

An Optometrist-Led Eye Care Program for Older Residents of Retirement Homes and Long-Term Care Facilities



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ABSTRACT

Background and Purpose

Visual impairment among older adults residing in long-term care (LTC) facilities and retirement homes is common and can have a significant adverse impact on their quality of life. Despite the burden of illness, they frequently receive inadequate eye care. We describe an optometrist-led eye care program serving this population, including a profile of participants and the program's educational role for optometry students.

Methods

An optometrist assessed residents of LTC facilities and retirement homes. Participants received their routine eye care, which included a report to the resident's family physician, through the program. A chart review was conducted for a consecutive series of patients; data were recorded on a standardized data abstraction form.

Results

All residents examined had at least one (average 1.8) ocular condition. Challenges presented by residents in their assessment, such as confusion and/or impaired comprehension (14.3%), refusal or poor cooperation (13.2%), and physical limitations (8.8%), were common, indicating the necessity of adapting eye assessment procedures to the needs of this population.

Conclusion

This study supports the involvement of optometrists in the eye care for residents of retirement homes and LTC facilities, where optometrists can be an important clinical and educational resource. The program is a useful learning opportunity for optometry students.

Key words: geriatrics, long-term care, retirement home, optometry, visual impairment, education

INTRODUCTION

Visual impairment can be associated with serious health consequences for older adults, including limitations in physical activity, impaired mobility, and poor balance, that are associated with higher levels of morbidity (e.g., hip fractures) and mortality.¹ The prevalence of vision impairment is high among older residents of long-term care (LTC) facilities and retirement homes.^{2,3} Rates are three to 15 times higher than those among seniors in the community.⁴ Impaired vision among older adults in LTC and retirement homes can lead to disability,⁵ disruptive behaviour,⁶ and depression.⁷ Some of the causes of these vision problems can be corrected,⁸ but there is evidence that this population's vision needs are not being adequately met.⁹ Nursing home residents may be less likely to receive beneficial therapies for visual impairments,¹⁰ and those with dementia are at a particular risk for unmet needs due to the challenges associated with their assessment.¹¹

As improving vision has been associated with a higher quality of life among LTC residents,¹² better access to routine optometric services including interventions has been recommended.¹³ Provision of vision services in nursing homes not only is beneficial to the residents, but also has been found to be professionally rewarding for optometrists. There is a need for an increased understanding of the current and potential role of optometry services in LTC.¹⁴ We describe an optometrist-led eye care program serving residents of LTC facilities and retirement homes in Ontario, providing a profile of the residents receiving care.

METHODS

Program Description

This optometrist-led eye care program provided routine vision care to residents of LTC facilities and retirement homes on site, in addition to being an important teaching resource for various stakeholders. Residents assessed were those who could not easily leave the facility or simply found it easier to be seen in-house (e.g., they had difficulty finding a driver). All equipment used during these examinations was portable.

Patients or their substitute decision makers requested the appointments. The program provided a comprehensive initial examination as well as follow-up care. Follow-up care was particularly important for older adults because of their high prevalence of ocular disease.

A tracking system was implemented to notify facilities when residents were due for a follow-up assessment or their yearly examination. Within each LTC facility, a full year of examinations was scheduled based on anticipated need for eye care, ranging from one to 12 visits per facility per year. If there was a need, an additional clinic day at the facility was added. The number of practitioner visits to individual sites depended on demand, which was anywhere from two visits every month to one visit every six months. At each site visit, eight to 12 patients were seen by one optometrist and two to four students. Often the eye care was co-managed with ophthalmologists. Most of the examinations provided were covered by the Ontario Health Insurance Plan or were otherwise paid for by patients or their families. Glasses were paid for by the patients or their families.

An important component of this program was education. Learners included optometry students, LTC staff, other health-care providers, and the public. As a teaching resource for optometry students, it created a unique clinical teaching environment wherein students were exposed to an important and demographically relevant client population significantly different from the population seen in the university-based clinics. Optometry students usually went to the LTC facility or retirement home with the optometrist whom they assisted. LTC staff (including personal support workers and nurses) were taught through a series of training sessions. The lecture series included topics that ranged from different causes of red eyes to what patients with varying eye conditions may be experiencing. A macular degeneration simulator was brought in to mimic the experience of someone with central vision loss. Other simulators that could mimic a variety of eye conditions were also used.

As part of the facilities advisory committee (an interdisciplinary team of health-care providers interested and involved in the care of residents in LTC facilities), the lead optometrist had the opportunity to lobby for the service and share information with other committee members. The hope was that this would lead to improvements in the quality of eye care provided to residents.

Public education was an important aspect of this eye care program. The lead optometrist gave lectures on the aging eye to various community groups.

Participants (Residents Assessed)

The residents ($N = 91$) reported on were all those referred to the service over a 2-month period. Informed consent was not felt to be required, as the intervention was usual care, the treating optometrist conducted the chart review, only anonymized information was collected, and only aggregate

data are being presented. Participants were residents of either local retirement homes ($n = 23$, 25.3% of the total) or LTC facilities ($n = 68$, 74.7%) in the Waterloo region of Ontario. A total of eight homes were visited during the study period (two of the homes were visited three times each): two were retirement homes, four were LTC facilities, and two were combined facilities. Retirement homes provide a lower level of support to their residents than LTC facilities.^{15,16}

Chart Review

The lead optometrist (T.L.) assessed the patients in the retirement homes and LTC facilities where they resided. Participants received routine eye care. A report was provided to their attending family physician. No personal identifying information was collected during the chart review. The chart review was conducted on all consecutive referrals made to the service during the 2-month recruitment period. These data were recorded on a standardized data abstraction form. Summary reports (based on information recorded in patient charts) prepared for program administrative purposes were also reviewed. Descriptive statistics summarizing our findings are provided.

This study received ethics clearance from the Office of Research Ethics at the University of Waterloo.

RESULTS

Description of Residents

The mean (SD) age of the sample was 87.0 (6.8) years. There were more women than men (72, 79.1% vs. 19, 20.9%). The older residents were medically complex and often unable to travel to external clinics. Table 1 shows that the residents of LTC facilities who were seen had a high likelihood of more than one ocular condition/disease and presented greater clinical challenges than those from retirement homes. Cataracts were the leading ocular condition/disease (59.3%), followed by age-related macular degeneration (ARMD; 41.8%) and glaucoma (27.5%). All of the residents examined had at least one ocular condition/disease: 31 (34.1%) had one condition, 48 (52.7%) had two conditions, and 12 (13.2%) had three conditions. The mean number of eye conditions/diseases among this population was 1.8.

Optometric Assessment in Long-Term Care

Portable equipment was used for external examinations. Vision was tested at a distance of 3 m instead of the standard 6 m. This was done for several reasons: the high prevalence of eye problems; the need to capture and maintain the resident's attention (particularly if cognitively impaired); and the size of the rooms.

TABLE 1.

Cause of Vision Impairment and Selected Clinical Challenges Encountered in Residents ($N = 91$) of Long-Term Care (LTC) Facilities and Retirement Homes

<i>Characteristic</i>	<i>Retirement home, n (%)</i>	<i>LTC facility, n (%)</i>
Ocular condition/disease		
Age-related macular degeneration	9 (39.1)	29 (42.6)
Cataracts	12 (52.2)	42 (61.8)
Glaucoma	6 (26.1)	19 (27.9)
Other*	14 (60.9)	32 (47.1)
Clinical challenge		
Dementia	4 (17.4)	27 (39.7)
Communication barrier	2 (8.7)	28 (41.2)

*Strabismus, corneal conditions, capsular haze, blepharitis and other lid conditions, cerebrovascular disease, other unspecified decreased acuity, retinal lesions/conditions, glaucoma risks or precursors, and iris lesions.

Challenges

Multiple challenges to the provision of vision care to these residents were identified. There were communication barriers, often related to the presence of cognitive impairment. These included problems with confusion or comprehension (13, 14.3%), limited or lack of response (9, 9.9%), and language barriers (4, 4.4%). Other challenges experienced were refusal of testing or poor patient cooperation (12, 13.2%), physical limitations (8, 8.8%), photophobia and blepharospasm (5, 5.5%), fatigue (5, 5.5%), aggression (3, 3.3%), and anxiety (2, 2.2%). Although it was initially assumed that a standard eye examination could be completed with this population, adjustments (other than the distance of 3 m noted above) had to be made due to these challenges. For instance, among patients with dementia the assessment often had to be completed over a few days or was done with the involvement of a family member who assisted with the examination.

Recommendations for Patients

Report forms were used that summarized the assessment findings and the recommendations made. Family physicians, staff caring for residents, and family members were expected to review these reports shortly after the assessment. If a condition required urgent care, the family was contacted immediately. The most common recommendations were to continue with current treatment or to monitor their condition and/or symptoms (21, 23.1%), Amsler grid testing and/or ocular vitamins (e.g., for residents with ARMD; 13, 14.3%), and artificial tears or lid care (11, 12.1%). Most of the referrals

recommended were to ophthalmologists (26, 28.6%), followed by the attending family physician (6, 6.6%), the University Centre for Sight Enhancement (2, 2.2%), and the University Ocular Health Clinic (2, 2.2%) (both University centres were at Waterloo). Some residents declined a suggested referral (3, 3.3%), which was a concern, as they may not have fully understood the need for the referral. Since the inception of this optometrist-led eye care program in LTC and retirement homes, referrals to other programs have increased. Other recommendations were re-attempting the assessment with a family member present (2, 2.2%) and a prescription for new eyeglasses (3, 3.3%).

The eye care program has expanded from 2 to 3 days a week, and it is anticipated that it will continue to grow to include a fourth day. At least six LTC facilities are on a waiting list for these services. A collegial and collaborative relationship has developed between the facilities' physicians and the optometrists. Some physicians became comfortable co-managing conditions such as glaucoma and ocular surface disease, as well as with ordering laboratory tests based on the optometrist's recommendation.

Educational Component

The educational component included in-service lectures given at the LTC facilities. They were well received by facility staff and administration. A common theme expressed by optometry students was that they initially dreaded the placement. However, by the end, most found the experience enjoyable despite the challenges. Following are some quotations from the students: *"Really like these excursions.... Although some days are challenging.... It is a rewarding experience because we see many different things."*; and *"Great experience dealing with the elderly in an unfamiliar setting."*

DISCUSSION

The primary purpose of this article was to describe the optometrist-led eye care program for residents in institutional settings. Our findings suggest that vision rehabilitation services can be integrated within these institutions and have the potential of helping with the management of common clinical challenges encountered in LTCs such as disruptive behaviours, depression, and disability.

This study reinforces the importance of follow-up. Eye diseases are more prevalent and progressive in older adults. Successful intervention for vision impairment is contingent upon early identification and careful follow-up. Knowing and understanding the residents enhances their comfort level, making success in managing their eye disease more likely. Care providers need to fully understand how ocular disease affects vision, the extent of vision loss, and whether a particular portion of the resident's vision is missing. For example, macular degeneration affects the central portion of vision. Individuals with this disease may not be able to read

but may still be able to pick a penny off of the floor. Understanding these seemingly conflicting symptoms can prevent care providers from erroneously believing the resident does not have a visual impairment and may improve his or her care (e.g., by knowing how close or where to present material to the resident).

Due to time and resource constraints, ophthalmologists likely will not be able to conduct the vision assessments described in this paper. This program was primarily run by optometrists, often with co-management with ophthalmologists and facility physicians. A major challenge to the sustainability and propagation of vision programs in institutional settings is attracting optometrists to work in this area. Our eye care program—in addition to providing education to LTC and retirement home staff, as well as to the general public—involved a teaching component for optometry students. Although students were often initially unenthusiastic about their placement in an LTC facility, by the end many thoroughly enjoyed the opportunity. Other reports indicate that training programs in LTC can improve the delivery of optometry services to older individuals,¹⁷ who will form a large component of a typical optometrist's practice. However, simple exposure to the care of an older person is likely insufficient to attract health professionals into a field of practice in itself. The specific attributes of the experience (e.g., enthusiastic mentor who is a role model for the students, interactive learning opportunities) are of great import.¹⁸

The potential benefits of optometrist-led eye care programs for residents of retirement homes and LTC facilities are far-reaching. These benefits, coupled with the prevalence of vision impairment and their deleterious health effects among this population, demonstrate the need for this type of service.

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CONFLICT OF INTEREST DISCLOSURES

None declared.

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