

## **Eyes on the Elderly: A Falls Prevention Initiative**

**Presented by:**

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## **Vision Care Services**

- **History**
- **Significance**
- **Purpose**



## **Vision Care Services**

- **Vision care services includes vision screening, vision assessment, referral and follow up of interventions.**
- **PCH staff and families need to be educated on visual deficits and related care needs.**



## **Lack of Access to Vision Care Services**

- **The issue of the lack of vision care services for residents living in a PCH setting is a global issue embedded in all types of health care systems, cultures and environments.**
- **Australia, Iran, Great Britain, US, China and Canada all indicate this lack of service.**



## Literature Review

- **The current population in Canada over the age of 65 is 13% and is projected to increase to over 23% by the year 2030**  
(Statistics Canada, 2001)
- **In Manitoba, 13.6% of older adults are 65+, with over 8% residing in the PCH setting** (Statistics Canada, 2001)
- **Research indicates that vision decline is directly related to the aging process**  
(Houde & Huff, 2003)



## Visual Deficits

- **Cataracts**
- **Refractive Errors**
- **Macular Degeneration**
- **Glaucoma**
- **Diabetic Retinopathy**



## Visual Deficits

- These deficits contribute to falls, fractures, depression , increase in cognitive impairment and disruptive behaviors in the elderly (Carnicelli, 2001)
- Vision plays an important role in balance, mobility, falls, and standing balance of older persons
- Residents in the PCH setting who receive vision care services have demonstrated a **DECREASE** in these responses.



## Exercise #1

- **Room Sweep**
- **Body Sway**



- **Fall related hip fractures in the elderly are higher in persons with visual impairment** (Brannan et al., 2003)
- **Falls are a major source of death and injury in the elderly.**
- **Hip fractures are the most common fracture, the most devastating and the most costly to the health care system to treat** (Kannus & Khan, 2001)



- **Administrators, physicians, nurses, residents, families and government are unaware of the effects that visual deficits have on the quality of life and independence of the elderly** (Johnston, 2001)
- **Health care is determined by assessing how much benefit is gained by a service in terms of life extension and/or improvement in quality of life. Vision care has not been viewed as medically necessary** (National Advisory Council on Aging, 1995)



- **Rates of eye disease and visual impairment among PCH residents is 3.3 times greater than any other segment of the population (Morser, 1994)**
- **Unrecognized visual impairment is a factor contributing to PCH placement and increased cognitive impairment (Van der Pols et al, 2000)**

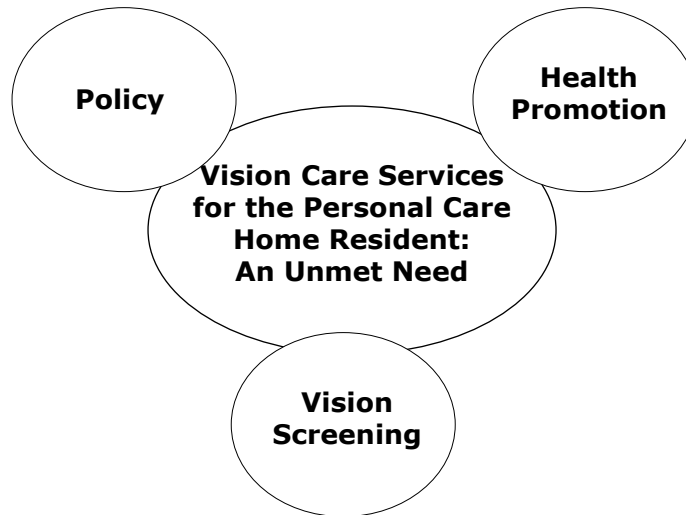


## **Interventions can be Effective**

- **Simple refractory alterations and cataract surgery can have an impact on falls, fractures and quality of life (Harwood et al., 2005)**



## A Model of Intervention



## Vision Screening

- Screening of disease is one method used to reduce health cost by ensuring that appropriate and timely health care is available for those in need
- Screening needs to include not only the assessment for disease indicators, but also accessibility for referral and treatment
- Vision screening can be used to detect visual impairment not disease, with referral to appropriate eye care specialist

## **Feasibility of a Vision Screening Program 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 (Papadimitropoulos et al., 1997)**
- **In 2001, Seniors > 80 used 32% of all hospital days (Statistics Canada)**
- **It is estimated that 40% of falls leading to hospitalization are the results of hip fractures and that number will increase dramatically from 23,375 to over 88,000 cases by the year 2041 (Papadimitropoulos et al., 1997)**



## **Feasibility** (cont'd.)

- **Manitoba is projected to have the second highest percent of visual impairment and blindness in Canada by 2026 (Statistics Canada, 2001)**
- **The average cost for a general vision examination in Manitoba is \$50 - \$70; cataract surgery is approximately \$1200, and hip surgery required due to a fracture from a fall is upwards of \$36,000 (Manitoba Health)**
- **Based on these statistics and the foregoing discussion of literature, there is a need for a vision screening program in the Province of Manitoba**



## Survey

- Questionnaires sent to 38 LTC facilities in Winnipeg
- Purpose:
  - To determine whether routine vision care services are provided



## Survey Results

- N= 28 LTC facilities responded
- Facility size ranged from 60 to 240 beds
- 1% to 8% of fractures were due to falls
- No data available that linked falls to vision impairment
- Falls per 1000 resident days, ranged from 5 to 30



## **Survey Results (cont'd)**

- **6 out of the 28 facilities indicated they provide vision care services upon admission**
- **Each identified a different action**
- **6 facilities indicated they had a policy on vision care services**
- **2 facilities had conducted an educational session on visual deficits during the past 6 months**



- **Need for more formalized vision care services in long term care facilities**
- **Need for staff to be aware of how to detect and care for persons with visual loss**



## **Manitoba Health Falls Prevention Program**

- **Vision Care**
- **Bone Health**
- **Medications**



## **Our shared project** ***“Focus on Falls Prevention”***

- **Misericordia Health Centre**
- **Misericordia Health Centre Foundation**
- **Manitoba Health**
- **University of Manitoba**
- **Manitoba Association of Optometrists**
- **Canadian National Institute for the Blind**



## **PURPOSE**

- **To improve the Quality of Life for seniors in the Province of Manitoba**
- **To provide evidence to support improving vision in this population group will impact positively on falls and fractures and demonstrate a more positive outcome on the overall healthcare budget and wait times**



## **Pilot Project Phase I**

- **Pilot project 14 months. February, 2006 – March 31, 2007.**
- **The intent of the pilot is to provide support for a Provincial Vision Screening Program for the Elderly who reside in the LTC and Community settings**



## **Program Description**

- **Vision screening nurse provides on site vision screening**
- **On site optometry services**
- **Recommended interventions discussed with resident/ family**
- **Appropriate referrals**
- **Appropriate follow up**
- **Education**



## **Characteristics**

- **550 residents/ community screened**
- **Age Range: 59-101**
- **Levels of Care in PCH : 2, 3, 4**
- **Dementia:**
  - **PCH: 70%**
  - **Community: 10%**



## **Vision Screening Kit**

- **Relevant for screening people with Alzheimer Disease**
- **Residents receptive to tool**
- **Specific strategies used**



## **Demonstration of Kit**



## Research

- Survey of PCH
- Vision Screening tool
- Visual deficits and their relationship to Falls/ Fractures



## Results of Screening/Optomety Assessments

- LTC setting:
  - 370 residents screened exhibited some type of visual deficit. The vision screening tool was valid in all 370 assessments
- Community:
  - 150 vision screened. The vision screening tool was valid in all 150 assessments



- **20 residents with dementia were not able to be screened utilizing the vision screening tool**
- **Strategies :**
  - **PCH: greater length of time for screening**
  - **Community: More clients could read the smallest print and were faster in performing the test**



## **Qualitative Case Study Results**

- **Man driving in the community**
- **I CAN SEE**



## **Phase II**

- **April 1, 2007- March 31, 2008**
- **Collaborate with the WRHA to link the Focus on Falls Prevention Initiative with their Falls Prevention Program**
- **Provide education to the PCH settings that have established Falls Prevention Programs: vision screening tool and operations of the Focus on Falls Prevention Initiative.**



## **Phase II**

- **Provide on site optometry services for those residents deemed high risk for falls due to vision loss.**
- **Educate staff and family on visual deficits and care required.**



## **Recommendations for Residents and Families**

- 1. Label eyewear with name and room number and provide appropriate care.**
- 2. Ensure all residents have annual or biannual eye examinations.**
- 3. Assess current eye medication.**



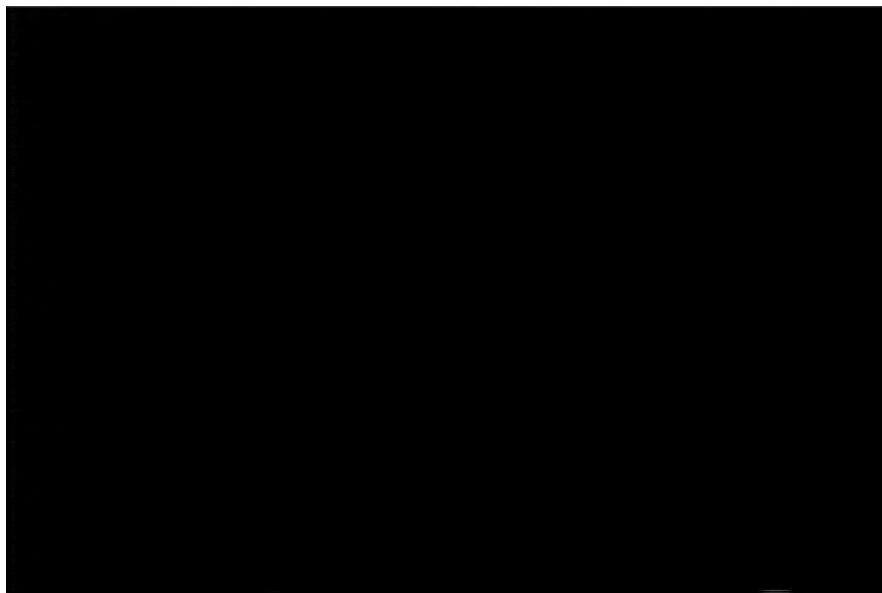
## **Recommendations (cont'd)**

- 4. Educate staff on visual deficits and care needs for residents**
- 5. Educate families on the effects of visual deficits and possible increase in cognitive, behavioral and functional issues**



## Next Steps

- Evaluate whether falls decrease
- Evaluate whether quality of life indicators improve
- Incorporate the vision screening tool into all Falls Risk Assessments
- MDS



# Questions ? Input ? Feedback ?

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