

FOCUS ON FALLS PREVENTION : A PATIENT SAFETY INITIATIVE

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Background

- Research indicates that vision decline is directly related to the aging process (Houde & Huff, 2003)
- Fall related hip fractures in the elderly are higher in persons with visual impairment (Brannan et al, 2003)
- Correctable and treatable deficits which contribute to vision decline in aging include refractive issues, cataracts, macular degeneration, glaucoma and diabetic retinopathy (Stuen & Faye, 2001)
- These deficits contribute to falls, fractures, depression, disruptive behavior and cognitive impairment in the elderly population (Carnicelli, 2001).
- Unrecognized visual impairment is a factor contributing to nursing home placement and increased cognitive impairment (Van der Pols et al, 2000).



Definitions

- **Vision Care Services:** on-site vision screening with a reliable vision screening tool and optometry services, appropriate referral, interventions, education and follow up for residents.
- **Glaucoma:** a group of diseases characterized by gradual loss of peripheral vision due to damage of the optic nerve.
- **Cataract:** the lens inside the eye becomes cloudy with age
- **Age-related Macular Degeneration (AMD):** the macula (central retina) becomes damaged and causes distorted central vision.
- **Diabetic Retinopathy:** is a disease in which the small blood vessels (capillaries) in the back of the eye (retina) are damaged. If untreated, it can lead to blindness



Purpose

- To improve the quality of life and safety for seniors in the province of Manitoba

Goals

- To provide on-site vision care services to seniors residing in long term care, community, and acute care settings in both urban and rural Manitoba
- To identify the effects of vision care services on reducing falls and fractures as a patient safety initiative

Implementation

- Vision screening nurse and optometrist hired for project
- Purchase of portable optometry equipment and cart
- Adaptation of vision screening kit to North American standards
- Development of all chart forms for project
- Survey to LTC facilities in the WRHA for participation in project
- Sites determined by the use of a falls risk assessment tool
- Resident participants at each site determined by being over the age of 65 and if they have been assessed as high risk for falls
- Participating sites:
 - Specific training to staff on the use of the vision screening tool including return demonstrations
 - Prior to clinic: A complete vision history and vision screening performed
 - Clinic: On-site optometry assessment in an established area in each LTC facility
 - Discussion of results with resident/ family
- Post-clinic: Appropriate referral, transportation, intervention, and follow-up for each resident



Vision Screening Kit

- Adapted from the Centre for Eye Research Australia (CERA) /WHO vision screening kit
- Designed to provide a quick and easy assessment of vision loss related to activities of daily living
- Instruction booklet and referral algorithm
- User friendly for all health care professionals
- Useful in cognitively impaired and English as an additional language (EAL) residents
- Research: a research study had been conducted testing the reliability and validity of the tool. Findings: the tool was found to be highly reliable and valid in detecting vision loss and referral to appropriate professional



Significance

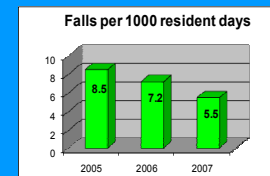
- Falls are a major source of death and injury in the elderly. Hip fractures are the most common, the most devastating and the most costly to the health care system to treat (Kannus & Khan, 2001)
- IN MANITOBA:**
- Of the \$819 million per year spent on unintentional injuries, \$335 million is related to falls with \$164 million devoted to treating falls among the elderly
 - The average cost for a general vision examination for those 65 and older is \$35; cataract surgery is approximately \$1300, and hip surgery required due to a fracture from a fall is upwards of \$36,000

Focus on Falls Prevention Project: March 2006-March 2009

- Three year pilot project funded by Manitoba Health and Misericordia Health Centre Foundation:
 - **Year I : 2006-2007:** Based at Misericordia Health Centre(MHC) and one community site
 - **Year II: 2007-2008:** Included MHC as well as 9 long-term care facilities in the Winnipeg Regional Health Authority (WRHA)
 - **Year III : 2008-2009:** Included MHC as well as 10 long-term care (LTC) facilities in the WRHA as well as other affiliated agencies, acute care facilities and other health regions in the province of Manitoba

Outcomes

- 1500 residents screened and assessed
- 49% of all long-term care facilities in the WRHA participated in the project
- All residents assessed had some form of visual deficit
- Over 50% referred
- Interventions included: eye-specific vitamins, new eyeglass prescriptions, cataract surgery, eye drops, photodynamic therapy, avastin therapy, lighting improvements, and magnifiers
- High satisfaction of project by residents/ families and staff
- Decrease in falls per 1000 resident days during research period



- Those who received interventions during research period had no Critical Incidents: no falls or fractures

• Project and research results: www.misericordia.mb.ca

Current State of Vision Care Services in Long-term Care Facilities

Canada and Manitoba:

- No specific guidelines
- Vision has not been deemed a " medically necessary health service"
- Lack of access and referral in the long-term care setting