

Comprehensive Fall Prevention For Community-Dwelling Older Adults

Planning for Success
In Identifying and Referring Older Adults
Through Hospital-Based Programs

September 2005



*Michigan Department
of Community Health*



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Forward

Falling in adults 65 and older is a complex problem confronting public health, the health care system and families. Statistics alone do not begin to measure the pain, suffering and loss of independence that are experienced by older adults who fall, but a number of trends highlight the magnitude of the problem:

- ❑ Falling accounts for 80-95% of hip fractures in older adults.¹
- ❑ The rate of fatal falls increases dramatically with age.²
- ❑ Falls are the leading cause of injury deaths for older adults.³
- ❑ Among adults 75 and older, those who fall are four to five times more likely to be admitted to a long-term care facility for a year or longer.⁴

These health outcomes are exacerbated by older adults accepting falls as an inevitable part of aging and health professionals not being aware of the reimbursable best practices that can address the many risk factors for falls. Further, there is not a systematic process in the health care system by which older adults can be assessed for fall risk and referred for services. This guide responds to these issues by offering a step-by-step process by which a hospital can plan a fall prevention program or clinic. Included are examples of fall risk assessment tools, algorithms for fall management and reimbursement guidelines.

The Injury and Violence Prevention Section of the Michigan Department of Community Health (MDCH) developed this guide as part of a grant from the National Center for Injury Prevention and Control, Centers for Disease Control and Prevention (CDC). Grant resources have funded other unique elements of this project, which include training of health care professionals in fall prevention assessment and interventions. The purpose of this guide is to help hospitals to develop model hospital-based geriatric fall prevention clinics with evidence-based, multi-component interventions to reduce fall risks. This guide may also be used as a training or planning tool for administrative and clinical providers who see the need for fall prevention services in the communities of older adults that they serve.

A 2003 RAND study found a lack of sustained fall prevention programs nationwide due to two key factors: insufficient funding and lack of available programs.⁵ The intent of this guide is to demonstrate how existing reimbursable hospital-based services can be coordinated or packaged into a fall prevention program or clinic. Recognizing that both the risk factors for falls as well as the evidence-based services to manage falls are complex and diverse, the guide will lead the reader through the planning phases to implement this important geriatric service, addressing such

¹ National Institutes of Health: Osteoporosis and Related Bone Diseases National Resource Center. *Falls and Related Fractures: The Risk of Undiagnosed Osteoporosis*. April 2000.

² Michigan Department of Community Health. *Elderly Falls Report*. 2004

³ Murphy, S.L. *Deaths: Final Data for 1998*. *National Vital Statistics Reports*. Vol. 48. No. 11. Hyattsville (MD): National Center for Health Statistics. 2000.

⁴ Donald, I.P. and Bulpitt, C.J. *The Prognosis of Falls in Elderly People Living at Home*. *Age and Ageing*. 1999. 28:121-5.

⁵ RAND. *Fall Prevention Interventions in the Medicare Population*. Prepared for Centers for Medicare and Medicaid Services. 2003

critical topics as system readiness for a fall prevention clinic and interdisciplinary clinical management of falls.

The focus of the guide is not on the development or provision of services for institutionalized older adults in such settings as nursing homes as those settings have specific environmental, regulatory and staff education programs to address fall risk. Therefore, the clinical pathways and algorithms in this guide are primarily targeted to the community-dwelling older adult, although there will be similarities in risk assessment and treatment modalities for both populations.

For the purpose of this guide and for simplicity, use of the terms “fall prevention program” and “fall prevention clinic” will be interchangeable. However, it is recognized that depending on the health care setting, a program or clinic may have different organizational structures and service configurations.

MDCH is conducting a number of evaluative studies of the fall prevention clinic model in 2005/2006, including a project to validate the fall risk assessment tools. Refinement of the clinical model, tools and algorithms is considered to be ongoing, and the reader of this guide should consider the model presented as a compilation of best practices still being tested.

Why Should Hospitals Promote Fall Prevention for Older Adults?

*By Gary Schmekel, Program Administrator
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Genesys Regional Medical Center, Grand Blanc*

As an Administrator who led the development of a fall prevention program at our hospital in 2004, I am frequently asked the following questions:

Why should Hospital Administrators be interested in fall prevention?

Falls in the senior population negatively impact independence and overall quality of life (e.g., loss of mobility, decline in daily activity due to fear of falling and decrease in longevity). Implementing a comprehensive fall prevention program will improve the lifestyle of older adults and strengthen customer allegiance with providers. Primary care physicians will also respond positively as they will have a “focused-care option” to refer patients who present in their practice seeking treatment for symptoms or injuries associated with falls. Fall interventions are reimbursable under Medicare and/or by most third party payers.

What sells this to Hospital Administrators?

As an Administrator, it is not only the “right thing to do for elderly patients served,” but also enhances the connection or relationship with this population: a population expected to double by 2030. In addition, it should offset problematic re-admissions to the hospital and/or lower the number of inappropriate Emergency Department visits.

How does it impact the hospital in terms of making system changes?

The Outpatient Physical Medicine Department is usually a great fit for launching a fall prevention strategy, as it works with an interdisciplinary team to assess patients and provide services in the fall prevention clinic. Physicians and physical and occupational therapists are, or can be trained on specific fall prevention modalities and then can participate in designing care plans for patients. The program can be marketed throughout the hospital’s system and community as a “first to market concept,” given that it is a relatively new focused strategy.

The Impact of Fall Prevention on Medical Practice

*By David Bauer, M.D., F.A.C.E.P.
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As our population becomes more elderly in the years to come, the number of patients over 65 years of age who fall will increase dramatically. These falls can be just as devastating to patients as myocardial infarctions, strokes, and pneumonia, yet relatively little attention has been paid to this syndrome in common everyday practice. Since it has been shown that falls in many instances indeed can be prevented with an aggressive prevention program, it makes sense that much more awareness, education, and involvement of physicians in fall prevention needs to become reality. In fact, proper assessment, management and referral could—and should—become the standard of practice.

Falls in the elderly patient population present unique challenges to physicians and other caregivers, since the etiology of these falls in most cases involves a multitude of known risk factors. To even *have* the knowledge of these risk factors, let alone sort out these individual risk factors in every patient who falls, can be very difficult, frustrating and time-intensive for any practitioner. Couple this with the normal challenges in dealing with elderly patients, such as poor historical reliability and the need for confirmation of established home support systems, it is clear why the average physician has little success with prevention of falls in the elderly.

Physicians often deal on a daily basis with elderly patients who have fallen or fall regularly, yet currently there are no specific tools readily available to primary practitioners for identifying and treating those patients who are at risk for future falls. With the availability of a fall prevention clinic, the physician has a resource for assistance in managing these challenging patients. It has been shown throughout the fall prevention literature that the most successful programs are those that approach the falling patient with a comprehensive risk assessment and involve multiple interventions.⁶ This type of resource management is most likely too complex and time-consuming for the average practitioner, and this struggle could lead to failure and perhaps medical liability. Relief from this diagnostic and therapeutic burden can therefore come by virtue of a fall prevention clinic.

Everybody wins in the setting of patients being referred to established fall prevention clinics. Patients receive comprehensive evaluation of their risk factors, and multi-disciplinary, targeted interventions in a cohesive, organized manner not available in any other venue. Doctors are offered an excellent resource for assistance with these complex patients who repeatedly come to their offices after falling, and these doctors will be gratified that a solution is perhaps finally at hand. And with the refinement of reimbursement by third party payers, hospitals can offer a unique community service while becoming fiscally stronger with these programs. These advantages for all should be stressed in any fall prevention clinic development.

⁶ RAND. *Fall Prevention Interventions in the Medicare Population*. Prepared for Centers for Medicare and Medicaid Services. 2003.

Since many interventions involve physical and occupational therapy, on-site clinics in the physical therapy department make sense. Holding the clinic at an outpatient clinic site at the hospital could work also, as long as appointments with physical/occupational therapy staff are readily available. One individual or a small set of individuals needs to function as the clinic case manager(s), providing close coordination of assessment and appropriate intervention. Also, a clinic case manager will need to follow-up with subsequent interventions and act as a liaison between the clinic, the primary physician, the pharmacist and other fall prevention clinic interventional staff. Training of staff for this fall prevention clinic development will also be necessary. Some extra equipment, such as a Biodex balance assessment machine and video camera are ideal but optional. Adequate public relations for the clinic are needed as well to introduce the medical staff and community to this unique entity.

In summary, fall prevention clinics make perfect sense. The science of falls has evolved enough to offer more definitive solutions to a daunting epidemiological problem. Prevention of falls can save bones, save brains, save lives, save physicians countless hours of frustration and make hospitals stronger partners in their communities.

Why Should Physical and Occupational Therapy Be Involved in a Fall Prevention Program?

*By Joy M. Finkenbiner, Physical Therapist
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As physical and occupational therapists, we see first hand—and all too often—the serious debility, loss of independence and even death that can occur as the result of a fall. From my own experience, I have seen situations in which improving an individual’s strength, balance and coordination—in addition to removing falling hazards in the home—have combined to make a significant decrease in the incidence of falls. Physical and occupational therapists are the experts when it comes to assisting patients with therapeutic interventions in these areas but we also work with an interdisciplinary team, including pharmacists and home care service providers, who assist with other evidence-based fall prevention services.

Involvement of physical and occupational therapists is a critical component of a successful fall prevention clinic. We can instruct patients in exercises and warn them about fall risks in the home that can make a big difference in decreasing the likelihood of future falls. An exciting development is the potential value of teaching older adults simple Tai Chi exercises to help prevent falls. And as the old saying goes—and is certainly true in this case—an ounce of prevention is worth a pound of cure.

Reasons that a Hospital Should Undertake A Fall Prevention Program for Older Adults

To summarize, administrators, physicians and health care professionals have identified the following reasons that a hospital should consider adding a fall prevention program as a hospital service line.

- I. It is the right thing to do for the hospital's customers, who include older adults and their families with concerns about how to prevent injurious falls.
- II. Two-thirds of the deaths due to falls are preventable if health professionals, caregivers and older adults apply proven, evidence-based services to reduce fall risks.⁷ Hospitals provide all of these services that include, but are not limited to, balance management, medication adjustment, vision testing and correction, and muscle strengthening.
- III. Fall prevention helps maximize the independence of older adults so that they can remain in their own homes as long as possible, therefore avoiding lengthy stays in nursing homes or assisted living settings.
- IV. A fall prevention program may establish a continuum linkage with elderly customers and grow system loyalty in a population slated for double-digit growth over the next 20 years.
- V. Older adults who receive prevention services from a hospital may be more likely to show customer loyalty when they select treatment services.
- VI. Provision of fall prevention services should lead to revenue growth in outpatient physical and occupational therapies.
- VII. Start-up costs are usually cost-neutral as the program involves coordination of existing services, most of which are Medicare reimbursable.
- VIII. A fall prevention program is cost efficient in that it may help older adults avoid expensive nursing home care.

⁷ Project Independence in cooperation with the Claude D. Pepper Older American Independence Center Program on Aging. Yale University School of Medicine. *Reducing the Risk of Falls Among Older Adults in the Community*. January 2000.

Falls Among Community-Dwelling Older Adults

Fall-related injury is an emerging and largely unrecognized public health problem that is anticipated to grow as the population ages. As one of the most common and serious health problems facing adults over 65, falls and their resulting injuries are associated with many costly and serious outcomes. These include increased risk of premature death, disability, reduced independence, decreased social interactions and premature nursing home admissions.⁸

More than one-third of healthy, community-dwelling older adults fall each year.⁹ Twenty to thirty percent of those who fall sustain a moderate to severe injury such as a hip fracture or head trauma as a result of the fall.¹⁰ Whereas injuries from falls are a health risk for people of all ages, they comprise a more significant risk for those over the age of 65—and especially those over the age of 75—because of chronic conditions and frailty that predispose older adults to complications from falls.

A number of indicators highlight the severity of the problem and reflect the pain and suffering to older adults and their families:

- ❑ Falling accounts for 80–95% of hip fracture in older adults.¹¹ Half of all older adults hospitalized for hip fracture do not regain their former level of mobility and cannot return home or live independently; 20% die within a year. Hip fractures lead to an overall 5–20% reduction in life expectancy for older persons.¹²
- ❑ Falls are the leading cause of injury deaths for older adults¹³ and the most common cause of nonfatal injuries and hospital admissions for trauma.¹⁴
- ❑ Among adults aged 75 and older, those who fall are four to five times more likely to be admitted to a long-term care facility for a year or longer.¹⁵
- ❑ In 2001, 1.6 million older adults were treated in emergency departments for fall-related injuries.¹⁶

⁸ American Geriatrics Society Panel on Falls in Older Persons. *Guideline for the Prevention of Falls in Older Persons*. Journal of the American Geriatrics Society. 2001;49:664-672.

⁹ Hausdorff, J.M., Rios, D.A., Edelber, H.K. *Gait Variability and Fall Risk in Community-Living Older Adults: A One-Year Prospective Study*. Archives of Physical Medicine and Rehabilitation. 2001;82(8):1050-6.

¹⁰ Sterling, D.A., O'Connor, J.A., Bonadies, J. *Geriatric Falls: Injury Severity is High and Disproportionate to Mechanism*. Journal of Trauma-Injury Infection and Critical Care. 2001;50(1):116-9.

¹¹ National Institutes of Health: Osteoporosis and Related Bone Diseases National Resource Center. *Falls and Related Fractures: The Risk of Undiagnosed Osteoporosis*. April 2000.

¹² National Osteoporosis Foundation. *Osteoporosis and Its Most Serious Consequences: Hip Fracture Background*. January 17, 2001.

¹³ Murphy, S.L. *Deaths: Final Data for 1998*. National Vital Statistics Reports. Vol. 48. No. 11. Hyattsville (MD): National Center for Health Statistics. 2000.

¹⁴ Alexander, B.H. Rivara, F.P., Wolf, M.E. *The Cost and Frequency of Hospitalization for Fall-Related Injuries in Older Adults*. American Journal of Public Health. 1992;82(7):1020-3.

¹⁵ Donald, I.P. and Bulpitt, C.J. *The Prognosis of Falls in Elderly People Living at Home*. Age and Ageing. 1999. 28:121-5.

- ❑ In 2000, direct medical costs for hip fractures totaled \$179 million dollars for fatal and \$19 billion dollars for nonfatal fall injuries.¹⁷

The State and Injury Prevention Directors' Association (STIPDA)¹⁸ states that nationwide:

- ❖ **Every year**, 300,000 older adults suffer fall-related hip fractures.
- ❖ **Every week**, nearly 200 Americans 65 and older die from fall-related injuries.
- ❖ **Every day**, over 400 older adults learn that they will never regain full mobility due to a hip fracture caused by a fall.

Preventing Falls in Older Adults Saves Lives!

The United States Prevention Task Force recommends that all persons 75 years of age or older or 70-74 with known risk factors should be counseled about fall prevention.¹⁹ Because the risk factors for falls are diverse, complex and interactive, the interventions to address falls share the same diversity.²⁰

Of the evidence-based interventions studied, the following have been proven to be most effective in reducing falls:

1. Comprehensive clinical assessment²¹
2. Exercise for balance and strength²²
3. Medication management²³
4. Vision correction²⁴
5. Reducing home hazards²⁵

Ideally, a hospital-based program should include as many of these evidence-based practices as is feasible. Research has proven that fall prevention programs that include fall risk assessments

¹⁶ National Center for Injury Prevention and Control. Centers for Disease Control and Prevention. Web-based Injury Statistics Query and Reporting System (WISQARS). Cited 24 Nov. 2003.

¹⁷ Stevens, J., 2005, in press; Centers for Disease Control and Prevention, 1996.

¹⁸ State and Territorial Injury Prevention Directors' Association, Atlanta, Georgia, 2004. www.STIPDA.org

¹⁹ U.S. Preventive Services Task Force. Guide to Clinical Preventive Services: Second Edition. Baltimore: Williams and Wilkins. 1996:659-85.

²⁰ RAND. *Fall Prevention Interventions in the Medicare Population*. Prepared for Centers for Medicare and Medicaid Services. 2003.

²¹ American Geriatrics Society Panel on Falls in Older Persons. *Guideline for the Prevention of Falls in Older Persons*. Journal of the American Geriatrics Society. 2001;49:664-672.

²² Lord, S.R., Caplan, G.A. Ward, J.A. *Balance, Reaction Time and Muscle Strength in Exercising Older Women: A Pilot Study*. Archives of Physical and Medical Rehabilitation. 1993;74(8):837-9.

²³ Cummings, R.G. *Epidemiology of Medication-Related Falls and Fractures in the Elderly*. Drugs and Aging. 1998; 12(1):43-53.

²⁴ Ray, W., Griffin, M.R. *Prescribed Medications and the Risk of Falling*. Topics in Geriatric Rehabilitation. 1990;5:12-20.

²⁵ Gill, T.M, Williams, C.S.,Robison, J.T., Tinetti, ME. *A Population-Based Study of Environmental Hazards in the Homes of Older Persons*. American Journal of Public Health. 1999;89(4):553-6.

and medical follow-up reduced the risk of falling by **18 percent**, and reduced the average number of falls sustained by **43 percent**.²⁶

Yale University Program on Aging further states that two-thirds of the deaths due to falls are preventable if health professionals, caregivers and older adults apply proven evidence-based services to reduce fall risks.²⁷

Michigan's Older Adult Population

With the aging of the Baby Boomer population and increases in longevity, population trends in Michigan and nationwide predict continued growth in the 65 and over population and even larger increases in those over 85. As the population ages, the threat of falls and fall-related fatalities and injuries will become a significant health problem needing attention. These facts are of special concern to Michigan when one looks at the state's projected population trends.

Michigan is one of only nine states with a population exceeding one million residents over the age of 65. In 2002, those aged 65 and older comprised 12.3% of the state's population. According to estimates by the U.S. Census Bureau, this will increase to 14.3% in 2015 and 18.1% in 2025.²⁸

As the elderly population in Michigan grows, the state will face unprecedented challenges in maintaining health status and funding health care. The aging of Michigan's population will have a significant impact on the state health care system in terms of cost, making cost-containment critical.²⁹

Michigan's fall-related morbidity and mortality data and medical costs, combined with population projections that indicate an aging populace, suggest that fall injury prevention among persons age 65 and older is an important area for public health intervention. These figures demonstrate the critical need for Michigan to implement effective, multi-faceted strategies to reduce the incidence of falls among its aging population.

Fall Injuries, Fall Incidence and Demographics in Michigan

Salient findings from analysis of death certificates, hospital discharge data and population-based surveys in Michigan include the following:

²⁶ RAND. *Fall Prevention Interventions in the Medicare Population*. Prepared for Centers for Medicare and Medicaid Services. 2003.

²⁷ Project Independence in cooperation with the Claude D. Pepper Older American Independence Center Program on Aging. Yale University School of Medicine. *Reducing the Risk of Falls Among Older Adults in the Community*. January 2000.

²⁸ Michigan Department of Management and Budget. Office of the State Demographer. 2003.

²⁹ Michigan Office of Services to the Aging, 1995.

*Fatal Fall Injuries*³⁰

- Between 1990 and 2002, the Michigan death rate due to elderly falls nearly doubled from 17.9 to 32.5 per 100,000 population.
- An average of 345 older Michigan residents died each year from a fall between 1999 and 2002.
- Rates were 25% greater for men compared to women; Whites had twice the rate of Blacks.

*Non-fatal Fall Injury Hospitalizations*³¹

- In 2002, falls were the cause of 80% of Michigan hospitalizations for injury among older adults.
- Most of the injuries sustained were fractures, specifically hip fractures.
- Women had twice the rate of men.

*Fall Incidence and Risk Factors*³²

- Thirteen percent of Michigan older adults reported falling within the past three months. Twenty-eight percent reported falling in the previous year.
- About twenty-five percent of those who fell required medical attention.
- Falls were reported as occurring most frequently on porch steps.

**Demographics with the highest incidence of falls:
Female, white, over 80 years of age.**

It is estimated that for every older adult fall injury death in Michigan, there are **33** non-fatal hospitalizations, about **200 older adults** seeking non-inpatient medical care and nearly **900 who fall**. Older adult falls that occurred in Michigan in 2002 have estimated medical costs of **\$659 million**. Including lost work time and quality life years lost, the total cost was about **\$2.5 billion**.³³

³⁰ Michigan Department of Community Health, *Elderly Falls Report*, 2004.

³¹ Michigan Department of Community Health, *Elderly Falls Report*, 2004.

³² Michigan Department of Community Health, *Elderly Falls Report*, 2004.

³³ Michigan Department of Community Health, *Elderly Falls Report*, 2004.

Given increasing fall death rates and a growing Michigan senior population, there may be a substantial increase in the number of fall deaths in the absence of prevention. Prevention can work if evidence-based practices are applied. Research has proven that fall prevention programs that include fall risk assessments and medical follow-up reduced the risk of falling by 18 percent, and reduced the average number of falls sustained by 43 percent (RAND, 2002).

Planning for Fall Prevention Services

Michigan Department of Community Health (MDCH) Fall Prevention Project

The planning model presented in this guide is based on experience, research and evaluation of fall prevention programs at Generation Care, Inc. in Muskegon, Crittenton Hospital Medical Center in Rochester and Genesys Regional Medical Center in Grand Blanc. The program at Generation Care has been in existence since 2001. The programs at Crittenton and Genesys began in 2003 and 2004, respectfully. The following description highlights the target population, goals and intervention of the National Center for Injury Prevention and Control grant that funds the Crittenton and Genesys programs.

To address fall injury prevention in adults 65 and older, the Injury and Violence Prevention Section (IVPS) of the Michigan Department of Community Health received a three-year grant from the National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, effective October 1, 2002. Through this grant, the IVPS develops, implements and evaluates hospital-based geriatric fall prevention clinics using a research design. Crittenton and Genesys offer interventions and referrals through the clinics to patients 65 and older identified in the Emergency Department (ED), whose visits were the result of a fall or fall injury.

Crittenton and Genesys ED nurses administer a validated fall risk assessment tool (FRAT) to measure factors and behaviors that increase fall risk. Based on medical inclusion criteria and a minimum score on the FRAT, eligible patients are randomly assigned to intervention or control groups. Patients in the intervention group are referred to the fall prevention clinic where they receive a second, more comprehensive FRAT, education, interventions and referrals. Patients in the control group are screened with a short FRAT and receive the usual ED standard of care for patients presenting with falls, but no other interventions. Patients confined to or being discharged to nursing homes are the most common exclusion group.

In the fall prevention clinics, the two hospitals offer a multi-factorial intervention and referrals to reduce fall risk. Intervention services include counseling and education of patients and their families, provision of a fall-related home hazard assessment, a review of medications, lessons in Tai Chi and referrals to other Medicare-reimbursable hospital services. These other services include vision testing; physical therapy for gait, balance and muscle strengthening; treatment of chronic and acute conditions that can lead to falls (e.g., cardiac conditions, incontinence); and bone mineral density testing for osteoporosis. Intervention and control group patients maintain fall calendars on which they record their falls. Patients in both groups are called monthly and

complete six-month and one-year fall risk assessments to record changes in risk factors, falls and fall injuries.

In addition to the fall prevention clinics and FRAT, a third project component is the development of training courses for interdisciplinary providers to improve skills in identifying and managing adults over the age of 65 with fall injuries. Project staff has developed courses for nurses, physicians, physical therapists and occupational therapists; the courses for nurses and physical therapists have been approved for continuing education credits.

Evaluation of the interventions focuses on the outcomes of reducing falls and fall injuries, addressing quality of life issues for older adults and their caregivers and positively impacting health professionals' knowledge and behavior regarding fall risk assessment and management. Process evaluation, including focus groups of older adults, addresses the factors of the intervention that ensure successful outcomes.

Evaluation efforts are ongoing and a final, comprehensive evaluation report of clinic effectiveness is not expected until 2006. For this reason, the planning model presented is a compilation of best practices that will be refined as final evaluation results are obtained.

Fall Prevention Planning Process

To establish a fall prevention clinic within a hospital or an outpatient clinic setting, a **SIX-STEP PLANNING PROCESS** is suggested to determine protocols, algorithms and clinical pathways:

Step One:	Determination of System Readiness to Serve a Population with Fall Risks
Step Two:	Staff Training and Education
Step Three:	Fall Risk Assessment
Step Four:	Interventions and Management of Clinical Outcomes
Step Five:	Reimbursement of Fall Prevention Services
Step Six:	Evaluation of Clinic Effectiveness

Step One: Determination of System Readiness to Serve a Population with Fall Risks

One of the most intangible aspects of hospital readiness for the development of a fall prevention “product line” is the maturity of the geriatric-focused culture within the institution. More often than not, older adults avoid hospitals because of physical barriers and systems that prevent exceptional service for this population. Not only are the physical aspects of the clinic absolutely critical to the ongoing success of the program but also the level of true understanding of who this unique customer is must be considered. A listing of components of “cultural readiness” is reviewed below.

Hospital staff planning for fall prevention should use this checklist *throughout* the planning process to ensure that the clinic can respond to the needs of those over 65. Remember that older adults are the fastest growing, largest consumer group of health care services.

❖ Elimination of Physical Barriers

- Provide easy parking or possible valet service.
- Have easy-to-manage doors.
- Use clear, “positive wording” signage.
 - Consider names like “Walk Strong and Tall,” “100 years; 100 steps,” etc. rather than “Fall Prevention Clinic” which implies weakness and dependence.
- Send health history and related registration forms to the home so there is plenty of time for completion rather than rushing at a busy front desk.

- Clipboards on the lap don't work well; consider small, round tables and chairs.
- Decorate for the season; “warm” things up. The less “clinical” looking the better!
- Provide chairs of varied sizes; consider a rocker here and there. Arms are a must. Have a least one bariatric-friendly chair.
- Consider fruit juice, cookies or an easy-to-serve snack
- Offer a “freebie” upon arrival: key chains and coin purses are a big hit. Refrigerator magnet calendars are great giveaways too (and inexpensive if purchased in bulk.) Therapists can also use these to mark days for prescribed home exercises, walks, hydration monitors, etc.
- The most important physical barrier is truly the time the patient is kept waiting. Implement the rule that no one waits beyond five minutes past his or her appointment time without personally being addressed as to the reason for the wait. **Service is everything!**
- When possible, choose a site with its own direct entrance. Hospitals are overwhelming.

❖ Elimination of Potential Cultural Barriers

- Use “Mr.” or “Miss/Mrs.” unless given permission to address the patient in a more familiar manner.
- For a patient who is there for the first time, warmly welcome and express your appreciation for the visit. Offer a quick orientation to the waiting area, where the bathroom is located, what they can expect, etc.
- Our current culture of older adults responds well to the doctor as an authority figure. Therapists should consider making statements such as “Your doctor will be happy to hear that you are here and we will be sure to send a report to him/ her directly with your treatment plan.”
- Remember...we REALLY don't know what it feels like to be old until we are old. Using “I understand” is less effective than “I can imagine.” Ask for input on how things are going and how they feel from the patient. It's all about trust.
- NEVER make a blank promise and then not keep it. This is a big trust breaker. If you say you will do something, be sure to do it. Write it down.
- Condescending voice tones or inappropriate addresses such as “sweetie” are not well accepted.
- Rushing, or the perception of it, is a big red flag to older adults. Those in the geriatric business must be prepared to allow things to move along a smooth, comfortable pace of activity.
- Older adults may negatively perceive the clinic as a place that has the potential to remove or eliminate a level of independence and freedom. Crankiness by a patient should be overlooked. The gruff exterior may be fighting against life in general, not you!
- The older adult patient perceives insincerity very quickly.
- Patients—as well as therapists—may have many pre-conceived notions about what is and is not possible; in fact, their own ageism is often a hurdle for most geriatric therapists. Recognize your own biases as well as the patients. Share

success stories; post them up everywhere. Use testimonials and a “wall of fame” in your waiting area. Make them BELIEVE that anything is possible!

- The fear of falling may be difficult to see initially, but may consume the patient. Building confidence takes more than verbal reassurance. Use graphs and check sheets and have the patient record their individual progress. Every little bit of progress counts and should be communicated to the patient. Videotaped gait around obstacles is a great way to visualize progress with posture, speed, agility, step length, etc.
- Women will verbalize fear of falling more than men.

The single, most important factor in preparing staff to work in this type of setting is that the patient must perceive they are gaining VALUE in their life by being there...at every visit.

Physical facilities necessary for a successful clinic include:

- Noise control is essential.
- Distraction elimination should be the goal, with as many private treatment areas or “corners” as possible.
- Mirrors are helpful, but limit to one section of the clinic.
- Lighting is critical. Use natural light wherever possible or use differing levels of lighting throughout the facility, just like home. A corner treatment area with an easy chair and floor lamp or other simulations of home makes treatments meaningful and practical.
- If possible, have several types of flooring—such as tile and carpet—with floor transitions to simulate home.
- Avoid clutter. Everything should have a place.
- Have several areas around the clinic in which assistive devices (such as canes and rolling walkers) can be tucked away or held on the wall for easy access to “trial runs” during treatment.
- Have small benches for family to watch and interact, but not interfere.
- A great decorative touch for the walls are testimonials and pictures of patients in action.

❖ To be effective for physical therapy (PT) and occupational therapy (OT) treatments, the Rehabilitation Department will need:

- Mat table accessible from three sides.
- Variety of step heights and footstools.
- Cones and or other obstacles.
- Chair with arms and 10-foot clear path (marked) for Timed Up and Go testing.
- Accessible drinking water.
- Sink or hand sanitizer on the wall.

- Functional Reach yardstick (recommended model: AliMed version).
- Therapy balls of different sizes (45 cm, 55 cm, 65 cm and oblong).
- Foam of different densities (Theraband Company produces a variety of oblong versions).
- Parallel bars, preferably with portable mirror, or one bar mounted on wall.
- Wall storage for multiple patient education materials.
- Kitchen counter and kitchen table simulation.
- A variety of “Making Life Easier” products for ADL (activities of daily living) training for OT staff to trial (reachers, jar openers, rocker knives, walker baskets, rolling carts, etc.).
- Biodex Balance System (preferred, but not required).
- Mirrors.
- Pool for aquatic therapy and balance treatment (preferred, but not required).
- Theraband, gait belts, mobilization belts (for stretching hip flexors), positioning pillows and bolsters.
- Warm moist packs (for pre-stretching) in various sizes.
- Cold packs (for tone inhibition).
- Standard therapy assessment tools: goniometer, tape measure, inclinometer (hand held), stethoscope, sphygmomanometer and clock with second hand.

The Interdisciplinary Team

Perhaps the greatest challenges for the hospital-based clinic are the interdisciplinary communication system and network that must exist to serve the many facets of a solid program. In fact, these are so critical that the team members should be chosen as much for their ability to communicate effectively as for their credentials and training. Health care providers must be excellent listeners and be able to hear things “between the lines” for the older patient. Often they become their primary advocate in the health care system. Cases of neglect and abuse are more prevalent as the burdens of caregiving manifest themselves within the family unit. Providers must be able to mobilize resources, to follow through and be persistent among other providers and to make things happen.

In a hospital setting, the priorities of the administration, clinicians, and patients may appear to be very different, but in fact, the main focus is the same: **happy, satisfied customers**. The administrative team primarily may be focused on reimbursement, systems, and costs, but this perspective absolutely is essential to the long-term existence of the clinic. The clinicians want to do the right thing for the patients, and may be frustrated with staffing patterns and cost restrictions, but again, their role is to be the effective link between the patients and the administrative team. The patient—the fall prevention clinic participant—just wants to get better. When all three perspectives are equally focused and communicate well, the opportunities for synergistic effects with other programs and systems in the hospital begin to happen.

***Staff working at the fall prevention clinic have to be able to
GET THINGS DONE for older adults.***

Team members should be:

- Genuine; “down to earth,” sincere.
- Great listeners, but able to skillfully direct conversation.
- Aware of community resources.
- Able to effectively communicate with physicians.
- Able to cope with frustrations and setbacks.
- Sincerely interested in working with older adults.
- Team players who don’t worry about the overlap between professional boundaries, but understand the unique contribution their profession has to offer.

An interdisciplinary team structure is recommended to plan the fall prevention clinic, including assessment of hospital readiness, development of clinical pathways and provision of education to both providers and patients on fall prevention.

Not all the members of the planning team actually provide services in the fall prevention clinic; some members are planners or managers rather than clinicians. Clinic providers—who require advanced fall prevention assessment and fall prevention clinical management skills—most often are from rehabilitation services and include physical therapists (PT), occupational therapists (OT) and geriatric nurses. PT’s and OT’s provide the largest number of therapy modalities that qualify as fall prevention services, most of which are reimbursable by Medicare and secondary insurance.

Members of the Fall Prevention Team may include:

- ✓ **Physicians, preferably focused on geriatric care**
- ✓ **Physician assistants or physician extenders (such as nurse practitioners)**
- ✓ **Nurses or nurse practitioners, preferably geriatric based**
- ✓ **Geriatric-focused psychologists**
- ✓ **Physical therapists**
- ✓ **Occupational therapists**
- ✓ **Speech-Language pathologists**
- ✓ **Audiologists**
- ✓ **Ophthalmologists or optometrists**
- ✓ **Social workers**
- ✓ **Pharmacologists**
- ✓ **Dentists**
- ✓ **Durable medical equipment specialists**
- ✓ **Administrators or managers**

Older adults are a hospital’s best marketing representatives. They will tell everyone if their experiences were adequate, less than expected, or just “wonderful.” With this in mind, hospitals must prepare for the clinic by identifying potential barriers between departments or within specialty areas and openly addressing them. If the clinic does not deliver the services it professes to, unsatisfied customers will quickly spread the word. The fall prevention clinic can be a powerful tool for building the reputation most hospitals desire: responsive to patients, thorough, scientific and the best in the area.

Older adults are the fastest growing, largest consumer group of health care services.

Fall Prevention Clinic for Older Adults

Like any other hospital-based program, the intensity of services—as well as the ability of the clinic to refer to other resources—will vary greatly between hospitals. It is essential for the hospital to decide to what degree the clinic is a provider or a referral site, so the training of staff, gathering of resources and specific marketing plan for the clinic are all carefully integrated and planned.

Most certainly, the clinic must be interdisciplinary, with the ability to complete a FRAT as the important first step along the path to prevention.

Hospitals do not want to attract older adults with a “paper only” product. There must be real value and treatment offered at the fall prevention clinic. The services available at the clinic need to be clearly identified. The following flow chart demonstrates the roles of the interdisciplinary team in relationship to the clinic and also highlights evidence-based services for the clinic.

Geriatric Assessment and Intervention Skills

Being ready to serve older adults with a comprehensive fall prevention clinic takes more than desire, hospital support and excellent facilities. Specific geriatric assessment and intervention skills should be finely honed and practiced over time to be prepared for the challenges of managing frail adults.

A “clinic readiness checklist” for self-assessment of clinical skills follows:

Clinician Self Assessment

Clinical Skills	Discipline	Notes
<i>Vital sign abnormalities:</i> <ul style="list-style-type: none"> ➤ <i>Pulse pressure changes with activity</i> ➤ <i>Orthostatic hypotension</i> ➤ <i>Warning levels for resting pulse and blood pressure</i> 	PT OT Nursing	Everyone should know these important factors!
<i>Normal vs. pathological changes with aging</i>	PT OT Nursing	Critical information
<i>Peripheral edema management (with CHF, venous insufficiency, and other co-morbidities)</i> <ul style="list-style-type: none"> ➤ <i>Ankle-brachial index</i> ➤ <i>Circulation/skin issues</i> 	PT OT	Systematic approach to preventing ulcers, varying levels of compression; lymphedema management options.
<i>Cognitive assessment:</i> <ul style="list-style-type: none"> ➤ <i>Mini-Mental Exam and scoring</i> ➤ <i>Trail –making and/or Short Blessed Test</i> 	OT	Nursing may administer Mini-Mental Exam as well.

<u>Clinical Skills</u>	<u>Discipline</u>	<u>Notes</u>
<p><i>BADL assessment focusing on:</i></p> <ul style="list-style-type: none"> ➤ <i>Bathing and hygiene</i> ➤ <i>Toileting</i> ➤ <i>Donning/doffing shoes</i> ➤ <i>Lower extremity dressing</i> <p><i>IADL assessment focusing on:</i></p> <ul style="list-style-type: none"> ➤ <i>Cooking and food prep</i> ➤ <i>Accessing 911/ emergency management</i> ➤ <i>Managing mail; enter/exit home</i> 	OT	Older adult driver assessments are a great addition to the fall prevention clinic. Easy to administer within clinic; very valuable tool for physician decision-making.
<p><i>Basic vestibular assessment and treatment:</i></p> <ul style="list-style-type: none"> ➤ <i>Vestibulo-ocular reflex</i> ➤ <i>Dix-Hallpike maneuver</i> ➤ <i>Apley maneuver</i> ➤ <i>Vestibular exercises for hypofunction</i> ➤ <i>Central vs. peripheral signs</i> 	PT	Vestibular dysfunction needs to be ruled out and/or treated, including general vestibular hypofunctioning.
<p><i>Basic Shoe/ Foot assessment and ability to make simple choices and/or refer to orthotist</i></p>	PT	Shoe: Focus on flexible toe box, heel support, fit, style, shoe sole, bunion and hammer toe deformity and accommodation in shoe. Foot: Key ROM deficits: Great toe dorsiflexion; <u>ankle dorsiflexion</u> .
<p><i>Vision deficit assessment and treatment</i></p>	OT	Basic visual acuity, perceptual deficits, limited visual fields, dominant vs. non-dominant eye activities, binocular and related vision skills.

<u><i>Clinical Skills</i></u>	<u><i>Discipline</i></u>	<u><i>Notes</i></u>
<i>Hearing acuity</i>	SLP or audiologist	
<i>Dysphagia assessment and Rx</i>	SLP	Preferably trained in videofluoroscopy and safe swallowing strategies.
<i>Medication management:</i> <ul style="list-style-type: none"> ➤ <i>Medications that older adults should never take</i> ➤ <i>Medication combinations that increase risk</i> 	Pharmacist Nurse	Therapists should have working knowledge of medicines that affect fatigue and energy levels, contribute to balance deficits, and may alter vital sign assessments with activity.
<i>Functional Tools:</i> <ul style="list-style-type: none"> ➤ <i>Timed Up and Go</i> ➤ <i>Functional Reach</i> ➤ <i>Tinetti Assessment Tool</i> ➤ <i>Other:</i> <ul style="list-style-type: none"> ○ <i>Berg Balance</i> ○ <i>KATZ or Barthel Index</i> ○ <i>Other advanced balanced tools</i> (Examples include: Bristol Activities of Daily Living Scale, Frail Elderly Functional Assessment Questionnaire, Modified Falls Efficacy Scale, FIM's, CTSIB, and more) 	PT OT	Therapists must utilize objective, valid, reliable measuring systems for balance and related function. Katz and Barthel are tools for ADL assessment by OT. Many balance assessment tools and machines exist to analyze balance and gait.
<i>Gait assessment and training:</i> <i>Normal aging changes vs. pathological changes</i>	PT	OT's also have a valuable role with mobility recommendations throughout the home.

<u>Clinical Skills</u>	<u>Discipline</u>	<u>Notes</u>
Bed mobility skills Range of Motion Assessment <i>Focusing on:</i> <ul style="list-style-type: none"> ➤ <i>Cervical ROM</i> ➤ <i>Scapulo-humeral rhythm and its impact on shoulder ROM</i> ➤ <i>Chest excursion</i> ➤ <i>Hip extension</i> ➤ <i>Knee extension</i> ➤ <i>Ankle and toe dorsiflexion</i> 	PT/OT	Essential ranges to allow management and response to the visual environment and to maintain upright, energy efficient posture.
Strength Assessment focusing on: <ul style="list-style-type: none"> ➤ <i>Toe intrinsics</i> ➤ <i>Triceps</i> ➤ <i>Latissimus dorsi</i> ➤ <i>Abdominal group</i> ➤ <i>Grasp</i> ➤ <i>Hip extension</i> ➤ <i>Quads/Hams</i> ➤ <i>Plantarflexors</i> ➤ <i>Dorsiflexors</i> 	PT/OT	Primary response muscles for protective reactions and transfers from sit to stand.
Postural Recovery Strategies: Assessment and progressive facilitation: <ul style="list-style-type: none"> ➤ <i>Ankle/ foot strategy</i> ➤ <i>Hip/trunk strategy</i> ➤ <i>Step strategy: anterior, posterior, lateral, crossover</i> ➤ <i>Postural muscle/ core strengthening strategies</i> 	PT/OT	A great starting point for balance enhancement and training.
Strengthening/ stretching: Therapeutic exercise principles for older adults	PT/OT	Open and closed chain; evidence-based theory on stretching and efficient strengthening; use of aquatic theory (if available); proximal/distal theory with aging and strength.

<u><i>Clinical Skills</i></u>	<u><i>Discipline</i></u>	<u><i>Notes</i></u>
<i>Computerized posturography (optional: Biodex, NeuroCom brands)</i>		
<i>Basic Incontinence Care:</i>	PT	Whichever discipline assumes this role needs to take a comprehensive approach to incontinence care including products, referrals to urologists, etc.
➤ <i>Screen for stress, urge and mixed types</i>	OT	
➤ <i>Basic bladder health education</i>	Nursing	
➤ <i>Effective home exercise planning</i>		
➤ <i>Advanced incontinence care (use of pelvic EMG, home units, etc.) Optional</i>		
<i>Hydration/ Nutrition:</i>	PT	Disciplines will vary.
➤ <i>Minimum hydration levels</i>	OT	
➤ <i>Basic nutrition recommendations for older adults</i>	Nursing	
➤ <i>Patient education materials</i>		
<i>Basic Osteoporosis Management:</i>	PT	Disciplines may vary.
➤ <i>Who to refer for testing</i>	OT	
➤ <i>Weight bearing exercise program</i>		
➤ <i>Nutritional guidelines</i>		
➤ <i>Patient education materials</i>		
<i>Home Assessment:</i>	OT	All disciplines may participate with this process.
➤ <i>Able to analyze with T.E.A.C.H. videotape system</i>		
➤ <i>Focused home visit</i>		
➤ <i>Home modification recommendations</i>		

Communications and Systems

Just as important as the technical skills are the communication and interactive skills of all clinic staff. In fact, older adults cite interpersonal skills, trust, respect and connection with caregivers as the main reasons they consider second visits. To quote a customer satisfaction feedback form, “...it’s the people that make me stick with it. They believe they can make a difference, and I believe them. I don’t give a darn about all the fancy equipment.”

- ❖ Certainly there is a role for caregivers and family members to play with regard to accurate history and carryover of assigned tasks; HOWEVER, remember the **trust factor!** Once lost, this trust is nearly impossible to regain.
 - Follow HIPAA (Health Insurance Portability and Accountability Act) guidelines when talking with others so that confidentiality is maintained.
 - Know that the majority of older adults significantly under-report their falls, for fear of consequences.
 - Patients often answer differently in the presence of family. Try to repeat historical questions and other aspects of interviewing casually throughout the first two to three visits for greater clarity and reliability.
 - Stress may affect memory and recall of events. Try to integrate questions throughout the visit rather than all at once as an interrogation.

Fall Prevention Clinic Champion/Team Leader

When preparing for the clinic, perhaps the most important person to be chosen by the hospital is the “fall prevention champion” or team leader. This individual literally pulls it all together. He or she coordinates all clinic services and disciplines, determines what needs to be changed and improved and takes responsibility to make things happen without criticism, but with the patient always in mind. The champion of the program understands older adult culture as it is today—and, yes, it will change significantly over the next 20 years—and pulls resources together while maintaining a direct line of communication with all team members.

Once the fall prevention team players are identified and trained, it is important early in the development of the clinic to create a team leader and/or case manager role. This position is critical to pulling together all service components of the team and encouraging follow-through among the various team members. The timing of referrals, attention to details and integration of family input and support are all examples of how the team leader orchestrates the interventions.

The team leader or fall prevention champion can lead the intervention team in various ways, as the following table demonstrates:

Possible Roles of the Fall Prevention Team Leader

- ✓ Spearheads fall prevention “rounds”—Every month, reviews cases with focus on risk factors and specific outcomes impacted by the team; maintains a master list of current patients.
 - ✓ Serves as the main contact with outside resources; assembles materials from related agencies; promotes clinic to outside groups.
 - ✓ Solves problems; eliminates roadblocks and communication problems between team members.
 - ✓ Serves as the patient advocate for care and service, including with family members.
 - ✓ Serves as the primary contact for patients; conducts customer service focus groups; solves issues with billing questions, etc.
 - ✓ Promotes the clinic within the hospital setting; provides testimonials of success; ensures ongoing quality assurance audits and outcome studies; budgets for the future.
 - ✓ Works to make all hospital employees aware of the positive effects of the fall prevention program.
-

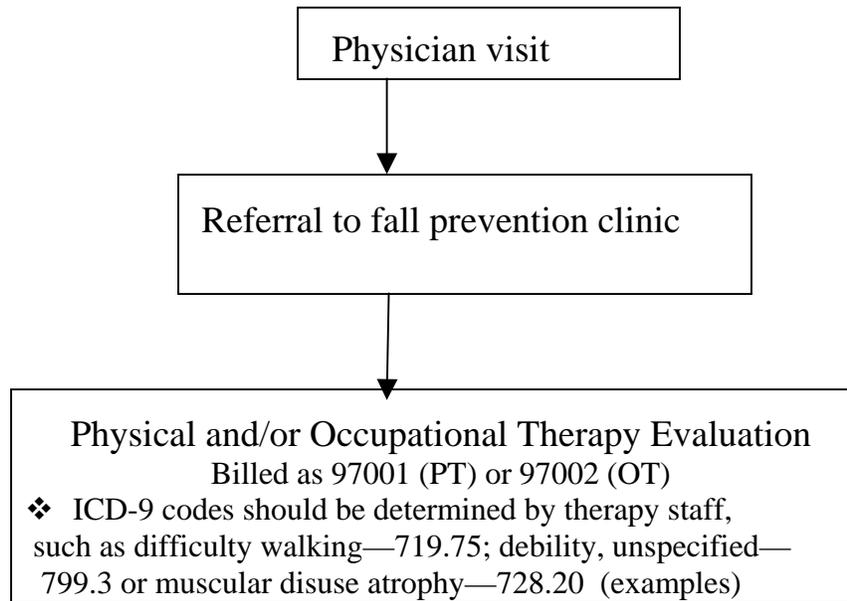
Revenue Considerations

A fall prevention clinic can only be effective if it continues to exist. Therefore, planning for appropriate reimbursement practices is a critical activity in preparing for success.

Physician orders currently are required for Medicare reimbursement, although significant progress has recently been made in Direct Access legislation at the federal level. At the time of publication, 38 states participate under varying levels of direct access language, allowing physical therapists to evaluate patients without a physician referral. Many states that permit this level of professional autonomy are hampered by superceding reimbursement limitations, leaving the practice restricted to having a physician referral. The fall prevention clinic is a perfect avenue to prepare clinicians for the process of screening and referral necessary for future direct access practice patterns. At the same time, the clinic promotes communication between the physician and team leader, keeping the level of physician control intact. The clinic can operate with two distinctively different referral patterns:

- ❑ Physician initiated referral
- ❑ Self-referral to clinic

Pattern #1: Physician Initiated Referral.

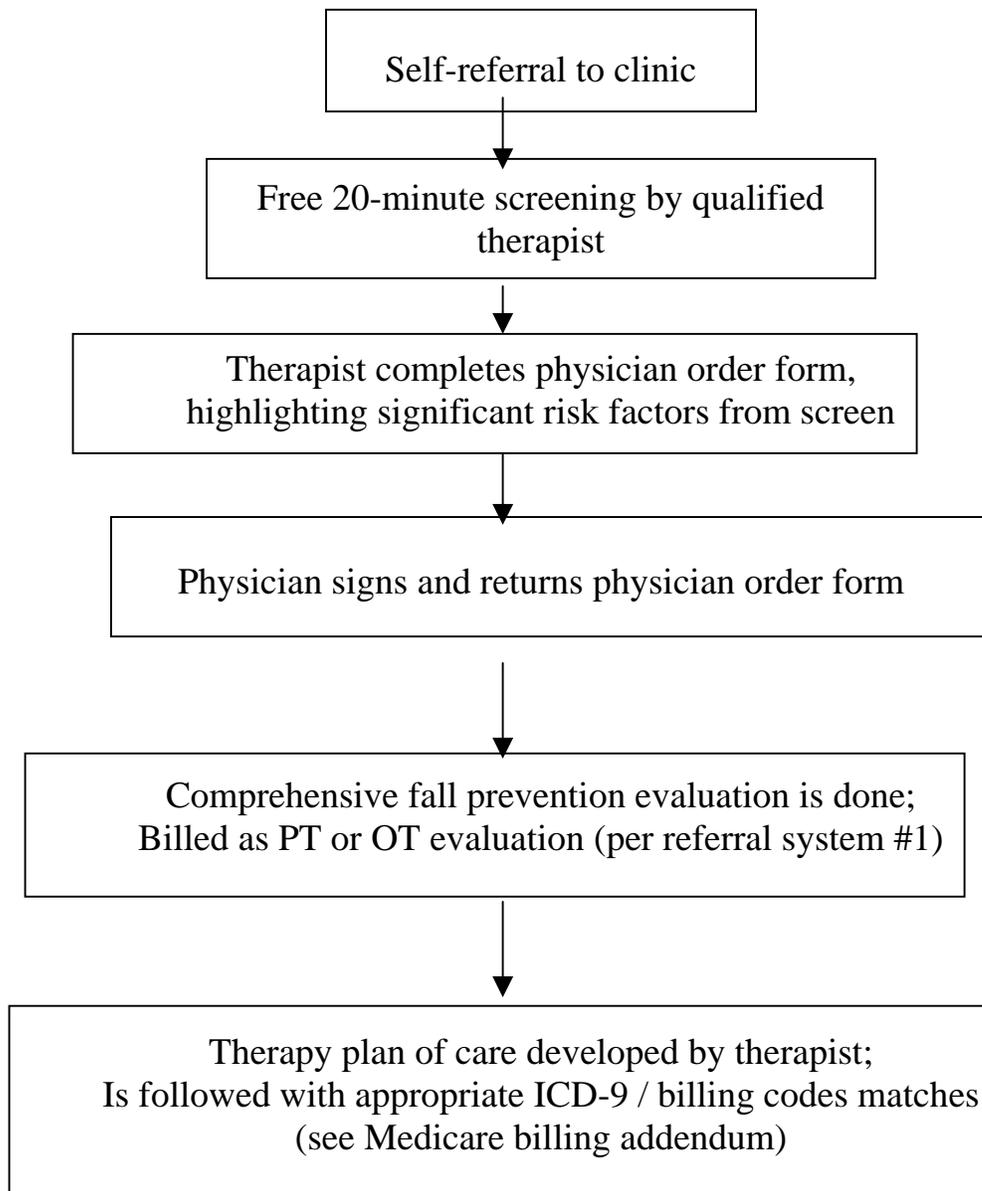


A therapy plan of care is developed and Medicare guidelines for outpatient OT and PT would be followed. Exception: if the patient is receiving home care services, outpatient care is not a covered service under Medicare benefits.

In this referral pattern, Medicare reimbursement for services rendered is the primary revenue source (80% of billed services), with secondary insurance billed for the remaining 20%. Of course, patients must pay their 100% deductible once per year and co-pays may vary (see “prior authorization” section). Physician visits and physician-extenders (under the physician’s supervision) are also reimbursable.

Pattern #2: Self-Referral to Clinic

In the self-referral pattern, a true opportunity for development of new revenue exists. This referral pattern is completely driven by attracting new patients to the hospital or system for a specific product, rather than encouraging physicians and other clinicians to change the culture of how they practice and adding fall prevention to how existing patients are served. Once the product is in place, and a new patient seeks the new service, a positive and meaningful experience makes it likely that the patient will begin to choose the hospital or system for future care because it has shown itself to be sensitive and smart in the management of older adult issues. For a negligible investment, the hospital may utilize the fall prevention clinic to tap into the largest growing health demographic in the United States today.



In either case, the primary care by the therapists is a covered Medicare service. Treatment must meet Medicare guidelines. Functional tool measures (listed in clinical skills table) and frequent objective findings must be included in periodic re-assessments to support payment for services. Referrals to other services such as audiologist, podiatrist, etc., all follow Medicare reimbursement guidelines.

Prior Authorization

Patients in the fall prevention clinic should be notified of any outstanding Medicare deductibles and co-pays prior to the onset of service. It is strongly recommended that any anticipated fees clearly be communicated in writing prior to the start of service, along with a patient signature validating the information. The Medicare phone validation process is quite simple and time

efficient. Further discussion of reimbursement, including coding and documentation, is included in the reimbursement section of this guide.

Business Planning

A business plan, which uses the business model, can guide the Fall Prevention Planning Team as it identifies customers and competition and costs out the product line. Below is an outline for a geriatric fall prevention business plan. Hospitals may also have a specific format that they utilize. Quite often, business plans rely heavily on economic information and forecasts whereas it may be more appropriate to emphasize the health and wellness objectives and the community impact of the geriatric fall prevention product line. Also to be considered is the potential for growth of hospital services such as physical and occupational therapy.

Elements of a Geriatric Fall Prevention Business Plan

1. Cover sheet containing all of the basic information, including hierarchy of responsibility, contact information, etc.
2. Statement of purpose and how this program fits the mission of the institution.
3. Table of contents.
4. The program.
 - a. Description of the program.
 - b. Marketing: how the program is marketed in the service area of the institution.
 - c. Competition: what other health care providers or hospitals offer fall risk assessment and treatment and how this differs from your program.
 - d. Operating procedures: protocols and other important information about operations.
 - e. Personnel: who are the key staff involved and what are their qualifications.
 - f. Anticipated health outcomes: How many clients will be served and what is the expected impact on health, wellness and behavior.
5. Financial data.
 - a. General statement about costs and income.
 - b. Sources of revenue and estimates of each.
 - c. Predicted growth of hospital-based services such as PT, OT and bone mineral density testing.
 - d. Capital equipment and supply list, existing and new.
 - e. Balance sheet.
 - f. Income projections (profit and loss).
 - g. Breakeven analysis.
6. Supporting documents.
 - a. Letters of agreement.
 - b. Grant applications.
 - c. Other relevant information such as marketing materials, testimonials, etc.
 - d. Copies of licenses and other legal documents.
 - e. Resumes of all principals.

A final word about the plan: A librarian can help the team locate more specific information. Most libraries have a variety of directories, indexes and encyclopedias that cover many business topics. Many guidebooks, textbooks and manuals on small business are published annually. An

accountant or financial consultant can help with the financial data. The approach to writing a business plan is similar to that of writing a grant. Don't worry about length, but do have a good format that makes information easy to find.

Step Two: Staff Training and Education

As health providers prepare and hone their clinical skills for the important work of fall prevention, it is helpful to bear in mind general principles of assessment and intervention.

Seven Principles of Fall Prevention Assessment and Intervention

1. **No two “falling” adults are the same.** Assessments may be simple or very complex. Fall prevention intervention strategies will vary with the setting. For example, the focus of this manual is management of falls in community-dwelling adults. Assessment and treatment in a skilled nursing facility may focus on seating and positioning to prevent pain and inhibit a spontaneous sit-to-stand initiative in patients with moderately severe dementia. In ANY setting, however, both the assessment and intervention must be multi-factorial.
2. **Test and re-test for reliability of results:** There may be comprehension, hearing, or other sensory deficits interfering with seeing the whole picture from a clinical perspective. Re-testing also can provide the evaluator with important information about the patient's ability to learn, adapt, and retain information. Therefore, testing and re-testing provide clues about effective interventions.
3. **Avoid making assumptions from/based on what you see and hear on the first visit.** People who fall tend to significantly under-estimate the number of fall frequencies during history taking. Assume everyone who has fallen within the last two months could fall again— hard—today.
4. **If you see a problem that can be addressed, don't assume that you will be able to change it and don't get frustrated when you can't.** Culture and habits are difficult to overcome. Take time to describe examples of how things might work better. It takes years to develop risky behaviors and more than one or two visits to make permanent changes.
5. **Don't rush.** This may be the only time your patient opens the door for discussion.
6. **Remember to offer options for CONTROL and CHOICES.** Try not to choose the solution for your patient. Strategies work best if voluntarily embraced and they seem like the patient's idea.
7. **Whatever you offer has to add VALUE to the individual's life.** If the program sounds difficult, condescending or mandated, it is less likely to be followed. The benefits need to be specific, clear and measurable to the patient.

Depending on the number and type of specialty clinicians available to the clinic, training and education for the fall prevention clinic staff should include the following topics:

Educational Topics

Normal vs. Pathological Aging

Chronic Diseases:

- ❖ Osteoporosis: Primary and secondary types, assessment parameters, dietary and weight bearing exercise guidelines, impact of hormone replacement and risk.
- ❖ Alzheimer's Disease and Dementia: How to communicate, motivate, pattern, and plan for success.
- ❖ Arthritis Management: Managing acute conditions, energy conservation, joint protection, adaptive tools to maximize function, lifelong activity and exercise habits, nutrition and dietary supplements.
- ❖ Parkinson's Disease: Facilitating safe mobility skills, managing tone and tremors, assistive devices, methods of caregiver education, contracture management, posture prevention strategies, lifelong activity and exercise programs.
- ❖ Diabetes Mellitus: Management of peripheral neuropathy, self-assessment of skin and circulation, foot care.
- ❖ Coronary Artery Disease: Setting safe parameters for activity and function, lifelong exercise, self-monitoring, perceived exertion, etc.

Other Important Geriatric Topics:

- ❖ Psycho-Social Issues and Communication
- ❖ Evidence-Based Strengthening for Older Adults
- ❖ Home Assessment and Safety Interventions
- ❖ Urinary Incontinence Management
- ❖ Nutrition and Hydration Standards for Older Adults
- ❖ Use of Assistive Devices and Mobility Training

Educational Topics (continued)

- ❖ Balance Enhancement Interventions:
 - ✓ Postural Strategy Development
 - ✓ Vestibular-Ocular Exercises
 - ✓ Progressive Challenges
 - ✓ Integrating Vision, Vestibular and Somatosensory Input to Maximum Automated Responses
 - ✓ Tai Chi: Basic and Advanced Moves
- ❖ Vision and Perception Training
- ❖ Vestibular Assessment and Treatment
- ❖ Wound Assessment and Treatment
- ❖ Lymphodema and Peripheral Edema Management Strategies
- ❖ Cardiac and Endurance Guidelines for Geriatric Programming

Step Three: Fall Risk Assessment

To make an impact with a fall prevention clinic so that the number of older adult falls are reduced, hospitals need to:

- I. Identify all of the factors that contribute to the likelihood or predictability that someone may fall.
- II. Recognize which factors may be altered through identification/assessment, patient education and direct treatment of patient problems.

The most critical aspects of comprehensive fall prevention lie in the clinic's ability to:

- Identify which factors contribute to fall risk.
- Prioritize which factors may be improved with treatment.
- Effectively communicate compensatory strategies for factors that likely will not change.
- Develop client acceptance of a 24-hour approach to fall management and intervention strategies.

Since we know falling happens for many different reasons, a comprehensive team approach to assessment and intervention is critical to successful prevention. No two patients are alike and an **individualized plan of action** is needed for each patient.

This section of the manual will describe intrinsic and extrinsic risk factors pertaining to falls, with sample fall risk assessment tools (FRATs) included in the appendices. The most important part of the FRAT process is not the results, but is instead the first exposure the patient has to the clinic concept and to the information that falls can be positively impacted by action. Although the assessment process is important, remember that patient history will not be 100%. The patient may not feel well and results will need to be verified as much as possible with the family. The FRAT will be most consistent in its completion and findings if the same type of health professional performs certain tasks, although it does not have to be done exclusively by the physician, nurse, therapist, etc. With a little teamwork, the FRAT can be time effective and fairly simple to administer.

Typically, fall prevention literature labels factors that are “within oneself” as *intrinsic* factors while the “outside influences” that may affect fall risk are *extrinsic* factors.

A brief summary of related factors is listed below, with factors described in detail on subsequent pages.

:

INTRINSIC FACTORS	EXTRINSIC FACTORS
<ul style="list-style-type: none"> • Age • History of falls • Vision deficits • Hearing deficits • Strength deficits • Range of motion loss or asymmetry • Balance and/or postural strategy impairment • Gait pattern and mobility dysfunction • Activities of daily living disability • Cognitive and attention impairments. • Possible correlation with urinary incontinence • History of falls • Awareness and acceptance of falling • Pathological conditions and existing diseases 	<ul style="list-style-type: none"> • Shoe style and fit • Assistive device: type, technique • Medication use • Home environment • Nutrition and hydration • Homebound status • Lack of health professional’s knowledge: <ul style="list-style-type: none"> ○ Assessment tools ○ Treatment interventions ○ Effective geriatric communication and compliance skills

From this snapshot view of risk factors, more detailed explanation is needed to fully understand the implications of each factor. As you read, consider the challenges of differentiating between “normal” vs. pathological changes associated with aging.

❖ INTRINSIC RISK FACTORS

Age

- ✓ A usual loss of one percent of strength per year
- ✓ Shifts in “normal” center of gravity to a more anterior location
- ✓ Increased postural sway
- ✓ Tendency for foot arches to drop, effectively elongating the foot slightly
- ✓ Decreased overall reaction time, slowing coordination and motor learning processes

History of Falls

- ✓ The research of Mary Tinetti indicates that fall history is a clinically significant assessment finding related to the likelihood that a fall will be repeated. The Tinetti Assessment Tool is an objective way to measure gait and balance challenges associated with fall risk.³⁴
- ✓ A two-year historical picture of falls is important to the fall risk assessment process, clearly indicating any gradual decline in function during this time period.

Cognitive Changes

- ✓ Although still under study, cognitive changes may be associated with falls as they relate to attention span and tendency toward distraction; ability to sort environmental clutter; perceptual deficits relating to interpretation of risk or danger; spatial perceptual changes; deficits in problem solving or sequential thinking; and inability to inhibit impulsive, spontaneous, poorly motor planned activities.

Pathological Conditions

The following diseases and conditions are described in the literature as having a correlative relationship with falling.³⁵

- ✓ Diagnosed osteoarthritis and rheumatoid arthritis
- ✓ Parkinson's Disease
- ✓ Although osteoporosis is not a direct risk for falls, it certainly is correlated to the degree of injury severity resulting from falling.
- ✓ Alzheimer's Disease: several studies show early results with a relationship to falls; however, the specific cognitive or functional tie to falls is currently unknown.
- ✓ Clinically significant postural hypotension (present in 30% of older adults): defined as a sudden drop in blood pressure (and temporary blood flow to the brain) while moving from supine to sitting or standing. Symptoms associated include a roaring in ears, dizziness or temporary head spinning resulting in a loss of balance.
 - Postural hypotension is also associated with some medications commonly used to treat depression (therefore making depression under treatment a possible risk factor), as well as some cardiac medications.

³⁴ Tinetti, M.E., Speechley, M. *Prevention of Falls Among the Elderly*. New England Journal of Medicine. 1989; 320(16):1055-9.

³⁵ Tideiksaar, R. *Falling in Old Age: Prevention and Management, Second Edition*. New York, New York: Springer Publishing Company, Inc. 1997.

- ✓ Peripheral neuropathy: Impacting the ability to sense where one's feet and lower legs are in space, possibly impairing natural balance and righting reactions.

Vision Deficits

- ✓ Decreased visual acuity (less than 20/60) or related pathological conditions such as the presence of cataracts, which impairs normal vision.
- ✓ Impaired reaction to light/dark changes, affecting the ability to change pupil size abruptly to aid focus and acuity in different lighting situations.
- ✓ Decreased contrast sensitivity, particularly with grays, browns and neutral colors.
- ✓ Decreased peripheral field requiring constant adjustment to respond to changes in the environment.
- ✓ Decreased depth perception, with both close and far away objects.

Hearing Deficits

- ✓ Decreased hair cells, both in overall number and in threshold for action potential.
- ✓ Calcification of cupula so that it is less sensitive to change.
- ✓ Thinning afferent axons, affecting speed of transmission and, therefore, response.
- ✓ Decreased conduction time.
- ✓ Increased vibratory threshold.
- ✓ Temporal perception delays, along with relays to and from the cerebellum—the central controller of balance and coordination—moving much more slowly.

Other orthopedic changes

- ✓ Strength changes comprise the most well studied risk factor that can be impacted with intervention, resulting in a potentially tremendous impact on fall risk reduction. Most older adults maintain approximately 45% of their maximum muscle strength.³⁶
- ✓ Changing collagen levels, within aging tissue, make it less elastic, with a greater tendency toward loss of range of motion and contractures.

³⁶ Lord, S.R., Caplan, G.A. Ward, J.A. *Balance, Reaction Time and Muscle Strength in Exercising Older Women: A Pilot Study.* Archives of Physical and Medical Rehabilitation. 1993;74(8)837-9.

- ✓ Gait (ambulation) changes with aging:
 - Wider base of support between both feet.
 - Slower overall cadence or speed of walking (note: this is assessed specifically with the Timed Up and Go functional test).
 - Less heel-toe excursion during walking.
 - Limited trunk rotation and arm swing.
 - Shorter step length.
 - Less weight shifting and pelvic adaptation to single leg support.
 - Anterior weight shift related to center of gravity changes (note: overall, the center of gravity is held quite tightly, with minimal limits of stability due to upper extremity and trunk limitations in balance responses during walking).

Balance and/or Postural Strategy

- ✓ Normal balance relies on instant integration of information from at least three main sources: the visual, vestibular (inner ear) and somatosensory (joint receptors) systems
- ✓ As we age, we become more visually dependent, simply because we may not challenge and therefore utilize other sensory systems. These other systems tend to adapt to not being used by increasing overall reaction times and deferring to the visual input. They begin to hypo-function.
- ✓ Naturally occurring postural strategies to balance—the ankle-foot reaction, hip flexion response, and finally the step response—become more labor intensive and delayed for some. When coupled with strength and range of motion losses, the overall impact on balance and recovery can be extremely debilitating.

Changes in Activity of Daily Living Skills (ADL's)

Although not specifically researched, declining basic activities of daily living (BADLs) that frequently are reported within six months of a fall include:

- ✓ Difficulty with bathing, which environmentally can certainly be life threatening.
- ✓ Difficulty with dressing skills, particularly lower extremities, socks and shoes.
- ✓ Instrumental Activities of Daily Living (IADLs) most affected include:
 - Fear or difficulty entering and exiting the home, such as to get the mail.
 - Reduced frequency or complexity of preparing a hot meal, involving planning, two-handed tasking, carrying, opening/closing containers and cans, and dishwashing.
 - Difficulty with bed mobility skills such as rolling, and getting in and out of bed.

❖ **EXTRINSIC RISK FACTORS**

Shoe style and fit

- ✓ Chronic heel cord tightness that is uncompensated by shoe. This effectively negates any ankle-foot postural recovery strategy.
- ✓ Shoe fit: a flexible toe box is absolutely necessary, again to compensate for postural strategies that may be limited by range of motion or strength in the ankle complex. Excessive weight on the metatarsal bar should be avoided.
- ✓ Toe intrinsic strength: As the first line of defense against falling anterior or posterior, this is the single most commonly overlooked strength test of an older adult.

Assistive Devices

- ✓ A careful multi-tasking assessment is needed here. Some people walk more safely without an assistive device. Occasionally, different devices work better for different activities. Many older adults have purchased or borrowed a device without proper fitting or instruction in technique. Most people start using a cane on the wrong side, complicating their gait and balance deficits.
- ✓ A primary problem is poor utilization and anterior shift of center of gravity to arms and progressive weakness of hip and trunk extensors. This is common in older adults using a walker with a significant endurance or respiratory limitation. The arms are often overused with a flexed trunk posture, effectively increasing the size of the rib cage to facilitate passive expiration (common with patients with chronic obstructive pulmonary disease.)

Home Environment

The most common risk factor of the home environment is the reluctance of the homeowner to make changes!

Home environmental hazards include:

- ✓ Insufficient lighting—particularly at night—that does not create enough illumination to view the floor and its transitions.
- ✓ Bathroom arrangements that do not facilitate safe toilet transfer or bathing.
- ✓ Rugs and loose carpet edges, with changing floor surfaces and irregular transitions.
- ✓ Stairs with no railing or only one railing, with inadequate stairwell and step widths.

- ✓ Highly polished floors.
- ✓ Furniture and countertop clutter.
- ✓ Low tables and chairs, and high or low bed height.
- ✓ Low toilet seats.
- ✓ No non-slip surface in tub.
- ✓ Irregular or raised sidewalks, or raised thresholds at doorways.
- ✓ Wet leaves, ice, snow or puddles in dips in the sidewalk or driveway.
- ✓ Oil on garage floor.

Nutrition and Hydration

Overall, the primary concerns are related to under-nutrition (not necessarily under or over weight) and dehydration. Many older adults dehydrate themselves to manage their incontinence, unknowingly making urine more concentrated. This, in turn, worsens urge incontinence. Key problems include:

- ✓ Dehydration and associated risks to mental function and other systems.
- ✓ High fat, high sodium diets with prepared and frozen foods.
- ✓ Limited access to fresh foods and/or a balanced diet.
- ✓ Low calcium intake contributing to osteoporosis.
- ✓ Low B vitamin intake contributing to fatigue.
- ✓ Limited vitamin C contributing to strength and muscle recovery problems.

Homebound Status

Older adults who have limited interaction with the world outside their homes may be at greater risk of falls due to:

- ✓ Limited endurance and activity levels.
- ✓ Nutritional compromise due to infrequent shopping trips.
- ✓ Less stimulation of all the senses.
- ✓ Once exposed to situations out of the home, they are more likely to startle, have difficulty with different terrain, fatigue easier due to over-stimulation and may respond poorly to distractions.

Medication Use

- ✓ Falling and dizziness are the most common side effects of medications.

- ✓ Psychotropic drugs are most associated with falls. This is well documented, particularly in nursing home research findings.
- ✓ Cardiac and analgesics have little correlation with falls unless the medicine impacts postural hypotension as a precursor to fall incidence.
- ✓ Recent studies show just four or more concurrent medications contribute to increased fall risk.³⁷
- ✓ Research shows variance in this area, but we know that the following impact fall risk: selective serotonin re-uptake inhibitors (sleep related), tricyclic anti-depressants, neuroleptic agents, benzodiazapines, anti-convulsants and Class 1A antiarrhythmias.

Incontinence: Under Study

- ✓ The relationship of incontinence to falls currently is under study. This includes stress, urge, overflow, mixed and functional types.
- ✓ Stress urinary incontinence (UI) affects pelvic floor weakness, directly correlated to hip strength. Hip strength definitely is a factor in fall prevention.
- ✓ We know that falling may cause problems in the pelvic musculature or even nerve damage in the coccygeal area, so a good hip assessment may provide clues to fall risk and vice versa.
- ✓ Urge-type UI may affect judgment and focus. Anyone with urge incontinence may experience a panicked, rushing type of gait pattern to reach the bathroom on time.
- ✓ Functional UI (the inability to maintain continence because of the physical challenges associated with toileting) is common in assisted living and nursing home settings.
- ✓ UI may simply affect attention and decreased overall activity levels due to worry over the UI problem.

ONE THING IS FOR CERTAIN...

Lack of health professionals' knowledge regarding assessment tools, treatment interventions and effective communication and compliance skills is also an extrinsic risk factor for older adult falls.

³⁷ Cummings, R.G. *Epidemiology of Medication-Related Falls and Fractures in the Elderly*. *Drugs and Aging*. 1998; 12(1):43-53.

Fall Risk Assessment Tool (FRAT)

Once these important baseline skills are developed, the clinician must learn to utilize a systematic checklist of intrinsic and extrinsic factors to help prioritize problems and develop a comprehensive plan of care. Included in this manual are two fall risk assessment tools (FRATs): 1) A short FRAT that can be used in community-based or Emergency Department settings is included in Appendix A. 2) A comprehensive FRAT that examines each factor that may contribute to fall risk is included in Appendix B. The FRATs use evidence-based guidelines for fall risk from Functional Assessment Tools listed previously in this text. The clinician may use the tool in any order that works best for the patient. It is often helpful to plan which discipline will address which component of the exam. As long as the FRAT is completed in its entirety, any trained health professional can contribute to the process. The discipline which is most trained in the clinical area should be the first choice for assessment.

A short reminder checklist for therapists that divides the intrinsic and extrinsic factors in an easy-to-read checklist format is included in Appendix C. This list can be readily supplemented to any standardized evaluation within the clinic. Fall risk assessment should be a part of any assessment for adults over the age of 65, and this tool is a quick reminder of potential risk areas.

Again, emphasizing points made previously in this text, establishing trust and rapport is an important part of completing a comprehensive assessment. It may be helpful first to focus on key areas in the initial visit and then move on to safety and prevention tactics, returning to completing the FRAT at the next visit. There are no hard and fast rules though. Since no two clients are the same, the health professional needs to gauge how things are moving along. If the patient seems very interested, be sure and begin treatment, including several homework assignments, such as vision-vestibular exercises (recommended for everyone over 65,) perhaps also demonstrating how important foot intrinsic muscles are to maintaining balance and providing simple exercises to begin strengthening.

The comprehensive FRAT helps the health professional remember all of the key areas of assessment that may be affecting risk for falls. The ability to extract information in a comfortable, non-threatening interview style is an essential practice skill in the assessment process.

High Risk Functional Test Values

In addition to the clinical competency checklists for service providers in fall prevention clinics, therapists need to be acutely aware of **high risk functional test values** that direct safety urgency and problem prioritization. These are presented in the following table:

Functional Tool	High Risk Indicators
❖ Timed Up and Go (TUG)	Over 15 seconds
❖ Tinetti Assessment Tool	Less than 19 of 28
❖ Functional Reach	Less than or equal to 6 inches
❖ Berg Balance Scale	0-20 High Risk 21-40 Medium Risk 41-56 Low Risk
<i>Other Parameters</i>	
❖ Gait speed	Less than 4.5 meters/sec.
❖ One leg standing	Less than or equal to 12 seconds
❖ Tandem Standing	Less than or equal to 30 seconds

Risk Factor Summary

The more we interpret research findings and apply the evidence to the way we care for people, the better opportunities we will have to impact the willingness, desire and compliance of older adults with proven methods of reducing their risk for falling.

So much can be done—even with just one encounter. Make every minute count by focusing on the potential **positive** effects of changing every risk factor that you can!

Remember, the fall prevention clinic is designed to identify those factors that can be affected through specific interventions. Many of the primary causes for falling can be eliminated, with the net effect of preventing future falls.

Step Four: Interventions and Management of Clinical Outcomes

Evidence-Based Interventions

For a fall prevention program to be effective in reducing the rate of falling, risk assessments must be paired with **individually tailored** and **multi-factorial** follow-up interventions. The combination of a multi-factorial risk assessment and management program along with exercise has been shown to be the best approach to preventing falls.³⁸ Home modification alone or other such single intervention approaches are not as effective as a multi-component treatment program that addresses the multiple intrinsic and extrinsic risk factors of the older adult. Remember that though very few older adults have just one risk factor for falling, there is always a tendency among providers and families to look first at the home environment and its hazards and not to do the comprehensive assessment.

Throughout this manual, tables are incorporated that list clinical competencies relating to fall prevention. Too often therapists become complacent with basic information and may not maintain a level of expertise with current evidence-based practice guidelines. Many resources exist to help the clinician become more proficient with assessment and treatment. Self-study and continuing education are methods of attaining this level of clinical expertise.

The following appendices will also assist the clinician in developing proficiency with evidence-based guidelines for management of older adults with fall risk:

- ❖ Appendix D contains an algorithm for the recommended components of clinical assessment and management for fall prevention, including risk factors, assessment tools and intervention services.
- ❖ Appendix E presents the fall prevention treatment interventions that are based in a hospital's rehabilitation department.
- ❖ Appendix F offers guidelines and a checklist for medication review and adjustment.
- ❖ Appendix G describes opportunities for additional senior-focused programs.
- ❖ Appendix H presents an algorithm for home assessment and intervention.
- ❖ Appendix I gives an example of a case manager worksheet to assure quality outcomes in assessment and treatment.

³⁸ RAND. Falls Prevention Interventions in the Medicare Population. Prepared for Centers for Medicare and Medicaid Services. 2003.

Suggested Resources for the Clinician:

Evidence-Based Practice Resources	Resource
Home-study units which include self – assessment tests on topics such as: <ul style="list-style-type: none"> ➤ Balance Management in Older Adults ➤ Functional Assessment in Older Adults ➤ Vestibular Dysfunction: the Basics ➤ Therapeutic Exercise and Older Adults ➤ Gait Training and the Elderly 	American Physical Therapy Association; Geriatric Section. Home Study Modules, 1999-2004. Available on line as member (www.apta.org) or call: 1-800-888-APTA.
Geriatric-focused topics on management of physical disabilities, e.g., arthritis management, post-stroke recovery.	American Journal of Occupational Therapy and OT Practice: Two periodicals published by the AOTA available by topic/ subject search at www.aota.org .
American College of Sports Medicine: Fitness Guidelines for Older Adults.	American College of Sports Medicine: Senior Guidelines; www.acsm.org
Senior Fitness Testing Manuals and training materials by Roberta E. Rikli and C. Jessie Jones.	Human Kinetics: ISBN 0-7360-3356-4
Geriatric Physical Therapy: A Clinical Approach, Second edition; Bottomly and Lewis	ISBN: 0-8385-8875-1 Publisher: Appleton and Lange
Geriatric Physical Therapy, Second edition, Edited by Andrew Guccione	ISBN: 0-323-00172-6 Publisher: Mosby
Orthopedic Assessment and Treatment of the Geriatric Patient, by Carole B. Lewis and Karen A. Knortz	ISBN: 0-8016-5412-4 Publisher: Mosby
<i>Generations: The Journal of the American Society on Aging</i>	Volume XXVI, Number 4 <i>Falls and Fall-Related Injuries</i> , Winter 2002-2003 American Society on Aging 833 Market Street, Suite 511 San Francisco, California 94103-1824
<i>Strength Training for Older Adults</i> by Wayne Westcott and Thomas R. Baechle	ISBN: 0-87322-952-5 Publisher: Human Kinetics
Good Internet sources for medication information: www.medications-online.com ; www.healthsquare.com ; www.healthtouch.com ; www.kramesondemand.com	
<i>The Journal of Geriatric Physical Therapy</i>	Various fall-focused issues, published by the geriatrics specialty section of the APTA
<i>Fall Proof! A Comprehensive Balance and Mobility Training Program</i> , by Debra J. Rose	ISBN: 0-7360-4088-9 Publisher: Human Kinetics

The preceding list is by no means complete or exclusive. It is beyond the scope of this manual to describe interventions as they are taught in the texts, periodicals, and anthologies of care strategies for older adults. Each reference offers an opportunity to go beyond the entry-level approach to therapeutic intervention and challenges the reader to explore new ways to meet therapeutic goals, using every available treatment tip. Therapists working in the geriatric-focused setting constantly prioritize their treatments, expending their patients' energy and tolerance very carefully and weaving patient education continuously through the treatment. Treatment becomes a 24-hour approach, carefully winding the threads of good advice throughout an older adult's daily activities.

An additional comment on treatment: Just as no two older adults are the same, so too are the ways older adults respond to treatment interventions. The therapist must gain a sense of what motivates and inspires the patient. For example, is the patient social? Do they like to practice with others watching? Does the patient respond and trust technology or do they prefer private, "hands only" sessions—leaving the complex balance equipment for others? Every approach that is tailored must be carefully considered, with feedback asked for every step of the way.

Home Assessment

The intervention relating to the home assessment process is worth discussing further. The literature well documents the environmental risks within the home. Basic interventions such as "pick up all throw rugs" are common sense. Much more, however, is needed to truly make an impact in the home environment. Because most hospitals cannot afford to allow therapists to go off-site for comprehensive home assessments with patients, one option to consider is the *Technology Enhanced Assessment of Client Homes (TEACH) system* (Appendix H), which provides a script for home assessment movie-making.

Through the use of home videotape with a guided "script" for the moviemaker, the therapist and patient can view the common high risk areas of the home objectively, privately and without the stress of having company. Through the videotaped tour, the reviewer can pinpoint potential areas for change or modifications that could be helpful in reducing fall risk within the home. This method of home assessment has several advantages:

- The privacy, personal security and dignity of the patient are respected. It is much less threatening.
- Family members can be included in the assessment, without the additional traffic and related stress.
- If a friend or family member can assist in the process, the patient can "walk and talk" throughout the home and direct observation of skills such as food preparation, rising from a favorite chair and getting out of bed can all be viewed objectively.
- The high risk BADLs and IADLs previously described can be simulated on tape
- Time efficiency is attended to, with options for rewinding, fast forwarding and targeted reviews of space.

Fear of Falling

Fear of falling can functionally immobilize older adults within their environment, preventing the activity that they so desperately need. Social isolation and lack of interaction in general can perpetuate as the fear may become consuming and more limiting over time. Patients who are afraid need specific support and encouragement as they re-learn to trust their bodies with treatment.

Non-Verbal Signs of Fear of Falling

<i>Physical Signs</i>	<i>Behavioral</i>
Smaller, wide based steps	Will carefully plan movement to end in seated position. Pre-plans start and end points to walking route
Upper extremities away from body	Avoids carrying items
Tendency to touch and lean on upper extremities and hands when moving about the room	Will sit down to talk or to do food prep, etc.
Sighing and deep breaths during activity such as walking	Also limits bathing and hygiene time, may be uncomfortable standing with both arms engaged in activity
Relatively non-verbal during movement	May or may not verbalize fear
Slow cadence	May verbalize “you don’t understand” often during treatment or interviews
Often picks up or carries assistive device, making the risk for falls even greater	May lean on counter, wall, back of chair during conversation or task

It should also be noted that chronic pain management may play a significant role in comprehensive interventions in older adults. Although older adults certainly have a well-documented, elevated threshold for pain, chronic pain may significantly impact activity levels that contribute to weakness and loss of flexibility that contribute to fall risk. Medicines for pain management certainly are a significant risk factor as well. Treatment options for pain management that are most effective for older adults include:

- Aquatic rehabilitation: the opportunities to change fall risk by working in the water are endless!
- Primary and secondary breathing and relaxation strategies.
- TENS therapy.
- Massage and contract-relax techniques for muscle relaxation.
- Caution should be used with thermal agents because of the risk of burns due to possible altered sensation and tolerance. Since circulation is peripherally challenged, superficial heat is considered to be ineffective with the exception of use of pre-stretching modes.

Keep in mind that most people who fall:

- **Don't think there is a problem.**
- **Don't believe they will be seriously injured.**
- **Are skeptical when a health professional talks about their "home situation."**
- **Are turned off by terms like "strengthening." After all, old people are weak, right?**

Key Components of Effective Intervention Programs

- Be more of a listener than preacher. Offer pointed, valuable tips and information; stay away from generalizations and jargon.
- Your care means more if it seems like solicitude rather than science.
- Older adults prefer 9 – 11 am appointments except if dependent on others for rides.
- Be on time for appointments. Simple—but very, very effective.
- Avoid seeing patients in the central gym area to start. Eliminate as many visual and auditory distractions as much as possible until you have worked together on physical activities several times.
- Instruct, demonstrate, cue and then **stop talking** during periods of movement and activity.
- Make lists for yourself about complicated cases. Don't let yourself get overwhelmed.
- Share the list with your patient. When you're both on the same page, a patient is more apt to hang in there!
- Be prepared to be intensive with your care. Plan mat time, upright time, sitting time and keep the treatment focused and moving along.
- Continuity of care is critical. If the evaluating therapist will not be treating the patient, be sure to introduce the assistant to the patient as your partner and have the assistant in on parts of the evaluation. Stay on top of the case. Stop in the treatment room as often as possible.
- Consider using folders to manage handouts, tips, diaries, etc. Ask the patient to bring the folder every time.
- Focus only on one to two critical exercises for a home program muscle group.
- Use a grid for the patient to record how many and how much they accomplish at home. Make sure you look at it!
- Use calendars to keep track of fluids, exercises and what you focus on during treatment.
- Involve family members in treatment when appropriate **ONLY** after you are very familiar with how a person responds and with his/her permission.
- Some of the most important work you will do is tapping into local resources that you didn't even know existed, e.g., where tylastic shoelaces can be purchased.
- Reserve a spot on your bulletin board for patients and staff identifying new contacts, resources, phone numbers and services.

- If you refer a patient to someone else for a service, be sure and follow up to see if you will make that referral a second time.
- **Older adults will come back only if:**
 - **They feel you are adding value to what they already know.**
 - **If you are not wasting their time.**
 - **If you treat them with respect.**
 - **If you let them participate with their care.**
 - **If you are sure to include their doctor.**
 - **If you improve the quality of their lives.**

Consider the following model of how two disciplines can work together on intervention strategies in fall prevention:

<i>Occupational Therapy (OT)</i>	<i>Physical Therapy (PT)</i>
Comprehensive, meaningful ADL assessment and treatment	Comprehensive, meaningful strength and range of motion assessment and treatment
Home assessment and modification	Posture analysis and treatment
Balance with functional activities	Pain management
Vision, perception adaptation	Mobility and gait patterns
Adaptation of tasks	Static and dynamic standing balance
Energy conservation	Balance recovery strategies
Hand strength and agility, coordination	Feet and shoes
Sequencing of tasks	

Many areas of OT and PT overlap, depending on the number and intensity of problems. Teamwork is critical. Potential areas of overlap:

- Nutrition and hydration
- Urinary incontinence management and bladder training
- Stress management
- Tai Chi
- Breathing exercises
- Home safety: use of phone, getting up from a fall, medication management, IADLs such as money management (most are typical of OT domain of care.)

Final Tip on Effective Interventions:
Always practice as if you are the LAST CLINICIAN your patient may see!

Physician Awareness

Fall prevention or even recognition of signs and symptoms of frequent falls are not mainstream in entry-level physician education. Most physicians will readily agree that they are unaware of the treatment options available for the falling older adult. As the team leader and the primary health professional voice that older adults respond best to, it is critical that the awareness of assessment techniques and the multitude of treatment options now available are included in physician awareness and education prior to opening a fall prevention clinic.

Educational Areas for Focused Awareness Training: Physicians and Physician Extenders

Key Areas of Physician Training

- **Interviewing and Communicating with Older Adults: Key Questions That May Indicate High Fall Risk.**
- **“Normal” Strength and Range of Motion in Older Adults.**
- **Timed Up and Go Functional Tests and Normative Data.**
- **Vestibular-Ocular Testing.**
- **What the Rehabilitation Team Can Do for Balance and Vestibular Disorders.**
- **Activity Strategies to Increase Blood Pressure Temporarily to Compensate for Postural Hypotension.**
- **Pharmacological Facts: Ten Drugs to Avoid Prescribing to Older Adults.**

Management of Clinical Outcomes

While the internal quality auditing practices of each hospital’s rehabilitation department varies, the fall prevention clinic is certainly one area that requires targeted efforts at ongoing assessment of its effectiveness. Recommended strategies to avoid older adults falling through the cracks in a busy clinic environment include:

- **Monthly Fall Prevention Rounds:** Each patient on caseload is discussed from a table prepared prior to meeting. The table identifies name, date of first assessment, physician name, dates of progress notes to physicians, attendance percentage, top three targeted fall prevention areas and current frequency of visits. A follow-up column assigns loose end tasks such as necessary phone calls or referral check ups or 30-day call-backs to the patient for reinforcement of home exercises.

- **Tracking of Average Length of Stay:** It is strongly recommended that both the length of treatment time (start-to-end dates) and total number of visits be compiled over time to provide evidence to other health professionals of the efficiency of the treatment interventions. Awareness will facilitate future referrals.
- **Patient Testimonials:** Patient pictures and quotes are also important to gather. Using these examples in visible areas such as waiting rooms and treatment gyms can be both validating and inspiring.
- **Functional Assessments:** Using objective functional tests such as Timed Up and Go, Tinetti Assessment Tool or Functional Reach measurements with periodic re-assessment helps the clinician re-direct treatment priorities as the patient changes. Sometimes the changes are subtle and the patient (and clinician) may feel discouraged quickly. Using a variety of tools for re-assessment, including the traditional strength, range of motion, or six-minute walk test, provides important, reliable feedback as to the effectiveness of the care. **At the same time, if scores are not changing, the clinician should begin to emphasize compensatory strategies and focus on safety (e.g., how to get up from a fall). The clinician may have to discontinue the skilled interventions and place the patient on a maintenance type of safety program.**
- **It is absolutely essential to avoid standardizing treatment frequencies.** Not all patients need to be seen three times per week for 30 days! It may be more effective to schedule visits as in this example:
 - First week: assessments, early intensive treatment with specific home assignments – three times/week.
 - Second week: focus on two priority areas stretching and strengthening— key areas—two visits.
 - Third week: one visit to progress; one phone call to inspire and connect.
 - Fourth week: one visit to progress, again with one short phone call; retest one to two functional tools and/or range of motion, strength.
 - Fifth week: progress to meaningful balance work; build on a stronger foundation; see patient three times to challenge, progress, set up home balance and endurance work.
 - Sixth week: one visit and patient completes TEACH home assessment videotape
 - Seventh week: two visits for home safety, tools to make life easier, energy conservation, etc.
 - Re-assessment; tie together all outside referrals; re-assess, reinforce, teach—one to two visits.
 - One month later: one visit or one phone call.
 - Of course, visits will vary with individual patient needs!

The important role of managing clinical outcomes is that based on what we see and measure, we *change* what we do next.

Step Five: Reimbursement of Fall Prevention Services

Reimbursement for services rendered in relation to fall prevention certainly is a critical component of assuring the financial viability of this and other health-related programs. This section of the manual primarily focuses on reimbursement for the evaluation and assessment services provided by **rehabilitation services related to the fall prevention clinic**. This section is organized into **six primary topics**:

- I. General Information**
- II. Medicare and Secondary Billing Payments**
- III. Ethics and Reimbursement**
- IV. Coding and Billing**
- V. Documentation**
- VI. Medicare Appeal Process**

General Information

The term “reimbursement” simply means “payment for services rendered.” However, navigating through the maze of third party payers, Medicare and fee- for-service systems is far from simple. A better description might be “the process an individual therapist or entity providing services engages in to obtain payment for service.”³⁹

This process includes:

- Validating payment source prior to rendering service.
- Informing the patient regarding his/her responsibility, if any.
- Performing the evaluation and initial treatment.
- Selecting an ICD-9 code specific to the therapeutic problems.
- Billing appropriately and ethically.
- Collecting reimbursement.

Because each entity varies as to the process used, this module focuses upon a general explanation as to the variety of third party payer types, selection of the ICD-9 diagnostic code as a precursor to billing and using correct billing procedures per Medicare guidelines—the primary pay source in many older adult cases seen in the fall prevention clinic. A detailed explanation of the theory and practice of the following plan types will not be included. Instead, a general description of each reimbursement source is included:

1. **Direct from the patient or proxy** (primary reimbursement)
 - i. **Cash-based:**
 1. Patients are totally responsible for payment of services delivered for an agreed-upon fee.

³⁹ Focus: Geriatric Physical Therapy; “Reimbursement” by Daniel E. Cioleck, PT, MS, GCS, October 2000

2. Patients pay out-of-pocket and are responsible to receive payment from their health insurance plan (indemnity plans are common sources of this type of system, and some disability plans).
3. Patients with Medicare B may select a non-participating provider and use form HCFA 1490 to obtain direct reimbursement.

Fall prevention services that provide a significant perceived value to the community may provide opportunities for an entity to increase its cash-based business.

2. Third party agent or insurer (primary reimbursement)

1. Payment from a business entity (i.e. insurance company) to the provider.
2. Each policy is different. The patient and provider should carefully check as to the required deductibles (out-of-pocket expenses before insurance benefits become active) and co-pays (percentage of out-of-pocket expenses for each service provided).
3. Two primary sub-categories
 - a. Fee for Service
 - i. The fee for each unit of care is usually determined by the insurance company, regardless of what the provider bills.
 - ii. Per Service Benefit Plans
 1. Example: Blue Cross/ Blue Shield.
 2. Traditional fee for service model.
 3. Provider must follow the rules for the plan or risk non-compliance non-reimbursement.
 - iii. Per Diem Benefit Plans
 1. Managed care method by insurance companies that pays per visit, regardless of time, intensity of service or skill level.
 2. Often used by HMOs, and has been used for years for inpatient hospital coverage by Medicare Part A.
 - iv. Per Episode Benefit Plans
 1. Systems that pay the provider a set amount to manage the patient care regardless of intensity or duration to cover all services rendered.
 2. Used in SNFs following hospitalization, Medicare diagnosis groupings in hospitals (DRGs) and home health PPS systems.
 - b. Capitation
 - i. Fixed, predetermined amount to the provider on a regular interval, regardless if the individual receives services or not.

- ii. Called risk arrangements in which the provider pays for any and all care necessary, according to contract agreement.
- iii. Currently unaware of any type of plan available for geriatric patients; this is typical for employer sponsored/ workers compensation type of arrangements.

3. **Direct from an employer or sub-contracting source (secondary reimbursement):** Self-explanatory.

Although the framework for reimbursement appears complex, older adults involved in fall prevention basically utilize two primary systems: Medicare and supplemental or secondary insurance plans, although many new models of health plans are under development for the geriatric patient.

This discussion focuses on the outpatient patient seeking fall prevention services.

Medicare and Secondary Billing Payments

At this time of this publication, Medicare is undergoing a massive transformation. The final rulings for January 2006 are yet to be clarified and finalized.

Medicare Benefit Plans basically are divided into three parts, and its framework has been the ongoing topic of discussion and evolution since its creation as a part of United States law in 1965. In addition to establishing the three parts of Medicare which older adults are entitled to by law, the Health Care Financing Administration (HCFA) is legally required to oversee the administration of the Medicare system.

Part A: Hospital Insurance Benefits

This was designed to cover inpatient hospital, post-hospital extended care providers (skilled nursing facilities), home health agencies and hospice care providers. Most older adults automatically are eligible for Part A benefits after age 65 and do not have to pay a premium if they or a spouse paid into the system while working. Additionally, legislation allows individuals who would not otherwise qualify for Medicare A benefits to purchase them after paying a monthly premium. It is beyond the scope of this module to explore these circumstances.

Part B: Supplemental Medical Insurance

This insurance program began as a voluntary program for older adults. Individuals are eligible for Part B if they are eligible for Part A benefits. The program is funded from tax contributions from the government and premium payments by enrollees. **Part B benefits cover all or portions of home health services, physician and related services, outpatient physical, occupational and speech therapy services, rural health clinics, outpatient rehabilitation**

facility services, ambulatory surgical services and some mental health hospital services, as well as some types of durable medical equipment, prosthetics and orthotics.

Part C: Medicare+ Choice Program

A variety of plans have been available for older adults since sweeping Medicare legislation in 1997, which incidentally enacted the first capitated restrictions for therapy services under Part B benefits. Part C plans mimic traditional HMOs (with and without point of service options), and other managed care plans (like PPOs) and health savings accounts. Anyone eligible for Part A or B benefits may enroll except persons with end stage renal disease, although their Part C coverage must remain intact if they acquire this diagnosis while insured. Part C scope of benefits and payment plans vary greatly and are becoming more widespread and popular among older adults who are actively planning their finances for later life stages.

Medicare Supplemental Health Insurance Policies

According to the Social Security Act, the federal government requires that any policy claiming to be “supplemental” to Medicare should be certified by the government. These policies evolved to cover costs not covered under Parts A, B or C. A well-known supplemental health insurance plan for Medicare beneficiaries is Medigap. There are currently more than 10 types of supplemental plans certified by the government for purchase by qualifying older adults.

Medicare Benefits Administration:

When the government created law mandating the structure of Medicare, it also provided a clear indication that fiscal intermediaries would administer the day-to-day operations of claims processing for Medicare A and B. This complex group of fiscal intermediaries and carriers for home health agencies, hospitals and outpatient providers is currently undergoing massive restructuring, in part in response to a history of arbitrary and unclear denials, delayed payments and cumbersome delivery systems. Each year there are significant improvements in the processes associated with becoming a Medicare provider, rules and regulation clarifications and claims processing.

Medicare Providers:

All hospitals certainly are Medicare providers and must renew Medicare certification periodically.

To become an outpatient Medicare provider, which is necessary for a successful fall prevention clinic focused on community service, the clinic may choose one of two methods by which to apply.

1. Physical Therapy Independent Practitioner or Occupational Therapy Independent Practitioner (PTIP or OTIP): This method includes an application and the credentialed provider’s proof of licensure. Estimated processing time is four to six weeks, and applications are easily accessed through the Center for Medicare Services website

(www.hcfa.gov/medicare/enrollment.) This is a viable plan for free-standing organizations that do not have a medical director (as required by the Medicare Agency Provider enrollment process) or do not offer social services. Benefits can be assigned to a corporation or agency to avoid complicated tax issues for the PTIP or OTIP.

2. **Rehabilitation Agency:** The process of becoming an agency is more lengthy and complex than certifying as a PTIP or OTIP and requires medical directorship, social services, vocational rehabilitation access and other components that may not be as readily available to the outpatient provider.

Accessing Medicare Benefits:

While both options offer the ability to participate with Medicare, PTIPs and OTIPs have more structured reimbursement limitations. Therefore, the following information covers these limitations as they are currently, with the understanding that if requirements are met, both the rehabilitation agency and PTIP/OTIP entities are eligible for reimbursement. It should be clarified that each regional fiscal intermediary varies as to its own medical review policies. This document reflects directives by the Wisconsin Physician Service (WPS), the carrier for Michigan.

Once the provider status has been secured, the PTIP, OTIP or Rehab Agency must adopt the systems Medicare uses to determine a viable claim. Medicare (HFCA) purchased licenses for certain coding components of Medicare claims processing.

ICD-9: Diagnostic Coding System.

CPT: Common Procedural Terminology (created by the AMA). Of common interest to therapists are the 97000 series within this code.

CCI: Correct Coding Initiative edits which identify which codes cannot be billed together (introduced in 1996).

In order to successfully bill the Medicare system and receive reimbursement for reasonable and necessary rehabilitation services relating to fall prevention, accurate coding, billing and documentation must be performed.

Other pertinent information related to Medicare:

CMS issued Transmittal V on January 9, 2004 defining certification of Medicare patients in the outpatient therapy setting as needing to occur within 30 calendar days from the date the physician sees the patient and orders therapy. Currently the APTA is working with CMS on the misinterpretation of this transmittal so that it **reads 30 days from the start of therapy rather than the physician visit**. According to this transmittal, a patient must follow up with the physician within 60 days of the initial therapy evaluation and then at least every 30 days thereafter. The provider must document in the medical record that the patient met this requirement. The transmittal can be viewed at: www.cms.gov/manuals/pm_trans/R58P.pdf.

WPS released a revised Local Coverage Determination (LCD) with an effective date of July 1, 2005. Complete plan of care and cert/re-cert requirements can be found in the revised LCD entitled “Outpatient Physical Therapy, Occupational Therapy and Speech-Language Pathology.” The link to the main page, where a specific state and then the appropriate LCD can be selected is http://www.psic.com/medicare/policies/pol_home.shtml.

It should be noted that **secondary payer sources may have their own set of rules** separate from Medicare rules and regulations. Once Medicare has paid its portion of the bill (maximum of 80% of billed units of care), the secondary insurer may pay all or some of the remainder of the amount, depending on the plan.

One of the most important roles of the intake assessment professional who conducts billing is to ascertain the amount of out-of-pocket expense to the customer at the onset of care, to avoid surprise or cessation of care due to cost.

Commonly asked questions based on June 6, 2005 implementation of Medicare outpatient rulings:

1. Does Medicare require a referral for physical therapy?

NO. A referral or an order are not specifically required by Medicare. According to Section 220.1.1 of the new manual: “certification requirements are met when the physician certifies the plan of care.” However, it adds: “Payment is dependent on the certification of the plan of care rather than the order, but the use of an order is prudent to determine that a physician is involved in the care and available to certify the plan.”

This is written as such because many states practice under direct access legislation where patients may see a physical therapist without a physician referral. In Michigan, the practice acts for both physical therapists and occupational therapists require a physician order prior to evaluation and treatment. Screenings may be performed without a physician order, with physician orders needed for comprehensive evaluation and treatment interventions.

2. “Is a physician/NPP visit required 60 calendar days after the physical therapy evaluation?”

NO. Medicare does not require a physician/NPP visit at that point unless the National Coverage Determination (NCD) for a particular treatment requires it (Section 220.1.3-C). However, the physician/ NPP could require a visit at 60 days or earlier if, in his/her professional judgment, it is necessary.

3. “Do I still have to have the patient’s plan of care recertified every 30 days?”

YES. “Certifications are required for each 30 day interval of treatment and are timely when the certification occurs before or during the interval” (Section 220.1.3 – D). Patients must be under the care of a physician/NPP during each interval of treatment (Section 220.1.3-C).

4. “What must be included in the physical or occupational therapy plan of care?”

“The plan of care shall contain, at a minimum, the following information as required by regulation (42 CRF 424.24 and 410.61): diagnosis, long-term treatment goals and type, amount, duration and frequency of therapy services” (Section 220.1.2-B). The plan must also include the **signature** and **professional identity** of the person establishing the plan as well as the **date** the plan was written (Section 220.1.2-A).

5. “I called the patient’s physician after I performed the evaluation, and she approved the plan of care. Will the certification requirement be met if I document this phone call in the patient’s record?”

NO. While you should document the call in the patient’s record, you also must get a signed plan of care. To be considered timely, the plan must be signed within 14 days of the verbal order (Section 220.1.3-B)

6. “Can I begin treatment on the same day as the evaluation?”

YES. “The evaluation and treatment may occur and are both billable either on the same day or subsequent visits. **It is appropriate that treatment begins when a plan is established.**” (Section 220-1-2-A).

7. “My patient was initially referred by a specialist who signed the first plan of care, but now the patient is being followed by her primary care physician. Can the primary care physician sign the re-certification?”

YES. “When therapy services are continued for longer than one month, the physician/NPP who is responsible for the patient’s care at that time should review and certify the plan for each interval of therapy. **It is not required that the same physician/NPP order, certify and/or recertify the plans**” (Section 220.1.3-C).

The Medicare Benefit Policy Manual, Publication 100-02, Chapter 15, Section 220-230, is available at the CMS Web site: www.cms.hhs.gov/manual/102_policy/bp102c15.pdf.

Ethics and Reimbursement

Most health care providers know that the process of receiving payment for services rendered can be very frustrating. Health care is a business, and though most caring health professionals realize that this business focus cannot be the driving force, reality compels us to blend business acumen with our compassion for doing things right.

It absolutely is possible to be fiscally viable and/or profitable doing the right thing while at the same time providing superior patient care without compromising patient billing ethics.

Those who do not believe or practice this may be teetering on business fraud as defined by the Medicare system. It is up to each health care provider to maintain the highest standards of care and billing practices if for no other reasons than to prevent further reimbursement efforts to constrain practice through capitation and other controls.

Medicare—a legal entity—defines fraud in a variety of ways. A list of commonly convicted fraudulent activities in therapy services follows:

1. Incorrectly reporting diagnoses or procedures to maximize payments.
2. Billing for services not furnished, including billing for cancelled appointments.
3. Billing for individual treatment when care was provided in a non-1:1 setting, such as seeing three patients simultaneously.
4. Billing for aquatic therapy, (which is supposed to be 1:1) when the therapist is deck-side, supervising three to four patients simultaneously in a group setting.
5. Billing therapy services when improper levels of supervision exist.
6. Billing for more units than the patient physically is provided, including time for documentation.
7. Receiving payment from two different insurance sources for the same service and not paying one back.

This is only a short list of some of the illegal activities providers have participated in, affecting patients' rights and the integrity of the health profession.

Supervision issues and billing practices by non-therapists recently have been under scrutiny based on a July 25, 2005 publication from Medicare. Medicare will only pay for PT services provided in physician offices incident to the physician's services if "qualified personnel" provide these services as defined in a June 24, 2005 transmittal (http://www.coms.hhs.gov/manuals/pm_trans/R36BP.pdf). This clearly defines the graduates from PT, PTA, OT and OTA programs as the sole providers who may bill using physical or occupational therapy treatment codes in a physician's office. This means that services of athletic trainers, massage therapists, recreation therapists, kinesiotherapists and low vision specialists may not be billed as therapy services.

The Medicare document also clarifies the requirement that services provided by PTAs cannot be billed incident to the physician or nurse practitioner services. PTAs must be supervised by a physical therapist in all treatment settings, including a physician's office. The PTA services are covered under the benefit for service for PT's, not under the "incident to" physician office clause. In order to bill for PTA services in a setting where the PT and PTA are employed by a physician or nurse practitioner, the PT would need his or her own Medicare provider number. Payment for PT services billed using the PT provider number would then be reassigned to the physician or nurse practitioner.

It is further mandated that services paid for "incident to" physician services in a physician practice must be directly supervised by the physician. This is further defined to mean:

“...DO, MD or NP who is legally authorized to practice therapy services by the state in which he or she performs such function or action. Direct supervision requirements mandate that the supervisor (DO, MD or NP) must be present in the office suite and immediately available to furnish assistance and direction throughout the performance of the procedure. It does not mean the DO, MD or NP must be present in the same room in the office where the service is provided.”

More information on this recent ruling is available to APTA members at:

<http://www.apta.org/AM/Template.cfm/Template=/CM/HTMLDispaly.cfm&ContentID=23603>.

If it is known that fraudulent billing practices exist within a health care facility, a hotline is available for anonymous reporting of such crimes: 1-800-HHS-TIPS.

Coding and Billing

Coding practices are important, particularly to the Medicare billing system. Whether the therapist provides the code or a coding specialist assigns the ICD-9 code, it is critical that the Medicare system guidelines be incorporated into the process.

The Medicare system recognizes certain ICD-9 (diagnosis) codes as appropriate for certain treatment procedure types (CPT-4 codes.) As the therapist or health professional prepares the therapy plan of care for physician certification, these guidelines must be considered. In most cases, denials for appropriate, reasonable and necessary care can be avoided with proper coding at the onset of care.

Following is a detailed table identifying ICD-9 codes that are acceptable for different treatment billing codes. These vary significantly by state, but a brief summary of typical ICD-9 codes approved for each billing code is included. Please note that coding and billing alone do not guarantee reimbursement; rather, carefully planned care, use of functional parameters and complete documentation are critical to justify that the service is “reasonable and necessary, requiring the skills of a therapist.”

Please be advised that the table of ICD-9 codes was developed using the guidelines set forth by the Michigan Carrier of Wisconsin Physician Services. These may vary significantly from state to state; these are merely examples. A comprehensive list is available from the intermediary or carrier for each region.

Treatment CPT-4 code	ICD-9	Diagnosis
97110 Therapeutic Exercise	715.10	Osteoarthritis Localized; Primary
	718.30-39	Contracture of joint
	719.75-.77	Difficulty walking
	781.2	Abnormality of gait
	781.3	Lack of coordination
	781.92	Abnormality of posture
97112 Neuromuscular Re-education	800's	All fractures
	368.46-369.25	Multiple eye/vision field issues
	714.0	Rheumatoid arthritis
	729.5	Pain in limb
	781.2	Abnormality of gait
	781.3	Lack of coordination
97116 Gait Training	799.4	Cachexia
	800's	Contusions, sprains, strains, nerve injuries
	332.0	Parkinson's disease
	333.91	Stiff man syndrome
	356.0	Peripheral neuropathy
	368.46-369.25	Multiple eye/ vision field issues
97140 Manual Therapy	781.2	Abnormality of gait
	781.99	Other symptoms involving nervous and Musc. systems
	719.40	Pain in joint
	905.1-.9	Late effects of musculoskeletal and connective tissue injuries

Effective October 1, 2005, several ICD-9 changes affecting reimbursement occurred. See www.apta.org for the most recent ICD-9 changes. Changes for 2006 will be available and posted in November 2005. The January/February 2006 issue of *Physical Therapy Reimbursement News* will publish a summary article of any CPT codes changes for 2006. APTA will offer CPT coding seminars beginning in January 2006. Dates and locations will be posted on the APTA web site. AMA's CPT 2006 can be ordered from the AMA through its on-line bookstore at <http://catalog.ama-assn.org/Catalog/home.jsp>. The Coding and Payment Guide for the Physical Therapist 2006 will be available from Ingenix by calling 800-INGENIX. APTA members receive a discount for this publication.⁴⁰

⁴⁰ APTA. *Physical Therapy Reimbursement News*. Vol. 12, No. 4/5, July/August 2005 and September/October 2005.

The following table contains procedures codes that should not be filled on the same visit, in violation of Medicare “bundling” restrictions:⁴¹

Procedure Codes That Should Not Be Billed on the Same Visit

97001	97750
97002	All Other Procedures
97003	97750
97003	97755
97004	All Other Procedures
97116	97140
97140	97124
97140	97012
97530	97112
97530	97116
97530	97535
97530	97542
97530	97750
90911	97032
90911	97110
90911	97112
90911	97530
90911	97535
97140	97530

Documentation

The best way for a therapist to prove the worth of the services rendered is to document subjective and objective findings related to patient assessment, care planning and progress. Unfortunately, with time constraints and other patient care priorities throughout the day, **documentation is the last priority for most therapists, yet it is the first line of defense for successful reimbursement.**

There are three compelling reasons why health providers need to document:

1. Establishes a legal description of what happened.
2. Encourages health care providers to think critically about the next step in the patient’s care.
3. Facilitates payment (reimbursement).

SOAP notes (subjective, objective, assessment and plan) are common forms of documentation, reflecting a problem-oriented medical record approach to critical thinking and analysis for patient care. SOAP processes are a part of any health provider’s training. However, when the Nagi Model of Disablement and the use of evidence-based practice guidelines are considered,

⁴¹ CMS website and Generation Care, Muskegon, Michigan.

providers often fall short of solid documentation of the objective and assessment areas particularly when working with older adults. Appendix J contains guidelines on the SOAP format, technical components of documentation and specific documentation examples.

The importance of quantifying status and progress cannot be emphasized enough. It simply is not specific, reproducible or tied to evidence-based practice to utilize objective findings and data such as: “improve balance” or “improve endurance.” Susceptibility to reimbursement denials often follows this type of documentation, even if the care was reasonable, appropriate and medically necessary.

Providers need to document the skills of clinical critical thinking and care that is rendered. A specific patient example of CPT-4 billing code use and documentation follows:

Treatment includes: Normalizing muscle tone, including neuro techniques to facilitate functional movement patterns, improving coordination, improving postural control, kinesthesia, and proprioceptive stimulation.

CPT-4 coding: Neuromuscular re-education; 97112

Billing: Bill the number of 15-minute increments spent in direct 1:1 contact with the client.

Documentation: Document the specific techniques rendered (i.e. NDT, PNF, Feldenkrais, etc.) and describe how these techniques affected the muscle tone, posture, etc.

Example: “NDT and PNF techniques used to normalize hypertonic left UE and facilitate controlled voluntary movement in functional patterns. Followed by PNF in bilateral reciprocal combined D1 and D2 diagonals to achieve minimal assistance donning and doffing a jacket.” (use abbreviations for brevity).

In general, when documenting:

- **Write legibly, showing clear clinical reasoning.**
- **Think like a reviewer whenever possible.**
- **Show that the care provided was complex and skilled.**
- **Prove that the client is making progress with safety and function.**
- **Use evidence-based functional tools like Tinetti, Berg Balance, Timed Up and Go, Functional Reach, Six-Minute Walk Test.**

Medicare Appeal Process

Providers who submit claims to HCFA intermediaries that are denied have the right to an appeal under Medicare law. Basically, the appeal process includes four to five steps:

If claims are sent to an Intermediary:

1. **Reconsideration Review:** within 60 days of denial.
2. **Administrative Hearing:** must be at least \$100 denial; within 60 days.
3. **Appeals Council Review:** must be at least \$100 denial; within 60 days.
4. **Judicial Review:** disputed amount must be at least \$1,000; within 60 days.

If claims are sent to a Carrier:

1. **Review Request:** No minimum dollar; within six months.
2. **Fair Hearing Request:** Must be at least \$100; within six months of denials
3. **Administrative Law Judge Review:** Disputed amount is at least \$500; within 60 days
4. **Appeals Council Review:** Must be at least \$1,000; within 60 days.
5. **Judicial Review:** Must be at least \$1,000; within 60 days.

It is imperative that the provider follow the steps outlined in the protocols found in Publication 3780-3799.17 of Pub 13—Intermediary Manual and 12000-12999 of Pub 14—Carrier Manual.

Included in the appendices are summaries of documentation tips useful in the evaluation, weekly or monthly progress notes, daily treatment notes and discharge summary. The S.O.A.P format, technical components of documentation, documentation examples and twenty reasons that Medicare payments may be denied are other topics that are addressed in the appendices.

Summary

Comprehensive, multi-factorial fall prevention services for older adults are reimbursable if they are reasonable and necessary and follow specific guidelines set forth by the carrier or intermediary. Critical thinking skills, thorough assessments, correct coding, billing and accurate documentation all contribute to the likelihood of receiving prompt payment from Medicare within ten days of billing. This valuable service is linked to many potential revenue sources while serving critical needs of the older adult population.

Step Six: Evaluation of Fall Prevention Clinic Effectiveness

Hospital administrators, health care providers, patients and their families want to know if the fall prevention clinic is effective in reducing falls among older adults so that they avoid injuries and maintain their independence. Preliminary data from the Michigan Department of Community Health pilot study in two hospitals described in this manual shows the model presented to be effective. One-year post-clinic experience, patients in an intervention group experienced **33% less falls** than those in a control group. It is still recommended that each hospital undertaking this program conduct evaluation to determine what works or does not work in its facility and use that information to make changes in clinic services and patient education.

Both qualitative and quantitative information should be collected to determine implementation challenges as well as treatment outcomes for patients. Evaluation strategies should be utilized to document patient outcomes, system challenges and quality of life changes for older adults. Because this is a new line of service for many hospitals, administrators will also want to track the revenue generation and growth in services resulting from the fall prevention clinic such as outpatient PT and OT.

Following are suggestions for types of evaluation, evaluation questions and suggested indicators for tracking patient and system outcomes of a fall prevention program:

Patient Outcomes

Since the goals of a fall prevention program should include the identification and management of risk factors of older adults in order to reduce the number of future falls, it is recommended that the fall prevention clinic collect data to track the following indicators:

- Improvement in future fall risk assessment scores from initial assessment to six months and one year.
- Decrease in number of subsequent falls.
- Improvement in balance and gait.
- Increase in lower extremity strength.
- Decreased fear of falling.

Through fall prevention clinic visits, fall prevention clinic staff should collect qualitative information through patient and family interviews to detail experience with fall history. Such questions could include:

- What are the patients' challenges to a successful clinical experience?
- Do patients take advantage of recommended clinic interventions and referrals?
- How effective are patient interventions/referrals in preventing or minimizing future falls?
- Do the interventions/referrals alleviate or increase anxiety in previous fall patients?
- Do the interventions/referrals have an effect on lifestyle decisions (e.g., remaining in one's home)?
- How are families impacted by the patient's experience in the fall prevention program?

System Outcomes

A theme of this manual is that system changes related to provider education and training, patient referral patterns and clinical pathways for management of elderly falls are critical for the successful implementation of a fall prevention clinic. Other system changes include the partnerships and interdisciplinary collaborations that need to be solidified for comprehensive fall management. Both qualitative and quantitative information should be collected to evaluate these system outcomes. Focus groups of providers, pre- and post-tests and chart audits or are examples of methods by which the following questions can be addressed before and after clinic implementation.

Before implementation of a fall prevention clinic, hospitals should ask these questions:

- What are internal and external barriers and challenges to patient recruitment, referral and treatment?
- What partnerships need to be in place for successful clinic implementation?
- Can partnerships be formed with the medical staff, nursing and physical medicine departments? Are these the key disciplines to be involved? What other disciplines can support the clinic?
- What assessment and treatment skills are practitioners lacking related to management of older adult falls?

After implementation of a fall prevention clinic, hospitals should consider the following issues:

- How do practitioners' practice and referral patterns change as a result of training and newly implemented assessment and referral pathways?
- What are practitioners' reactions to the new system?
- Do practitioners believe the new system improves care for the older adult?
- How many patients have been referred to the clinic? Assessed in the clinic? Treated in the clinic?

Hospitals should closely monitor financial costs to demonstrate fiscal feasibility and long-term growth potential. The increased revenue generated in referrals from a fall prevention clinic to hospital-affiliated practitioners and support services is expected to provide a strong incentive for adoption of this model. In addition, hospitals need to track costs to predict the types and levels of support needed for the long-term operation of this initiative.

Michigan Hospital-Based Fall Prevention Program

Genesys Regional Medical Center, Grand Blanc By Gary Schmekel

Genesys Health System initiated a strategic planning process in the fall of 2002 to address how we might best prepare our organization for meeting the needs of the geriatric population—a population expected to double by 2030. The culmination of this work led to the formation of the Genesys Gerion Institute. The focus of the Gerion Institute is to create a highly coordinated and person centered system of caring, with a focus on maximizing the independence of older adults.

Early business planning efforts of the Gerion Institute sought to identify gaps or shortfalls in senior health services within the community we serve. Early research supported a need to work on fall prevention, as falls were identified as the “leading cause of injury related death in older adults (CDC, 2002).”

The Gerion Institute formed a task group entitled “Community Ambulators” to work on the creation of a fall prevention strategy for our organization. Two avenues were developed and deployed to address fall prevention for older adults. One strategy identified patients presenting to their primary care physician for treatment related to a fall. The second strategy was research-based, joining a study sponsored by the CDC that identified patients who present to the Emergency Department as the result of a fall.

Both strategies refer patients to a fall prevention clinic where they receive a comprehensive fall risk assessment, therapy plan and education on topics to help to lower their exposure to falls. Both plans implement physical and occupational therapy to improve balance and self-confidence. Research has proven that “fall prevention programs that include fall risk assessments and medical follow-up reduced the risk of falling by 18 percent, and reduced the average number of falls sustained by 43 percent (Rand, 2003).”

Genesys believes that by launching these new strategies we will enhance the quality of life for older adults and maximize their independence.

A Vision for the Future

By Holly Lookabaugh-Deur, President
Generation Care, Muskegon

Health professionals look to the future of fall prevention programming from different perspectives: some for the discovery of new health care business niches; others to build new relationships with a growing demographic. Some health professionals explore new programs because they are deeply committed to service; yet others, quite simply, wish to help older family members age gracefully. Whatever the reason behind the pursuit, clearly the impetus behind serving the frail needs to be about much more than simply money. Programs can look wonderful on paper, but the reality of affecting the culture and safety of an older adult is less than glamorous yet incredibly rewarding.

Equally important to serving the fall risk needs of the elderly is the health care provider's ability to see that falling is just one component of managing the medical needs of the older adult. While the fall episode may be the entry point into the care cycle, we need to view each snapshot of time very carefully as geriatric-focused clinicians. We cannot miss any opportunity to detect serious, treatable diseases and disorders that, more often than not, are swept under the rug of ageism. It's often easier to say, "It's a normal part of aging," when in fact it's not! As clinicians, we need to recognize biases and combat our own with exploration of fact and evidenced-based treatments.

There is no place in geriatric care for complacency. Complex problems need dedicated, energetic people discovering scientific solutions for everyday life. Whatever role you play in fall prevention—whether it is delivering the warmth of a genuine front desk welcome, or the guiding hand of a therapist—GIVE.

Ms. Lookabaugh-Deur joined the Centers for Disease Control and Prevention funded fall prevention project as a 23-year veteran of physical therapy practice. With ten years of hospital experience as an acute care clinician, home health provider and department administrator, geriatric care became her primary focus in practice. Deur served as both Physical Therapy Assistant Program Director and Dean of Allied Health for Baker College for six years and led a chain of 14 nursing home rehabilitation programs for several years before entering private practice full time.

As a Board Certified Geriatric Physical Therapist and Certified Wound Care Specialist, her private practice includes many specialty programs such as Parkinson's Management for Life, Complete Control Incontinence programs and more.

Generation Care Health Center opened in 2001 and employs 27 therapists and customer service specialists. Generation Care also proudly serves the rehabilitation needs of Newaygo Medical Care Facility, a 122-bed skilled nursing home facility. Holly teaches and guest lectures in a variety of universities, but her true passion and commitment lies in working with older adults and their families.

TIMED UP AND GO Test: Less than 15 seconds, recorded score = "0"		
15 to 20 seconds	<input type="checkbox"/> → 2 points	
Over 20 seconds	<input type="checkbox"/> → 3 points	
Contraindicated/ not tested due to condition	<input type="checkbox"/> → 0 points	

CURRENT MEDICATIONS (list individually): (EXCLUDING supplements, vitamins or occasional meds for colds, headache, etc.)		
Medication 1:	<input type="checkbox"/> Total # of OTC and prescribed is 1-3 → 1 point	
Medication 2:		
Medication 3:		
Medication 4:	<input type="checkbox"/> Total # of OTC and prescribed is 4-9 → 2 points	
Medication 5:		
Medication 6:		
Medication 7:		
Medication 8:		
Medication 9:		
	<input type="checkbox"/> Total # of OTC & prescribed is over 9 → 3 points	
**REFER ALL SCORES 3 and OVER to FALL PREVENTION CLINIC	TOTAL SCORE:	

Discharge Status: Admitted to hospital Discharged

Admission Diagnoses: _____

Other Notes:

Signature/ Date

This FRAT was validated in 2005 for use with community-dwelling older adults. For more information, contact Anne Esdale, Fall Prevention Project Coordinator, Injury and Violence Prevention Section, Michigan Department of Community Health, (517) 335-9523, or esdalea@michigan.gov

FRAT Instructions

Vital Sign Red Flags:

Record BP while patient is lying down and immediately record again after moving from lying to standing. Do not allow an adjustment period of 5 or more seconds to occur in sitting before moving into a standing position or the results will be false.

Explain to the patient that the BP readings are compared in the two different positions.

Fall History Suggested Questions:

Use pointed questions to reach a more accurate answer about frequency of falls.

“Have you fallen getting in and out of the car?” If yes: “How often?”

“When you fall, is it usually in the same room of the house?”

“Does this happen more than once during the week?”

“Have you fallen going down the steps to the basement?” If yes: “How long ago?”

Mental Status:

If the patient is unable to answer key questions or the answers vary in consistency, he or she needs further time for assessment in the Fall Prevention Clinic. If the family relates concern over increased confusion or refusal to comply with medicines or other medical or safety advice, score the patient with a “3” to assure thorough assessment in the clinic.

Chronic Medical Conditions:

Each condition listed is closely correlated with falling. Assign one point for each condition. If the patient has been diagnosed with other medical conditions, count the number of these conditions. Assign **1 point** if more than one chronic illness exists (examples: PVD, CAD, lumbar disc degeneration, etc.) – not one point for *each* additional condition.

Sensory Deficits:

If either the patient or family reports a history of hearing problems, record “1.”

Vestibulo-Ocular Reflex:

Instruct the patient to focus on an object one foot away from his/her face (a finger, a pen, etc.) Ask the patient to turn his/her head to the right and to the left ***while keeping eyes focused on the object***. Demonstrate to make it clear. **Repeat 2-3 times.** *If the patient’s eyes move from the object, even for a second, record 1 point.*

Incontinence Issues:

Sample questions:

“Do you need to wear a pad during the day to keep your underwear dry?”

“Do you ever have a problem in the night with wet pajamas or sheets?”

“Do you ever leak if you cough or sneeze or do something physical?”

“Do you ever have the urge to go, but can’t quite make it to the bathroom?”

Timed Up and Go Test:

Patient is seated (a chair without arms is preferred, but not necessary) with 10 feet in front of him/her marked off. Explain that it is a timed test, and when you say “go” he/she should rise from the chair, walk to the mark, turn around and return *as quickly and safely as possible*. The time stops once the person is re-seated. Demonstrate the task. The patient may practice if necessary and devices such as walkers may be used. Once you say “go” you may walk next to the patient, but you may not coach or assist for the test to be valid. This score is an important predictor of falls and it will be repeated in the clinic. *Please use your own judgment if you do not feel the test is safe at this time, and record “0” if the test is contraindicated.*

Current Medications:

This category is based on the total number of medicines regularly taken by the patient. Dietary supplements such as calcium, vitamins, minerals, ginseng, chondroitin sulfate or other herbal combinations should **not** be included. If an over-the-counter medicine (such as a laxative, prescribed aspirin, or allergy medicine) is taken daily, count this as a regular medicine. Count the total and assign points as listed.



APPENDIX B: Comprehensive Post-Fall Evaluation Tool

Patient Name: _____

Review Date: ___/___/___

Patient Date of Birth: ___/___/___

Was patient accompanied by a family member/someone else? Yes []* No []

*Who (if known)? _____

GENERAL INFORMATION:	
Height:	Weight in Pounds:
Resting Heart Rate:	Resting Blood Pressure:
BP with Rising to Standing (Orthostatic Test):	
Immediate:	After 2 Minutes:
ASSISTIVE DEVICES USED (list all):	
1.	3.
2.	4.
FALL HISTORY:	
Date of Fall:	<p><i>Mechanism (i.e., on or from stairs/steps; on or from ladders/scaffolding; from or out of building/other structure; into hole or other surface opening; from slipping, tripping, or stumbling; from collision, pushing, or shoving by/with another person; out of bed; while transferring to chair; while bending over; during a bathroom transfer, other</i></p> <p>Injuries:</p> <p>Associated Symptoms (i.e., dizziness, loss of balance, palpitations, etc.)</p>
Date of Fall:	<p>Mechanism:</p> <p>Injuries:</p> <p>Associated Symptoms:</p>
Date of Fall:	<p>Mechanism:</p> <p>Injuries:</p> <p>Associated Symptoms:</p>
Number of falls in the last 2 years: _____	Number of falls in the last 2 months: _____

MEDICAL CONDITIONS/DISEASES:

- Diabetes** **Hypertension** **Hyperthyroidism**
 Cardiovascular **Hypotension** **Hypothyroidism**
 Other (specify):

MUSCULOSKELETAL DISORDERS:

- Bone Fractures**
 Osteoporosis
 Post Surgical Joint Replacement
 Arthritis → If checked, what type? → **Rheumatoid** **Osteo** **Other** (i.e., Psoriatic)
 Other (specify):

Musculoskeletal Exam:

RANGE OF MOTION: **Normal** **Decreased** → See attached PT assessment form

FOOTWEAR ASSESSMENT: **Appropriate** **Not Appropriate***

*Recommendation/Referral(s) Made:

FOOT EXAMINATION: **No intervention needed**

Problem: _____

Intervention recommended: _____

Referred to Podiatrist

NEUROLOGICAL DIAGNOSES:

- Parkinson's Disease** **Post C.V.A.** **Dementia** → diagnosed undiagnosed
 Other (specify):

Neurologic Exam:

PROPRIOCEPTION: **Intact/Not tested; patient within normal limits** (per clinician assessment)
 See attached PT assessment form

MUSCLE STRENGTH: **Not tested; patient within normal limits** (per clinician assessment)
 See attached PT assessment form

SENSORY DEFICITS:

Vision History: No known problems Wears regular glasses Wears reading glasses
 Wears bifocals* Glaucoma Cataracts Diabetic retinopathy

* Recommend they don't wear while walking

Last Vision Exam*: _____

Visual Acuity (via Snellen chart): _____

Contrast Sensitivity (via Pelli-Robson chart): _____

*If last eye exam more than 1 year ago, recommend patient see Ophthalmologist or Primary Care Physician for referral

Auditory History: No known problems Apparent deficit* Wears hearing aid: L R

Last hearing exam/check: _____*

*Refer to Primary Care Physician for Audiology testing/script if last screen more than two years ago

Other Sensory Exams:

Visual-Ocular Reflex: Present Absent

:

MENTAL STATUS:

Check the *one* category that best describes the patient:

Oriented at all times/normal Intermittent confusion * Significant memory/confusion issues *

If confused, note caregivers' report of past compliance efforts (i.e., not taking medications, missing/not following up with doctor's appointments, etc.) **and related issues:**

*MINI-MENTAL STATUS EXAM RESULTS _____ (score out of 30 possible points)

Note: only perform Mini-Mental Status exam if patient is not oriented/normal

OSTEOPOROSIS RISK:

Axial BMD test in the past 2 years? Yes No*

Woman over age 65? Yes* No

X-Rays with previous spine fracture? Yes* No

Taking steroids (i.e. Prednisone)? Yes* No

Diagnosed with hyperparathyroidism? Yes* No

Being treated for osteoporosis? Yes* No

*Refer to Primary Physician for Axial BMD test

ELIMINATION/BLADDER CONTROL (check *all* categories that apply):

Incontinent Bladder* Unstable toilet and/or tub transfers*

*Provide educational materials

GAIT & BALANCE:	
Functional Reach Test: _____ inches	*Less than or Equal to 6” = HIGH RISK
Tinetti Balance Score: _____ /34*	* Less than 19 = HIGH RISK
Timed Up and Go Score: _____ inches	*Greater than 15 = HIGH RISK
Other:	
Refer “HIGH RISK” patients to Physical Therapy for balance and vestibular screen	

MEDICATIONS (excluding supplements, vitamins or occasional meds for colds, headache, etc):	
Medication:	Medication:
Medication:	Medication:
Medication:	Medication:
Medication*:	Medication:
Medication:	Medication:
Patient is currently taking more than 10 medications <input type="checkbox"/>	
SIGNIFICANT RISK exists if 4+ medications → refer to Pharmacist for medication review	

ENVIRONMENTAL:	
How do you bathe?” (check the MOST FREQUENT method) <input type="checkbox"/> Sponge Bath <input type="checkbox"/> Shower <input type="checkbox"/> Bath	
“How often do you bathe?” <input type="checkbox"/> Daily <input type="checkbox"/> 2-3 times per week <input type="checkbox"/> Weekly <input type="checkbox"/> Less than Weekly	
“Do you need to go up or down stairs in order to bathe?” <input type="checkbox"/> Yes <input type="checkbox"/> No	
“How many times do you get up at night?” <input type="checkbox"/> Once* <input type="checkbox"/> 2-3 times* <input type="checkbox"/> More than 3 times* <input type="checkbox"/> n/a	
*If checked → ask: “Do you use lighting to assist you in moving around your home?” <input type="checkbox"/> Yes <input type="checkbox"/> No	
“Why do you get up at night?”	
“How do you get your mail?” (Trace route, note stairs, length of driveway, location of mailbox):	
“Do you have rugs in your home?”	Yes <input type="checkbox"/> * No <input type="checkbox"/>
“Do you use a non-slip bath mat?”	Yes <input type="checkbox"/> No <input type="checkbox"/> *

“Do you use grab rails in your bathroom?” Yes [] No []*

“Do the stairways in your home have rails?” Yes [] No []* n/a []

***Provide Educational Materials**

“Please tell me if you need help with” (check all that apply):

- Dressing, eating, bathing or getting to the bathroom?
- Taking medicine or changing bandages?
- Preparing meals, doing laundry, or cleaning the house?
- Shopping or trips to the doctor’s office?

“What services are provided to you in your home at the current time?” (check all that apply):

- Homemaker Service
- Home Delivered Meals
- Grocery Service
- Chore Service
- Transportation Services
- Assistance with Access to Services
- Other Services. Please Specify: _____

Other general notes taken during assessment:

Evaluator Name/Date (please print) _____

This FRAT can be used for a comprehensive assessment of an older adult’s fall risks in either a fall prevention clinic or rehabilitation setting. It has been utilized by Generation Care, Inc. and the MDCH fall project since 2001, with ongoing validation efforts by both groups. For more information, contact Anne Esdale, Fall Prevention Project Coordinator, Injury and Violence Prevention Section, Michigan Department of Community Health, (517) 335-9523, or esdalea@michigan.gov.

Appendix C: Fall Risk Assessment Checklist

Name: _____

Intrinsic Factors:

Cognitive/Attention:

Short Blessed Test _____

*score of 8 or more is evidence of dementia

Trail Making Test _____

*score of more than 1 minute is abnormal

Vitals:

Postural hypotension _____

Change in pulse pressure/activity:

Key ROM Deficits:

Dorsiflexion: _____

Plantarflexion: _____

Knee extension: _____

Hip extension: _____

Hip abduction: _____

Cervical ROM: _____

Trunk ROM: _____

Key Strength Deficits:

Toe intrinsics: _____

Dorsiflexion: _____

Plantarflexion: _____

Quads: _____

Triceps: _____

Hip Abd: _____

Trunk ext _____

VOR Reflex: _____

Gait Pattern:

Ability to center self

Biodex Dynamic Balance: _____

Ability to move outside center:

Biodex Dynamic Limits of Stability:

Fall Risk Assessment Checklist – Page two

Postural Strategies:

Ankle/foot: _____

Hip: _____

Step: _____

Extrinsics:

Shoes:

Flexible toe box _____

Fit: overflow of base on shoe last

With pronation or supination _____

Inadequate heel control _____

Heel breakdown and heel strike _____

Foot sensation (diabetic?):

Test DLOS with:

Shoes: _____

Slippers/day shoes:

Barefoot: _____

Environmental:

Self-

Assessment/Profile: _____

TEACH (videotaped home assessment):

4 or more medicines:

Assistive Devices:

Co-morbidities: (incontinence, hydration, nutrition, osteoporosis)

Notes: _____

Therapist/ Date: _____

Appendix D: Algorithm for Assessment and Management

Using the results of the *Comprehensive Post-Fall Evaluation Tool*, the results will be addressed as follows:

Assessment and Risk Factor	Assessment Tool	Management
<p>Body Mass Index</p> <p>Hydration</p>	<p>BMI Chart</p> <p>Hydration Screen</p>	<ul style="list-style-type: none"> □ Provide educational materials □ Patient completes screen. A hydration screen that reveals less than 5 glasses per day should be reported to primary physician for possible lab evaluation. Provide educational materials.
<p>Blood pressure (BP), Heart Rate (HR)</p> <p>Postural Blood Pressure</p>	<p>Measurement of BP, HR</p> <p>Measurement of Postural BP</p>	<ul style="list-style-type: none"> □ If BP over 140 systolic or 90 diastolic, or under 110 systolic, ⇒send progress note to physician □ If HR less than 60 ⇒send progress note to physician □ If ≥ 20mm Hg (or $\geq 20\%$) drop in systolic pressure or ≥ 10 mm Hg drop in diastolic pressure⇒send progress note to physician, and <ol style="list-style-type: none"> 1. refer for medication review 2. provide education on corrective measures – see handout. 3. refer to primary physician for possible pressure stockings and/or pharmacologic therapy.

Assessment and Risk Factor	Assessment Tool	Management
Fall History	Questionnaire	<ul style="list-style-type: none"> □ If history of falls ⇒ question client in detail about mechanism of fall, injuries noted, new signs and symptoms since fall (e.g., more dizziness, headache, etc.). □ If no fall history except for presenting fall ⇒ relay the importance of preventing problems and how screening can detect problems to address before future falls.
Mental Status	Folstein Mini-Mental Status Exam	<ul style="list-style-type: none"> □ If severely impaired cognition (score less than 20 out of 30) ⇒ exclude from study if more than mildly impaired cognition. □ If mildly impaired cognition (score ≥ 20 and ≤ 25): <ol style="list-style-type: none"> 1. refer to pharmacist to reduce medications that impede cognition. 2. alert caregivers of cognitive deficits. 3. OT referral for home safety and ADL assessment.
Neurological Examination -Proprioception (lower extremities most important) -Muscle Strength	Tuning Fork Vibration Test Manual Muscle Testing	<ul style="list-style-type: none"> □ If impaired proprioception (or vibratory sense): <ol style="list-style-type: none"> 1. evaluate and recommend appropriate footwear. 2. provide appropriate assistive device if warranted. □ If decreased muscle strength ⇒ refer to physical therapist for gait, balance and strength training.

Assessment and Risk Factor	Assessment Tool	Management
<p>Musculoskeletal Examination</p> <p>-Range of Motion</p> <p>-Footwear Assessment</p> <p>-Examination of Feet</p>	<p>Range of Motion Testing</p> <p>Menz Footwear Assessment Form</p> <p>Foot Examination</p>	<ul style="list-style-type: none"> □ If decreased⇒refer to PT for strengthening exercises, range of motion exercises, gait and balance training, assistive devices as appropriate. □ Recommend use of appropriate footwear, provide handout on footwear. □ If neuropathy, foot pain, ulcers⇒referral to podiatrist.
<p>Osteoporosis Risk</p>	<p>Questionnaire</p>	<ul style="list-style-type: none"> □ If no BMD test in the past two years, refer to BMD testing for individuals who fall into one of the following groups: <ol style="list-style-type: none"> 1. Women over 65. 2. Men and women whose X-rays show previous spine fractures. 3. Men and women on prednisone or steroid-type drugs or who are planning to begin such treatment. 4. Men and women diagnosed with primary hyperparathyroidism. 5. Men and women being treated for osteoporosis to see if the therapy is working. □ Recommend hip protectors for those with diagnosed osteoporosis.

Assessment and Risk Factor	Assessment Tool	Management
Assistive devices	Questionnaire	<ul style="list-style-type: none"> □ If patient reports problems in using assistive devices ⇒ refer to PT for training in use.
Gait and balance	<p>Questionnaire</p> <p>Tinetti Assessment Tool</p> <p>Timed Up and Go Test</p> <p>Functional Reach Test</p>	<ul style="list-style-type: none"> □ If patient reports unsteadiness or provider notes this, or if impairment on brief assessment tests, refer to PT for gait and progressive balance training. □ If Tinetti score is less than 19: -refer to PT for gait and progressive balance training. □ If Timed Up and Go is ≥ 15 sec: -refer to PT for gait and progressive balance training. □ If Functional Reach is less than 6", refer to PT for gait and progressive balance training
Medications	Medication Checklist	<ul style="list-style-type: none"> □ If patient is on 4 or more medications or on high risk medications (e.g., benzodiazepines, other sleeping medications, neuroleptics, antidepressants, anticonvulsants or class 1A antiarrhythmics) ⇒ refer to pharmacist for review and reduction of medications
Environmental/Home Hazard Evaluation	Home Fall Prevention Checklist (CDC)	<ul style="list-style-type: none"> □ If patient needs assistance with activities of daily living ⇒ refer to OT for assessment of home hazards and assistance with ADLs. □ Evidence-based recommendations include 1) removal of loose rugs, 2) installation of grab bars, 2) use of nightlights and a working flashlight, 3) use of non-slip bathmats, 4) functional stair rails, 5) other interventions as necessary.

Sources:

1. Lookabaugh-Deur, Holly, *Fall Prevention Intervention*, Generation Care, Muskegon, 2003
2. Tinetti, Mary E., M.D., *Preventing Falls in Elderly Persons*, New England Journal of Medicine, 348:1, January 2, 2003, pp. 42-49.

For more information, contact Anne Esdale, Fall Prevention Project Coordinator, Injury and Violence Prevention Section, Michigan Department of Community Health, (517) 335-9523, or esdalea@michigan.gov

Appendix E: Rehabilitation Services: Treatment Interventions

Service	Description	Assessment Instrument
Equipment Recommendations (PT/OT)	Training in use of assistive devices for mobility, such as transfer aids, bed mobility/turn assist devices, rollator walkers as well as car pivot discs and other functional aids	Barthel Index; Tinetti Gait Assessment; Timed Up and Go
Gait Training	Focused treatment on gait sequence, facilitation, normal and compensatory gait patterns and inhibiting unsafe patterns on all surfaces (level, uneven, stairs, doorways, etc.). Promotion of ambulation safety by using lower extremity exercises for improved strength, ROM coordination and safety awareness. Balance activities on a variety of walking surface and environments. Possible training in the use of an assistive device such as a walker or cane. Appropriate footwear is also recommended.	Tinetti Gait Assessment
Strengthening and Flexibility Exercises (PT/OT)	Exercises that enhance muscle strength, joint flexibility and sensory integration in trunk and lower extremities related to function. These include weight-bearing exercises to reduce the rate of bone loss and guard against the risk of fracture. OT focuses on key upper extremity functional strength.	Manual Muscle Tests
Balance (PT)	Using a systems approach, therapy focuses on vision, strength, range-of-motion, semicircular canals, vestibular function and movement patterns.	Tinetti Assessment Tool; Berg Balance Scale; Biodex (if available)
Urinary Continence Re-training (PT/physician)	Treatment includes education, pelvic floor strengthening exercises and bladder training. Additional options include electrical stimulation, biofeedback and adaptive tools. Physician may also prescribe medications.	Bladder Health Quiz and Voiding Log from Generation Care

Service	Description	Assessment Instrument
Osteoporosis Management (RN/Physician/PT/OT)	Diagnosis, prevention and treatment of osteoporosis with calcium and vitamin D, nutrition education, regular weight bearing exercises and use of FDA approved pharmacological options.	Hydration/ Nutrition Screen and Osteoporosis Risk Factor Quiz from Generation Care
Hydration/Nutrition (PT/OT)	Review and intervention of essential hydration and nutrition components necessary to prevent hypovolemic issues of dehydration and access fuel for metabolism and good health.	
Treatment for Postural Hypotension (PT)	Treatment includes raising the head of the bed, postural exercises and close review of medications by referral to pharmacist.	Assess with blood pressure changes: supine, sitting, standing.
Instruction Regarding Footwear	Instruction in wearing sturdy shoes with thin, non-slip soles, avoiding slippers and running shoes with thick soles.	No specific tool; diabetic foot assessment tool available from Generation Care.
Aquatic-based programs (PT)	Provision of treatment and instruction in exercise program in water for weight bearing exercises, strengthening, flexibility/ROM and pain management as needed. Focuses on area of functional loss – gait skill, balance, strength, range of motion—and utilizes hydrotherapy principles to facilitate normal or compensatory movements.	Compilation of other category findings.
Pain management instruction (PT)	Provision of modalities (moist heat, ultrasound) and skilled manual treatment for management of pain. Education on body mechanics, posture and safe exercise. Utilizes chronic pain management strategies such as soft tissue massage, TENS, interferential current and education.	VAS 1- 10 scale
Tai Chi Instruction (PT/OT)	Instruction in 12 slow movements that are proven to be effective with balance, targeting patients with arthritis because 1) arthritis is a risk factor for falls and 2) Tai Chi is effective in reducing the pain and other symptoms associated with arthritis.	Assessment by therapist as to needs and potential of patient.

Service	Description	Assessment Instrument
Vestibular Re-training (PT)	Stimulation and coordination of the semi-circular canals to promote balance with vestibular-ocular training. This is provided in conjunction with the activities listed in gait activities.	Balance and vestibular assessments
Visual/Perceptual Treatment and Training (OT)	Evaluation and treatment for visual perceptual skills, field loss/neglect, oculomotor skills, scanning/tracking to safely negotiate within the patient's home and community.	Vision screening; Low vision screening and multiple perceptual tools
Home Assessment (OT/PT)	Assessment and recommendation of home modifications and equipment to increase safety within the home, such as lighting, secure or remove rugs, non-skid bath mat, grab bars, etc. Equipment recommendations should be incorporated into this review and assessment.	Home environment assessment

Updated 8/25/03; Approved by Holly Lookabaugh-Deur, Generation Care, and Rehabilitation Staff from Crittenton Hospital and Medical Center, Rochester.

For more information, contact Anne Esdale, Fall Prevention Project Coordinator, Injury and Violence Prevention Section, Michigan Department of Community Health, (517) 335-9523, or esdalea@michigan.gov

Appendix F: Medication Review Guidelines and Checklist

1. Decrease number of medications when possible—especially if taking more than four medications.
2. Investigate lower dosages of medications, especially psychotropic drugs, diuretics and cardiovascular drugs.
3. Consider withdrawal of digoxin:
 - a. In patients with stable CHF.
 - b. If CHF is due to valvular disease or hypertension.
 - c. If there is no response to digoxin after one month with decreased heart size or increased exercise capacity.
4. Stop or decrease number of psychotropic medications:
 - a. Neuroleptics – i.e., phenothiazines, butyrophenones.
 - b. Sedative/hypnotics – i.e., barbiturates, hydroxyzine.
 - c. Antidepressants – i.e., tricyclic antidepressants, selective serotonin uptake inhibitors (SSRI).
 - d. Benzodiazepines.
5. Avoid combination of certain drugs:
 - a. Narcotics with psychotropics.
 - b. More than one psychotropic.
6. Discontinue over-the-counter medications—especially cold preparations and antihistamines.
7. Evaluate all cardioactive and antihypertensive medications:
 - a. Especially if patient has postural hypotension.
 - b. Decrease total number if possible.
 - c. Decrease diuretic use if possible.
8. Change non-steroidal anti-inflammatory (NSAID) drugs to acetaminophen in non-inflammatory conditions.

Developed by Michigan Fall Prevention Project
Michigan Department of Community Health
2004

Fall Prevention Program: Medication Review Checklist



Patient: _____ Review Date: _____

Number of medications patient was taking at time of review: _____

Indicate which of the following recommendations were made/actions taken when reviewing the above patient's medication intake.

Decrease number of medications, if possible (especially if taking more than four medications).

Notes:

Investigate lower dosages of medications, especially psychotropic drugs, diuretics and cardiovascular drugs.

Notes:

Consider withdrawal of digoxin:

- In patients with stable CHF
- If CHF is due to valvular disease or hypertension
- If there is no response to digoxin after one month with decreased heart size, or increased exercise capacity

Notes:

Stop or decrease number of psychotropic medications:

- Neuroleptics (i.e. Phenothiazines, Butyrophenones)
- Sedative/hypnotics (i.e. Barbiturates, Hydroxyzine)
- Antidepressants (i.e. Tricyclic Antidepressants, Selective Serotonin Re-uptake Inhibitors (SSRI's))
- Benzodiazepines

Notes:

- [] Avoid combination of certain drugs:
- Narcotics with psychotropics
 - More than one psychotropic

Notes:

- [] Discontinue over-the-counter medications, especially cold preparations/antihistamines.

Notes:

- [] Evaluate all cardio-active and anti-hypertensive medications:
- Especially if patient has postural hypotension.
 - Decrease total number if possible.
 - Decrease diuretic use if possible.

Notes:

- [] Change non-steroidal anti-inflammatory (NSAID) drugs to acetaminophen in non-inflammatory conditions.

Notes:

Appendix G: Additional Senior-Focused Programs

So many opportunities are available for hospitals and growing health care systems as the spectrum of specialty services for older adults continues to evolve. A fall prevention clinic may be a perfect catalyst for entry into this spectrum through self-referrals by older adults. Other equally important programs may develop as a result of accessing this consumer group.

<i>Older Adult Health and Wellness Related Programs</i>	<i>Brief Descriptions</i>
Osteoporosis Management Program	Nutrition, weight bearing exercises, posture, pain management, relaxation.
Older Adult Drive Safe Program	Screening program using evidence-based tools to assess basic physical and mental parameters for safe driving (no road test). Examples: range of motion, reaction time, trail making and memory, strength, visual field, light/dark tests, etc.
Parkinson’s Disease Management	Care-giving education, nutrition/hydration, exercise, ADL tools and adaptation, transfers, balance, preservation of trunk rotation and reciprocal movement in the water, cognitive stimulation, etc.
Comprehensive Arthritis Management	Series of programs for rheumatoid and osteoarthritis with information and interventions for pain reduction and restoration of maximum function, including research on over the counter supplements, use of resting splints for severe hand pain, sensible and systematic exercise programs, aquatic interventions, breathing and relaxation, resting positions.
Diabetic Foot Clinic	Shoes, peripheral neuropathy teaching, diabetic socks, foot care and inspection, etc.
Wound Care Clinic	Peripheral Vascular Disease, venous and arterial insufficiency wounds, chronic non-healing wound specialty.
Breathe Free Program	Breathing and graded, paced exercise for those suffering from chronic lung disease.
Balance Enhancement Programs	Tai Chi and related wellness programs focused upon maximizing balance and coordination across the lifespan.

Urinary Incontinence Management	Urology consultation, screening and examination, product management, etc.
Senior Fitness Testing	Compare key, research-verified test results in healthy older adults as a way to jumpstart a personal approach to wellness programming.
Wellness Counseling and Programs Targeting Senior Age Groups	Flexibility, strength and cardiovascular fitness programs for the healthy older adult.
Senior Olympic Training Site	Promote senior sports medicine programs for the elite senior athlete as well as sports-focused functional exercise programs, e.g., Great Golf or Terrific Tennis.
Other Programs Related to Homebound Older Adults: <ul style="list-style-type: none"> ❖ Transportation assistance ❖ Safety checks at home ❖ Home health visits ❖ Medication reviews ❖ Hearing and vision screening 	Networked, coordinated services without duplication of profit and nonprofit services within the community.

Appendix H: Algorithm for Home Assessment and Intervention

T.E.A.C.H.

Technology Enhanced Assessment of Client Homes

Purposes:

- To assess a client with documented fall risk in his/her home environment while respecting individual privacy and sense of personal security.
- To encourage family and caregiver participation in the home assessment process.
- To systematically assess the critical details of the home with the client demonstrating accurate and true mobility methods within the home environment.
- To provide visual support to caregiver and client teaching with respect to home environment modification.
- To provide before and after views of modified home environments when applicable.

Summary: Via a videotaped tour of a client's home, the reviewer will be able to identify potential areas for change or modification that could be helpful in reducing fall risk. The home assessment and recommendation process may be done in stages, using input from the therapy team, family (if appropriate) and client, to develop a realistic plan for low risk lifestyle development.

Proposed Details:

1. Through the use of the decision algorithm for when to utilize a "home assessment," the potential client is identified.
2. If feasible, the client's home will be visited by a therapist. If not feasible, the TEACH program is introduced to the client as a potential home outreach program.
3. The client/family/caregiver are asked if they have access to a video-recorder to use for the project. If not, a hospital loaner is provided. (Each facility will develop their own policy regarding the security and management of their equipment).
4. Within three days, the client/family/caregiver are asked to complete the videotaped checklist. The checklist does not need to be done in order.

5. When possible, the client is encouraged to walk and talk the viewer through the home. Phrases such as “make a home movie” can be used to make the home assessment project sound more appealing and fun.
6. Be prepared to provide the client with the original copy to be returned or copy the tape, whichever is more feasible for the clinic.
7. In two separate 20-minute sessions, the videotape is reviewed with the client/family/caregiver with the therapist using home assessment forms to determine which areas need further measurement or details, depending on the content of the tape. For example, if the client’s bed to bathroom trail seems unsafe or difficult for the client in the film, the client or caregiver may be asked to measure the height of the bed, etc.
8. It is important to review the tape in concert with the other therapeutic activities of the session such as balance, exercise, etc., in short periods of time to reduce anxiety, and to provide feedback and functional application of the exercises and activities to the home environment whenever possible.

TEACH Videotape Check List for Person Using the Videocamera

Note: It is optimal if the client can be videotaped doing activities of daily living, with a family member or caregiver as the camera person.

Make your own movie... where YOU are the STAR!!

- **Take a shot of the front of the home. Try to get the WHOLE house in the picture.**
- **Take a shot of the home through the ENTRANCE THAT the client MOST COMMONLY USES. Take a picture of the floor right inside the entrance.**
- **Videotape the KITCHEN. Have the client stand where he/she normally prepares food. Next, have the client get a glass of water from the sink and pretend to carry a meal to the place where he/she normally eats. Try to videotape a few seconds of the floor and doorways as the client passes through.**

- **Now, take a rest in the LIVING ROOM. Next, take a shot of the client getting in and out of his or her favorite chair, showing where the phone and light switches are.**
- **Let's get the MAIL. How does the client get out of the home to get the mail? Videotape the actual route, with the client walking it, if possible.**
- **On to the BEDROOM. Have the client crawl in bed for a nap and pretend to turn off the lights. Where is the phone? Take a picture of the floor.**
- **Now it's time to go into the BATHROOM for a guided tour! Please have the client keep all of his/her clothes and shoes on! ☺ Show where the client takes a bath and how he/she sits down on the toilet, too.**
- **Where does the client keep medicine? Show where it is stored and how the client takes medicine during the day (use a pill box, etc.)**
- **Have the client pretend that he/she is going out for a "field trip." Have the client obtain his/her coat, etc. and head for the pick-up place. WAVE GOOD-BYE!**

Appendix I: Case Manager Worksheet

Patient Name: _____

Start Date: _____ Current Therapy Plan of Care Rx frequency: _____

Top 3 specific therapy goals for this patient:

1. _____
2. _____
3. _____

Progress Review Checklist:

Overall Attendance % to date: _____ Notes: _____

Fall Factor	Assessed?	Not checked yet?	Notes
Specific strength			
Specific ROM			
Vestibular ruled out or treated			
Postural Recovery Strategies			
Biodex assessment			
Shoes/ Footwear			
Pain			
ADL function/ OT			
Home/ Environment: <ul style="list-style-type: none"> • Home Eval • Video • Checklist 			
Incontinence issues			
Seating (if in w/c)			
Gait pattern/device			
Shoes/ Footwear			
C-V Endurance			
Medication review			
Vision issues			
Hearing/Swallowing			
FEAR			
Other:			

Family/ Caregiver involved in assessment or treatment?

Functional Assessment Tools Used: (Tinetti, TUG, etc.) _____

Follow-up notes/ recommendations:

Reviewed by/date: _____

Appendix J: SOAP Format

Subjective:

Should relate a positive patient statement regarding therapy. Responses could include:

- What did the patient, family, caregiver or staff say about the patient's response to treatment?
- Were there any reports from patient, family, caregiver or staff regarding functional limitations that were not directly observed by the therapist?
- Are there any subjective pain complaints and how does the patient feel this impacts his/her ability to function?

Objective:

Should include a comparison between previous week and current status. Items to include follow:

- Highlight progress obtained. If no progress in one goal area explain why not, i.e., "focus this week on bed mobility, pivot transfers not significantly addressed this week."
- If progress is small, magnify gains and break into smaller components, i.e., segmenting tasks/task analysis. An explanation for no or slow progress needs to be made particularly for continuation of skilled care.
- Make sure you demonstrate consistency between disciplines or document rationale for differences.
- A brief statement of the intervention processes can be made but the emphasis should be on the patient's physical and behavioral response to therapy.
- What specific objective gains have there been in the patient's performance of functional tasks? For example, "the patient can now brush hair using the affected upper extremity." You can document changes in level of assistance needed, range of motion improvement, and strength gains, but be sure to relate those to function and/or be able to substantiate your observations with standardized functional tools.
- What specific skilled intervention was provided to impact these areas of functional ability? For example, what did you teach, train, introduce, inhibit, facilitate?
- If teaching was done, comment on the format of instruction (i.e., written, verbal) and the ability of the patient, family or caregiver to return demonstration.
- Document conferences/communication between disciplines, patient, family, caregiver and staff with a brief summary.

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Appendix K: Technical Components of Documentation

Background Information

Physician Orders:

Orders are needed for an evaluation. You may initiate treatment based on verbal orders but the physician must sign the order before the bill is submitted (HHM, Section 204.2, Final Rule, Federal Register, July 30, 1999).

Certification:

Same process for Part A and Part B; Re-certification needs to be completed every 30 days.

Onset Date:

Should be within the last six months. Some examples of dates to be used include date of hospitalization, surgery date, date of admission to the facility, first date of recent episodes of falls and functional decline. If you don't know, use the first date of that month. You also need to explain onset date in relation to medical diagnosis if relationship is not obvious.

Medical Diagnosis:

Use the pertinent medical diagnosis resulting in the therapy disorder and relate to 50% or more of the effort in the plan of treatment. Include the written diagnosis and ICD-9 code.

Treatment Diagnosis:

Therapist should always choose the most specific diagnosis possible: Example: If CFA (436) is the medical diagnosis, therapist may choose a type of hemiplegia (non-dominant or dominant – 342.9). If the treatment condition appears unrelated to medical diagnosis, the therapist needs to explain the relationship in the medical history section of the evaluation.

Treatment Condition:

If a patient is admitted with a complex diagnosis such as pneumonia or CHF, then rehab requires a "treatment condition" to qualify the primary diagnosis. Example: pneumonia, treatment condition may be "difficulty in walking, 719.78."

Prior Level of Function:

MUST be put in functional terms. This should include support systems as well as developmental, educational, vocational, cultural and socioeconomic history.

Past Medical History:

This helps establish the medical complexity of your patient. Should include precautions and contraindications.

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Appendix L: Documentation Examples Related to Education

<p style="text-align: center;">Poor Example</p> <p>Patient/caregiver education completed. Caregiver unable to successfully complete ROM program without therapist intervening. Will continue education as appropriate.</p>	<ul style="list-style-type: none"> • No performance area highlighted. • Lack of explanation of why patient/caregiver was unable to complete task, leaving room for false interpretation.
<p style="text-align: center;">Good Example</p> <p>RUE: Following the last treatment session, the patient refused to permit the caregiver to provide AAROM to RUE. Caregiver's handling of RUE lacks the therapeutic quality necessary for patient to tolerate movement. Caregiver is motivated to learn proper technique; therapist will continue instructing caregiver. Daily AAROM by caregiver will prevent the continued development of soft tissue contractures, reduce pain and reduce edema in the right hand.</p>	<ul style="list-style-type: none"> • Clear documentation of expected ability of caregiver to successfully complete home program especially due to level of motivation. • Documentation of therapist's skilled assessment of caregiver technique helps to justify the need for continued skilled intervention/education. • Documentation of type of program provided and rationale for the need of this particular program.

Use of Standardized Functional Assessment Tools

<p>Patient ambulated 100 feet with wheeled walker and one rest break.</p>	<ul style="list-style-type: none"> • No reference to functional implications. • No use of standardized functional assessment tools. • Does not show comparative data to know if this is an improvement.
<p>Ambulation: Using a wheeled walker, patient's ambulation increased from 50 feet with two rest breaks to 100 feet with one rest break, enabling patient to use the bathroom. Patient's Tinetti gait and balance score increased from 7/28 to 10/28, slightly reducing his/her risk of falls.</p>	<ul style="list-style-type: none"> • Clear use of standardized functional assessment tools to support functional observations. • Association of clinical funding to functional outcomes. • Comparative data stated to clearly show progress. • Emphasis on safety implications.

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Appendix M: Specific Documentation Examples

Focus on Function

<p style="text-align: center;">Poor Example</p> <p>The patient was given a sock donner and a dressing stick to help him get his left sock on his foot. Therapist provided minimal assistance in positioning the sock donner and in pulling sock up his leg.</p> <p><u>Plan:</u> Continue POC</p>	<ul style="list-style-type: none"> • No clear organization of performance area. Reader must deduce the functional emphasis of the note. • Providing assistance is not a skilled service; a caregiver can provide this. • No specific instrument of evaluation, progress or instruction given to patient. • “Continue POC” is too vague and implies repetition.
<p style="text-align: center;">Good Example</p> <p><u>Dressing:</u> Patient was issued and instructed in the safe use of a dressing stick and sock donner to address the goal of independence in LE dressing. During ADL assessment using adaptive equipment, patient required maximum assistance to don the sock on the LLE due to need to adhere to hip flexion limitations imposed by the THR.</p> <p><u>Plan:</u> ADL training in LE dressing including safe use of adaptive equipment. Issue/instruct in modified use of long-handled shoehorn.</p> <p><u>Add goal:</u> Independence in LE dressing.</p>	<ul style="list-style-type: none"> • Performance area highlighted. • Clear statement relating medical problems to functional deficits. • Note shows that therapist does not provide assistance. He/she instructs in safe, appropriate, modified use of adaptive equipment. • Skilled intervention stated by instruction in ADLs, actual performance assessment and provision of adaptive equipment. • Goal of LE dressing is referenced. • Specific plan clearly requires skilled services. • Dynamic care plan.

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Appendix N: One Dozen Documentation Tips⁴²

Always be consistent and use comparable objective measures in the evaluation, weekly or monthly progress notes, daily treatment notes and discharge summary.

1. Consider patient's signs and symptoms that justify the treatment planned, rendered, documented and billed (such as the reason for referral as it relates to the primary or treatment diagnosis).
2. Record prior functional levels, comorbidities that may impact outcomes, cognitive levels and any history of prior treatments for the condition.
3. Use objective baseline data to establish the expected rehabilitation potential, set goals and measure progress.
4. Clearly state the impact the objective baseline findings have on the patient's individual functional ability.
5. Use standardized rating scales to support your services. If you use another type of scale, make sure you provide a key to the scale with the medical records.
6. Relate progress to functional activities whenever possible.
7. State progress and goals in significant and material ways that are meaningful to the reviewer, specifying the type of assistance you are recording. For example, is it physical or cognitive assistance? Are they verbal or visual cues and not actual physical assistance that you provided during treatment? Or, are you actually recording the patient's effort necessary to complete a task, not physical or cognitive assistance given by the therapist?
8. When instructing in maintenance programs, specify whether the assistance was given to the patient or the caregiver.
9. Quantify significant progress by asking questions such as:
 - How much of the task did the patient complete?
 - How far did the patient ambulate, with what device and on what surface?
 - What are the objective test results?
 - Are you using valid scales for the impairment or condition you are assessing?
 - What is the patient's specific functional mobility?
 - What was the level and type of assistance provided?
 - Was there a progression in weight-bearing status during a functional activity?
 - What durable medical equipment, supplies and assistive or adaptive devices were assessed, used or discharged in treatment?
 - What compensatory skills were taught?
 - Was there a progression of task complexity?

⁴² American Journal of Occupational Therapy. June, 2003. Vol. 10. Pages 213-4.

- How did pain, soft-tissue integrity, strength, ROM, coordination, tone and visual perception or functional endurance change?
10. If several disciplines are involved in the treatment plan, make sure that therapists approach problems from their specialized area to avoid duplication of services.
 11. If the daily notes reflect discrepancies from one discipline to another, make sure the therapy notes account for the discrepancy. Therapy records should reflect which challenges are being addressed.
 12. The documentation must always indicate the type of skilled treatment given, treatment minutes by HCPCS/CPT codes and therapist's signature with qualifying credentials.

Appendix O: Twenty Reasons Medicare Payments May be Denied⁴³

1. Patients who have poor potential of benefiting from therapy services.
2. Maintenance services after patients plateau in their progress toward the goals.
3. Services that are not specific to or effective for the condition being treated.
4. Services that are not individualized to the patients' needs.
5. Continued treatment when patients and/or caregivers are noncompliant.
6. Continued treatment when patients are unable to sustain gains and there is no overall improvement.
7. Group therapy out of compliance with Medicare guidelines.
8. Treatment for general instruction or education that is not specific to patients' medical needs.
9. Services only for overall fitness or endurance training.
10. Routine evaluations or reevaluations, preoperative evaluations, screening evaluations and mandated quarterly evaluations.
11. Treatment for cardiac conditions in the absence of an orthopedic, muscular or neurological condition amenable to therapy.
12. Treatment for a condition in which spontaneous recovery can be expected and with no clear need for skilled care or adaptation.
13. Treatments not requiring the unique skills of a qualified therapist.
14. Excessive amount, intensity, frequency or duration of treatments or visits.
15. Services for negative pressure wound therapy (NPWT) only (this is generally a routine dressing change and the supplies are billed to the carrier).
16. Treatment for a condition with an old onset date and no recent exacerbation or decline in function.
17. Range of motion for patients with uncomplicated conditions.

⁴³American Journal of Occupational Therapy. June 2003. Volume 10. Pages 213-4.

18. Routine positioning in bed or wheelchairs for residential patients.
19. Issuance of non-specialized standard wheelchairs, routine off-the-shelf splints and foot/elbow cradles or “carrots” for pressure relief.
20. Routine monitoring of standard safe swallow techniques.

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