FINDING THE COMFORT ZONE: FALL PREVENTION PROGRAMS FOR SENIORS

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Falls are common in the elderly population and can pose a serious threat to their mental and physical health. Every year a third of all persons 65 years and older who reside in the community report one or more falls. Falls are the second leading cause of accidental death and can also result in a fear of instability and falling, in the survivors. As a result, falls can lead to decreased mobility, individual and family distress, nursing home placement, and the use of chemical and physical restraints. In institutionalized clients, falls can account for up to 90% of all reported incidents.

It has been noted in many articles that falls and resulting injuries are not random, unpredictable events, but are understandable and preventable. Falls are the result of the interaction of physiological, social and environmental factors. A challenge for Occupational Therapists is to develop community and institutional awareness programs and checklists, which help identify predictable environmental, social and physiological factors for fall prevention. This will provide an opportunity for Occupational Therapists to take a leading role in preventative education for clients and caregivers in the community and in institutions.

First it is important to identify who may be at risk for falling. Some of the warning signs identified for seniors over the age of 65 which place them at risk for a fall may include one or more of the following:

- Two or more visits to their family physician within the last year for other than routine visits or checkups
- Two or more general health problems
- Lack of physical activity
- Use of blood pressure medication
- More than two prescription drugs taken regularly
- More than two limitations in daily activity

These risk factors can then be looked at in more detail in the context of their physiological, psychological, social and environmental make up. Physiologically, we need to consider if the client has had any ongoing cardiovascular difficulties such as a previous infarct or high/low blood pressure. Changes in blood flow to the brain can create situations where the client may have a brief loss of consciousness, which can result in a fall if they are standing or walking during the occurrence. As well, client's with neurological deficits such as Parkinson's disease or a CVA with hemiparesis are limited in their reaction timing or ability to lift their lower extremities in a timely fashion to clear obstacles in their way, again creating a situation for a fall to occur. Sensorimotor changes such as a loss of vision, balance, hearing, motor planning difficulties, or over all muscle weakness can also prevent seniors from seeing, perceiving or clearing obstacles during movement.

Psychologically, seniors may be at risk of falling if they experience depression, the loss of a spouse, mild memory loss, difficulty learning new tasks, or decreased thought processing speed. All of these events may alter their ability to perceive changes in the environment as well as a decreased reaction timing to these changes and as such not allow them to react quick enough to prevent a fall.

Socially, new living arrangements may create confusion especially in the middle of the night causing falls from unaccustomed placed furniture or new stair wells. Excess alcohol consumption or large quantities of medication use can alter the clarity of brain functioning resulting in poor perception. The income of the senior or presence of friends/family to assist with daily functions such as more difficult home maintenance tasks will make a difference in the senior attempting tasks that may be beyond their level of functioning, especially activities requiring the use of step stools to reach higher heights.

Environmentally, entrances, doorways, stair railings, stairs, lighting, flooring, bathroom space and heights, as well as slippery surfaces must all be considered hazards and addressed based on the functional level of each individual senior.

Why are we concerned? The results of having a fall and injury are many. The client may experience a physical injury such as fractured hips, pain, lacerations and bruising, which may take months to heal. The fear of falling may alter their confidence in completing simple activities of daily living causing them to have a loss of independence with a loss of autonomy or control over their life. Emotionally and psychologically, there may be functional deterioration due to confusion and forgetfulness and ultimately institutionalization may occur if the client can no longer function on their own.

If a client has fallen the following clinical protocol may be followed to ensure the risk of further falls. First we must identify any mobility issues, or circumstances surrounding the fall. What was the client doing, was there a loss of consciousness, and any injury. Has there been a pattern of falls previous to this? What is the frequency and what were the circumstances surrounding the other falls? The client should then visit their family doctor in order to determine if there has been a mental status change or occurrence of a headache 24 hours post fall. As well all medications should be reviewed including non prescription drugs. The doctor will also be able to determine if there has been a change in the client's underlying medical status. The client should also be seen by a physiotherapist for an evaluation of gait, balance, and extremity strength.

An Occupational Therapy assessment will be of value if the client fell during a transfer, as transfers can be evaluated, and transfer training or assistive devices can be recommended. A look at housing adaptations or assistive devices to reduce bending, reaching, squatting and kneeling may be necessary. An alert system may also be required if a fear of further falls is limiting functional activity. If the client is in a wheelchair, a seating assessment may be required if they fell by sliding out of the chair.

The following areas are important in the prevention and intervention of falls:

1. Home Safety Recommendations/ Safety tip checklists. These checklists identify environmental barriers in the home. Issues of environmental access and safety need to be reviewed in all areas including the basement or storage areas, kitchen, bathrooms, entrance areas, bedroom and all main living areas.

2. Recommendations and education on the safe use of appropriate assistive devices. i.e. larger hand grips to prevent slippage of items during carrying activities, non-slip matting, timers to allow lights to come on automatically when dark, pill dispensers to prevent medication overdose, fluorescent tape to identify surface level changes, bathing equipment to assist with transfers, long handled items to prevent bending and reaching. Consider devices which prevent rushing while transferring, walking or climbing stairs. For example portable phones or cell phones, front door openers or buzzers, and the treatment of incontinence to prevent rushing to utilize the toilet. Tremors may increase the likelihood of spilled drinks. Therefore consider sipping cups or drinking bottles to prevent spills. If a spill occurs, long handled light weight mops should be easily accessed for quick clean up.

3. Physical Activity/ exercise program. The more flexible and active a senior, the more quickly they will respond to a change in their environment, thus preventing a fall. Exercise helps to strengthen muscle and maintain bone density, but also maintains a good cardiovascular system.

4. Mobility equipment, seating systems, restraint free positioning and transfer techniques used within the home environment as well as in long term care facilities must be reviewed frequently and address changes in the client's physical functional level. With respect to the institutional settings, the focus needs to be on transfers in and out of wheelchairs and beds, as well as a review of appropriate seating systems. It is noted that clients in institutions fall when attempting to find positions of comfort. Seating programs to increase client comfort and reduce restraint use need to be developed.
5. Community Resources such as Fall clinics, Home maintenance services, Home Safety Videos and training courses run by seniors for seniors as well as safety checklists should be made available to the client and their family to encourage preventative action to take place once they have been identified as being at risk for falling.

We need to determine what are the needs of our clients, and how much pain and the fear of falling influences a clients' activity level. As our focus with the elderly moves from optimum mobility, to comfort, functional mobility, and the minimization of pain and fatigue, our recommendation of technology must adjust to meet these new needs. Our recommendations must also provide a sense of well being and self esteem for the client. Change is difficult for the elderly to adjust to, and so it is with great respect for their culture and experience that we must find methods to assist them in determining their new needs.

Therefore, by predicting and minimizing the risk of falling, and with appropriate intervention and treatment, Occupational Therapists can assist in lowering the enormous medical and emotional costs of falls in the elderly. The elderly client may then remain autonomous, with a decreased fear of falling, increased self esteem and a general feeling of comfort within their environment.

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