Assessing Risks and Preventing Falls in Community-Dwelling Well Elders: A Role for Occupational Therapy

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Introduction
Falls are a leading cause of morbidity and mortality in individuals over age 65. Community dwelling well elders are at a high risk for falls leading to injury, institutionalization, and premature death. Over half of all falls in people over age 65 occur in the home, and one in three people age 65 or older living in the community falls at least once a year. Much research has been done on falls in institutionalized elders, however, few programs have been initiated in community settings with well elders. Occupational therapists can help assess and prevent falls in community dwelling individuals through advocacy, outreach, education, intervention, and consultation initiatives. Those initiatives are consistent with the focus of occupational therapy on primary prevention, wellness and health promotion; and on community as the most meaningful context for occupation. At Dominican University of California, occupational therapy faculty and students have recently developed and implemented several community initiatives designed to help older people remain active and healthy in their communities.

Scope of problem
People over the age of 65 total 36 million in the USA, over 12% of the total population. By 2030, 22% will be over age 65. California has the largest elderly population of any state with over 3.5 million people over age 65. In California, 200,000 falls annually result in injuries, especially fractures, head injuries, and death. Three hundred and seventy five million dollars are spent annually in California treating those with fall-related hip fractures. On the average, two Californians daily die of fall-related injuries. Risk factors for falls include the normal aging process, medication issues, poor nutrition, unsteady gait, confusion, and progressive diseases such as Parkinson’s disease. Fear of falling is another significant issue for many older people. Proven methods exist to help assess fall risk and prevent falls.

Fall risk assessments
- Clinical assessments: Used to determine risk for falling.
  - Tinetti Balance and Gait Scale
  - Barthel Index
- Fitness assessments: Used to assess overall levels of fitness.
  - 30 second chair stand
  - Arm curl
  - Two minute step in place
  - Chair sit and reach
  - Black scratch
  - Eight foot up and go

Fall prevention programs
Effective fall prevention programs include exercise, education, and environmental modification. Research shows that multifactoral fall prevention programs are the most successful.

- **Exercise:** 34% of persons over age 65 do not exercise regularly. Exercise programs should include both specific and targeted exercise. Should focus on building strength, endurance, and flexibility. Can include Tai Chi, strength training, walking, yoga.

- **Education:** Educational information is not widely distributed by primary care providers or community agencies. Educational programs should include written and oral presentations on fall risk and fall prevention, including medications, diet, home safety, and home modification.

- **Environmental Modifications:** Environmental assessment and modification programs are not currently widely available, due to cost and staffing limitations. Programs should include home safety evaluations, removal of fall hazards such as throw rugs, improved lighting, and installing safety equipment such as handrails.

- **Multifactoral Programs:** Research shows the best outcomes with these programs. These include a comprehensive multidisciplinary risk factor screening, post-fall assessments, a review of all medications, and all of the above mentioned interventions.

Description of project: Community Initiatives
Between 2003 and 2005, DUC OT faculty and students completed a number of community based projects focusing on fall prevention. Projects were developed and implemented primarily in Marin County, California, an affluent suburban community with a rapidly aging population.

- **DUC OT faculty participated in a statewide invitation conference on fall prevention.**

- **DUC OT faculty were invited to join a county-wide task force on fall prevention.**

- **DUC OT students gave presentations on fall prevention at assisted living facilities, senior centers, and senior housing sites.**

- **DUC OT faculty and students completed individual consultations and home safety evaluations with over 50 seniors.**

- **“Eight foot up and go” fall risk assessments were administered annually at county wide senior information fairs attended by over 5,000 seniors.**

- **DUC OT students developed manuals and training materials for community volunteers at multiple community agencies as part of a service learning program development course.**

- **DUC OT students led training sessions for community workers and volunteers on assessing fall risk, evaluating homes for fall risk factors, and recommending home safety modifications in multiple settings.**

- **DUC OT faculty consulted with county public health and division of aging staff to develop a job description for a community health occupational therapist position.**

Suggestions for future initiatives
- Include fall risk assessment as a part of all functional assessments for individuals 55 years of age and older.
- Offer special fall risk screening days during April, “OT Month”.
- Start or join a fall prevention task force in your place of employment or community.
- Offer to serve on the board of a community agency serving older adults.
- Develop written materials about fall risk that are age and culture appropriate for clients and families.
- Volunteer to do fall risk assessment, education and consultation at your local church, senior center, nursing home, assisted living facility, or other community agency.
- Write articles for your local newspaper on the risk of falling, and ways to prevent falls.
- Volunteer to “Rebuilding Together”, and ask to work on the homes of older individuals, making suggestions for home modifications that may decrease fall risk.
- Develop community clinics focused on helping older adults remain healthy in their homes and in the community. Can be run by OT students with appropriate supervision.
- Host a booth at a Senior Information Fair with screening and information on fall risk assessment and prevention.
- Research the efficacy of fall risk assessment and prevention programs with community dwelling elders.

Useful web sites
The American Occupational Therapy Association. www.aota.org
California Department on Aging, www.ca.gov/oag
Center for Disease Control, National Center for Injury Prevention and Control. www.cdc.gov/nipc/falls/default.htm
National Falls Prevention Action Plan. www.healthagingprograms.org (at What’s New’ section)

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