American Geriatrics Society.* 1995;43(4):415-25.
- C:\Bree\GAweb.doc47. **Reuben DB, Valle LA, Hays RD, Siu AL.** Measuring physical function in community-dwelling older persons: a comparison of self-administered, interviewer-administered, and performance-based measures. *Journal of the American Geriatrics Society.* 1995;43(1):17-23.
48. **Reuben DB, Fishman LK, McNabney M, Wolde-Tsadik G.** Looking inside the black box of comprehensive geriatric assessment: a classification system for problems, recommendations, and implementation strategies. *Journal of the American Geriatrics Society.* 1996;44(7):835-8.
49. **Roberts RO, Jacobsen SJ, Rhodes T, et al.** Urinary incontinence in a community-based cohort: prevalence and healthcare-seeking. *Journal of the American Geriatrics Society.* 1998;46(4):467-72.
50. **Rubenstein LZ.** The importance of including the home environment in assessment of frail older persons [editorial; comment]. *Journal of the American Geriatrics Society.* 1999;47(1):111-2.
51. **Sager MA.** Measurement of activities of daily living in hospitalized elderly. *JAGS.* 1992;40:457-462.
52. **Sattin RW, et. al.** Falls among older persons. *Ann Rev Public Health.* 1992;13:489-508.
53. **Schenkman M, Hughes MA, Samsa G, Studenski S.** The relative importance of strength and balance in chair rise by functionally impaired older individuals. *Journal of the American Geriatrics Society.* 1996;44(12):1441-6.
54. **Shreve ST, Kumanyika S.** Geriatric assessment: can primary care fill the void? [letter]. *Journal of the American Geriatrics Society.* 1997;45(11):1407-8.
55. **Shua-Haim J, Koppuzha G, Gross J.** A simple scoring system for clock drawing in patients with Alzheimer's disease [letter]. *Journal of the American Geriatrics Society.* 1996;44(3):335.
56. **Silliman RA, Barry PP.** Outpatient comprehensive geriatric assessment: an intervention whose time has come, or has it? [editorial; comment]. *Journal of the American Geriatrics Society.* 1999;47(3):371-2.
57. **Silverman M, Musa D, Martin DC, Lave JR, Adams J, Ricci EM.** Evaluation of outpatient geriatric assessment: a randomized multi-site trial [see comments]. *Journal of the American Geriatrics Society.* 1995;43(7):733-40.
58. **Sinoff G, Ore L.** The Barthel activities of daily living index: self-reporting versus actual performance in the old-old (> or = 75 years). *Journal of the American Geriatrics Society.* 1997;45(7):832-6.
59. **Steffens DC et al.** The prevalence of depression and its treatment in an elderly population: the Cache County study. *Arch Gen Psych* 2000; 57: 601
59. **Stults BM.** Preventive health care for older adults. *West J Med.* 1984;141:832-845.
60. **Sullivan DH, Walls RC, Bopp MM.** Protein-energy undernutrition and the risk of mortality within one year of hospital discharge: a follow-up study. *Journal of the American Geriatrics Society.* 1995;43(5):507-12.
61. **Thom D.** Variation in estimates of urinary incontinence prevalence in the community: effects of differences in definition, population characteristics, and study type. *Journal of the American Geriatrics Society.* 1998;46(4):473-80.
62. **Tinetti ME.** Performance oriented assessment of mobility problems in elderly patients. *JAGS.* 1986;34:119-126.
63. **Tinetti ME, al e.** Predictors and prognosis of inability to get up after falls among elderly persons. *JAMA.* 1993(269):65-70.
64. **Tinetti M, et. al.** A multifactorial intervention to reduce the risk of falling among elderly people living in the community. *New England Journal of Med.* 1994;331:821-827.
65. **Tinetti MA, al e.** Fear of falling and fall-related efficacy in relationship to functioning among community living elders. *Journal of Gerontol.* 1994;49:M140-M147.

66. **Valcour VG et al.** The detection of dementia in the primary care setting. *Arch Intern Med* 2000; 160: 2964.
- Walter L.** Personal communication. . 1999.
67. **Weiss BD, Reed R, Kligman EW, Abyad A.** Literacy and performance on the Mini-Mental State Examination. *Journal of the American Geriatrics Society.* 1995;43(7):807-10.
68. **Whooley MA.** Case-finding instruments for depression. *JGIM.* 1997;12:439-445.
69. **Wolf SL, Barnhart HX, Kutner NG, McNeely E, Coogler C, Xu T.** Reducing frailty and falls in older persons: an investigation of Tai Chi and computerized balance training. Atlanta FICSIT Group. Frailty and Injuries: Cooperative Studies of Intervention Techniques [see comments]. *Journal of the American Geriatrics Society.* 1996;44(5):489-97.
70. **Wolfson L, Whipple R, Derby C, et al.** Balance and strength training in older adults: intervention gains and Tai Chi maintenance [see comments]. *Journal of the American Geriatrics Society.* 1996;44(5):498-506.
71. **Wyman JF.** Quality of life of older adults with urinary incontinence [editorial; comment]. *Journal of the American Geriatrics Society.* 1998;46(6):778-9.
72. **Zanetti O, Geroldi C, Frisoni GB, Bianchetti A, Trabucchi M.** Contrasting results between caregiver's report and direct assessment of activities of daily living in patients affected by mild and very mild dementia: the contribution of the caregiver's personal characteristics. *Journal of the American Geriatrics Society.* 1999;47(2):196-202.
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ONE PAGE SIMPLE GERIATRIC SCREEN

DATE _____

Patient Name _____ Source: Pt _____ Other _____

Assessment Procedure Abnormal Action Result

Do you have difficulty with eyesight?
Jaeger Card or Snellen eye chart Yes or
can't read 20/40 Refer

Test each eye (with glasses)

Whisper short sentence @ 6-12 inches Unable to hear Cerumen check

(Out of visual view) OR audioscopy Retest/refer/HHI

"Touch the back of your head with your hands" Unable to do Further exam
"Pick up the pencil" either Consider OT

"Rise from your chair (do not use arms
to get up), walk 10 feet, turn, walk back
to the chair and sit down Observed problem Tinetti
or unable in <15 Further exam
Home eval & PT _____

"Have you had any falls in the last year?" Yes Tinetti _____
"Do you have trouble with stairs, lighting,
bathroom, or other home hazards?" Yes to any Further exam,
Home eval & PT

Weight/BMI or loss of 5% or more BMI <21 or yes Nutrition/eval _____

"Do you have a problem with urine leaks
or accidents?" Yes Incont. eval _____

"Over the past month, have often been
_____ Yes GDS or other
bothered by feeling sad, depressed, or
hopeless?" "During the past month,
have you often been bothered by little
interest or pleasure in doing things? depression assessment

Name three objects/re-ask in 5 minutes Unable Folstein

or other assessment

Do you have any problems with any of the following areas? Who assists?/ do you use any devices?

Doing strenuous activities like fast walking/bicycling? Yes___ No___ _____

Cook Yes___ No___ _____

Shop Yes___ No___ _____

Do heavy housework like washing windows Yes___ No___ _____

Do laundry Yes___ No___ _____

Get to a place beyond walking distance

by driving or taking a bus

Yes___ No___

Manage finances

Yes___ No___ _____

Get out of bed/transfer

Yes___ No___ _____

Dress

Yes___ No___ _____

Toilet

Yes___ No___ _____

Eat

Yes___ No___ _____

Walk

Yes___ No___ _____

Bathe (sponge bath, tub, or shower)

Yes___ No___ _____

(for "yes" answers, consider causes, social services and/or home eval/PT)

Other areas of concern: medication side effects and adherence, caregiver stress, elder abuse, pain, alcohol, advance directives and health care wishes.
1999 SFVAMC/cbj modified from Mark Lachs et al *Annals of Internal Medicine* 1990 & Alison Moore et al *Am J Med* 1996

TWO PAGE SIMPLE GERIATRIC SCREEN

Source: Pt _____ Other _____

Patient Name _____

Date _____

HISTORY ITEMS

"Have you had any falls in the last year?"

Abnormal	Action	Result and Comments
Yes	Tinetti or other gait assessment _____ Further exam, Home eval & PT Consider osteoporosis risk	

"Do you have trouble with stairs, lighting, bathroom, or other home hazards?"

Yes to any	Home eval &/or PT _____	
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"Do you have a problem with urine leaks or accidents?"

Yes	Rule out reversible (DIAPPERS) History (stress, urge), exam, PVR _____	
-----	---	--

"Over the past month, have often been bothered by feeling sad, depressed, or hopeless?"
"During the past month, have you often been bothered by little interest or pleasure in doing things?"

Yes to either	GDS or other depression assessment _____	
---------------	--	--

Do you ever feel unsafe where you live?
Does anyone threaten you or hurt you?"

Yes	Explore further, social work, APS _____	
-----	---	--

Is pain a problem for you?"

Yes___	No___	Evaluate _____
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Do you have any problems with any of the following areas? Who assists?/ do you use any devices? (for "yes" answers, consider causes, social services and/or home eval/PT/OT)

Doing strenuous activities like fast walking/bicycling?	Yes___	No___	_____
Cook	Yes___	No___	_____
Shop	Yes___	No___	_____
Do heavy housework like washing windows	Yes___	No___	_____
Do laundry	Yes___	No___	_____
Get to a place beyond walking distance by driving or taking a bus	Yes___	No___	_____
Manage finances	Yes___	No___	_____
Get out of bed/transfer	Yes___	No___	_____
Dress	Yes___	No___	_____
Toilet	Yes___	No___	_____

Eat	Yes__	No__	_____
Walk	Yes__	No__	_____
Bathe (sponge bath, tub, or shower)	Yes__	No__	_____

SIMPLE GERIATRIC SCREEN (continued)

Review medications that patient brought in	Abnormal Confusion about meds > 5 meds Doesn't bring in	Action Consider simplification Medi-set or other aid Consider	Comments _____
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PHYSICAL EXAM ITEMS

(the next few items will be performed by nursing staff in some settings)

Weight/BMI And ask "have you lost weight?" If so, how much?	BMI <21 Loss of 5%	Alert provider Or Nutrition eval Consider medical, dental, social	_____
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Jaeger Card or Snellen eye chart Test each eye (with glasses)	Can't read 20/40	Alert provider or refer	_____
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Whisper short sentence @ 6-12 inches (Out of visual view) OR audioscopy	Unable to hear Retest/refer/ Hearing handicap inventory	Cerumen check	_____
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Name three objects/re-ask in 5 minutes	Unable	MMSE or other	_____
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"Rise from your chair (do not use arms to get up), walk 10 feet, turn, walk back to the chair and sit down	Observed problem or unable in <15	Tinetti and / or further exam Home eval & PT	_____
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"Touch the back of your head with your hands" "Pick up the pencil"	Unable to do either	Further exam Consider OT	_____
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(Remember to ask about the 3 items!)

Other areas of concern: caregiver stress, alcohol, social isolation, exercise, advance directives and health care wishes.

1999 SFVAMC/cbj modified from Mark Lachs et al Annals of Internal Medicine 1990 & Alison Moore et al Am J Med 1996

