Effective Fall-Prevention Demands a Community Approach

(Bonita) Lynn Beattie, PT, MPT, MHA

ABSTRACT
Given the rapid aging of the population, we can expect the number of older adult falls and fall-related injuries and deaths to increase exponentially unless we make a serious commitment to providing evidence-based, fall risk screening and assessments, and appropriate interventions to those increasingly at risk. National, state, and local partners are coming together to address this growing public health issue through evidence-based interventions that promote collaboration between public health, health care, and aging service providers. Physical therapists are uniquely positioned to make a significant contribution to this effort and to promote older adult participation in programs and services that can augment or supplement the plan of treatment. The purpose of this special interest paper is to describe the efforts of the National Council on Aging’s Falls Free Initiative and the role that physical therapists and other rehabilitation professionals can play in community-based programs aimed at reducing risk and occurrence of falls in later life.

Key Words: fall prevention, older adults, physical therapists, risk of falls

INTRODUCTION
One in 3 older Americans fall each year. Falls are the leading cause of both fatal and nonfatal injuries for those aged 65 years and older. In 2010, every 15 seconds, an older adult was treated in the emergency department for a fall-related injury. Starting in 2012, 8000 to 10 000 baby boomers began turning 65 on a daily basis, adding to the falls risk pool. But perhaps even more importantly, the chances of falling and of being seriously injured in a fall increase with age; in 2010, the US Census Bureau estimated that there were more than 1.9 million nonagenarians and that number is rapidly growing. On the basis of these demographic changes, we can expect the number of falls, and fall-related injuries and deaths to increase exponentially unless we make a serious commitment to providing evidence-based, fall risk screening and assessments, and appropriate interventions to those increasingly at risk.

Over the past decade public health systems, health care providers, and aging service providers have been working collaboratively to address this growing public health issue; but only recently have the tools and resources been readily available to broadly implement evidence-based interventions across the varied levels of falls risk for older adults. Central to effective intervention is the informed and activated older adult/caregiver who is given the education, tools, resources, and support to adopt and maintain a healthy lifestyle and to reduce individual risks through targeted interventions to reduce falls. National Council on Aging’s Falls Free Initiative is providing the national leadership to educate older adults and their families and health care providers about how to stay safe and independent and how to activate and sustain appropriate behavioral change strategies.

The research evidence is strong: many falls are preventable through risk identification and targeted intervention. But first, the older adult, family members, providers, and others must recognize that falls are a significant and growing public health issue for older adults. Second, they must believe that there are cost-effective strategies that can be engaged to lessen the risk of falling, and finally they must be activated to make behavioral and clinical practice changes. Clinical interventions and community programs help raise awareness, appropriately target risk, and serve to activate the behavioral change model leading older adults to take steps to reduce their risks.

DISCUSSION
Increasingly, community-based organizations are playing an important partnership role in local and state efforts to promote and sustain healthy behaviors and healthy choices in our aging population. The last decade has seen growth in the availability of evidence-based, health promotion, and injury-prevention programs and services that help older adults maintain healthy, active lifestyles and better manage chronic conditions. Not surprisingly this important community role extends to the growing efforts to reduce falls
and fall-related injuries and deaths among older adults. Effective community-based fall-prevention programs and services offered to those at risk can and should supplement clinical services and target geographical areas of risk through coordination and collaboration with health care providers and public health officials.

Practically, there is a crisis of limited resources and services available to address the mounting challenge of falls in a rapidly aging population. While physical therapists are uniquely qualified to offer effective gait and balance training in a 1-1 model of care, there are not enough practitioners to reach all 50 million older adults who will swell in number to an estimated 70 million by 2030.\(^2\) To make a significant impact, it is imperative to activate and engage other available resources. We need to triage and assess level of risk to identify those in need of our services and those who can benefit from community-based exercise programs and services. Risk can be quantified, following assessment allowing interventions and services to target of those at moderate to high risk with clinical assessment and intervention. One way to think about fall risk management is American Geriatrics Society (AGS) clinical guidelines\(^3\) screening recommendations.

**High Risk**
Older adults who demonstrate high risk should undergo further clinical assessment, treatment, and referral. High risk is defined as one or more of the following:
- reports recurrent falls in the past year (or single fall with circumstances suggesting high risk),
- presents for medical attention because of a fall, or
- reports difficulties in walking or balance.

**Moderate Risk**
Older adults reporting only a single fall and reporting or demonstrating no difficulty or unsteadiness during the evaluation of gait and balance do not require a fall risk assessment but should be counseled to adopt fall-prevention strategies of maintaining a physically active lifestyle, monitoring medications, obtaining an annual eye examination, and making timely safety enhancing modifications in their homes. Referrals to community-based, fall-prevention, and physical activity programs are warranted.

**Low Risk**
Older adults who have not fallen and who do not demonstrate gait and balance difficulties are considered low-risk. They too should be counseled to adopt fall-prevention strategies of maintaining a physically active lifestyle, monitoring medications, obtaining an annual eye examination, and making timely safety enhancing modifications in their homes. Referrals to community-based, fall-prevention, and physical activity programs are warranted. It is important to note that low risk does not mean no risk of falls.

**RISK ASSESSMENT**
The Centers for Disease Control and Prevention (CDC), National Center for Injury Prevention and Control designed a toolkit to simplify the implementation of the AGS guidelines by putting practical tools in the hands of providers. The Stopping Elderly Accidents, Deaths and Injuries (STEADI) Toolkit is available on the Web site: www.cdc.gov/injury/STEADI. This toolkit includes provider training materials, case studies, simple evidence-based balance and gait tests, and referral forms targeting both clinical specialists and community programs as appropriate. The toolkit also includes a newly validated 12-question self-assessment form that both educates the elder/caregivers and provides a basis for dialogue with providers. Additional patient educational materials are included on steps to avoid falls and a home safety assessment form.

Older adults who demonstrate a higher risk of falls should undergo clinical assessment based on the AGS guidelines or the STEADI with further clinical treatment as warranted. Older adults should also be referred to appropriate-level community programming as indicated. Such programming can supplement or augment treatment plans. Those at moderate risk may also call for clinical intervention but should also result in referral to appropriate-level community programs where they can learn to manage their overall risk.

**EVIDENCE-BASED FALL RISK–REDUCTION PROGRAMS**
Several programs and resources can be found in communities across the country but are little known to the medical community. Programs listed later offer education and health promotion training based on sound behavior change strategies. Older adults need 150 minutes a week of moderate-level physical activity (and muscle strengthening 2 or more days a week) for general health\(^4\) and at least 50 hours of balance and strength training are needed over a minimum of 12 weeks, preferably 24 weeks to affect falls risk.\(^5\) The CDC developed a list of optional approaches to achieving recommended doses. See “How Much Physical Activity Do Older Adults Need?” at: http://www.cdc.gov/physicalactivity/everyone/guidelines/olderadults.html.

Not surprisingly, given the reimbursement structure when most older adults are discharged from physical therapy, they have not gotten the sufficient protective dose of balance exercise training. To meet the demands of effective intervention, clinical therapists must seek to provide additional options for their at-risk clients. To ensure that clients receive the dose they need post–physical therapy, referrals to properly trained exercise professionals are essential.

Fortunately, under the Older American’s Act, health promotion and disease/injury-prevention programs are available in a large number of community and senior centers. Each state houses a state-level unit on aging that...
collaborates with 1 or more Area Agencies on Aging blanketing the state. In turn, the Area Agencies on Aging are responsible for developing and funding area service plans to reach the needs of older adults.

**Programs for Older Adults With Low Risk of Falls**

Low-risk older adults should be encouraged to routinely participate in physical activities that stress balance and strength like those found in many communities. They can be referred to community programs such as Tai Chi: Moving for Better Balance, EnhanceFitness, Fit and Strong, Walk with Ease, and others.

**Tai Chi: Moving for Better Balance**

Developed by the Oregon Research Institute in Eugene, this simplified, 8-form version of tai chi, offered in community settings, has been proven to decrease the number of falls and risk of falling in older adults; classes are offered 2 to 3 times per week for at least 3 months. Program outcomes include decreased falls and a decrease in fear of falling. Target participants are relatively fit older adults with no major ambulatory problems or cognitive impairment. The tai chi program is 12 weeks’ duration, 36 hours’ total class time. It is taught by trained “Tai Chi: Moving for Better Balance” instructors. Additional information on the original research may be found at http://www.cdc.gov/HomeandRecreationalSafety/Falls/compendium/1.4_tai_chi.html.

**Enhance Fitness**

Enhance Fitness, developed by the University of Washington, in collaboration with Senior Services, is a group exercise program for older adults focusing on stretching, flexibility, balance, low impact aerobics, and strength-training. Classes meet 3 times per week, led by a certified fitness instructor. For more information, go to http://www.projectenhance.org/EnhanceFitness.aspx.

**Fit and Strong**

Developed by the University of Chicago, this physical activity program for older adults who have arthritis is designed to be offered 3 times a week for 8 weeks. Each session includes a 60-minute exercise program, a 30-minute education, and a group problem-solving session to help participants develop ways of incorporating exercise into their daily lives. For more information, visit www.fitandstrong.org.

**Walk With Ease**

Walk With Ease is a program of the Arthritis Foundation designed for people with arthritis, other chronic health conditions, and also those who would like to begin a regular walk program. It is a multicomponent program that includes walking, health education, stretching and strengthening exercises, and motivational strategies. Meets 3 times a week for 6 weeks and is led by a trained leader (total of 18 sessions). Materials have been successfully implemented and evaluated, resulting in benefits such as increased physical activity, increased walking distance and speed, decreased pain, and decreased depression (http://www.arthritis.org/walk-with-ease.php).

**Programs for Older Adults With Moderate to High Risk of Falls**

Those at moderate to high risk could greatly benefit from programs shown to significantly reduce falls or fear of falling through a multifactorial approach to behavior change: Stepping On is now found in 10 states, while A Matter of Balance is more widely distributed in 37 states.

**Matter of Balance**

A Matter of Balance Program is a volunteer Lay Leader Model, adapted from Boston University Royal Center by Maine’s Partnership for Healthy Aging. It teaches practical coping strategies to reduce the fear of falling and increase activity levels among older adults. Both of these programs are highly effective in reducing falls or fear of falling for older adults. The program is led by trained peer leaders over 8 weekly 2-hour sessions. For more information, contact Maine Health Partnership for Healthy Aging at http://www.mainehealth.org/phfa.

**Stepping On**

Both of the community programs described previously enfold physical therapist roles. Matter of Balance includes a teaching session by physical therapists. Similarly, Stepping On at a minimum includes 3 therapist-led sessions; the Leader is a current or retired health care professional, social worker, health educator, fitness expert, or aging network professional, often a physical therapist. These roles offer the physical therapists an opportunity to serve the community. Private practice clinics as well as community-based hospitals see both community-service and marketing value in sponsoring such program participation.

**Otago Exercise Program**

For home care clients, the highly effective Otago Exercise Program is recommended. It is particularly effective in those older than 80 years. The Otago Exercise Program is provided by home care physical therapists (through either Part A or Part B Medicare funding) and extends visits over a 1-year period with the client/caregiver taking on responsibility for maintenance.

Otago training was offered at the June 2012 APTA national conference. An online training program (2½-3 hours) will be available in the spring of 2013. It is being designed to prepare physical therapists to deliver the Otago to frail older adults in their home. Physical therapists can receive CEUs for the training and can take the course at their convenience. Additional information and the Otago exercise manual can be obtained by joining...
the www.phconnect.org “Otago Falls Prevention Exercise Program Forum.” Members of www.phconnect.org can also join the larger Falls Community “Preventing Falls Among Older Adults” and find more information on Tai Chi, Stepping On, and Otago.

FALL RISK AND CHRONIC HEALTH CONDITIONS
Fall risk is demonstrably raised with the presence of chronic conditions. According to the Agency for Health Care Research and Quality, 91% of older adults have at least 1 chronic condition, while 73% have 2 or more. Some conditions directly raise the fall risk, while other conditions can lead to functional loss, depression, pain, incontinence, and multiple medication use, all additional fall risk factors. The average 73-year-old woman has 3 chronic conditions and is on 5 prescription medications. Not surprisingly, efforts at the national level are also promoting better self-management of older adult chronic conditions as an additional contribution to falls risk management. This speaks to the need for another widely disseminated program found in most communities: Chronic Disease Self Management

CHRONIC DISEASE SELF-MANAGEMENT
Stanford University’s Chronic Disease Self-Management Program is a 6-week workshop that provides tools for living a healthy life with chronic health conditions, including diabetes, arthritis, asthma, and heart disease. The peer-led workshop provides support for normal daily activities and dealing with the emotions those chronic conditions may bring about. Chronic Disease Self-Management programs also include Tomando Control de su Salud, a Spanish-language, culturally appropriate version, and the Positive Self-Management Program, a workshop for people with HIV. For more information, see http://patienteducation.stanford.eduprograms/cdsmpp.html. An online version is now available, learn more at www.restartliving.org.

CONCLUSIONS
Physical therapists are uniquely positioned to make a difference in reducing both risk and incidence of falls. All physical therapists must make it a part of routine clinical practice to ask older adult clients about their falls history and to observe gait and balance as they enter the clinic. To find out more about the programs described here, and other appropriate programs in the community, contact the local Area Agency on Aging (searchable at www.eldercare.gov). If such programs are not readily available, physical therapists can be advocates who promote the development of sustainable fall-prevention programs in their communities. Physical therapists can volunteer to serve as the guest therapists in programs such as Stepping On and Matter of Balance. To help older adult clients manage or maintain their current level of risk and promote continued physical activity stressing balance and strength, physical therapists must engage in a dialogue with them about the importance of keeping safe and maintaining independence.

To reach the Healthy People 2020 goal of reducing falls-related emergency department visits by 10%, a community approach is imperative. Physical therapists have both an opportunity and obligation to join colleagues and a multitude of others who are united around this important public health issue as part of the 42-state member, State Coalitions on Fall Prevention Workgroup. Information about what each state is doing can be found at www.ncoa.org/fallsmap. Physical therapists can learn about the growing problem of falls in their state by accessing state profiles in falls at www.ncoa.org/FallsStateProfiles. Physical therapists can and should be active participants in the annual National Fall Prevention Awareness Day, on the first day of fall (information available at www.ncoa.org/fpad).

Beyond the collaboration between clinical and community services, there is a strong need to activate the very real contribution every individual can make to fall prevention within his or her own sphere of influence. Each of us fulfills multiple roles as members of professional communities, organizations, groups and neighbors, and families of older adults where awareness and action on falls risks can make a significant difference, ensuring that spills are wiped up, tripping hazards acted upon and reporting cracks and upraised sidewalks. Just doing a “walk through” safety assessment with your aging parents or neighbors to brainstorm and implement simple safety enhancements can significantly reduce risk.

REFERENCES