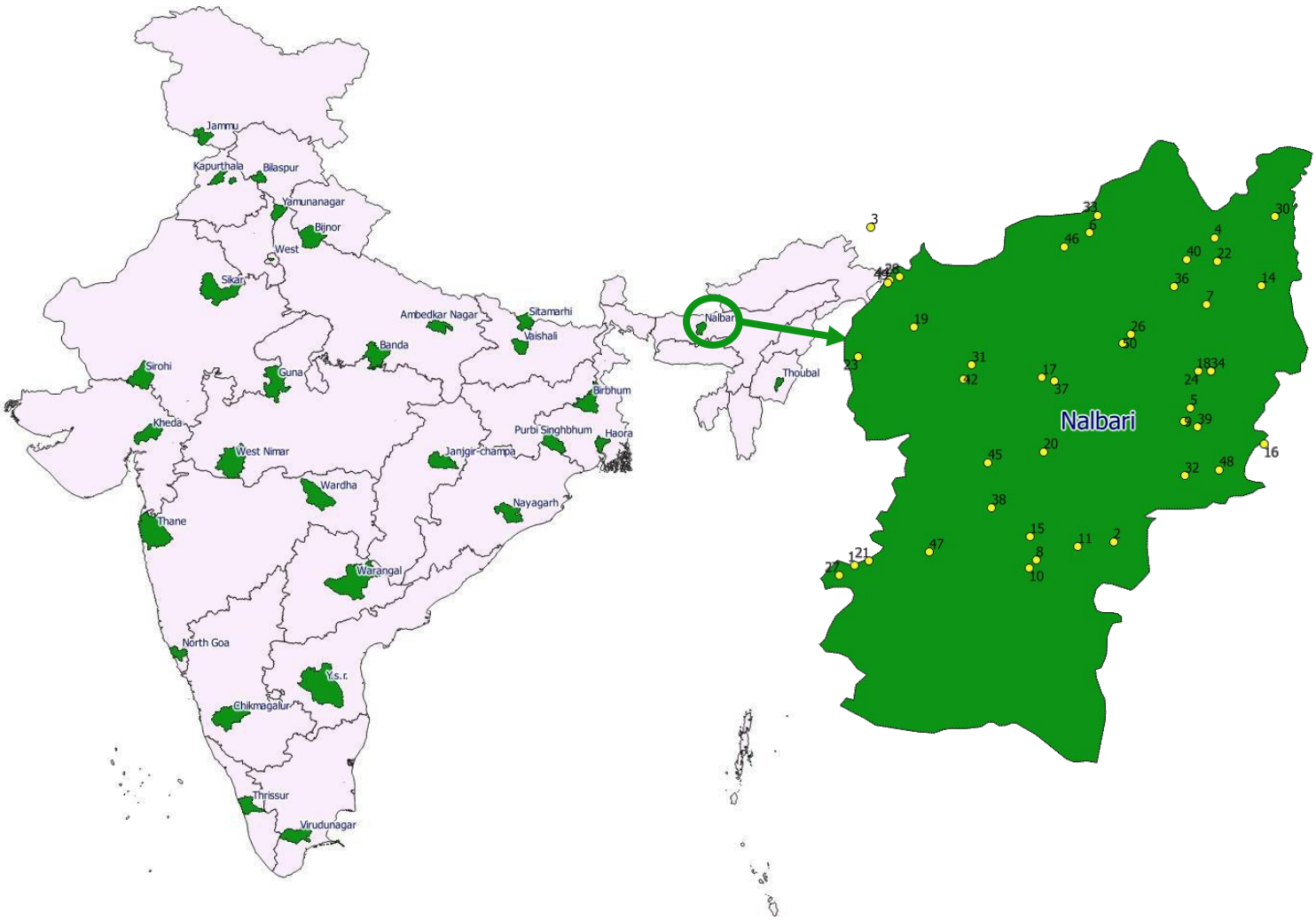
# NPCB National Blindness Survey: 2015-2018

## DISTRICT SUMMARY REPORT

### Nalbari, Assam





**Community Ophthalmology**

**Dr. Rajendra Prasad Centre for Ophthalmic Sciences**

**AIIMS, New Delhi - 110029**

# NPCB National Blindness Survey: 2015-2018

## DISTRICT SUMMARY REPORT

### Nalbari, Assam

**April 2017**

Praveen Vashist, Suraj S Senjam, Vivek Gupta, Noopur Gupta,
V Rajshekhar, BR Shamanna, Promila Gupta, Atul Kumar

**Community Ophthalmology**
**Dr. Rajendra Prasad Centre for Ophthalmic Sciences**
**AIIMS, New Delhi - 110029**

# RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

## SUMMARY REPORT

| | | |
|---|---|---|
| Date and time of report: | 23-Jun-16 | 9:30:51AM |
| This report is for the survey area: | NALBARI | |
| Year and month when survey was conducted: | 2016- 5 until 2016- 5 | |

This report shows the most important results from all the other reports. The 95% confidence interval (95% CI) is based on the sampling error in cluster sampling. More detailed information is provided in the other reports.

### 1. Eligible persons, coverage, absentees and refusals

| | Examined | | Not available | | Refused | | Not capable | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % | n | % |
| Males | 1,195 | 86.2% | 186 | 13.4% | 5 | 0.4% | 0 | 0.0% | **1,386** | **100.0%** |
| Females | 1,554 | 96.3% | 58 | 3.6% | 2 | 0.1% | 0 | 0.0% | **1,614** | **100.0%** |
| **Total** | **2,749** | 91.6% | **244** | 8.1% | **7** | 0.2% | **0** | 0.0% | **3,000** | **100.0%** |

### 2. Age and gender distribution of people examined in the sample

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 559 | 46.8% | 895 | 57.6% | **1,454** | **52.9%** |
| 60 - 69 years | 373 | 31.2% | 438 | 28.2% | **811** | **29.5%** |
| 70 - 79 years | 184 | 15.4% | 173 | 11.1% | **357** | **13.0%** |
| 80+ years | 79 | 6.6% | 48 | 3.1% | **127** | **4.6%** |
| **Total** | **1,195** | **100.0%** | **1,554** | **100.0%** | **2,749** | **100.0%** |

### 3. Sample prevalence of blindness, severe (SVI), moderate (MVI) and early (EVI) visual impairment - bilateral PVA

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % (95% CI) | n | % (95% CI) | n | % (95% CI) |
| Blindness | 33 | 2.8 (1.8 - 3.7) | 41 | 2.6 (1.9 - 3.4) | 74 | 2.7 (2.0 - 3.3) |
| Severe VI | 30 | 2.5 (1.6 - 3.4) | 29 | 1.9 (1.2 - 2.5) | 59 | 2.2 (1.6 - 2.7) |
| Moderate VI | 111 | 9.3 (7.4 - 11.2) | 133 | 8.6 (6.9 - 10.2) | 244 | 8.9 (7.5 - 10.3) |
| Early VI | 126 | 10.5 (8.9 - 12.2) | 183 | 11.8 (10.3 - 13.3) | 309 | 11.2 (10.1 - 12.4) |
| Functional Low Vision | 7 | 0.6 (0.2 - 1.0) | 11 | 0.7 (0.3 - 1.1) | 18 | 0.7 (0.4 - 0.9) |

### 4. Extrapolated magnitude of blindness, severe (SVI), moderate (MVI) and early (EVI) visual impairment - bilateral PVA

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % (95% CI) | n | % (95% CI) | n | % (95% CI) |
| Blindness | 1,535 | 2.5 (1.6 - 3.5) | 2,038 | 3.6 (2.8 - 4.4) | 3,566 | 3.0 (2.4 - 3.7) |
| Severe VI | 1,440 | 2.4 (1.5 - 3.3) | 1,415 | 2.5 (1.8 - 3.2) | 2,854 | 2.4 (1.9 - 2.9) |
| Moderate VI | 5,394 | 8.9 (7.0 - 10.8) | 5,876 | 10.3 (8.7 - 11.9) | 11,267 | 9.6 (8.2 - 10.9) |
| Early VI | 6,234 | 10.3 (8.6 - 11.9) | 7,699 | 13.5 (12.0 - 15.0) | 13,927 | 11.8 (10.7 - 12.9) |
| Functional Low Vision | 334 | 0.6 (0.1 - 1.0) | 508 | 0.9 (0.5 - 1.3) | 842 | 0.7 (0.4 - 1.0) |

### 5. Blindness prevalence (PVA<3/60 in better eye) by age group

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % (95% CI) | n | % (95% CI) | n | % (95% CI) |
| 50 - 59 years | 7 | 1.3 (0.4 - 2.1) | 5 | 0.6 (0.1 - 1.0) | 12 | 0.8 (0.4 - 1.2) |
| 60 - 69 years | 8 | 2.1 (0.6 - 3.7) | 15 | 3.4 (1.7 - 5.1) | 23 | 2.8 (1.6 - 4.1) |
| 70 - 79 years | 7 | 3.8 (1.3 - 6.3) | 8 | 4.6 (1.7 - 7.6) | 15 | 4.2 (2.2 - 6.2) |
| 80+ years | 11 | 13.9 (5.6 - 22.3) | 13 | 27.1 (14.4 - 39.7) | 24 | 18.9 (12.0 - 25.8) |
| All 50+ years | 33 | 2.8 (1.8 - 3.7) | 41 | 2.6 (1.9 - 3.4) | 74 | 2.7 (2.0 - 3.3) |

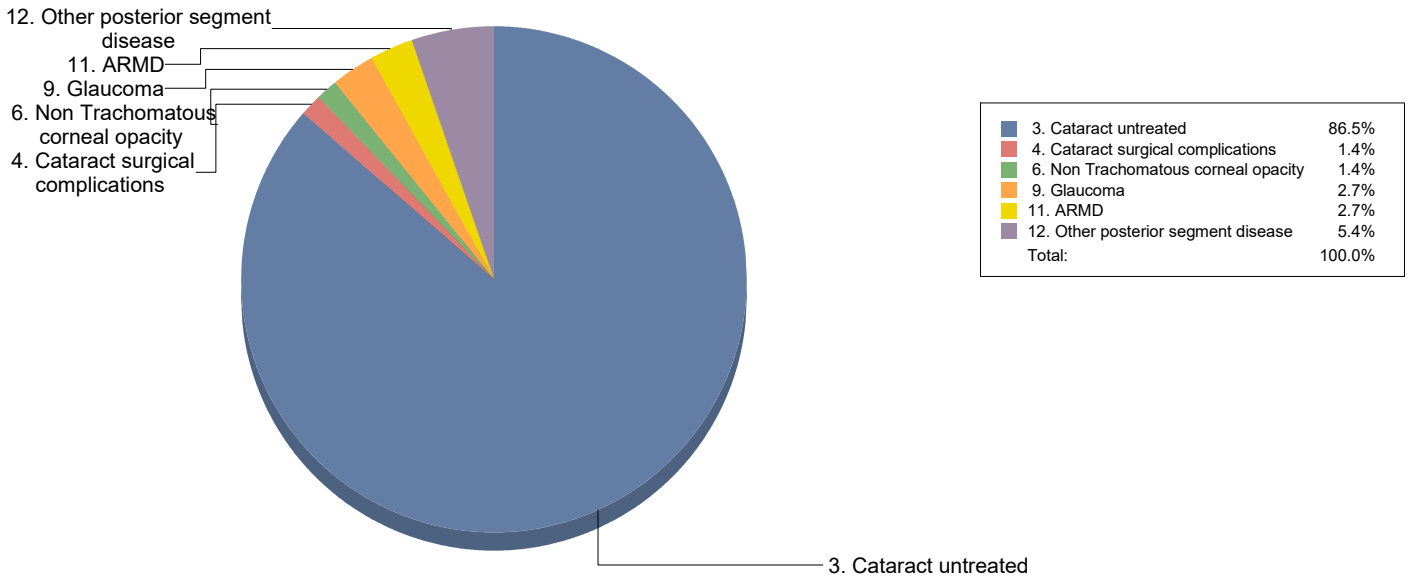
### 6. Principal cause of blindness, severe (SVI), moderate (MVI) and early (EVI) visual impairment in persons (PVA)

| | Blindness | | Severe VI | | Moderate VI | | Early VI | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| 1. Refractive error | 0 | 0.0% | 0 | 0.0% | 19 | 7.8% | 165 | 53.4% |
| 2. Aphakia uncorrected | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 3. Cataract untreated | 64 | 86.5% | 55 | 93.2% | 203 | 83.2% | 128 | 41.4% |
| 4. Cataract surgical complications | 1 | 1.4% | 1 | 1.7% | 5 | 2.0% | 7 | 2.3% |
| 5. Trachomatous corneal opacity | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 6. Non Trachomatous corneal opacity | 1 | 1.4% | 0 | 0.0% | 1 | 0.4% | 1 | 0.3% |
| 7. Phthisis | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 8. Onchocerciasis | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 9. Glaucoma | 2 | 2.7% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 10. Diabetic retinopathy | 0 | 0.0% | 1 | 1.7% | 4 | 1.6% | 1 | 0.3% |
| 11. ARMD | 2 | 2.7% | 0 | 0.0% | 4 | 1.6% | 1 | 0.3% |
| 12. Other posterior segment disease | 4 | 5.4% | 2 | 3.4% | 6 | 2.5% | 6 | 1.9% |
| 13. All other globe/CNS abnormalities | 0 | 0.0% | 0 | 0.0% | 2 | 0.8% | 0 | 0.0% |
| **Total** | **74** | **100.0%** | **59** | **100.0%** | **244** | **100.0%** | **309** | **100.0%** |

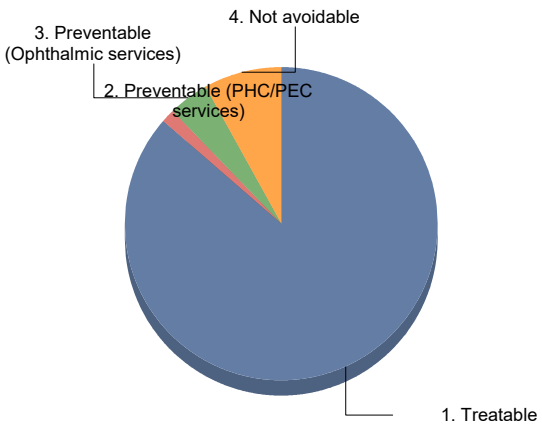
### Blindness, SVI, MVI and EVI in persons by intervention category

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| A. Treatable (1,2,3) | 64 | 86.5% | 55 | 93.2% | 222 | 91.0% | 293 | 94.8% |
| B. Preventable (PHC/PEC services) (5,6,7,8) | 1 | 1.4% | 0 | 0.0% | 1 | 0.4% | 1 | 0.3% |
| C. Preventable (Ophthalmic services) (4,9,10) | 3 | 4.1% | 2 | 3.4% | 9 | 3.7% | 8 | 2.6% |
| D. Avoidable (A+B+C) | 68 | 91.9% | 57 | 96.6% | 232 | 95.1% | 302 | 97.7% |
| E. Posterior segment causes (8,9,10,11,12) | 8 | 10.8% | 3 | 5.1% | 14 | 5.7% | 8 | 2.6% |

### 7. Graph: main cause of blindness in persons

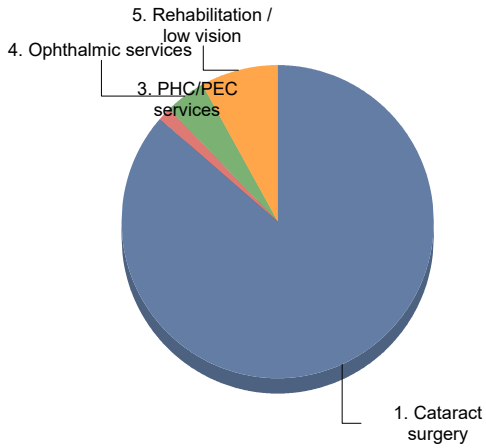


### 8. Graph: main category of blindness in persons




| | |
|---|---|
| 1. Treatable | 86.5% |
| 2. Preventable (PHC/PEC services) | 1.4% |
| 3. Preventable (Ophthalmic services) | 4.1% |
| 4. Not avoidable | 8.1% |
| Total: | 100.0% |

### 9. Graph: action required to reduce blindness




| | |
|---|---|
| 1. Cataract surgery | 86.5% |
| 3. PHC/PEC services | 1.4% |
| 4. Ophthalmic services | 4.1% |
| 5. Rehabilitation / low vision | 8.1% |
| Total: | 100.0% |

### 10. Cataract surgical coverage (persons) - percentage

| | Males | Females | Total |
|---|---|---|---|
| VA < 3/60 | 79.8 | 76.8 | 78.2 |
| VA < 6/60 | 70.1 | 70.1 | 70.1 |
| VA < 6/18 | 53.4 | 51.7 | 52.5 |

### 11. Barriers to cataract surgery - bilateral VA<6/60 due to cataract

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| Need not felt | 9 | 20.0% | 11 | 23.4% | **20** | **21.7%** |
| Fear | 4 | 8.9% | 9 | 19.1% | **13** | **14.1%** |
| Cost | 23 | 51.1% | 21 | 44.7% | **44** | **47.8%** |
| Treatment denied by provider | 3 | 6.7% | 2 | 4.3% | **5** | **5.4%** |
| Unaware treatment is possible | 5 | 11.1% | 1 | 2.1% | **6** | **6.5%** |
| Cannot access treatment | 1 | 2.2% | 1 | 2.1% | **2** | **2.2%** |
| Local reason | 0 | 0.0% | 2 | 4.3% | **2** | **2.2%** |
| **Total** | **45** | **100.0%** | **47** | **100.0%** | **92** | **100.0%** |

### 12. Outcome after cataract surgery with available correction (eyes)

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| Very good: can see 6/12 | 150 | 67.6% | 151 | 61.4% | 301 | 64.3% |
| Good: can see 6/18 | 27 | 12.2% | 49 | 19.9% | 76 | 16.2% |
| Borderline: can see 6/60 | 23 | 10.4% | 22 | 8.9% | 45 | 9.6% |
| Poor: cannot see 6/60 | 22 | 9.9% | 24 | 9.8% | 46 | 9.8% |
| **Total** | **222** | **100.0%** | **246** | **100.0%** | **468** | **100.0%** |

### 13. Outcome by type of cataract surgery with available correction (eyes)

| | Non-IOL | | IOL | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| Very good: can see 6/12 | 10 | 31.3% | 291 | 66.7% | **301** | **64.3%** |
| Good: can see 6/18 | 9 | 28.1% | 67 | 15.4% | **76** | **16.2%** |
| Borderline: can see 6/60 | 6 | 18.8% | 39 | 8.9% | **45** | **9.6%** |
| Poor: cannot see 6/60 | 7 | 21.9% | 39 | 8.9% | **46** | **9.8%** |
| **Total** | **32** | **100.0%** | **436** | **100.0%** | **468** | **100.0%** |

### 14. Cause of PVA<6/12 (good, borderline and poor outcome) after cataract surgery

| | Selection | | Surgery | | Spectacles | | Sequelae | | Can see 6/12 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % | n | % |
| Very good: can see 6/12 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 301 | 100.0% |
| Good: can see 6/18 | 1 | 3.8% | 24 | 44.4% | 49 | 83.1% | 2 | 7.1% | 0 | 0.0% |
| Borderline: can see 6/60 | 7 | 26.9% | 23 | 42.6% | 9 | 15.3% | 6 | 21.4% | 0 | 0.0% |
| Poor: cannot see 6/60 | 18 | 69.2% | 7 | 13.0% | 1 | 1.7% | 20 | 71.4% | 0 | 0.0% |
| **Total** | **26** | **100.0%** | **54** | **100.0%** | **59** | **100.0%** | **28** | **100.0%** | **301** | **100.0%** |

# RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

## SAMPLE RESULTS - NOT ADJUSTED FOR AGE AND SEX

| | | |
|---|---|---|
| Date and time of report: | 23-Jun-16 | 9:50:03AM |
| This report is for the survey area: | NALBARI | |
| Year and month when survey was conducted: | 2016- 5 until 2016- 5 | |

The sample size of the RAAB is sufficient to provide an acceptable accuracy of the overall prevalence of bilateral blindness (best corrected VA <3/60). The accuracy of prevalence estimates for any subgroup is far less and caution should be taken in the interpretation of these data.

**1. Eligible persons, coverage, absentees and refusals in survey**

| | Examined | | Not available | | Refused | | Not capable | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % | n | % |
| Males | 1,195 | 86.2% | 186 | 13.4% | 5 | 0.4% | 0 | 0.0% | **1,386** | **100.0%** |
| Females | 1,554 | 96.3% | 58 | 3.6% | 2 | 0.1% | 0 | 0.0% | **1,614** | **100.0%** |
| **Total** | **2,749** | **91.6%** | **244** | **8.1%** | **7** | **0.2%** | **0** | **0.0%** | **3,000** | **100.0%** |

**2. Prevalence of blindness, severe (SVI), moderate (MVI) and early visual impairment (EVI) - all causes**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % (95%CI) | n | % (95%CI) | n | % (95%CI) |
| **Blindness - VA < 3/60 in the better eye with best correction or pinhole** | | | | | | |
| All bilateral blindness | 30 | 2.5% (1.6-3.4) | 38 | 2.5% (1.7-3.2) | **68** | **2.5% (1.8-3.1)** |
| All blind eyes | 157 | 6.6% (5.4-7.8) | 174 | 5.6% (4.7-6.5) | **331** | **6.0% (5.3-6.7)** |
| **Blindness - VA < 3/60 in the better eye with available correction (presenting VA)** | | | | | | |
| All bilateral blindness | 33 | 2.8% (1.8-3.7) | 41 | 2.6% (1.9-3.4) | **74** | **2.7% (2.0-3.3)** |
| All blind eyes | 167 | 7.0% (5.8-8.2) | 186 | 6.0% (5.0-6.9) | **353** | **6.4% (5.7-7.2)** |
| **Severe visual impairment (SVI) - VA<6/60 - 3/60 in the better eye with available correction** | | | | | | |
| All bilateral Severe VI | 30 | 2.5% (1.6-3.4) | 29 | 1.9% (1.2-2.5) | **59** | **2.2% (1.6-2.7)** |
| All Severe VI eyes | 88 | 3.7% (2.7-4.7) | 80 | 2.6% (2.0-3.2) | **168** | **3.1% (2.5-3.6)** |
| **Moderate visual impairment (MVI) - VA<6/18 - 6/60 in the better eye with available correction** | | | | | | |
| All bilateral MVI | 111 | 9.3% (7.4-11.2) | 133 | 8.6% (6.9-10.2) | **244** | **8.9% (7.5-10.3)** |
| All Moderate VI eyes | 281 | 11.8% (10.1-13.4) | 338 | 10.9% (9.4-12.4) | **619** | **11.3% (9.9-12.6)** |
| **Early visual impairment (EVI) - VA<6/12 - 6/18 in the better eye with available correction** | | | | | | |
| All bilateral EVI | 126 | 10.5% (8.9-12.2) | 183 | 11.8% (10.3-13.3) | **309** | **11.2% (10.1-12.4)** |
| All Early VI eyes | 273 | 11.4% (10.1-12.8) | 421 | 13.6% (12.0-15.1) | **694** | **12.6% (11.6-13.7)** |

**3. Prevalence of presenting VA<3/60, VA<6/60, VA<6/18 and VA<6/12 - all causes (cumulative categories)**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % (95%CI) | n | % (95%CI) | n | % (95%CI) |
| **Blindness - VA < 3/60 in the better eye with available correction (presenting VA)** | | | | | | |
| All bilateral blindness | 33 | 2.8% (1.8-3.7) | 41 | 2.6% (1.9-3.4) | **74** | **2.7% (2.0-3.3)** |
| All blind eyes | 167 | 7.0% (5.8-8.2) | 186 | 6.0% (5.0-6.9) | **353** | **6.4% (5.7-7.2)** |
| **VA<6/60 in the better eye, with available correction (presenting VA)** | | | | | | |
| All bilateral cases | 63 | 5.3% (3.9-6.7) | 70 | 4.5% (3.4-5.6) | **133** | **4.8% (3.9-5.8)** |
| All eyes | 255 | 10.7% (9.0-12.3) | 266 | 8.6% (7.3-9.8) | **521** | **9.5% (8.4-10.5)** |
| **VA<6/18 in the better eye, with available correction (presenting VA)** | | | | | | |
| All bilateral cases | 174 | 14.6% (12.0-17.1) | 203 | 13.1% (11.2-14.9) | **377** | **13.7% (12.0-15.5)** |
| All eyes | 536 | 22.4% (19.9-24.9) | 604 | 19.4% (17.5-21.4) | **1,140** | **20.7% (18.9-22.5)** |
| **VA<6/12 in the better eye, with available correction (presenting VA)** | | | | | | |
| All bilateral cases | 300 | 25.1% (22.3-27.9) | 386 | 24.8% (22.4-27.3) | **686** | **25.0% (22.8-27.1)** |
| All eyes | 809 | 33.9% (31.3-36.4) | 1,025 | 33.0% (30.6-35.4) | **1,834** | **33.4% (31.2-35.5)** |

**4. Principal cause of blindness in persons: VA<3/60 in better eye with available correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 1. Refractive error | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 2. Aphakia uncorrected | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 3. Cataract untreated | 28 | 84.8% | 36 | 87.8% | **64** | **86.5%** |
| 4. Cataract surgical complications | 1 | 3.0% | 0 | 0.0% | **1** | **1.4%** |
| 5. Trachomatous corneal opacity | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 6. Non Trachomatous corneal opacity | 1 | 3.0% | 0 | 0.0% | **1** | **1.4%** |
| 7. Phthisis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 8. Onchocerciasis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 9. Glaucoma | 2 | 6.1% | 0 | 0.0% | **2** | **2.7%** |
| 10. Diabetic retinopathy | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 11. ARMD | 0 | 0.0% | 2 | 4.9% | **2** | **2.7%** |
| 12. Other posterior segment disease | 1 | 3.0% | 3 | 7.3% | **4** | **5.4%** |
| 13. All other globe/CNS abnormalities | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| **Total** | **33** | **100.0%** | **41** | **100.0%** | **74** | **100.0%** |
| | | | | | | |
| **Intervention by this visual impairment** | | | | | | |
| A. Treatable (1,2,3) | 28 | 84.9% | 36 | 87.8% | 64 | 86.5% |
| B. Preventable (PHC/PEC services) (5,6,7,8) | 1 | 3.0% | 0 | 0.0% | 1 | 1.4% |
| C. Preventable (Ophthalmic services) (4,9,10) | 3 | 9.1% | 0 | 0.0% | 3 | 4.1% |
| D. Avoidable (A+B+C) | 32 | 97.0% | 36 | 87.8% | 68 | 91.9% |
| E. Posterior segment causes (8,9,10,11,12) | 3 | 9.1% | 5 | 12.2% | 8 | 10.8% |

**5. Main cause of blindness in eyes - VA<3/60 with available correction, no pinhole**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 1. Refractive error | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 2. Aphakia uncorrected | 1 | 0.6% | 0 | 0.0% | **1** | **0.3%** |
| 3. Cataract untreated | 117 | 70.1% | 151 | 81.2% | **268** | **75.9%** |
| 4. Cataract surgical complications | 4 | 2.4% | 3 | 1.6% | **7** | **2.0%** |
| 5. Trachomatous corneal opacity | 0 | 0.0% | 1 | 0.5% | **1** | **0.3%** |
| 6. Non Trachomatous corneal opacity | 5 | 3.0% | 8 | 4.3% | **13** | **3.7%** |
| 7. Phthisis | 14 | 8.4% | 1 | 0.5% | **15** | **4.2%** |
| 8. Onchocerciasis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 9. Glaucoma | 7 | 4.2% | 4 | 2.2% | **11** | **3.1%** |
| 10. Diabetic retinopathy | 3 | 1.8% | 1 | 0.5% | **4** | **1.1%** |
| 11. ARMD | 1 | 0.6% | 4 | 2.2% | **5** | **1.4%** |
| 12. Other posterior segment disease | 14 | 8.4% | 13 | 7.0% | **27** | **7.6%** |
| 13. All other globe/CNS abnormalities | 1 | 0.6% | 0 | 0.0% | **1** | **0.3%** |
| **Total** | **167** | **100.0%** | **186** | **100.0%** | **353** | **100.0%** |
| | | | | | | |
| **Intervention by this visual impairment** | | | | | | |
| A. Treatable (1,2,3) | 118 | 70.7% | 151 | 81.2% | 269 | 76.2% |
| B. Preventable (PHC/PEC services) (5,6,7,8) | 19 | 11.4% | 10 | 5.4% | 29 | 8.2% |
| C. Preventable (Ophthalmic services) (4,9,10) | 14 | 8.4% | 8 | 4.3% | 22 | 6.2% |
| D. Avoidable (A+B+C) | 151 | 90.4% | 169 | 90.9% | 320 | 90.7% |
| E. Posterior segment causes (8,9,10,11,12) | 25 | 15.0% | 22 | 11.8% | 47 | 13.3% |

**6. Principal cause severe visual impairment in persons: VA<6/60 - 3/60 with available correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 1. Refractive error | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 2. Aphakia uncorrected | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 3. Cataract untreated | 28 | 93.3% | 27 | 93.1% | **55** | **93.2%** |
| 4. Cataract surgical complications | 0 | 0.0% | 1 | 3.4% | **1** | **1.7%** |
| 5. Trachomatous corneal opacity | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 6. Non Trachomatous corneal opacity | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 7. Phthisis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 8. Onchocerciasis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 9. Glaucoma | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 10. Diabetic retinopathy | 1 | 3.3% | 0 | 0.0% | **1** | **1.7%** |
| 11. ARMD | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 12. Other posterior segment disease | 1 | 3.3% | 1 | 3.4% | **2** | **3.4%** |
| 13. All other globe/CNS abnormalities | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| **Total** | **30** | **100.0%** | **29** | **100.0%** | **59** | **100.0%** |
| | | | | | | |
| **Intervention by this visual impairment** | | | | | | |
| A. Treatable (1,2,3) | 28 | 93.3% | 27 | 93.1% | 55 | 93.2% |
| B. Preventable (PHC/PEC services) (5,6,7,8) | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| C. Preventable (Ophthalmic services) (4,9,10) | 1 | 3.3% | 1 | 3.5% | 2 | 3.4% |
| D. Avoidable (A+B+C) | 29 | 96.7% | 28 | 96.6% | 57 | 96.6% |
| E. Posterior segment causes (8,9,10,11,12) | 2 | 6.7% | 1 | 3.5% | 3 | 5.1% |

**7. Main cause of severe visual impairment in eyes - VA<6/60 - 3/60 with available correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 1. Refractive error | 1 | 1.1% | 1 | 1.3% | **2** | **1.2%** |
| 2. Aphakia uncorrected | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 3. Cataract untreated | 78 | 88.6% | 71 | 88.8% | **149** | **88.7%** |
| 4. Cataract surgical complications | 1 | 1.1% | 2 | 2.5% | **3** | **1.8%** |
| 5. Trachomatous corneal opacity | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 6. Non Trachomatous corneal opacity | 0 | 0.0% | 1 | 1.3% | **1** | **0.6%** |
| 7. Phthisis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 8. Onchocerciasis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 9. Glaucoma | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 10. Diabetic retinopathy | 2 | 2.3% | 0 | 0.0% | **2** | **1.2%** |
| 11. ARMD | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 12. Other posterior segment disease | 5 | 5.7% | 5 | 6.3% | **10** | **6.0%** |
| 13. All other globe/CNS abnormalities | 1 | 1.1% | 0 | 0.0% | **1** | **0.6%** |
| **Total** | **88** | **100.0%** | **80** | **100.0%** | **168** | **100.0%** |
| | | | | | | |
| **Intervention by this visual impairment** | | | | | | |
| A. Treatable (1,2,3) | 79 | 89.8% | 72 | 90.0% | 151 | 89.9% |
| B. Preventable (PHC/PEC services) (5,6,7,8) | 0 | 0.0% | 1 | 1.3% | 1 | 0.6% |
| C. Preventable (Ophthalmic services) (4,9,10) | 3 | 3.4% | 2 | 2.5% | 5 | 3.0% |
| D. Avoidable (A+B+C) | 82 | 93.2% | 75 | 93.8% | 157 | 93.5% |
| E. Posterior segment causes (8,9,10,11,12) | 7 | 8.0% | 5 | 6.3% | 12 | 7.1% |

**8. Principal cause moderate visual impairment in persons: VA<6/18 - 6/60 with available correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 1. Refractive error | 11 | 9.9% | 8 | 6.0% | **19** | **7.8%** |
| 2. Aphakia uncorrected | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 3. Cataract untreated | 90 | 81.1% | 113 | 85.0% | **203** | **83.2%** |
| 4. Cataract surgical complications | 2 | 1.8% | 3 | 2.3% | **5** | **2.0%** |
| 5. Trachomatous corneal opacity | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 6. Non Trachomatous corneal opacity | 1 | 0.9% | 0 | 0.0% | **1** | **0.4%** |
| 7. Phthisis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 8. Onchocerciasis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 9. Glaucoma | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 10. Diabetic retinopathy | 3 | 2.7% | 1 | 0.8% | **4** | **1.6%** |
| 11. ARMD | 1 | 0.9% | 3 | 2.3% | **4** | **1.6%** |
| 12. Other posterior segment disease | 3 | 2.7% | 3 | 2.3% | **6** | **2.5%** |
| 13. All other globe/CNS abnormalities | 0 | 0.0% | 2 | 1.5% | **2** | **0.8%** |
| **Total** | **111** | **100.0%** | **133** | **100.0%** | **244** | **100.0%** |
| | | | | | | |
| **Intervention by this visual impairment** | | | | | | |
| A. Treatable (1,2,3) | 101 | 91.0% | 121 | 91.0% | 222 | 91.0% |
| B. Preventable (PHC/PEC services) (5,6,7,8) | 1 | 0.9% | 0 | 0.0% | 1 | 0.4% |
| C. Preventable (Ophthalmic services) (4,9,10) | 5 | 4.5% | 4 | 3.0% | 9 | 3.7% |
| D. Avoidable (A+B+C) | 107 | 96.4% | 125 | 94.0% | 232 | 95.1% |
| E. Posterior segment causes (8,9,10,11,12) | 7 | 6.3% | 7 | 5.3% | 14 | 5.7% |

**9. Main cause of moderate visual impairment in eyes - VA<6/18 - 6/60 with available correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 1. Refractive error | 39 | 13.9% | 37 | 10.9% | **76** | **12.3%** |
| 2. Aphakia uncorrected | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 3. Cataract untreated | 202 | 71.9% | 251 | 74.3% | **453** | **73.2%** |
| 4. Cataract surgical complications | 12 | 4.3% | 12 | 3.6% | **24** | **3.9%** |
| 5. Trachomatous corneal opacity | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 6. Non Trachomatous corneal opacity | 6 | 2.1% | 4 | 1.2% | **10** | **1.6%** |
| 7. Phthisis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 8. Onchocerciasis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 9. Glaucoma | 1 | 0.4% | 0 | 0.0% | **1** | **0.2%** |
| 10. Diabetic retinopathy | 4 | 1.4% | 4 | 1.2% | **8** | **1.3%** |
| 11. ARMD | 3 | 1.1% | 7 | 2.1% | **10** | **1.6%** |
| 12. Other posterior segment disease | 14 | 5.0% | 17 | 5.0% | **31** | **5.0%** |
| 13. All other globe/CNS abnormalities | 0 | 0.0% | 6 | 1.8% | **6** | **1.0%** |
| **Total** | **281** | **100.0%** | **338** | **100.0%** | **619** | **100.0%** |
| | | | | | | |
| **Intervention by this visual impairment** | | | | | | |
| A. Treatable (1,2,3) | 241 | 85.8% | 288 | 85.2% | 529 | 85.5% |
| B. Preventable (PHC/PEC services) (5,6,7,8) | 6 | 2.1% | 4 | 1.2% | 10 | 1.6% |
| C. Preventable (Ophthalmic services) (4,9,10) | 17 | 6.0% | 16 | 4.7% | 33 | 5.3% |
| D. Avoidable (A+B+C) | 264 | 94.0% | 308 | 91.1% | 572 | 92.4% |
| E. Posterior segment causes (8,9,10,11,12) | 22 | 7.8% | 28 | 8.3% | 50 | 8.1% |

**10. Principal cause early visual impairment in persons: VA<6/12 - 6/18 with available correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 1. Refractive error | 65 | 51.6% | 100 | 54.6% | **165** | **53.4%** |
| 2. Aphakia uncorrected | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 3. Cataract untreated | 56 | 44.4% | 72 | 39.3% | **128** | **41.4%** |
| 4. Cataract surgical complications | 2 | 1.6% | 5 | 2.7% | **7** | **2.3%** |
| 5. Trachomatous corneal opacity | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 6. Non Trachomatous corneal opacity | 1 | 0.8% | 0 | 0.0% | **1** | **0.3%** |
| 7. Phthisis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 8. Onchocerciasis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 9. Glaucoma | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 10. Diabetic retinopathy | 0 | 0.0% | 1 | 0.5% | **1** | **0.3%** |
| 11. ARMD | 0 | 0.0% | 1 | 0.5% | **1** | **0.3%** |
| 12. Other posterior segment disease | 2 | 1.6% | 4 | 2.2% | **6** | **1.9%** |
| 13. All other globe/CNS abnormalities | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| **Total** | **126** | **100.0%** | **183** | **100.0%** | **309** | **100.0%** |
| | | | | | | |
| **Intervention by this visual impairment** | | | | | | |
| A. Treatable (1,2,3) | 121 | 96.0% | 172 | 94.0% | 293 | 94.8% |
| B. Preventable (PHC/PEC services) (5,6,7,8) | 1 | 0.8% | 0 | 0.0% | 1 | 0.3% |
| C. Preventable (Ophthalmic services) (4,9,10) | 2 | 1.6% | 6 | 3.3% | 8 | 2.6% |
| D. Avoidable (A+B+C) | 124 | 98.4% | 178 | 97.3% | 302 | 97.7% |
| E. Posterior segment causes (8,9,10,11,12) | 2 | 1.6% | 6 | 3.3% | 8 | 2.6% |

**11. Main cause of early visual impairment in eyes - VA<6/12 - 6/18 with available correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 1. Refractive error | 147 | 53.8% | 241 | 57.2% | **388** | **55.9%** |
| 2. Aphakia uncorrected | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 3. Cataract untreated | 105 | 38.5% | 144 | 34.2% | **249** | **35.9%** |
| 4. Cataract surgical complications | 8 | 2.9% | 16 | 3.8% | **24** | **3.5%** |
| 5. Trachomatous corneal opacity | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 6. Non Trachomatous corneal opacity | 3 | 1.1% | 2 | 0.5% | **5** | **0.7%** |
| 7. Phthisis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 8. Onchocerciasis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 9. Glaucoma | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 10. Diabetic retinopathy | 1 | 0.4% | 2 | 0.5% | **3** | **0.4%** |
| 11. ARMD | 1 | 0.4% | 2 | 0.5% | **3** | **0.4%** |
| 12. Other posterior segment disease | 7 | 2.6% | 14 | 3.3% | **21** | **3.0%** |
| 13. All other globe/CNS abnormalities | 1 | 0.4% | 0 | 0.0% | **1** | **0.1%** |
| **Total** | **273** | **100.0%** | **421** | **100.0%** | **694** | **100.0%** |
| | | | | | | |
| **Intervention by this visual impairment** | | | | | | |
| A. Treatable (1,2,3) | 252 | 92.3% | 385 | 91.4% | 637 | 91.8% |
| B. Preventable (PHC/PEC services) (5,6,7,8) | 3 | 1.1% | 2 | 0.5% | 5 | 0.7% |
| C. Preventable (Ophthalmic services) (4,9,10) | 9 | 3.3% | 18 | 4.3% | 27 | 3.9% |
| D. Avoidable (A+B+C) | 264 | 96.7% | 405 | 96.2% | 669 | 96.4% |
| E. Posterior segment causes (8,9,10,11,12) | 9 | 3.3% | 18 | 4.3% | 27 | 3.9% |

**12. Prevalence of cataract with VA<3/60, VA<6/60, VA<6/18 and VA<6/12 - best corrected VA or pinhole**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % (95%CI) | n | % (95%CI) | n | % (95%CI) |
| **Cataract and VA<3/60 with best correction or pinhole** | | | | | | |
| Bilateral cataract | 25 | 2.1% (1.3-2.9) | 32 | 2.1% (1.4-2.7) | **57** | **2.1% (1.6-2.6)** |
| Unilateral cataract | 67 | 5.6% (4.4-6.8) | 80 | 5.2% (4.2-6.1) | **147** | **5.4% (4.7-6.0)** |
| Cataract eyes | 117 | 4.9% (3.9-5.9) | 144 | 4.6% (3.8-5.4) | **261** | **4.8% (4.1-5.4)** |
| **Cataract and VA<6/60 with best correction or pinhole** | | | | | | |
| Bilateral cataract | 44 | 3.7% (2.5-4.8) | 47 | 3.0% (2.2-3.9) | **91** | **3.3% (2.6-4.0)** |
| Unilateral cataract | 82 | 6.9% (6.3-10.2) | 94 | 6.1% (5.4-8.2) | **176** | **6.4% (6.4-8.5)** |
| Cataract eyes | 170 | 7.1% (5.6-8.6) | 188 | 6.1% (5.0-7.1) | **358** | **6.5% (5.7-7.4)** |
| **Cataract and VA<6/18 with best correction or pinhole** | | | | | | |
| Bilateral cataract | 97 | 8.1% (6.3-9.9) | 115 | 7.4% (6.0-8.8) | **212** | **7.7% (6.5-8.9)** |
| Unilateral cataract | 125 | 10.5% (8.8-12.1) | 139 | 8.9% (7.4-10.5) | **264** | **9.6% (8.3-10.9)** |
| Cataract eyes | 319 | 13.4% (11.2-15.5) | 369 | 11.9% (10.5-13.3) | **688** | **12.5% (11.1-13.9)** |
| **Cataract and VA<6/12 with best correction or pinhole** | | | | | | |
| Bilateral cataract | 183 | 15.3% (12.5-18.2) | 229 | 14.7% (12.4-17.0) | **412** | **15.0% (12.9-17.0)** |
| Unilateral cataract | 145 | 12.1% (10.3-14.0) | 165 | 10.6% (9.1-12.2) | **310** | **11.3% (9.9-12.6)** |
| Cataract eyes | 511 | 21.4% (18.5-24.3) | 623 | 20.1% (17.7-22.4) | **1,134** | **20.6% (18.5-22.7)** |

**13. Sample prevalence of (pseudo)aphakia**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % (95%CI) | n | % (95%CI) | n | % (95%CI) |
| Bilateral (pseudo)aphakia | 74 | 6.2% (4.3-8.1) | 67 | 4.3% (3.2-5.4) | **141** | **5.1% (4.0-6.3)** |
| Unilateral (pseudo)aphakia | 74 | 6.2% (4.7-7.7) | 112 | 7.2% (5.8-8.7) | **186** | **6.8% (5.6-7.9)** |
| (Pseudo)aphakic eyes | 222 | 9.3% (7.1-11.4) | 246 | 7.9% (6.5-9.4) | **468** | **8.5% (7.1-9.9)** |

**14. Cataract Surgical Coverage**

| | Males | Females | Total |
|---|---|---|---|
| **Cataract Surgical Coverage (eyes) - percentage** | | | |
| VA < 3/60 | 65.5 | 63.1 | 64.2 |
| VA < 6/60 | 56.6 | 56.7 | 56.7 |
| VA < 6/18 | 41.0 | 40.0 | 40.5 |
| **Cataract Surgical Coverage (persons) - percentage** | | | |
| VA < 3/60 | 79.8 | 76.8 | 78.2 |
| VA < 6/60 | 70.1 | 70.1 | 70.1 |
| VA < 6/18 | 53.4 | 51.7 | 52.5 |

**15. Number and percentage of first eyes and second eyes operated**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| First eyes | 148 | 66.7 | 179 | 72.8 | **327** | **69.9** |
| Second eyes | 74 | 33.3 | 67 | 27.2 | **141** | **30.1** |

**16. Uncorrected refractive error and uncorrected presbyopia**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| Total refractive errors | 260 | 21.8 | 348 | 22.4 | **608** | **22.1** |
| Uncorrected refractive errors | 76 | 6.4 | 108 | 7.0 | **184** | **6.7** |
| Uncorrected presbyopia | 922 | 77.2 | 1,216 | 78.3 | **2,138** | **77.8** |

**17. Persons with Functional Low Vision: BCVA<6/18 - PL+ in the better eye; incurable**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 | 3 | 0.5 | 3 | 0.3 | **6** | **0.4** |
| 60 - 69 | 1 | 0.3 | 2 | 0.5 | **3** | **0.4** |
| 70 - 79 | 1 | 0.5 | 4 | 2.3 | **5** | **1.4** |
| 80+ | 2 | 2.5 | 2 | 4.2 | **4** | **3.2** |
| Total | 7 | 0.6 | 11 | 0.7 | **18** | **0.7** |

**18. Principal cause of functional low vision in persons: BCVA<6/18 - PL+ in better eye, incurable**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 1. Refractive error | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 2. Aphakia uncorrected | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 3. Cataract untreated | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 4. Cataract surgical complications | 1 | 14.3% | 2 | 18.2% | **3** | **16.7%** |
| 5. Trachomatous corneal opacity | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 6. Non Trachomatous corneal opacity | 1 | 14.3% | 0 | 0.0% | **1** | **5.6%** |
| 7. Phthisis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 8. Onchocerciasis | 0 | 0.0% | 0 | 0.0% | **0** | **0.0%** |
| 9. Glaucoma | 1 | 14.3% | 0 | 0.0% | **1** | **5.6%** |
| 10. Diabetic retinopathy | 2 | 28.6% | 0 | 0.0% | **2** | **11.1%** |
| 11. ARMD | 0 | 0.0% | 3 | 27.3% | **3** | **16.7%** |
| 12. Other posterior segment disease | 2 | 28.6% | 4 | 36.4% | **6** | **33.3%** |
| 13. All other globe/CNS abnormalities | 0 | 0.0% | 2 | 18.2% | **2** | **11.1%** |
| **Total** | **7** | **100.0%** | **11** | **100.0%** | **18** | **100.0%** |
| **Intervention by this visual impairment** | | | | | | |
| A. Treatable (1,2,3) | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| B. Preventable (PHC/PEC services) (5,6,7,8) | 1 | 14.3% | 0 | 0.0% | 1 | 5.6% |
| C. Preventable (Ophthalmic services) (4,9,10) | 4 | 57.1% | 2 | 18.2% | 6 | 33.3% |
| D. Avoidable (A+B+C) | 5 | 71.4% | 2 | 18.2% | 7 | 38.9% |
| E. Posterior segment causes (8,9,10,11,12) | 5 | 71.4% | 7 | 63.6% | 12 | 66.7% |

**19. Persons with FLV and proportion of all persons in corresponding category of visual impairment with available correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| BCVA<3/60 - PL+ | 2 | 6.1 | 4 | 9.8 | **6** | **8.1** |
| BCVA<6/60 - 3/60 | 1 | 3.3 | 2 | 6.9 | **3** | **5.1** |
| BCVA<6/18 - 6/60 | 4 | 3.6 | 5 | 3.8 | **9** | **3.7** |
| Total | 7 | 4.0 | 11 | 5.4 | **18** | **4.8** |

# RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

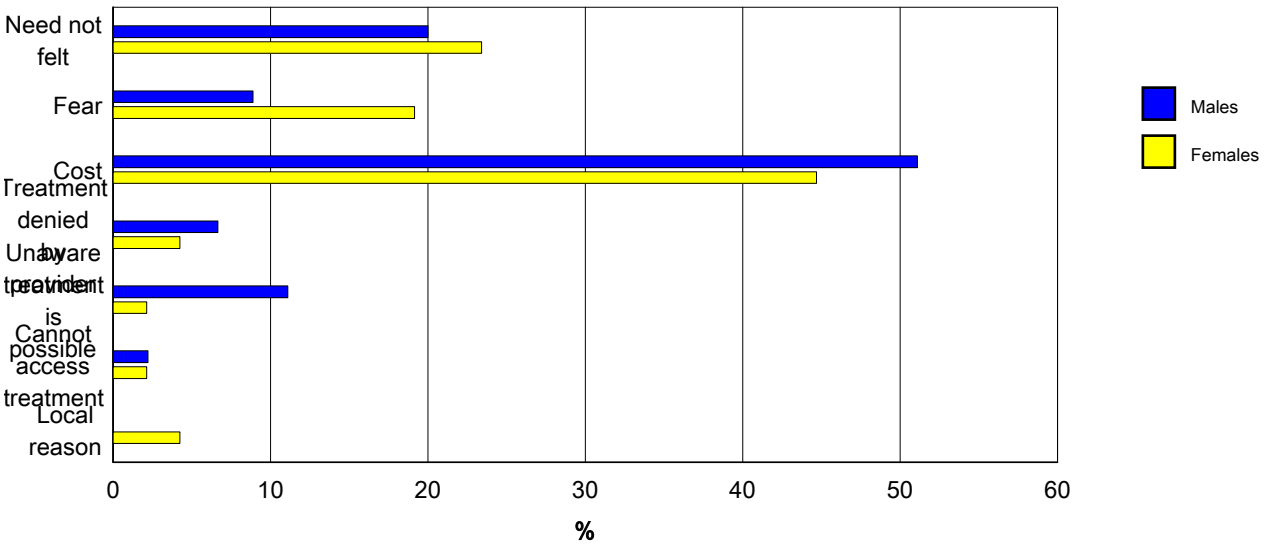
## REASONS WHY PEOPLE, BLIND DUE TO CATARACT, HAVE NOT BEEN OPERATED

| | | |
|---|---|---|
| Date and time of report: | 23-Jun-16 | 9:51:10AM |
| This report is for the survey area: | NALBARI | |
| Year and month when survey was conducted: | 2016- 5 until 2016- 5 | |

RAAB is designed as a rapid procedure and there is not enough time during the RAAB to hold in-dept interviews why people blind from cataract have not yet been operated. Hence, the data on barriers should be regarded as an indication whether more detailed qualitative studies are required.

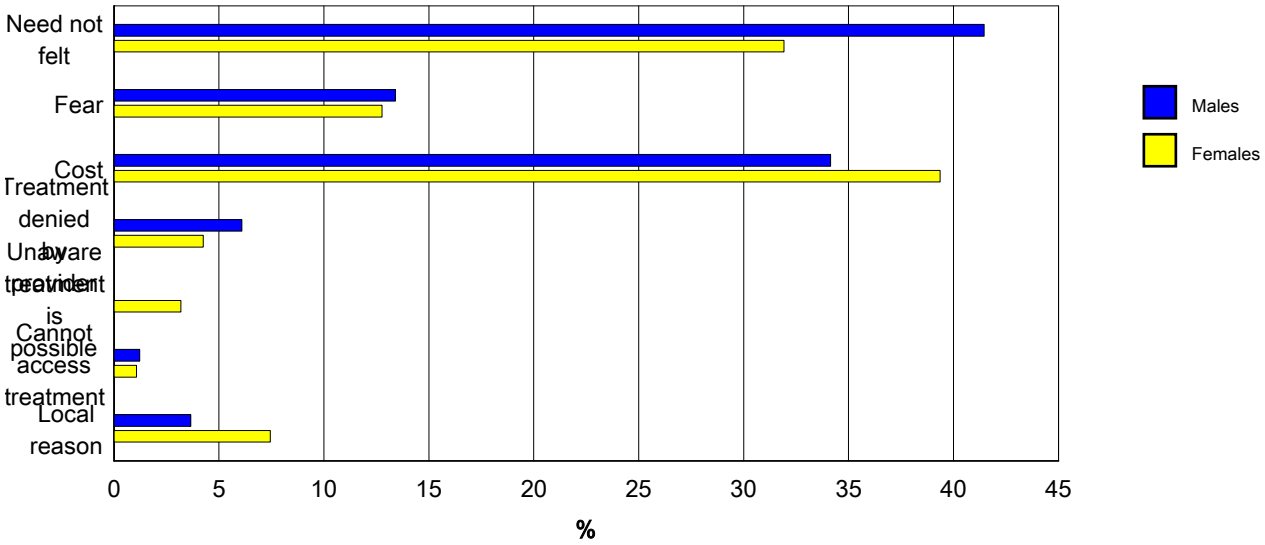
**1. Barriers to cataract surgery in sample (bilateral BCVA<6/60 due to cataract)**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| Need not felt | 9 | 20.0% | 11 | 23.4% | 20 | 21.7% |
| Fear | 4 | 8.9% | 9 | 19.1% | 13 | 14.1% |
| Cost | 23 | 51.1% | 21 | 44.7% | 44 | 47.8% |
| Treatment denied by provider | 3 | 6.7% | 2 | 4.3% | 5 | 5.4% |
| Unaware treatment is possible | 5 | 11.1% | 1 | 2.1% | 6 | 6.5% |
| Cannot access treatment | 1 | 2.2% | 1 | 2.1% | 2 | 2.2% |
| Local reason | 0 | 0.0% | 2 | 4.3% | 2 | 2.2% |
| **Total** | **45** | **100.0%** | **47** | **100.0%** | **92** | **100.0%** |



**2. Barriers to cataract surgery in sample (unilateral BCVA<6/60 due to cataract)**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| Need not felt | 34 | 41.5% | 30 | 31.9% | 64 | 36.4% |
| Fear | 11 | 13.4% | 12 | 12.8% | 23 | 13.1% |
| Cost | 28 | 34.1% | 37 | 39.4% | 65 | 36.9% |
| Treatment denied by provider | 5 | 6.1% | 4 | 4.3% | 9 | 5.1% |
| Unaware treatment is possible | 0 | 0.0% | 3 | 3.2% | 3 | 1.7% |
| Cannot access treatment | 1 | 1.2% | 1 | 1.1% | 2 | 1.1% |
| Local reason | 3 | 3.7% | 7 | 7.4% | 10 | 5.7% |
| **Total** | **82** | **100.0%** | **94** | **100.0%** | **176** | **100.0%** |



# RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

VISUAL OUTCOME AFTER CATARACT SURGERY (LONG-TERM OUTCOME)

| | | |
|---|---|---|
| Date and time of report: | 23-Jun-16 | 9:52:24AM |
| This report is for the survey area: | NALBARI | |
| Year and month when survey was conducted: | 2016- 5 until 2016- 5 | |

The visual acuity of all subjects operated earlier is measured with available correction and with a pinhole. This report gives population based data on visual outcome, not specific for one surgeon or one hospital and with follow-up periods ranging from one month to several decades. When cataract surgery took place several years earlier, the chance of vision loss due to other causes than cataract increases. If the proportion of eyes with a visual outcome less than 6/60 is higher than 10%, research into the possible causes of poor visual outcome is indicated.

### 1. VA in operated eyes in sample with available correction (PVA)

| | Non-IOL | | IOL | | Couching | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Eyes | % | Eyes | % | Eyes | % | Eyes | % |
| Very good: can see 6/12 | 10 | 31.3% | 291 | 66.7% | 0 | 0.0% | **301** | **64.3%** |
| Good: can see 6/18 | 9 | 28.1% | 67 | 15.4% | 0 | 0.0% | **76** | **16.2%** |
| Borderline: can see 6/60 | 6 | 18.8% | 39 | 8.9% | 0 | 0.0% | **45** | **9.6%** |
| Poor: cannot see 6/60 | 7 | 21.9% | 39 | 8.9% | 0 | 0.0% | **46** | **9.8%** |
| **Total** | **32** | **100.0%** | **436** | **100.0%** | **0** | **0.0%** | **468** | **100.0%** |

### 2. VA in operated eyes in sample with best correction (BCVA)

| | Non-IOL | | IOL | | Couching | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Eyes | % | Eyes | % | Eyes | % | Eyes | % |
| Very good: can see 6/12 | 21 | 65.6% | 339 | 77.8% | 0 | 0.0% | **360** | **76.9%** |
| Good: can see 6/18 | 1 | 3.1% | 41 | 9.4% | 0 | 0.0% | **42** | **9.0%** |
| Borderline: can see 6/60 | 5 | 15.6% | 22 | 5.0% | 0 | 0.0% | **27** | **5.8%** |
| Poor: cannot see 6/60 | 5 | 15.6% | 34 | 7.8% | 0 | 0.0% | **39** | **8.3%** |
| **Total** | **32** | **100.0%** | **436** | **100.0%** | **0** | **0.0%** | **468** | **100.0%** |

### 3. VA in operated eyes in sample by years after surgery

| | 3 yrs postop | | 4 - 6 yrs postop. | | 7+ yrs postop | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Eyes | % | Eyes | % | Eyes | % | Eyes | % |
| Very good: can see 6/12 | 138 | 69.7% | 78 | 69.6% | 85 | 53.8% | **301** | **64.3%** |
| Good: can see 6/18 | 27 | 13.6% | 14 | 12.5% | 35 | 22.2% | **76** | **16.2%** |
| Borderline: can see 6/60 | 19 | 9.6% | 8 | 7.1% | 18 | 11.4% | **45** | **9.6%** |
| Poor: cannot see 6/60 | 14 | 7.1% | 12 | 10.7% | 20 | 12.7% | **46** | **9.8%** |
| **Total** | **198** | **100.0%** | **112** | **100.0%** | **158** | **100.0%** | **468** | **100.0%** |

### 4. Age at time of surgery in males and females

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | Eyes | % | Eyes | % | Eyes | % |
| 1 - 29 | 4 | 1.8% | 0 | 0.0% | **4** | **0.9%** |
| 30 - 39 | 1 | 0.5% | 2 | 0.8% | **3** | **0.6%** |
| 40 - 49 | 24 | 10.8% | 29 | 11.8% | **53** | **11.3%** |
| 50 - 59 | 53 | 23.9% | 91 | 37.0% | **144** | **30.8%** |
| 60 - 69 | 80 | 36.0% | 87 | 35.4% | **167** | **35.7%** |
| 70 - 79 | 47 | 21.2% | 35 | 14.2% | **82** | **17.5%** |
| 80+ | 13 | 5.9% | 2 | 0.8% | **15** | **3.2%** |
| **Total** | **222** | **100.0%** | **246** | **100.0%** | **468** | **100.0%** |

### 5. Place of surgery by sex

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | Eyes | % | Eyes | % | Eyes | % |
| Government Hosp. | 122 | 55.0 | 144 | 58.5 | **266** | **56.8** |
| Voluntary/charitable hospital | 5 | 2.3 | 4 | 1.6 | **9** | **1.9** |
| Private hospital | 90 | 40.5 | 95 | 38.6 | **185** | **39.5** |
| Eyecamp | 5 | 2.3 | 3 | 1.2 | **8** | **1.7** |
| **Total** | **222** | **100.0** | **246** | **100.0** | **468** | **100.0** |

### 6. Post-op VA with available correction by place of surgery

| | Gov. Hosp. | | Vol. Hosp. | | Priv. Hosp. | | Eye camp | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Eyes | % | Eyes | % | Eyes | % | Eyes | % | Eyes | % |
| Very good: can see 6/12 | 148 | 55.6 | 9 | 100.0 | 138 | 74.6 | 6 | 75.0 | **301** | **64.3** |
| Good: can see 6/18 | 54 | 20.3 | 0 | 0.0 | 21 | 11.4 | 1 | 12.5 | **76** | **16.2** |
| Borderline: can see 6/60 | 32 | 12.0 | 0 | 0.0 | 13 | 7.0 | 0 | 0.0 | **45** | **9.6** |
| Poor: cannot see 6/60 | 32 | 12.0 | 0 | 0.0 | 13 | 7.0 | 1 | 12.5 | **46** | **9.8** |
| **Total** | **266** | **100.0** | **9** | **100.0** | **185** | **100.0** | **8** | **100.0** | **468** | **100.0** |

### 7. Post-op presenting VA and causes of borderline and poor outcome

| | Selection | | Surgery | | Spectacles | | Sequelae | | Can see 6/12 | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Eyes | % | Eyes | % | Eyes | % | Eyes | % | Eyes | % | Eyes | % |
| Very good: can see 6/12 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 301 | 100.0 | **301** | **64.3** |
| Good: can see 6/18 | 1 | 3.8 | 24 | 44.4 | 49 | 83.1 | 2 | 7.1 | 0 | 0.0 | **76** | **16.2** |
| Borderline: can see 6/60 | 7 | 26.9 | 23 | 42.6 | 9 | 15.3 | 6 | 21.4 | 0 | 0.0 | **45** | **9.6** |
| Poor: cannot see 6/60 | 18 | 69.2 | 7 | 13.0 | 1 | 1.7 | 20 | 71.4 | 0 | 0.0 | **46** | **9.8** |
| **Total** | **26** | **100.0** | **54** | **100.0** | **59** | **100.0** | **28** | **100.0** | **301** | **100.0** | **468** | **100.0** |

### 8. Proportion and type of surgery

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | Eyes | % | Eyes | % | Eyes | % |
| Non-IOL | 13 | 5.9 | 19 | 7.7 | **32** | **6.8** |
| IOL | 209 | 94.1 | 227 | 92.3 | **436** | **93.2** |
| Couching | 0 | 0.0 | 0 | 0.0 | **0** | **0.0** |
| **Total** | **222** | **100.0** | **246** | **100.0** | **468** | **100.0** |

# RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

INDICATORS BY SEX AND BY AGE GROUP - FINDINGS FROM SAMPLE

| | | |
|---|---|---|
| Date and time of report: | 23-Jun-16 | 9:53:20AM |
| This report is for the survey area: | NALBARI | |
| Year and month when survey was conducted: | 2016- 5 until 2016- 5 | |

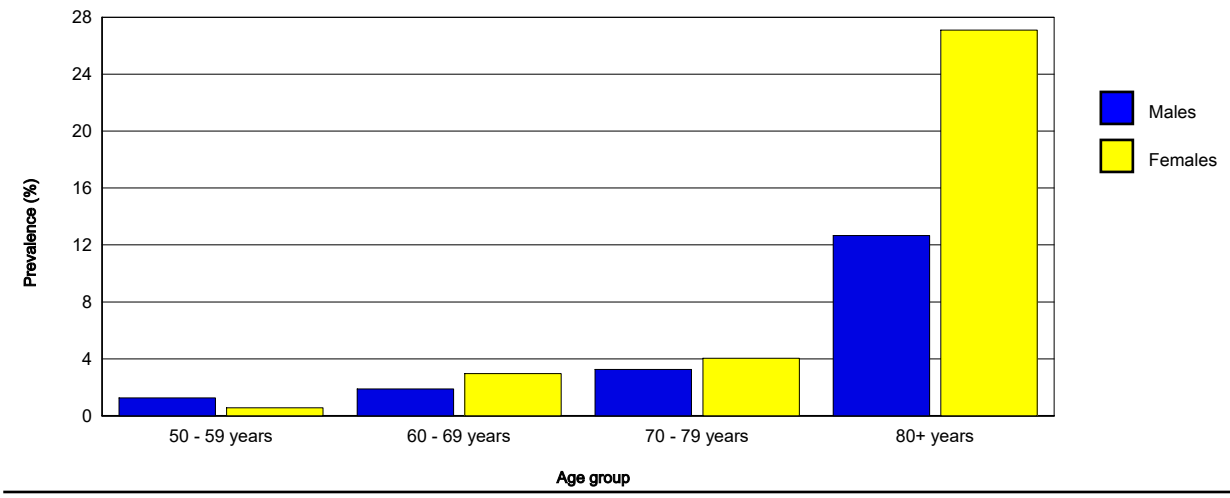
The sample size of the Rapid Assessment is sufficient to provide an acceptable accuracy of the overall prevalence of bilateral blindness (VA <3/60). The accuracy of prevalence estimates for any subgroup is far less and caution should be taken in the interpretation of these data. Confidence intervals for prevalence of various conditions can be calculated with menu Reports / Sampling error & Design Effect.

### 1. Age and sex distribution of people examined in the sample

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 559 | 46.8% | 895 | 57.6% | 1,454 | 52.2% |
| 60 - 69 years | 373 | 31.2% | 438 | 28.2% | 811 | 29.7% |
| 70 - 79 years | 184 | 15.4% | 173 | 11.1% | 357 | 13.3% |
| 80+ years | 79 | 6.6% | 48 | 3.1% | 127 | 4.8% |
| **Total** | **1,195** | **100.0%** | **1,554** | **100.0%** | **2,749** | **100.0%** |

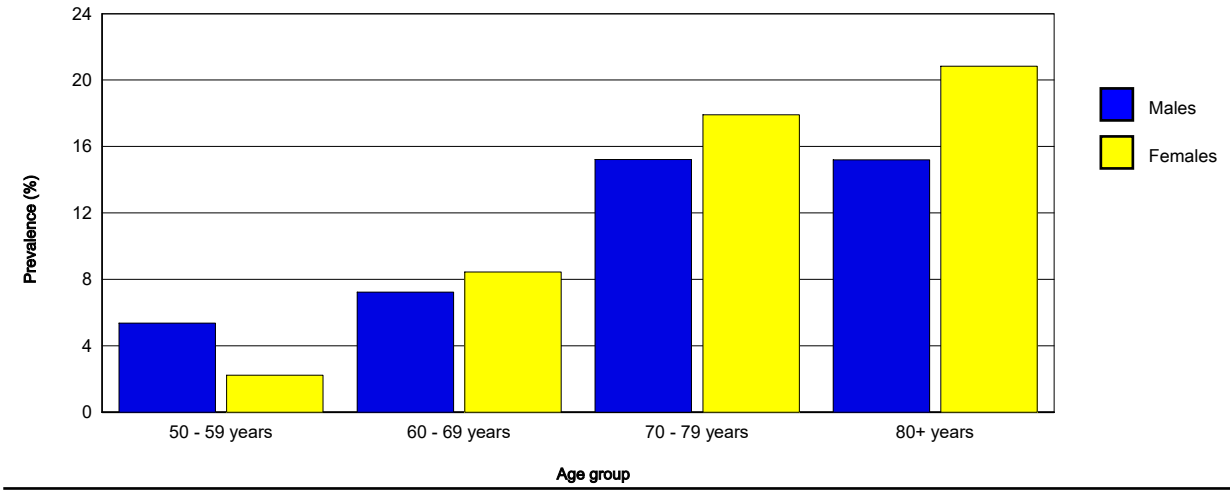
### 2. Prevalence of people with bilateral blindness - VA <3/60 in better eye with best correction

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 7 | 1.3% | 5 | 0.6% | 12 | 0.8% |
| 60 - 69 years | 7 | 1.9% | 13 | 3.0% | 20 | 2.5% |
| 70 - 79 years | 6 | 3.3% | 7 | 4.0% | 13 | 3.6% |
| 80+ years | 10 | 12.7% | 13 | 27.1% | 23 | 18.1% |
| **Total** | **30** | **2.5%** | **38** | **2.4%** | **68** | **2.5%** |



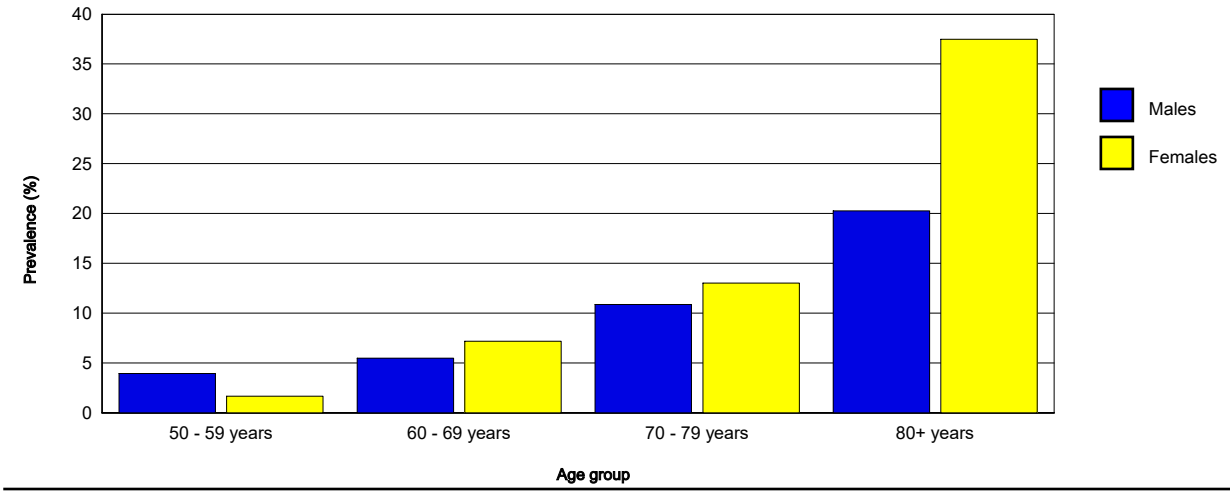
### 3. Prevalence of people with unilateral blindness - VA <3/60 with best correction

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 30 | 5.4% | 20 | 2.2% | 50 | 3.4% |
| 60 - 69 years | 27 | 7.2% | 37 | 8.4% | 64 | 7.9% |
| 70 - 79 years | 28 | 15.2% | 31 | 17.9% | 59 | 16.5% |
| 80+ years | 12 | 15.2% | 10 | 20.8% | 22 | 17.3% |
| **Total** | **97** | **8.1%** | **98** | **6.3%** | **195** | **7.1%** |



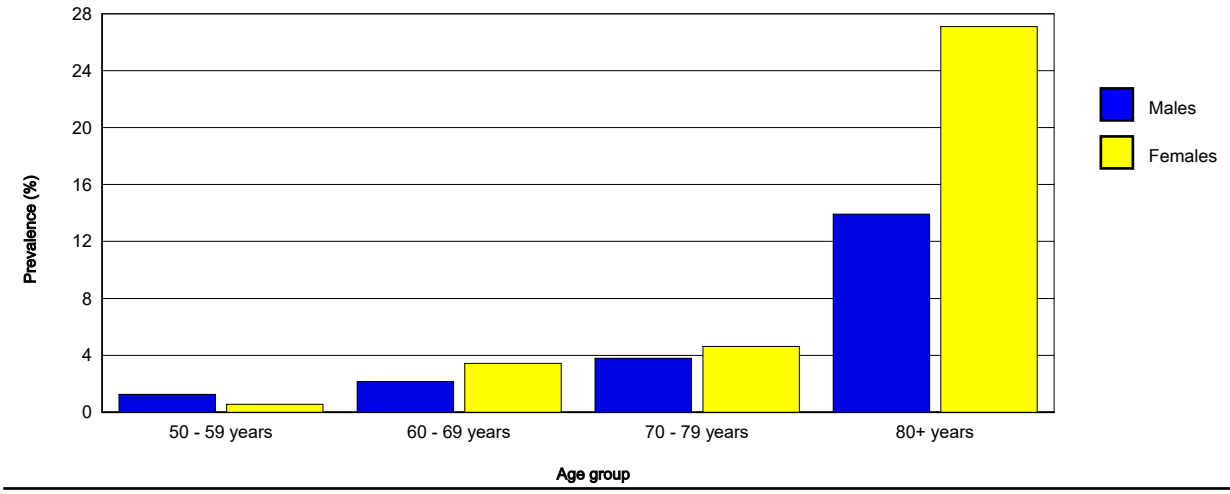

### 4. Prevalence of blind eyes - VA <3/60 with best correction

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 44 | 3.9% | 30 | 1.7% | 74 | 2.5% |
| 60 - 69 years | 41 | 5.5% | 63 | 7.2% | 104 | 6.4% |
| 70 - 79 years | 40 | 10.9% | 45 | 13.0% | 85 | 11.9% |
| 80+ years | 32 | 20.3% | 36 | 37.5% | 68 | 26.8% |
| **Total** | **157** | **6.6%** | **174** | **5.6%** | **331** | **6.0%** |



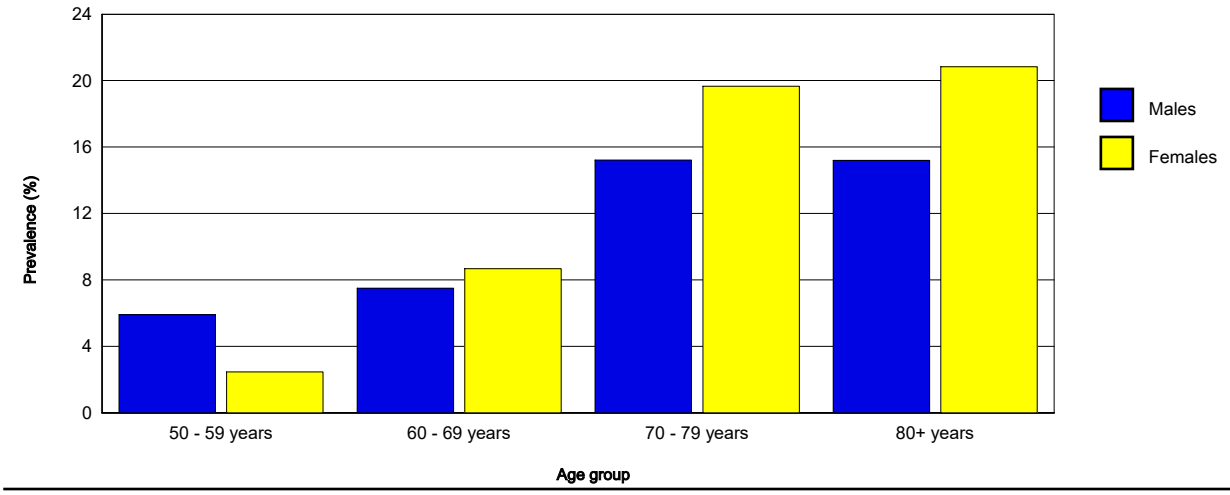
### 5. Prevalence of people with bilateral blindness - VA <3/60 in better eye with available correction

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 7 | 1.3% | 5 | 0.6% | 12 | 0.8% |
| 60 - 69 years | 8 | 2.1% | 15 | 3.4% | 23 | 2.8% |
| 70 - 79 years | 7 | 3.8% | 8 | 4.6% | 15 | 4.2% |
| 80+ years | 11 | 13.9% | 13 | 27.1% | 24 | 18.9% |
| **Total** | **33** | **2.8%** | **41** | **2.6%** | **74** | **2.7%** |



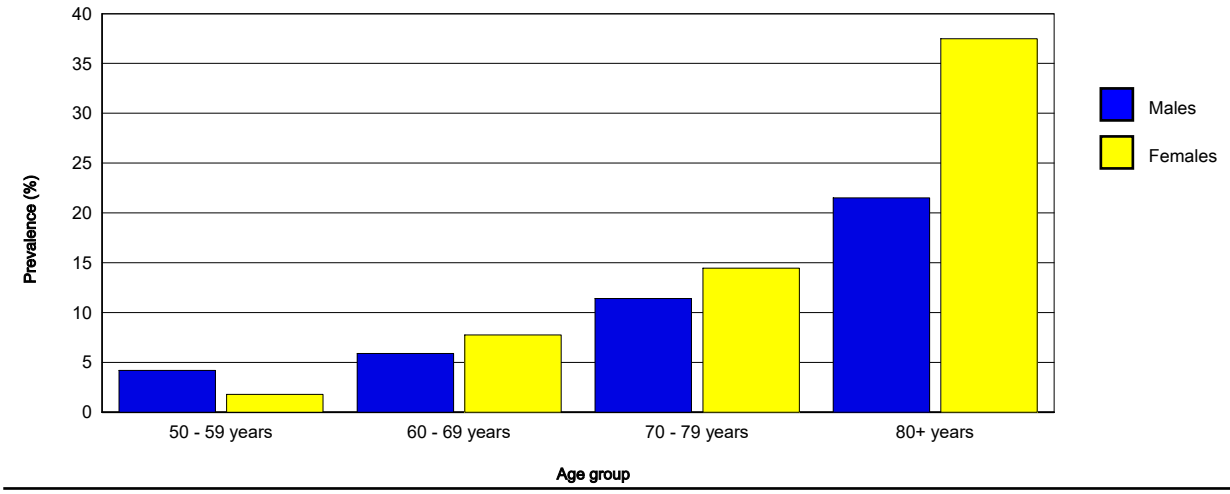

### 6. Prevalence of people with unilateral blindness - VA <3/60 with available correction

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 33 | 5.9% | 22 | 2.5% | 55 | 3.8% |
| 60 - 69 years | 28 | 7.5% | 38 | 8.7% | 66 | 8.1% |
| 70 - 79 years | 28 | 15.2% | 34 | 19.7% | 62 | 17.4% |
| 80+ years | 12 | 15.2% | 10 | 20.8% | 22 | 17.3% |
| **Total** | **101** | **8.5%** | **104** | **6.7%** | **205** | **7.5%** |



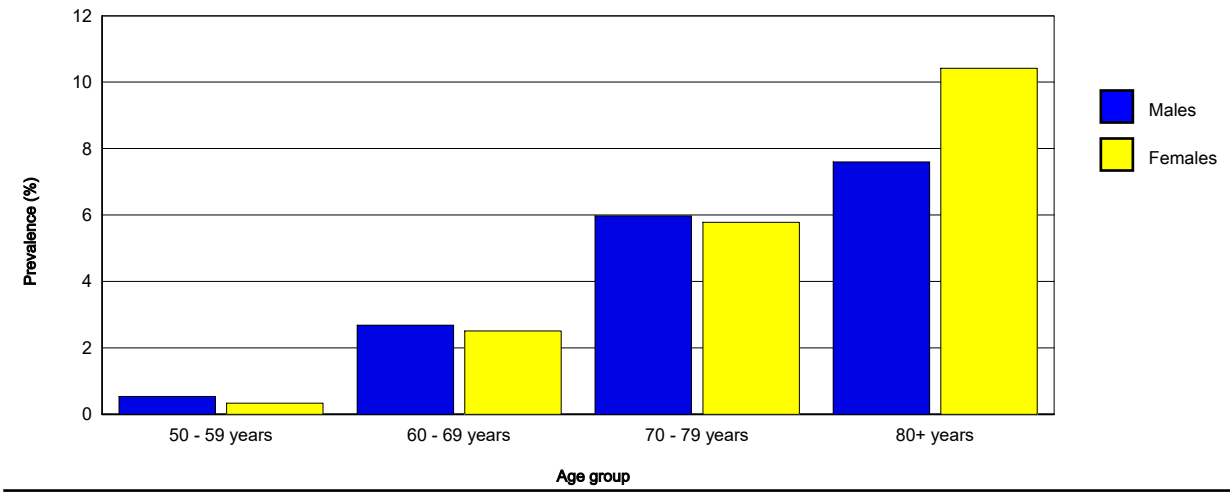
**7. Prevalence of blind eyes - VA <3/60 with available correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 47 | 4.2% | 32 | 1.8% | 79 | 2.7% |
| 60 - 69 years | 44 | 5.9% | 68 | 7.8% | 112 | 6.9% |
| 70 - 79 years | 42 | 11.4% | 50 | 14.5% | 92 | 12.9% |
| 80+ years | 34 | 21.5% | 36 | 37.5% | 70 | 27.6% |
| **Total** | **167** | **7.0%** | **186** | **6.0%** | **353** | **6.4%** |



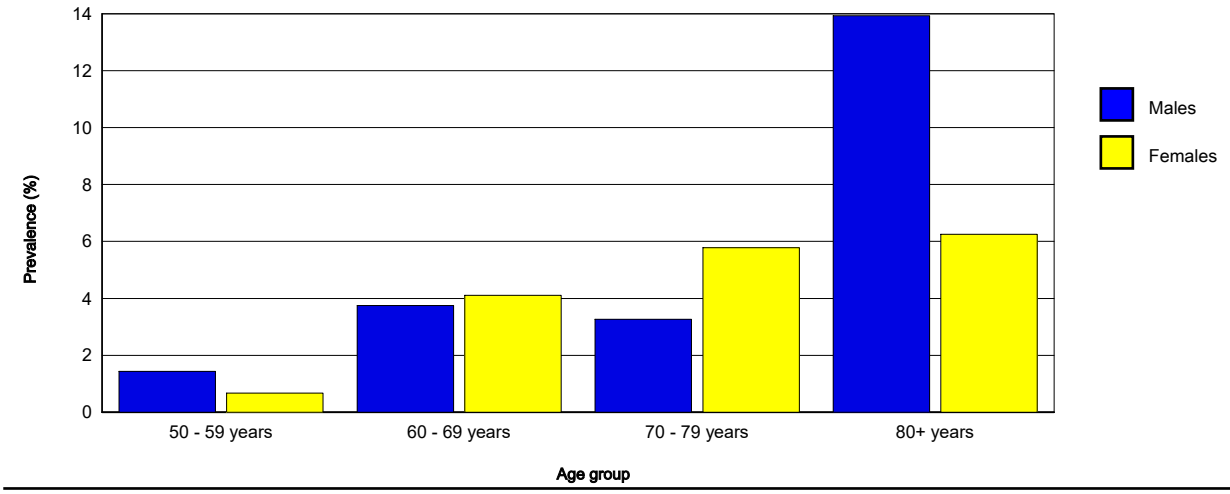

**8. Prevalence of people with bilateral severe visual impairment - VA<6/60-3/60 in better eye with available correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 3 | 0.5% | 3 | 0.3% | 6 | 0.4% |
| 60 - 69 years | 10 | 2.7% | 11 | 2.5% | 21 | 2.6% |
| 70 - 79 years | 11 | 6.0% | 10 | 5.8% | 21 | 5.9% |
| 80+ years | 6 | 7.6% | 5 | 10.4% | 11 | 8.7% |
| **Total** | **30** | **2.5%** | **29** | **1.9%** | **59** | **2.1%** |



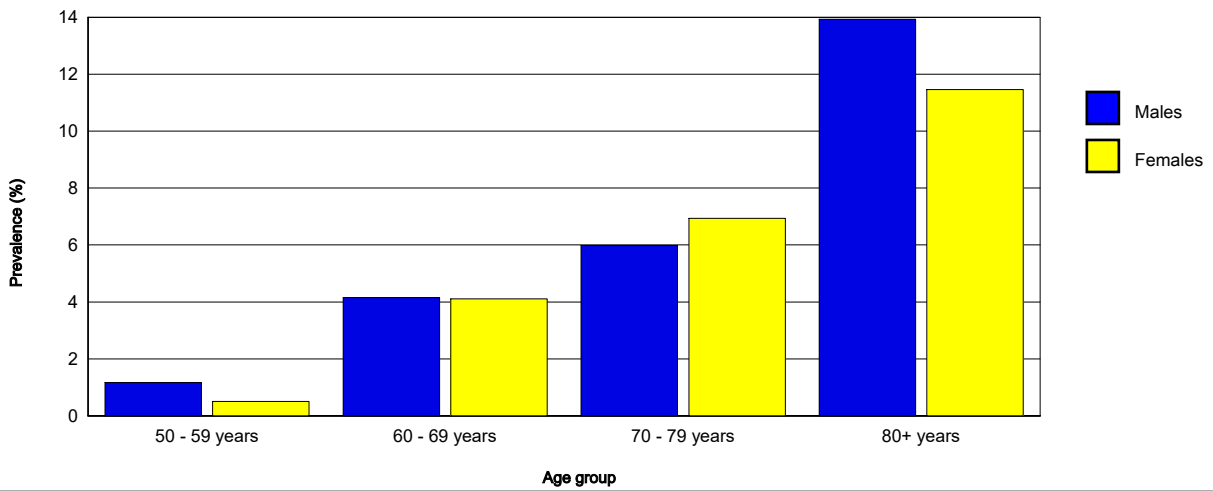
### 9. Prevalence of people with unilateral severe visual impairment - VA <6/60-3/60 with available correction

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 8 | 1.4% | 6 | 0.7% | 14 | 1.0% |
| 60 - 69 years | 14 | 3.8% | 18 | 4.1% | 32 | 3.9% |
| 70 - 79 years | 6 | 3.3% | 10 | 5.8% | 16 | 4.5% |
| 80+ years | 11 | 13.9% | 3 | 6.3% | 14 | 11.0% |
| **Total** | **39** | **3.3%** | **37** | **2.4%** | **76** | **2.8%** |



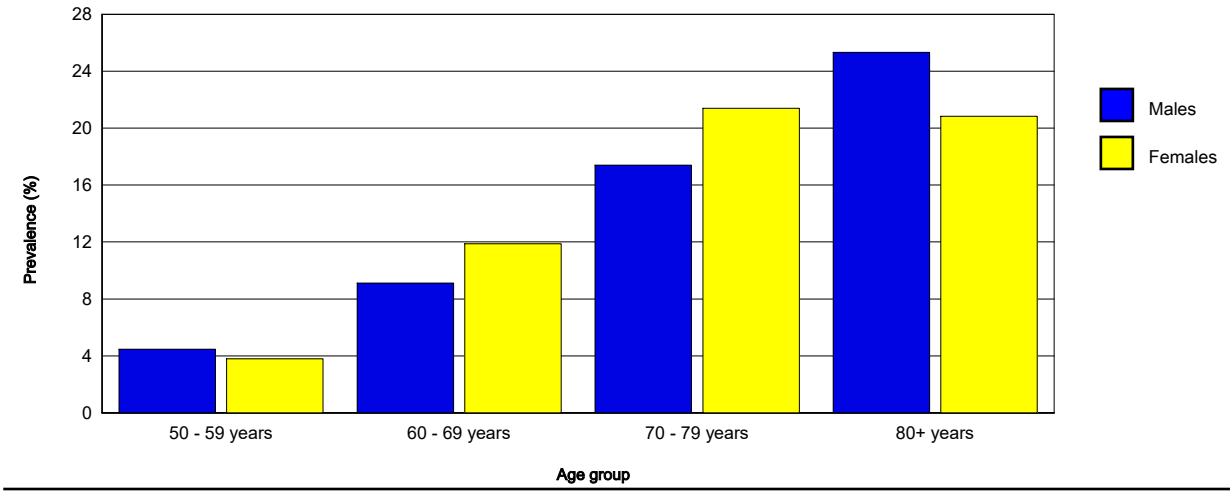

### 10. Prevalence of SVI eyes - VA VA<6/60-3/60 with available correction

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 13 | 1.2% | 9 | 0.5% | 22 | 0.8% |
| 60 - 69 years | 31 | 4.2% | 36 | 4.1% | 67 | 4.1% |
| 70 - 79 years | 22 | 6.0% | 24 | 6.9% | 46 | 6.4% |
| 80+ years | 22 | 13.9% | 11 | 11.5% | 33 | 13.0% |
| **Total** | **88** | **3.7%** | **80** | **2.6%** | **168** | **3.1%** |



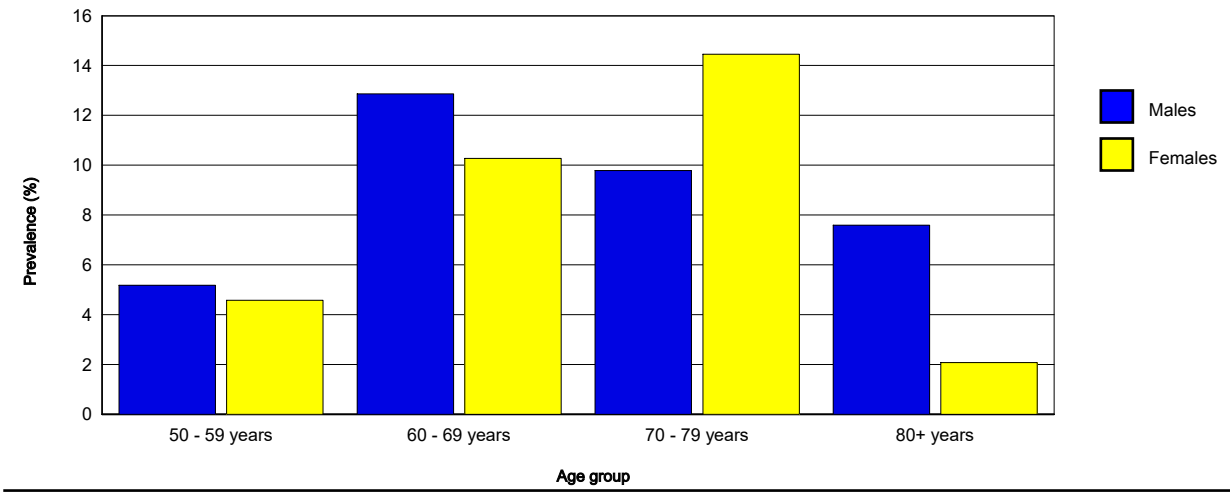
**11. Prevalence of people with bilateral moderate visual impairment - VA <6/18-6/60 in better eye with available correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 25 | 4.5% | 34 | 3.8% | 59 | 4.1% |
| 60 - 69 years | 34 | 9.1% | 52 | 11.9% | 86 | 10.6% |
| 70 - 79 years | 32 | 17.4% | 37 | 21.4% | 69 | 19.3% |
| 80+ years | 20 | 25.3% | 10 | 20.8% | 30 | 23.6% |
| **Total** | **111** | **9.3%** | **133** | **8.6%** | **244** | **8.9%** |



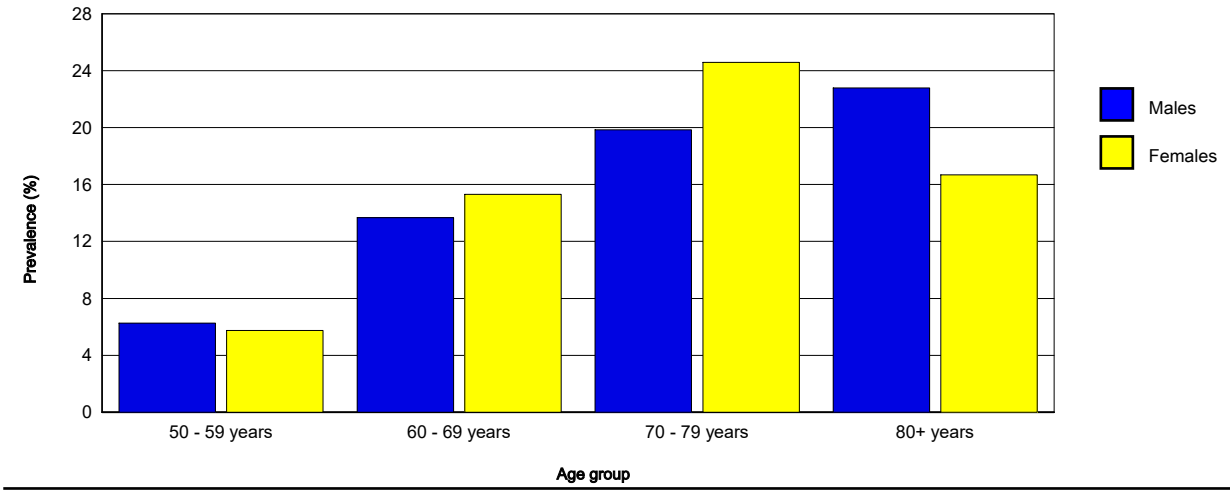

**12. Prevalence of people with unilateral visual impairment - VA <6/18-6/60 with available correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 29 | 5.2% | 41 | 4.6% | 70 | 4.8% |
| 60 - 69 years | 48 | 12.9% | 45 | 10.3% | 93 | 11.5% |
| 70 - 79 years | 18 | 9.8% | 25 | 14.5% | 43 | 12.0% |
| 80+ years | 6 | 7.6% | 1 | 2.1% | 7 | 5.5% |
| **Total** | **101** | **8.5%** | **112** | **7.2%** | **213** | **7.7%** |



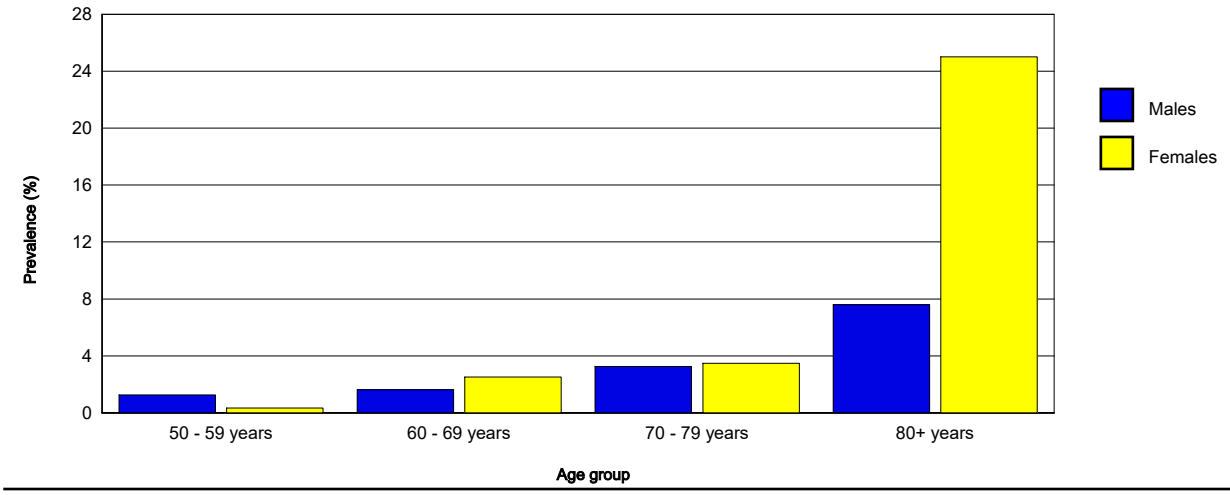
### 13. Prevalence of MVI eyes - VA<6/18-6/60 with available correction

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 70 | 6.3% | 103 | 5.8% | 173 | 5.9% |
| 60 - 69 years | 102 | 13.7% | 134 | 15.3% | 236 | 14.5% |
| 70 - 79 years | 73 | 19.8% | 85 | 24.6% | 158 | 22.1% |
| 80+ years | 36 | 22.8% | 16 | 16.7% | 52 | 20.5% |
| **Total** | **281** | **11.8%** | **338** | **10.9%** | **619** | **11.3%** |



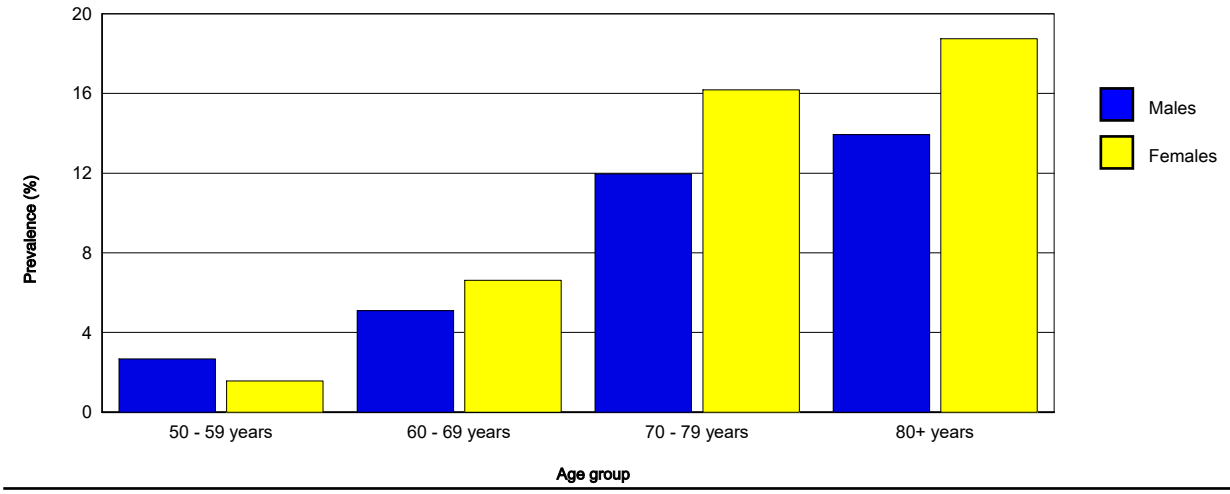

### 14. Prevalence of people bilateral blind due to cataract - VA<3/60 in better eye with best correction

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 7 | 1.3% | 3 | 0.3% | 10 | 0.7% |
| 60 - 69 years | 6 | 1.6% | 11 | 2.5% | 17 | 2.1% |
| 70 - 79 years | 6 | 3.3% | 6 | 3.5% | 12 | 3.4% |
| 80+ years | 6 | 7.6% | 12 | 25.0% | 18 | 14.2% |
| **Total** | **25** | **2.1%** | **32** | **2.1%** | **57** | **2.1%** |



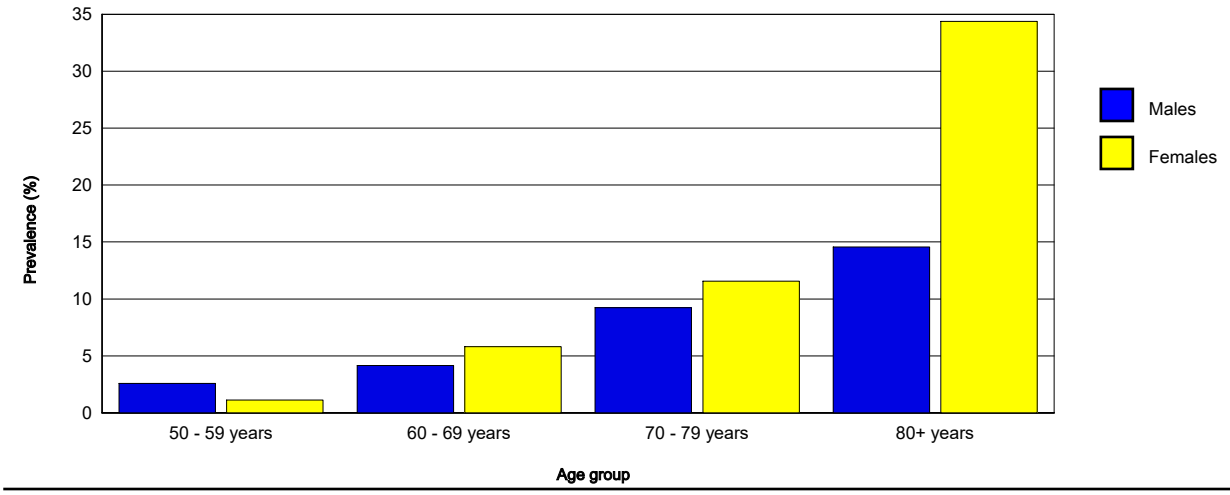
### 15. Prevalence of people unilateral blind due to cataract - VA <3/60 with best correction

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 15 | 2.7% | 14 | 1.6% | 29 | 2.0% |
| 60 - 69 years | 19 | 5.1% | 29 | 6.6% | 48 | 5.9% |
| 70 - 79 years | 22 | 12.0% | 28 | 16.2% | 50 | 14.0% |
| 80+ years | 11 | 13.9% | 9 | 18.8% | 20 | 15.7% |
| **Total** | **67** | **5.6%** | **80** | **5.1%** | **147** | **5.3%** |



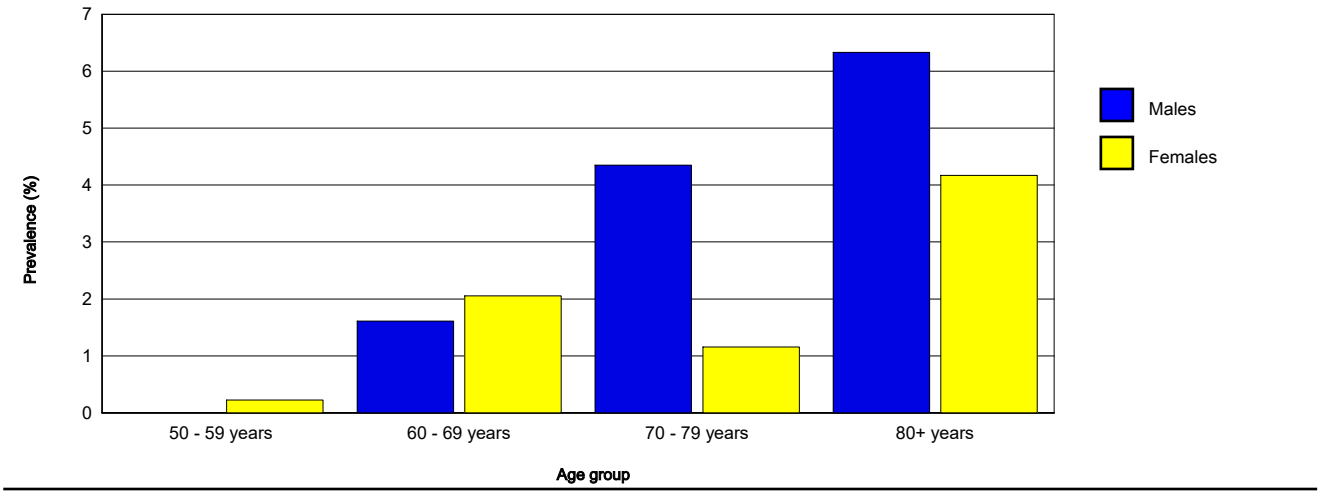

### 16. Prevalence of cataract blind eyes - VA <3/60 with best correction

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 29 | 2.6% | 20 | 1.1% | 49 | 1.7% |
| 60 - 69 years | 31 | 4.2% | 51 | 5.8% | 82 | 5.1% |
| 70 - 79 years | 34 | 9.2% | 40 | 11.6% | 74 | 10.4% |
| 80+ years | 23 | 14.6% | 33 | 34.4% | 56 | 22.0% |
| **Total** | **117** | **4.9%** | **144** | **4.6%** | **261** | **4.7%** |



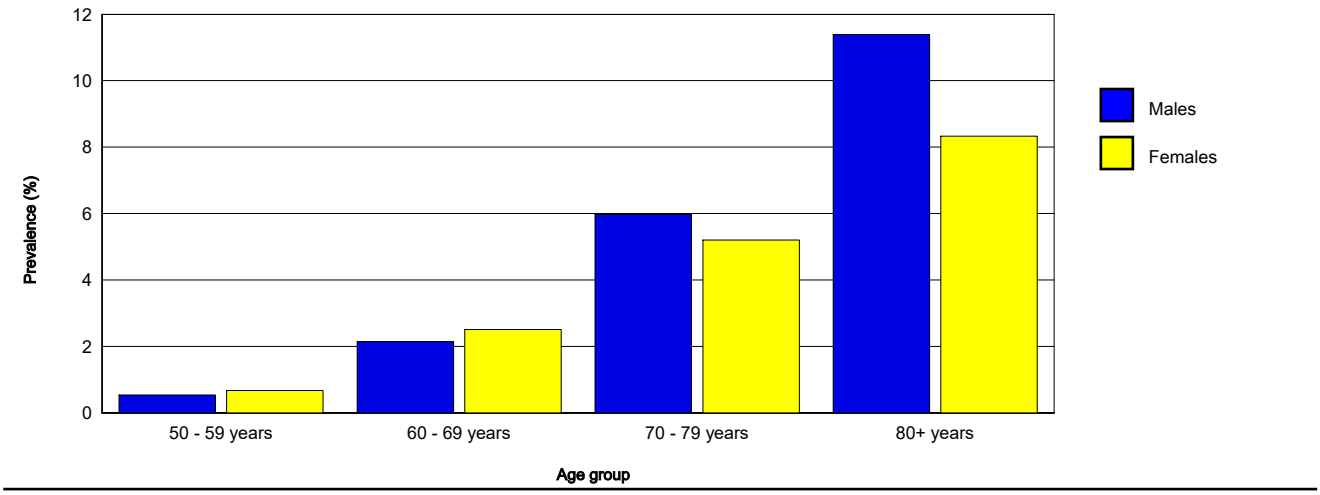
**17. Prevalence of people with bilateral severe visual impairment due to cataract - VA <6/60-3/60 - best eye, best correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 0 | 0.0% | 2 | 0.2% | 2 | 0.1% |
| 60 - 69 years | 6 | 1.6% | 9 | 2.1% | 15 | 1.8% |
| 70 - 79 years | 8 | 4.3% | 2 | 1.2% | 10 | 2.8% |
| 80+ years | 5 | 6.3% | 2 | 4.2% | 7 | 5.5% |
| **Total** | **19** | **1.6%** | **15** | **1.0%** | **34** | **1.2%** |



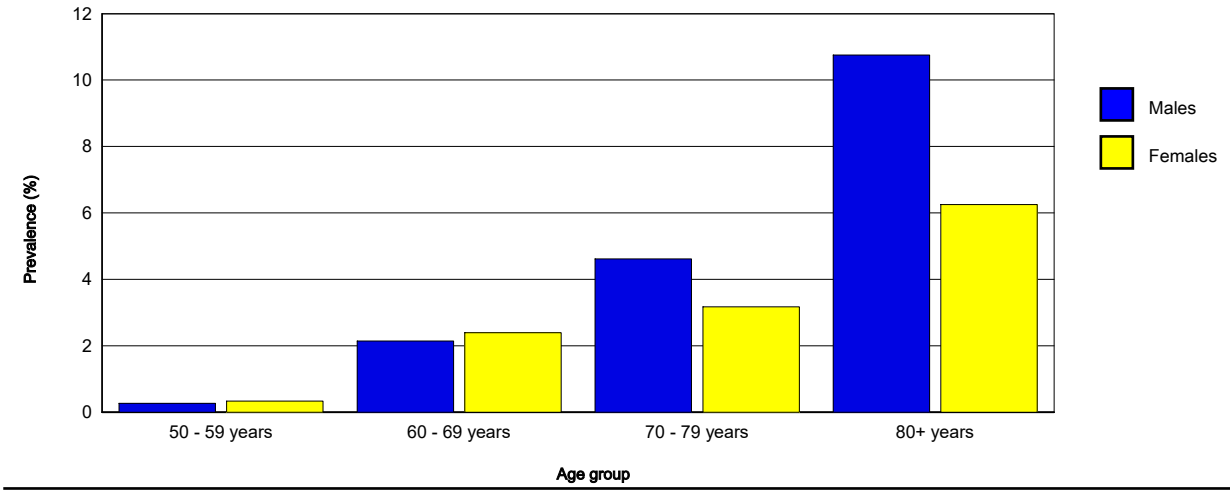

**18. Prevalence of people with unilateral severe visual impairment due to cataract - VA<6/60-3/60 with best correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 3 | 0.5% | 6 | 0.7% | 9 | 0.6% |
| 60 - 69 years | 8 | 2.1% | 11 | 2.5% | 19 | 2.3% |
| 70 - 79 years | 11 | 6.0% | 9 | 5.2% | 20 | 5.6% |
| 80+ years | 9 | 11.4% | 4 | 8.3% | 13 | 10.2% |
| **Total** | **31** | **2.6%** | **30** | **1.9%** | **61** | **2.2%** |



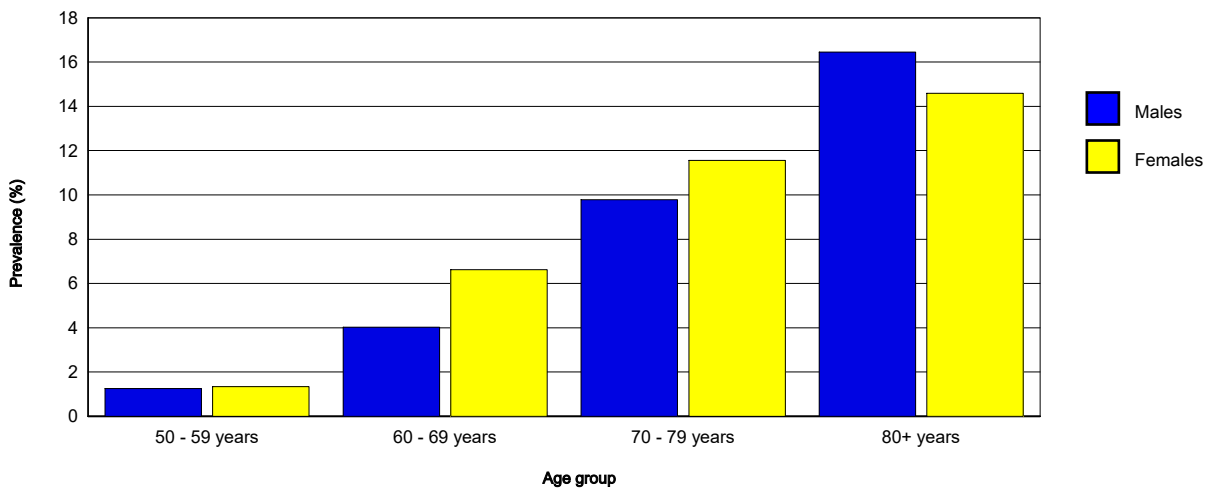
**19. Prevalence of cataract SVI eyes - VA<6/60-3/60 with best correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 3 | 0.3% | 6 | 0.3% | 9 | 0.3% |
| 60 - 69 years | 16 | 2.1% | 21 | 2.4% | 37 | 2.3% |
| 70 - 79 years | 17 | 4.6% | 11 | 3.2% | 28 | 3.9% |
| 80+ years | 17 | 10.8% | 6 | 6.3% | 23 | 9.1% |
| **Total** | **53** | **2.2%** | **44** | **1.4%** | **97** | **1.8%** |



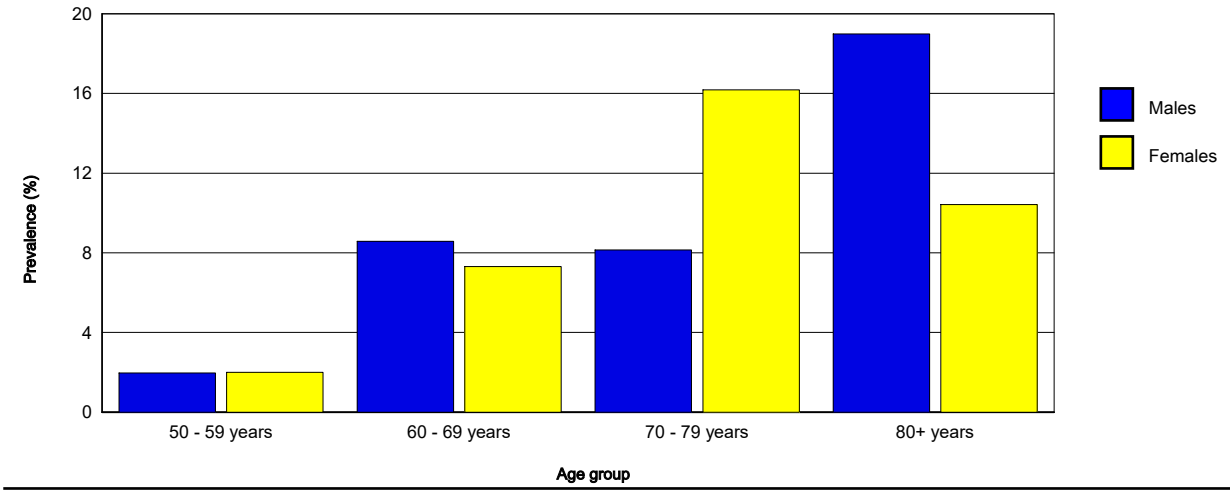

**20. Prevalence of people with bilateral moderate visual impairment due to cataract - VA<6/18-6/60 - best eye, best correction**

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 7 | 1.3% | 12 | 1.3% | 19 | 1.3% |
| 60 - 69 years | 15 | 4.0% | 29 | 6.6% | 44 | 5.4% |
| 70 - 79 years | 18 | 9.8% | 20 | 11.6% | 38 | 10.6% |
| 80+ years | 13 | 16.5% | 7 | 14.6% | 20 | 15.7% |
| **Total** | **53** | **4.4%** | **68** | **4.4%** | **121** | **4.4%** |



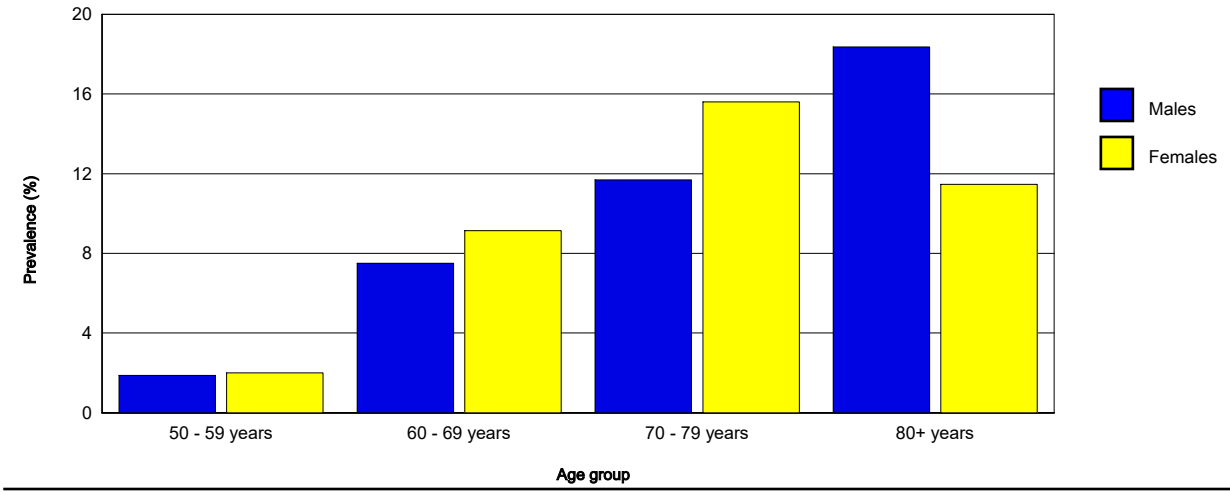
### 21. Prevalence of people with unilateral moderate visual impairment due to cataract - VA<6/18-6/60 best corrected

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 11 | 2.0% | 18 | 2.0% | 29 | 2.0% |
| 60 - 69 years | 32 | 8.6% | 32 | 7.3% | 64 | 7.9% |
| 70 - 79 years | 15 | 8.2% | 28 | 16.2% | 43 | 12.0% |
| 80+ years | 15 | 19.0% | 5 | 10.4% | 20 | 15.7% |
| **Total** | **73** | **6.1%** | **83** | **5.3%** | **156** | **5.7%** |



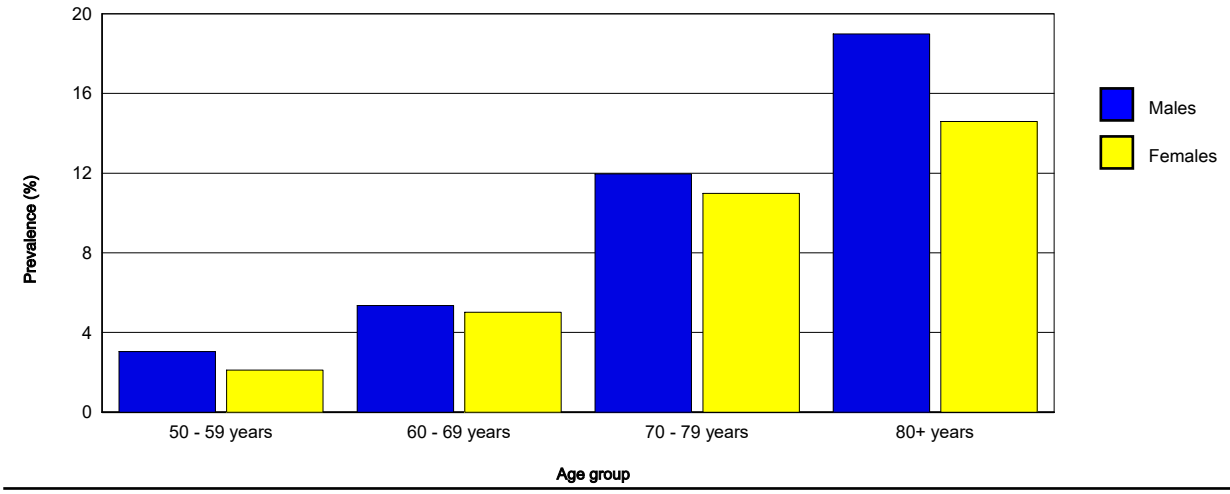

### 22. Prevalence of cataract MVI eyes - VA <6/18-6/60 with best correction

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 21 | 1.9% | 36 | 2.0% | 57 | 2.0% |
| 60 - 69 years | 56 | 7.5% | 80 | 9.1% | 136 | 8.4% |
| 70 - 79 years | 43 | 11.7% | 54 | 15.6% | 97 | 13.6% |
| 80+ years | 29 | 18.4% | 11 | 11.5% | 40 | 15.7% |
| **Total** | **149** | **6.2%** | **181** | **5.8%** | **330** | **6.0%** |



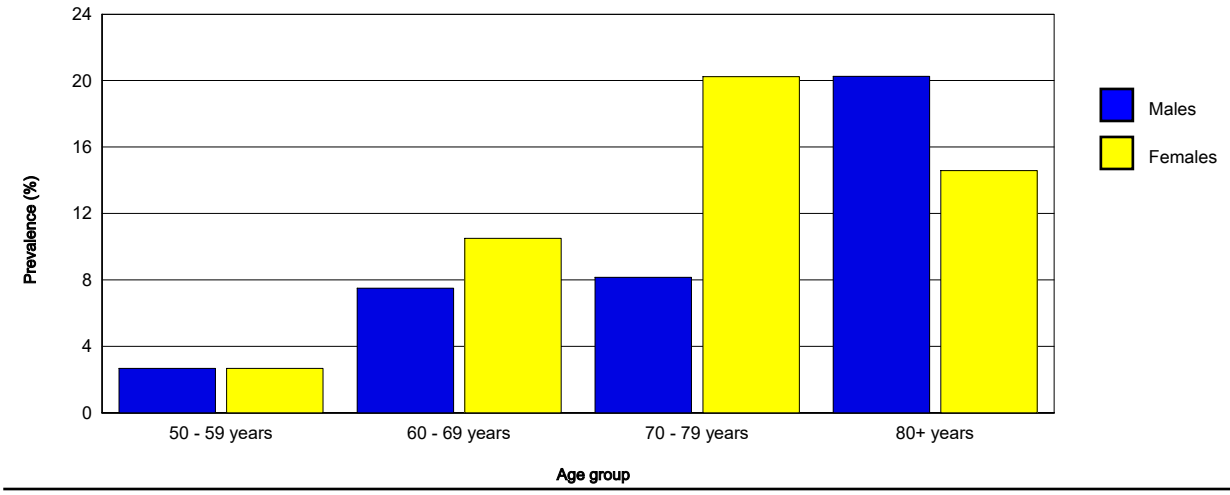
### 23. Prevalence of people with bilateral (pseudo)aphakia

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 17 | 3.0% | 19 | 2.1% | 36 | 2.5% |
| 60 - 69 years | 20 | 5.4% | 22 | 5.0% | 42 | 5.2% |
| 70 - 79 years | 22 | 12.0% | 19 | 11.0% | 41 | 11.5% |
| 80+ years | 15 | 19.0% | 7 | 14.6% | 22 | 17.3% |
| **Total** | **74** | **6.2%** | **67** | **4.3%** | **141** | **5.1%** |




### 24. Prevalence of people with unilateral (pseudo)aphakia

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 15 | 2.7% | 24 | 2.7% | 39 | 2.7% |
| 60 - 69 years | 28 | 7.5% | 46 | 10.5% | 74 | 9.1% |
| 70 - 79 years | 15 | 8.2% | 35 | 20.2% | 50 | 14.0% |
| 80+ years | 16 | 20.3% | 7 | 14.6% | 23 | 18.1% |
| **Total** | **74** | **6.2%** | **112** | **7.2%** | **186** | **6.8%** |



# RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

## AGE AND SEX ADJUSTED PREVALENCE AND ESTIMATED NUMBERS

| | | |
|---|---|---|
| Date and time of report: | 23-Jun-16 | 9:54:40AM |
| This report is for the survey area: | NALBARI | |
| Year and month when survey was conducted: | 2016- 5 until 2016- 5 | |

The prevalence of blindness and visual impairment increases strongly with age and in most communities, females are more affected than males. Normally, the people examined in the sample should have the same composition by age and by sex as the total population in the survey area. When there is a difference, the prevalence for the survey area will also differ. Table 2 and 3 compare the composition in the sample with that of the survey area. By combining the age and sex specific prevalence with the actual population, the age and sex adjusted prevalence and the actual number of people affected in the survey area can be calculated. The 95% confidence interval, based on the sample error in cluster sampling, is also given.

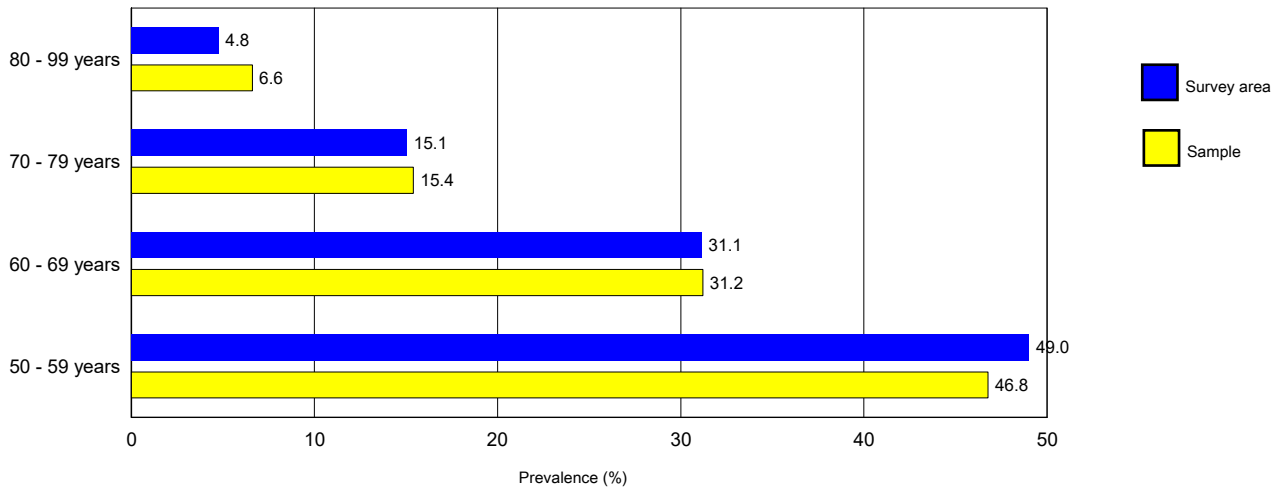
### 1. Age and sex distribution of people examined in the sample

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 559 | 46.8% | 895 | 57.6% | **1,454** | **52.9%** |
| 60 - 69 years | 373 | 31.2% | 438 | 28.2% | **811** | **29.5%** |
| 70 - 79 years | 184 | 15.4% | 173 | 11.1% | **357** | **13.0%** |
| 80 - 99 years | 79 | 6.6% | 48 | 3.1% | **127** | **4.6%** |
| **Total** | **1,195** | **100.0%** | **1,554** | **100.0%** | **2,749** | **100.0%** |

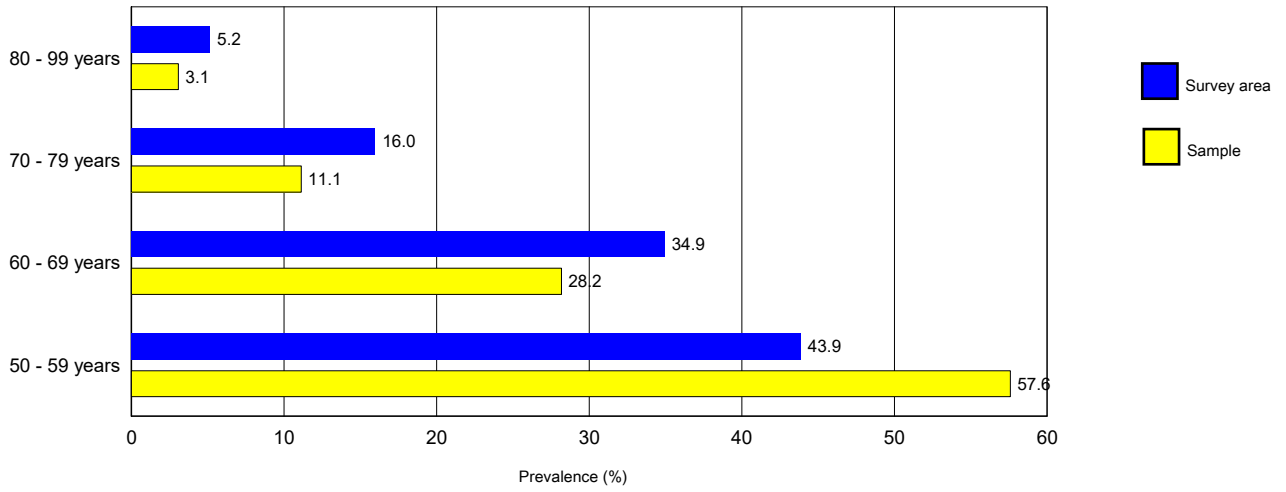
### 2. Total number of people aged 50+ in survey area

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 50 - 59 years | 29,827 | 49.0% | 24,997 | 43.9% | **54,824** | **46.5%** |
| 60 - 69 years | 18,950 | 31.1% | 19,909 | 34.9% | **38,859** | **33.0%** |
| 70 - 79 years | 9,160 | 15.1% | 9,113 | 16.0% | **18,273** | **15.5%** |
| 80 - 99 years | 2,903 | 4.8% | 2,950 | 5.2% | **5,853** | **5.0%** |
| **Total** | **60,840** | **100.0%** | **56,969** | **100.0%** | **117,809** | **100.0%** |

### 3. Proportion of males in total survey area and in sample



### 4. Proportion of females in total survey area and in sample




### 5. Adjusted results for all causes of blindness, severe (SVI), moderate (MVI) and early visual impairment (SVI)

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % (95% CI) | n | % (95% CI) | n | % (95% CI) |
| **Blindness - VA < 3/60 in the better eye with best correction or pinhole** | | | | | | |
| All bilateral cases | 1,396 | 2.3 (1.4 - 3.2) | 1,899 | 3.3 (2.6 - 4.1) | 3,295 | 2.8 (2.2 - 3.4) |
| All eyes | 7,598 | 6.2 (5.0 - 7.4) | 8,284 | 7.3 (6.4 - 8.2) | 15,882 | 6.7 (6.0 - 7.5) |
| **Blindness - VA < 3/60 in the better eye with available correction (presenting VA)** | | | | | | |
| All bilateral cases | 1,532 | 2.5 (1.6 - 3.5) | 2,042 | 3.6 (2.8 - 4.4) | 3,574 | 3.0 (2.4 - 3.7) |
| All eyes | 8,083 | 6.6 (5.4 - 7.9) | 8,831 | 7.8 (6.8 - 8.7) | 16,914 | 7.2 (6.4 - 7.9) |
| **Severe visual impairment (SVI) - VA<6/60 - 3/60 in the better eye with available correction** | | | | | | |
| All bilateral cases | 1,436 | 2.4 (1.5 - 3.2) | 1,418 | 2.5 (1.8 - 3.2) | 2,854 | 2.4 (1.9 - 2.9) |
| All eyes | 4,172 | 3.4 (2.4 - 4.4) | 3,827 | 3.4 (2.8 - 4.0) | 7,999 | 3.4 (2.8 - 4.0) |
| **Moderate visual impairment (MVI) - VA<6/18 - 6/60 in the better eye with available correction** | | | | | | |
| All bilateral cases | 5,389 | 8.9 (7.0 - 10.8) | 5,878 | 10.3 (8.7 - 11.9) | 11,267 | 9.6 (8.2 - 10.9) |
| All eyes | 13,874 | 11.4 (9.7 - 13.1) | 14,428 | 12.7 (11.1 - 14.2) | 28,302 | 12.0 (10.7 - 13.3) |
| **Early visual impairment (EVI) - VA<6/12 - 6/18 in the better eye with available correction** | | | | | | |
| All bilateral cases | 6,229 | 10.2 (8.6 - 11.9) | 7,700 | 13.5 (12.0 - 15.0) | 13,929 | 11.8 (10.7 - 12.9) |
| All eyes | 13,618 | 11.2 (9.8 - 12.6) | 16,946 | 14.9 (13.4 - 16.4) | 30,564 | 13.0 (11.9 - 14.0) |

### 6. Adjusted results for all causes of blindness, VA<3/60, <6/60 and <6/18 with available correction

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % (95% CI) | n | % (95% CI) | n | % (95% CI) |
| **Blindness - VA < 3/60 in the better eye with available correction (presenting VA)** | | | | | | |
| All bilateral cases | 1,532 | 2.5 (1.6 - 3.5) | 2,042 | 3.6 (2.8 - 4.4) | 3,574 | 3.0 (2.4 - 3.7) |
| All eyes | 8,083 | 6.6 (5.4 - 7.9) | 8,831 | 7.8 (6.8 - 8.7) | 16,914 | 7.2 (6.4 - 7.9) |
| **VA<6/60 in the better eye, with available correction (presenting VA)** | | | | | | |
| All bilateral cases | 2,969 | 4.9 (3.5 - 6.3) | 3,459 | 6.1 (5.0 - 7.1) | 6,428 | 5.5 (4.5 - 6.4) |
| All eyes | 12,255 | 10.1 (8.4 - 11.7) | 12,659 | 11.1 (9.9 - 12.4) | 24,914 | 10.6 (9.5 - 11.6) |
| **VA<6/18 in the better eye, with available correction (presenting VA)** | | | | | | |
| All bilateral cases | 8,359 | 13.7 (11.2 - 16.3) | 9,336 | 16.4 (14.5 - 18.3) | 17,695 | 15.0 (13.3 - 16.8) |
| All eyes | 26,130 | 21.5 (19.0 - 24.0) | 27,087 | 23.8 (21.8 - 25.7) | 53,217 | 22.6 (20.8 - 24.4) |
| **VA<6/12 in the better eye, with available correction (presenting VA)** | | | | | | |
| All bilateral cases | 14,587 | 24.0 (21.2 - 26.8) | 17,035 | 29.9 (27.5 - 32.3) | 31,622 | 26.8 (24.7 - 29.0) |
| All eyes | 39,747 | 32.7 (30.1 - 35.2) | 44,034 | 38.6 (36.2 - 41.1) | 83,781 | 35.6 (33.4 - 37.7) |

### 7. Adjusted results for cataract and blindness, SVI, MVI and EVI (best corrected)

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % (95% CI) | n | % (95% CI) | n | % (95% CI) |
| **Cataract and VA<3/60 with best correction or pinhole** | | | | | | |
| Bilateral cataract | 1,198 | 2.0 (1.2 - 2.8) | 1,637 | 2.9 (2.2 - 3.5) | 2,835 | 2.4 (1.9 - 2.9) |
| Unilateral cataract | 3,264 | 5.4 (4.2 - 6.6) | 3,737 | 6.6 (5.6 - 7.5) | 7,001 | 5.9 (5.2 - 6.6) |
| Cataract eyes | 5,660 | 4.7 (3.6 - 5.7) | 7,012 | 6.2 (5.4 - 7.0) | 12,672 | 5.4 (4.8 - 6.0) |
| **Cataract and SVI - VA<6/60 - 3/60 in better eye with best correction or pinhole** | | | | | | |
| Bilateral cataract | 887 | 1.5 (0.8 - 2.1) | 693 | 1.2 (0.9 - 1.6) | 1,580 | 1.3 (1.0 - 1.7) |
| Unilateral cataract | 670 | 1.1 (0.1 - 2.1) | 684 | 1.2 (0.5 - 1.9) | 1,354 | 1.1 (0.5 - 1.8) |
| Cataract eyes | 2,444 | 2.0 (1.2 - 2.8) | 2,071 | 1.8 (1.3 - 2.3) | 4,515 | 1.9 (1.5 - 2.4) |
| **Cataract and Moderate VI (MVI) - VA<6/18 - 6/60 in better eye with best correction or pinhole** | | | | | | |
| Bilateral cataract | 2,510 | 4.1 (2.8 - 5.4) | 3,137 | 5.5 (4.6 - 6.4) | 5,647 | 4.8 (4.0 - 5.6) |
| Unilateral cataract | 2,153 | 3.5 (2.1 - 5.0) | 1,888 | 3.3 (2.1 - 4.5) | 4,041 | 3.4 (2.4 - 4.4) |
| Cataract eyes | 7,173 | 5.9 (4.4 - 7.4) | 8,162 | 7.2 (6.1 - 8.2) | 15,335 | 6.5 (5.7 - 7.4) |
| **Cataract and Early VI (EVI) - VA<6/12 - 6/18 in better eye with best correction or pinhole** | | | | | | |
| Bilateral cataract | 4,260 | 3.5 (2.5 - 4.5) | 5,100 | 4.5 (3.3 - 5.7) | 9,360 | 4.0 (3.1 - 4.9) |
| Unilateral cataract | 1,079 | 0.9 (-0.6 - 2.4) | 691 | 0.6 (-0.8 - 2.0) | 1,770 | 0.8 (-0.3 - 1.8) |
| Cataract eyes | 9,599 | 7.9 (6.8 - 9.0) | 10,894 | 9.6 (8.1 - 11.0) | 20,493 | 8.7 (7.7 - 9.7) |

### 8. Adjusted results for cataract and VA<3/60, <6/60, < 6/18 and <6/12 with best correction

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % (95% CI) | n | % (95% CI) | n | % (95% CI) |
| **Cataract and VA<3/60 with best correction or pinhole** | | | | | | |
| Bilateral cataract | 1,198 | 2.0 (1.2 - 2.8) | 1,637 | 2.9 (2.2 - 3.5) | 2,835 | 2.4 (1.9 - 2.9) |
| Unilateral cataract | 3,264 | 5.4 (4.2 - 6.6) | 3,737 | 6.6 (5.6 - 7.5) | 7,001 | 5.9 (5.2 - 6.6) |
| Cataract eyes | 5,660 | 4.7 (3.6 - 5.7) | 7,012 | 6.2 (5.4 - 7.0) | 12,672 | 5.4 (4.8 - 6.0) |
| **Cataract and VA<6/60 with best correction or pinhole** | | | | | | |
| Bilateral cataract | 2,085 | 3.4 (2.4 - 4.5) | 2,330 | 4.1 (3.4 - 4.8) | 4,415 | 3.7 (3.2 - 4.3) |
| Unilateral cataract | 3,934 | 6.5 (4.9 - 8.1) | 4,422 | 7.8 (6.5 - 9.1) | 8,356 | 7.1 (6.0 - 8.1) |
| Cataract eyes | 8,104 | 6.7 (5.2 - 8.1) | 9,082 | 8.0 (6.9 - 9.0) | 17,186 | 7.3 (6.4 - 8.1) |
| **Cataract and VA<6/18 with best correction or pinhole** | | | | | | |
| Bilateral cataract | 4,594 | 7.6 (5.9 - 9.2) | 5,468 | 9.6 (8.5 - 10.7) | 10,062 | 8.5 (7.5 - 9.6) |
| Unilateral cataract | 6,088 | 10.0 (7.8 - 12.3) | 6,310 | 11.1 (9.2 - 13.0) | 12,398 | 10.5 (8.9 - 12.1) |
| Cataract eyes | 15,277 | 12.6 (10.4 - 14.7) | 17,245 | 15.1 (13.7 - 16.5) | 32,522 | 13.8 (12.4 - 15.2) |
| **Cataract and VA<6/12 with best correction or pinhole** | | | | | | |
| Bilateral cataract | 8,853 | 14.6 (12.4 - 16.7) | 10,568 | 18.6 (16.6 - 20.5) | 19,421 | 16.5 (14.8 - 18.2) |
| Unilateral cataract | 7,168 | 11.8 (8.8 - 14.8) | 7,000 | 12.3 (9.7 - 14.9) | 14,168 | 12.0 (9.8 - 14.2) |
| Cataract eyes | 24,875 | 20.4 (17.6 - 23.3) | 28,138 | 24.7 (22.4 - 27.0) | 53,013 | 22.5 (20.4 - 24.6) |

### 9. Adjusted results for aphakia and pseudophakia

| | Males | | Females | | Total | |
|---|---|---|---|---|---|---|
| | n | % (95% CI) | n | % (95% CI) | n | % (95% CI) |
| Bilateral (pseudo)aphakia | 3,569 | 5.9 (4.0 - 7.8) | 2,962 | 5.2 (4.1 - 6.3) | 6,531 | 5.5 (4.4 - 6.7) |
| Unilateral (pseudo)aphakia | 3,558 | 5.8 (4.4 - 7.3) | 5,035 | 8.8 (7.4 - 10.3) | 8,593 | 7.3 (6.2 - 8.4) |
| Eyes (pseudo)aphakia | 10,697 | 8.8 (6.7 - 10.9) | 10,959 | 9.6 (8.2 - 11.1) | 21,656 | 9.2 (7.8 - 10.6) |

## 10. Adjusted results for cataract surgical coverage

| | Males | Females | Total |
|---|---|---|---|
| **Cataract Surgical Coverage (eyes) - percentage** | | | |
| VA < 3/60 | 65.4 | 61.0 | 63.1 |
| VA < 6/60 | 56.9 | 54.7 | 55.8 |
| VA < 6/18 | 41.2 | 38.9 | 40.0 |
| **Cataract Surgical Coverage (persons) - percentage** | | | |
| VA < 3/60 | 81.9 | 76.5 | 79.1 |
| VA < 6/60 | 72.8 | 70.9 | 71.8 |
| VA < 6/18 | 56.9 | 53.9 | 55.3 |