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THE COLLEGE OF OPTOMETRISTS

# The PrOVIDe Study: sample characteristics

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## PURPOSE

**The risks of developing either dementia or visual impairment (VI) increase with age so potentially a large proportion of people with dementia will also be visually impaired. The main objective of the Prevalence of Visual Impairment in Dementia (or PrOVIDe) study was to measure the prevalence of a range of vision problems in people with dementia aged 60-89 years. Another objective was to determine estimates for the percentages of those with dementia likely to be able to perform successfully key elements of the eye examination.**

## Methods

PrOVIDe was a two-stage, mixed methods study, combining quantitative and qualitative research methods.

### Stage 1

Was a quantitative, cross-sectional prevalence study. Inclusion criteria were: individuals with a confirmed dementia (any type) diagnosis, aged 60-89 years; individuals lacking the capacity to give informed consent to participate required a consultee who could give approval on their behalf.

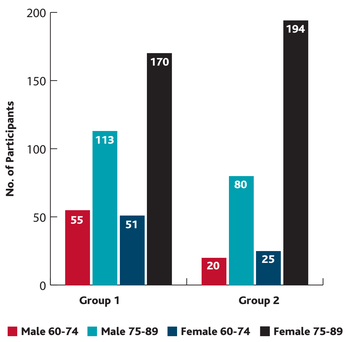
- 708 participants with dementia aged 60-89 years
- 389 lived in their own homes – median age 80 years
- 319 in care homes – median age 83 years

### Stage 2

In Stage 2 a combination of interviews with people living with dementia (recruited from Stage 1) and focus groups (family carers, optometrists and professional care workers) were used to collect qualitative date.

- 36 interviews with people with dementia
- Interviews / focus groups with family carers, professional care workers and eye care professionals
- 119 participants in total across all groups

**Stage 1 Participants**



## RESULTS

22% of participants reported not having had a sight test in the last two years: this included 19 participants who had not been tested in the last 10 years .

| VA worse than 6/12 | | | | |
|---|---|---|---|---|
| **Type of Visual Impairment** | **Full sample** *N = 708* % (n) [95%CI] | **Group 1** *N = 389* % (n) [95%CI] | **Group 2** *N = 319* % (n) [95%CI] | **Difference in proportions between Groups 1 & 2%**[†] [95% CI] |
| **Presenting** | 32.5 (191) [28.7, 36.5] | 21.8 (82) [17.8, 26.4] | 51.4 (109) [44.5, 58.3] | -29.6 [-37.9, -21.3] p<0.001 |
| Missing data % (n) | 16.9 (120) | 3.3 (13) | 33.5 (107) | |
| **Uncorrected or under-corrected** | 14.3 (84) [11.7, 17.5] | 10.6 (40) [7.8, 14.3] | 21.0 (44) [15.8, 27.2] | -10.4 [-17.0, -3.6] p<0.01 |
| Missing data % (n) | 17.2 (122) | 3.3 (13) | 34.2 (109) | |
| **Post-refraction** | 18.2 (107) [15.2, 21.5] | 11.4 (43) [8.4, 15.1] | 30.2 (64) [24.2, 36.9] | -18.8 [-26.1, -11.5] p<0.001 |
| Missing data % (n) | 16.7 (118) | 2.8 (11) | 33.5 (107) | |
| **VA worse than 6/18** | | | | |
| **Type of Visual Impairment** | **Full sample** *N = 708* % (n) [95%CI | **Group 1** *N = 389* % (n) [95%CI | **Group 2** *N = 319* % (n) [95%CI | **Difference in proportions between Groups 1 & 2**[†] [95% CI] |
| **Presenting** | 16.3 (96) [13.5, 19.6] | 10.6 (40) [7.8, 14.3] | 26.4 (56) [20.7, 33.0] | -15.8 [-22.8, -8.7] p<0.001 |
| Missing data % (n) | 16.9 (120) | 3.3 (13) | 33.5 (107) | |
| **Uncorrected or under-corrected** | 7.7 (45) [5.7, 10.2] | 5.1 (19) [3.2, 7.9] | 12.4 (26) [8.4, 17.8] | -7.3 [-12.7, -2.0] p<0.01 |
| Missing data % (n) | 17.2 (122) | 3.3 (13) | 34.2 (109) | |
| **Post-refraction** | 8.6 (51) [6.6, 11.3] | 5.6 (21) [3.6, 8.5] | 14.2 (30) [9.9, 19.7] | -8.6 [-14.2, -3.0] p<0.001 |
| Missing data % (n) | 16.7 (118) | 2.8 (11) | 33.5 (107) | |

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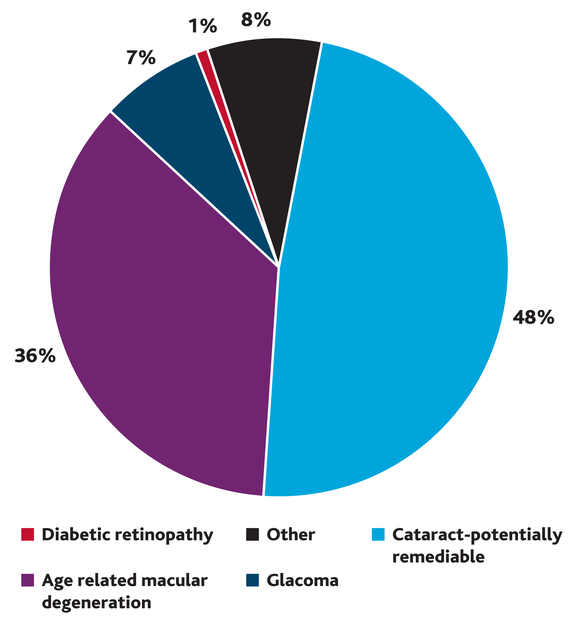
**UK Department of Health Disclaimer:** The views and opinions expressed herein are those of the authors and do not necessarily reflect those of the HS&DR Programme, NIHR, NHS or the Department of Health.

**A single cause of post refraction visual impairment has been identified for each participant**




## CONCLUSIONS

Almost 50% of VI was correctible with appropriate spectacle prescriptions. Once VI correctible with spectacles was removed, almost 50% of the remaining VI was due to cataracts, and thus potentially correctible with surgery.

The prevalence of VI in the PrOVIDe sample was similar to the best comparator data for the general population in the UK, but the study findings suggest that eye care for people with dementia could be improved, especially in terms of understanding the potential barriers to accessing cataract surgery, mechanisms for improving use of spectacles / refractive correction, and the factors driving the significantly higher rates of VI found among the PrOVIDe participants living in residential care homes.

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