European Geriatric Medicine 6 (2015) 241–244

Available online at ScienceDirect www.sciencedirect.com

Elsevier Masson France EM|consulte www.em-consulte.com/en

Research paper

Primary eye care services offered to older adults

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ARTICLE INFO

Article history:
Received 24 July 2014
Accepted 7 November 2014
Available online 11 April 2015

Keywords:
Eye care services
Geriatric optometry
Geriatrics
Older frail individuals
Optometrists

ABSTRACT

Purpose: Eye care services in long-term care facilities are not optimal and should be improved. In Canada, optometrists are the major providers of primary oculovisual examinations. Our objective was to evaluate the eye care services optometrists offer to older adults, in particular to frail older adults.
Materials and methods: A questionnaire regarding older adult patients ≥ 65 years of age was designed and sent to optometrists in active practice throughout Canada. Questions related to the optometrist's personal and practice profiles, the treatment and management of older patients, and gerontology/geriatric education.
Results: The overall average response rate for the entire country was 31.3%. About a third of all patients examined by optometrists in their office are ≥ 65 years of age. Optometrists examine about 2 to 4 older frail patients weekly in their office. Many optometrists are already examining older frail patients outside the office, and a greater proportion would accept to do so if they were asked, but on an exceptional basis. The main reasons for not seeing patients outside of the office relate to the lack of adequate fees, instrumentation and structural organization.
Discussion/conclusion: Optometrists examine a large proportion of older patients in their office, but only a small proportion of those are frail older adults. However, some optometrists examine older frail patients outside the office, and more would consider doing so if the working conditions and remuneration were improved. Solutions could therefore be implemented to improve accessibility to eye care services for older frail seniors in their living environment.

1. Introduction

The most recent statistics in Canada and the USA indicate that 12.9 to 16.6% of the population is ≥ 65 years of age [1–3], a prevalence that will reach 19 to 26% by the years 2030–2036 [2–4]. In Europe, data indicate that 17.4% of the population is ≥ 65 years of age, a prevalence that will reach 28% by 2020 [5]. Population aging is characterized by rising rates of multiple chronic diseases and a greater experience of functional decline [6]. Statistics indicate that most people ≥ 65 years of age live at home or in residential care facilities, while only a minority have severe enough health-related incapacities to require placement in long-term care facilities (LTCF). There are about 155,000 older Canadians living in LCTF [7], including about 34,000 in Quebec [8]. In the USA, some 1.25 million persons ≥ 65 years of age were living in nursing home in 2010 [9].

Aging is also accompanied by an increased prevalence of eye diseases. The four main causes of visual deficit and functional blindness in developed countries are more prevalent with increasing age, i.e., age-related macular degeneration, glaucoma, cataract and diabetic retinopathy [10–12]. Older individuals require regular eye examinations to adjust for changes in their refraction, evaluate their oculovisual health, treat active ocular disease and, whenever possible, alleviate a visual handicap with assistive devices. Current standards of care recommend a yearly eye examination for those ≥ 65 years of age [13–15]. Older seniors living in LTCF, in particular, should receive a regular eye examination considering that visual deficits can be 3 to 15 times more prevalent in institutional vs. community-dwelling older individuals [16]. Recent data indicate, however, that older LTCF residents do not receive eye care services on a regular basis [17].

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http://dx.doi.org/10.1016/j.eurger.2014.11.011
1878-7649/

Because primary care eye examinations in North America are offered mostly by optometrists, our objective was to determine the extent of eye care services they offer to older Canadians, with particular attention to older frail seniors, within and outside the office.

2. Methods

2.1. Survey

A questionnaire targeting practicing optometrists was developed for this study. It contained questions related to: personal and practice profile, treatment and management of older patients, and gerontology/geriatric education. The questionnaire was pre-tested by five optometrists, reviewed and finalized. It was written in French, with back translation in English and French again to ensure accuracy of content in both official Canadian languages. This final version was put on two Survey Monkey websites, to facilitate the communication with optometrists. Those practicing in Quebec (Qc) received the French version of the questionnaire and those practicing in the rest of Canada (RoC), the English version. Automated group email reminders could then be sent easily in French or English. This study was approved by the Research Ethics Committee of the University of Montreal.

2.2. Optometrists

A list of all practicing optometrists, containing their mailing and email addresses if available, was obtained from official optometric organizations. Optometrists were contacted by email if available, or by regular mail. The questionnaire was sent to 4283 optometrists (2979 RoC/1304 Qc). Optometrists contacted by mail received a printed questionnaire, a return stamped envelope, and a web link to enter the Survey Monkey questionnaire. For those contacted by email, the email contained only the web link access. The questionnaire remained open for 8 (RoC) and 9 (Qc) months (overlapping 2011–2012), and reminders were sent to maximize the response rate (RR). The web link period for filling the questionnaire was a little shorter for the RoC because it was not providing any more responses in spite of further reminders. To be included, a questionnaire had to be complete according to the respondent, i.e., by pressing "send" on the web or mailing in the filled questionnaire.

3. Results

Results will be presented for the RoC and Qc (RoC/Qc), rather than compiled together, mainly for technical reasons linked to the Survey Monkey sites hosting the questionnaire.

Table 1 lists the provinces and territories of Canada, number of practicing optometrists and respondents, and RR obtained. Altogether, 1339 optometrists completed the questionnaire, for an overall RR of 31.3%. In total, 53.7% (RoC)/67.1% (Qc) of respondents were female and the average age of optometrists was 42.3 ± 11.8/43.7 ± 12.0 years. The average years in practice were 16.1 ± 12.2/19.3 ± 12.2 years, optometrists working on average 4.3 ± 1.0/4.0 ± 1.0 days/week.

Although all offices see patients by appointment, a good proportion also accepts patients by a drop-in system (35.9%/35.3%) and the majority (86.1%/89.4%) accept ocular emergencies. The offices are wheelchair accessible in 91.2%/87.4% of cases and adapted for older adults (eg. rails in restroom) in 67.7%/37%. Most of the time, wheelchair patients are transferred into the ophthalmic chair for their eye examination (83.9%/90.1%), but a good proportion of optometrists also examine patients in the wheelchair with regular (49.5%/31.8%) or portable (56.3%/43.6%) instrumentation when required.

Table 1
Canadian provinces and territories with number of optometrists who were invited to take part and percentage of respondents per area.

Province–territory	Number of optometrists per province or territory invited to participate	Number of respondents per province or territory	Percentage of responses per province, territory or country[b]
Alberta	542	129	23.8
British Columbia	475	97	20.4
Manitoba	130	30	23.1
New Brunswick	116	34	29.3
Newfoundland and Labrador	46	8	17.4
Nova Scotia	94	27	28.7
Ontario	1415	330	23.3
Prince Edward Island	15	4	26.7
Quebec	1304	560	42.9
Saskatchewan	143	26	18.2
Northwest Territories	0	–	–
Nunavut	0	–	–
Yukon	3	1	33.3
Total	4283	1246 (93)[a]	31.3

[a] $n = 93$: optometrists from the RoC who did not answer the question related to their province/territory.
[b] Best estimate possible, not taking into account those for whom the province/territory was not available.

In a typical week, optometrists see an average of 62.6 ± 27.3/49.9 ± 19.3 patients, with 31.9% ± 14.8/34.0% ± 15.3 being ≥ 65 years of age (Table 2). Within this older population, 93.8%/86.6% of optometrists indicated examining "frail" patients in the office, seeing a median of 4.0/2.0 such patients per week. For this survey, frail older patients were defined as those ≥ 65 years of age who have polymorbidity, functional impairment, and who rely on others for some activities of daily living [18]. The main reason explaining why some optometrists do not see frail patients, inside or outside the office, is that they have not been contacted to do so. Among respondents, 52.1%/22.1% indicated that they have the special equipment required to perform eye examinations outside the office and 23.7%/7.3% actually see frail older patients outside of the office. They do so at a median of 1.0/2.0 days/month, seeing about 3.0/4.0 patients/month, mainly in LTCF, in assisted living facilities, at the person's home or at the hospital. Those optometrists were approached by patients' family consulting at the office, contacted by an institution, or by another professional to request an examination outside of the office for these individuals.

Caring for older frail patients often requires interaction with other professionals. Although 31.3%/29.9% of optometrists indicated not having to do so, when a consultation is needed, it is mainly with ophthalmologists, family physicians, physicians or nurses at a LTCF and low-vision centers. While 82.6%/59.0% of optometrists interacting with other professionals do not have difficulty finding the right resource person, an ophthalmologist is most often cited as being difficult to find when a referral for older frail patients is needed.

Table 2
Average percent of patients in the various age categories seen by optometrists in a typical week.

Age category (years)	Percentage of patients RoC	Percentage of patients Qc
0–6	8.8 ± 6.7	7.0 ± 4.8
7–18	16.8 ± 7.8	15.8 ± 7.7
19–64	42.8 ± 14.1	43.7 ± 13.6
≥ 65	31.9 ± 14.8	34.0 ± 15.3