

## Eye tests in the elderly: factors associated with attendance and diagnostic yield in non-attenders

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### Summary

Patients aged 60–75 years registered with one inner city general practice were sent a questionnaire asking when they last received an eye check by an optometrist. Of the 193 (77%) who responded, 110 (59%) had attended in the last 2 years, and 138 (74%) in the last 3 years. Males and those with mobility problems were less likely to have had their eyes checked. Seventy-seven previous non-attenders were offered an appointment with an optometrist and this was accepted by 34 (44%). These individuals showed a high level of ophthalmic morbidity. Discussion of optometric checks should be included in general practice health checks and the elderly surveillance programme.

### Introduction

In 1988 approximately 12 million eye examinations were performed by optometrists, of which about one million resulted in referral to the general practitioner or ophthalmologist (British College of Optometrists, personal communication). It is not known how equitably these tests were distributed within the population. As with other screening tests it is likely that those most in need did not attend, while low risk individuals attended more frequently than necessary. The introduction of charges for eye tests in April 1989 has raised concern that this may further dissuade high risk groups from presenting themselves. The elderly have a high prevalence of treatable eye disease, even in the absence of other risk factors which lead to exemption from charges<sup>1,2</sup>. This study reports a postal survey of those aged 60–75 years registered with one inner city general practice, completed before charges were introduced. The aim was to investigate what proportion had received an eye test in the previous 2 years, factors associated with attendance, and the amount of previously unrecognized eye disease in non-attenders.

### Methods

The questionnaire was sent, with a note from the general practitioner, to the 261 patients aged 60–75 years inclusive registered with the practice. The first mailing took place in September 1988, with one reminder if necessary. An upper age limit of 75 years was chosen as it was felt that above this age, a postal questionnaire would cause problems because of difficulties with eyesight, mobility and mental function. Respondents were asked when they last attended an optometrist for an eye test, and reasons for attendance or non attendance. The questionnaire included sociodemographic data and enquired about functional abilities (see appendix). Those who returned their questionnaire and had not visited an optometrist

in the previous 2 years were offered an appointment for an assessment. As well as standard optical tests, this included retinoscopy, intra-ocular pressure measurement by non contact tonometry and visual field testing including the Amsler chart for macular defects.

### Results

Nine questionnaires were returned by the post office as the patient had moved away. After one reminder 193 (77%) of the remaining 252 subjects completed and returned the questionnaire. Six were unable to state when they last visited an optometrist, leaving 187 questionnaires that could be analysed. Respondents were representative of the sample in age and sex. Overall 138 (74%) had attended an eye test within the last 3 years, and 110 (59%) in the last 2 years. Twenty five (13%) had not had a test in the last 5 years. Attendance was related to gender and mobility as shown in Table 1. Living alone, social class, and age were not associated with attendance. Of the 77 subjects who had not attended within 2 years, 39 (51%) were not aware that biannual checks were recommended, and 10 (13%) reported not attending as they could not afford any glasses recommended.

The 77 subjects who had not had an eye test in the last 2 years were offered such an examination. Thirty-four (44%) accepted. Males were more likely to accept (61% compared to 31% of females,  $P = < 0.01$  chi square analysis). Results of these tests are available for 25 subjects (the remaining nine subjects had not attended the optometrist by the end of the study). In only two subjects was the eye examination normal.

Table 1. Attendance at optometrist in those aged 60–75 years, according to gender and mobility

	Attendance in last 3 years	No attendance in last 3 years	
Male (n=93)	60 (65%)	33 (35%)	}
Female (n=94)	78 (83%)	16 (17%)	
Problems with mobility (n=31)	17 (55%)	14 (45%)	}
No problems with mobility (n=147) (9 missing values)	116 (79%)	31 (21%)	
Total (n=187)	138 (74%)	49 (26%)	

\*chi square 8.241, d.f.=1,  $P = < 0.01$

\*\*chi square 7.854, d.f.=1,  $P = < 0.01$

Eighteen (72%) had under-corrected visual acuity, six (24%) macular changes, five (20%) cataracts and three (12%) raised intra-ocular pressure. Other abnormalities detected included abnormal vessels, corneal scars and blepharitis. Twenty-three (92%) patients received advice about spectacles. In most cases this involved a new prescription, but in others advice was given about when to wear them and appropriate lighting. Ten patients (40%) were referred to their general practitioner and in 13 cases (52%) follow-up by the optometrist was advised. These included patients with early cataracts and macular changes.

**Discussion**

We have shown that a significant minority of the elderly do not consult an optometrist for regular eye checks, and that this problem is greatest in men and those with reduced mobility. Non-responders to the questionnaire may include a higher proportion of those with visual problems, mobility problems or lack of interest in their health. It is therefore plausible that these individuals are less likely than responders to have attended an eye examination. Our finding that 26% did not attend within 3 years may therefore underestimate the problem. Ignorance about the recommended frequency of such testing and the reasons for

it appears to contribute to non attendance. Although numbers are small it seems that non attenders have a high level of ophthalmic morbidity and may often benefit from treatment. The response to our invitation for an eye check in the questionnaire suggests that, especially for men, such a prompt from the general practitioner may have a major effect on attendance. Discussion of the value of eye checks should be included in well person checks in general practice, including the elderly visiting programme<sup>3</sup>. Provision of domiciliary assessments by optometrists for those with mobility problems should be considered. Further studies are needed to monitor any changes due to the introduction of a charge for eye examinations.

**References**

- 1 Vernon SA, Henry DJ, Cater L, Jones SJ. Screening for glaucoma in the community by non ophthalmologically trained staff using semi automated equipment. *Eye* 1990;4:89-97
- 2 Cullinan T. *Visual disability in the elderly*. London: Croom Helm, 1986
- 3 Department of Health and Welsh Office. *General practice in the National Health Service. A new contract*. London: Department of Health, 1989

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**Appendix**

**QUESTIONNAIRE:  
A Study of Eye Problems**

**Introduction**

I am carrying out a study at the University Hospital into the eye problems of people living in the Radford area. I would be very grateful if you could help me by filling in this questionnaire, which asks a few questions about your eyes and your general daily life. All answers will be confidential.

**Time:**

This questionnaire will only take 10 minutes to complete.

**Returning your questionnaire**

Please return your questionnaire as soon as possible in the envelope provided. No stamp is needed.

**Thank you**

\*\*\*\*\*

**ABOUT YOUR EYES**

Please tick, write in spaces or leave blank as appropriate.

- (1) Have you ever had an eye-test?  Yes  No

If you answered 'yes' to Question 1, then answer the following:

- (2) (a) When was the last time you went to an optician for an eye-test? (try to remember as near as possible)
- ..... year ..... month

- (b) Who was that optician?

Name: .....

Address: .....

- (c) Why did you go for your last eye-test?

I noticed my eyesight was getting worse

I was getting headaches/tired eyes

I had other eye problems

I just went for a check-up

My doctor sent me

The optician sent me a reminder

Any other reason? .....

The following questions should be answered by everyone (Questions 3-9)

- (3) Do you feel your eyesight has changed in the last 2 years?

Yes

No

If 'yes', in what way?

.....

- (4) (a) Have you had any other problems with your eyes in the last two years? (Describe)

.....

- (b) If you have had a problem with your eyes, did you get any help for it from:
- a doctor
  - an optician
  - no-one
  - other .....

(5) At the present time, do you have difficulty with either of the following? (wearing glasses if you have any)

	No difficulty	Some difficulty
(a) reading the newspaper	<input type="checkbox"/>	<input type="checkbox"/>
(b) watching the television	<input type="checkbox"/>	<input type="checkbox"/>

(6) Do you think your eyesight could be improved?

- Yes
- No

(7) Does the idea of:

	Not at all	A little bit	A great deal
(a) going for an eye-test worry you?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) wearing glasses worry you?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(8) How often do you think that you should go for an eye check-up?

- every six months
- every year
- every 2 years
- every 3 to 5 years
- don't know

(9) If there is nothing wrong with your eyesight, do you think it is necessary to go for an eye-test?

- Yes
- No

Any reasons? .....

*If you haven't been for an eye-test in the last two years OR if you have never been for an eye-test, answer Questions 10 and 11*

(10) If you have noticed any problem with your eyesight in the last two years, is there any reason why you haven't been for an eye-test?

.....

(11) As part of my study I may be able to arrange for a free eye-test for you at a local optician. Would you like to attend?

- Yes (an appointment will be sent to you)
- No

**ABOUT YOUR DAILY LIFE**

- (12) Are you:
- married
  - single
  - divorced/separated
  - widowed

- (13) Do you live:
- alone
  - with a partner
  - with others .....

(14) Which of these activities can you do?

	Fairly easily	With difficulty	Only with help	Not even with help
Get in and out of bed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Get about indoors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do light housework (eg cooking, dusting)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Go shopping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Catch a bus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(15) If you need help with any of these activities, what kind of help do you usually get?

.....

(16) If you wanted to go to the optician, how would you get there?

- Own car or partner's car
- Friend's/relative's car
- Bus
- Walk
- Other .....

(17) How easy would this be to arrange?

- Easy
- A bit awkward
- Very difficult

**ABOUT YOUR OCCUPATION**

- (18) Are you:
- retired
  - unemployed
  - employed
  - unable to work because you are permanently sick or disabled
  - housewife

(19) If you are employed or retired, what is or was your usual occupation?  
(Describe as fully as you can)

.....

(20) If you are a housewife, or not employed, what was your usual paid occupation?  
(If you have never been employed, write NONE)

.....

(21) At what age did you finish full-time education?

Age

**ABOUT YOUR HUSBAND/WIFE (answer if married or widowed)**

(22) What is or was your partner's usual occupation?  
(Describe as fully as you can)

.....

**Thank you for filling in this questionnaire. Please return it to me as soon as possible in the envelope provided.**