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Fall Prevention in the Elderly

Fall prevention among the elderly has received increased media attention in recent years. As our population ages there has been an effort to raise awareness on how to assess fall risk and prevent falls, both at home and in residential care facilities such as nursing homes and assisted living settings. Falls increase dramatically with age as mental and physical declines occur and two-thirds of those seniors who have fallen once will fall again within six months. The risk of falling is greater for women than for men. The health care costs of fall related injuries are extraordinary and a significant percentage of those hospitalized for fractures or head injuries as a result of falls do not return home to live independently.

Fall prevention programs focus on proper assessment for fall risks by health care providers and caregivers to the elderly as well as on the several areas which directly contribute to an increased chance of falling: medication side effects; lack of physical strength; and environmental hazards in the home. In addition, there are efforts to increase education and awareness of the elder and family members of fall prevention strategies. With respect to fall prevention in residential care settings, many of the same risk factors are present and there must be a collaborative effort among the health care providers, the pharmaceutical consultants, family members, and facility staff in order to reduce fall rates. Recent research is showing that as a result of the variety of risk factors – many factors often occurring in one individual - fall risk reduction can be a complex problem requiring the regular and active involvement and support of health care providers as well as family and other social supports.

Fall risk assessment - Assessing an individual for fall risk should be done by his or her health care provider on a regular basis. This assessment will include a history of falls; a medication review; an examination of vision, gait, balance, and muscle strength; a mobility assessment; a mental status exam; and basic review of heart rate and blood pressure. Health care providers must rely on the patient and family members to self-report about hazards existing in the home which might contribute to fall risk.

Mobility and fall risk will be assessed upon admission into any residential care settings such as nursing homes and assisted living centers as well as on an ongoing basis as physical and mental health changes occur. Research has shown that physical restraints, used in the past to prevent falls among at-risk

residents, actually cause harm to residents and are now mostly prohibited by state regulations¹. Most facilities incorporate exercise programs into daily activities and the staff encourage residents to attend them regularly for the most benefit. Additionally, facilities offer assistance with walking and mobility when needed as well as alarms when residents are at increased risk of falling.

Once a proper assessment is done, a specific plan to reduce risk can be created based on the identified risk factors.

Medication side effects – Studies have shown that the short term risk of single and recurring falls can be three times higher in the two days following a medication change². Although studies are still underway to identify the most effective interventions for monitoring medication changes and preventing medication-related falls, in the interim it is helpful to be aware that this is a vulnerable time for our seniors and that increased oversight by family or other caregivers may be appropriate. Psychoactive medications which are often prescribed for pain management or to control or stabilize moods should be particularly scrutinized when a fall prevention plan is being created.

Lack of physical strength – Maintaining good balance and lower limb muscle strength are well documented to be effective at preventing falls³. This can be accomplished through regular exercise such as walking or with programs such as Tai Chi which specifically target improvements to balance. Weight bearing or resistance training have been shown to increase bone mass which can protect against fractures in addition to its obvious strengthening benefit. Unfortunately, many elderly persons lack the motivation to exercise regularly and those with dementia or other cognitive deficits need reminders and encouragement and can often actively resist such encouragement. Despite this, there are simple and effective exercises which can be done at home while seated or standing which, if performed regularly, will improve strength, balance, posture, and endurance.

¹ See, for instance, <http://ute.kendaloutreach.org/Default.aspx> and similar websites

² <http://www.cdc.gov/HomeandRecreationalSafety/Falls/FallsPreventionActivity.html>

³ See for instance <http://www.biomedcentral.com/1471-2377/9/4>

Environmental hazards – Household clutter or the placement of certain furnishings is often a contributing factor to falls as are interior and exterior stairs, loose throw rugs, poor lighting, or long electrical or telephone cords. In addition, the lack of grab bars or other assistive devices in the home can impact fall risk. Sometimes even improper or ill-fitting footwear can be a contributing factor in falls in or around the home and may exacerbate existing minor environmental hazards. Seniors often need significant help in assessing the need for household organization and implementing improvements that might reduce risk of falling.

Education – The Centers for Disease Control and others are researching the extent to which elders are aware of their own risk of falling and their willingness to undertake strategies for reducing risk. For instance, there are ongoing focus groups reviewing self-assessment tools which would allow for a scoring system which would then be reviewed and discussed with the senior by his or her physician in order to create fall prevention strategies. In addition, there are researchers experimenting with digital tools to continuously monitor the walking and activity of a senior in his or her home. Sensors are placed in carpets and on clothing which gather data that can then be used to create a fall prevention plan unique to that person in the home⁴.

In addition to fall prevention measures, there are also ongoing efforts to encourage the use of injury-reduction products such as hip protectors in order to prevent fractures among those at highest risk. There are several styles of padded undergarments as well as padded belts that would be worn outside of one's clothing. Not only do these protectors prevent fractures but they also can provide a measure of security for the senior which decreases the fear of falling and allows him or her to be more active⁵.

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⁴ See <http://www.nytimes.com/2009/11/08>

⁵ See <http://www.hipprotector.com>