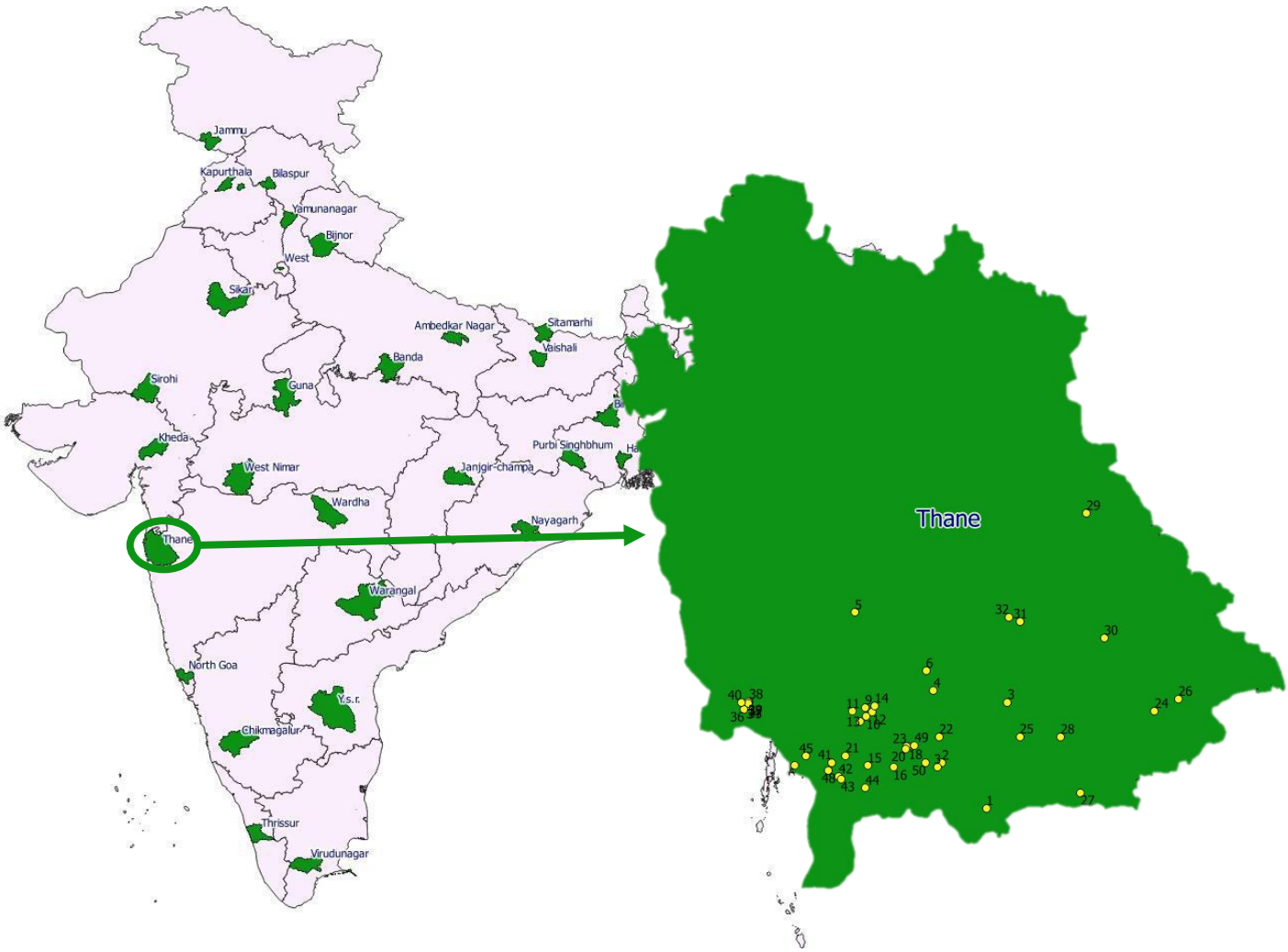
NPCB National Blindness Survey: 2015-2018

DISTRICT SUMMARY REPORT

Thane, Maharashtra



Community Ophthalmology

Dr. Rajendra Prasad Centre for Ophthalmic Sciences

AIIMS, New Delhi - 110029

NPCB National Blindness Survey: 2015-2018

DISTRICT SUMMARY REPORT

Thane, Maharashtra

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: 05-Feb-16 12:08:30PM

This report is for the survey area: thane

Year and month when survey was conducted: 1201- 1 until 2016- 1

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	1,209	89.6%	131	9.7%	4	0.3%	5	0.4%	**1,349**	**100.0%**
Females	1,595	96.6%	44	2.7%	7	0.4%	5	0.3%	**1,651**	**100.0%**
Total	**2,804**	93.5%	**175**	5.8%	**11**	0.4%	**10**	0.3%	**3,000**	**100.0%**

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

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	623	51.5%	881	55.2%	**1,504**	**53.6%**
60 - 69 years	396	32.8%	496	31.1%	**892**	**31.8%**
70 - 79 years	147	12.2%	166	10.4%	**313**	**11.2%**
80+ years	43	3.6%	52	3.3%	**95**	**3.4%**
Total	**1,209**	**100.0%**	**1,595**	**100.0%**	**2,804**	**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	24	2.0 (1.1 - 2.8)	32	2.0 (1.4 - 2.6)	56	2.0 (1.4 - 2.6)
Severe VI	22	1.8 (1.1 - 2.5)	32	2.0 (1.2 - 2.9)	54	1.9 (1.3 - 2.6)
Moderate VI	103	8.5 (6.3 - 10.7)	143	9.0 (7.4 - 10.5)	246	8.8 (7.3 - 10.3)
Early VI	150	12.4 (9.9 - 14.9)	226	14.2 (11.9 - 16.4)	376	13.4 (11.5 - 15.3)
Functional Low Vision	9	0.7 (0.2 - 1.2)	13	0.8 (0.4 - 1.2)	22	0.8 (0.4 - 1.1)

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	15,483	1.9 (1.0 - 2.7)	16,993	2.2 (1.6 - 2.9)	32,477	2.1 (1.5 - 2.6)
Severe VI	14,292	1.7 (1.1 - 2.4)	17,094	2.3 (1.4 - 3.1)	31,388	2.0 (1.3 - 2.6)
Moderate VI	67,389	8.2 (6.0 - 10.4)	73,735	9.7 (8.2 - 11.3)	141,128	8.9 (7.4 - 10.4)
Early VI	99,819	12.1 (9.6 - 14.6)	110,472	14.6 (12.3 - 16.9)	210,294	13.3 (11.4 - 15.2)
Functional Low Vision	5,894	0.7 (0.2 - 1.2)	6,245	0.8 (0.4 - 1.2)	12,139	0.8 (0.4 - 1.1)

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	3	0.5 (0.0 - 1.0)	5	0.6 (0.1 - 1.0)	8	0.5 (0.2 - 0.9)
60 - 69 years	7	1.8 (0.6 - 3.0)	16	3.2 (1.6 - 4.9)	23	2.6 (1.4 - 3.8)
70 - 79 years	11	7.5 (3.8 - 11.2)	6	3.6 (0.9 - 6.3)	17	5.4 (3.2 - 7.7)
80+ years	3	7.0 (0.3 - 13.7)	5	9.6 (0.3 - 18.9)	8	8.4 (2.7 - 14.1)
All 50+ years	24	2.0 (1.1 - 2.8)	32	2.0 (1.4 - 2.6)	56	2.0 (1.4 - 2.6)

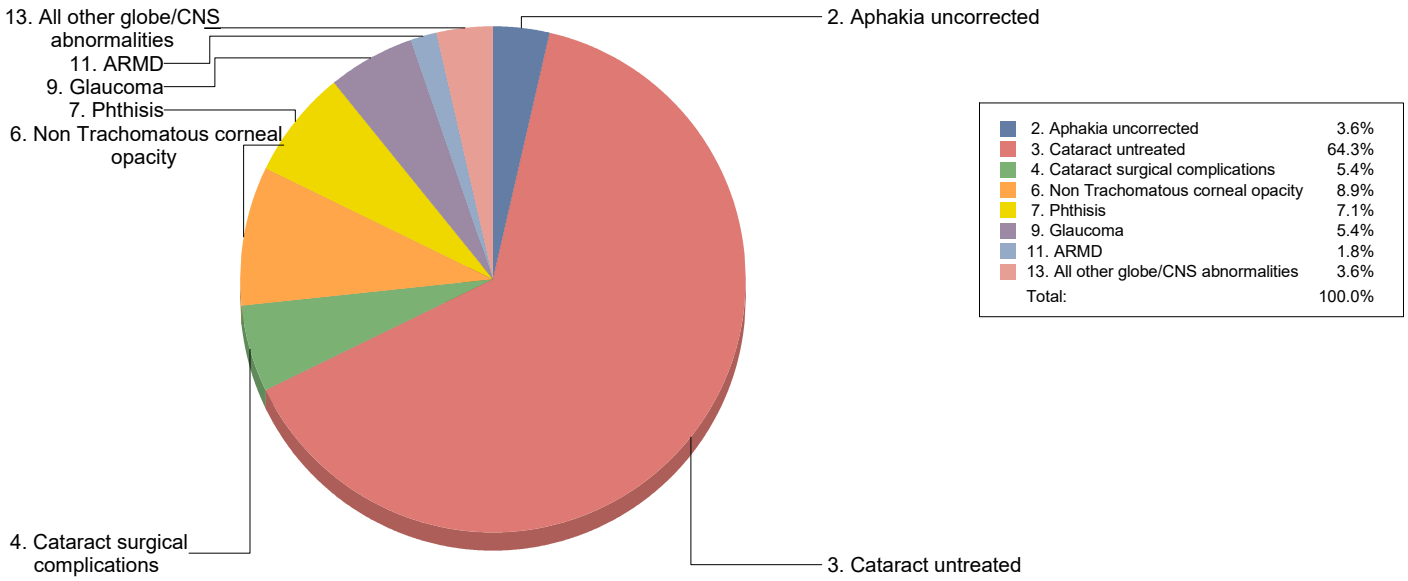
6. Principal cause of blindness, severe (SVI), moderate (MVI) and early (EVI) visual impairment in persons (PVA)

	Blindness		Severe VI		Moderate VI		Early VI	
	n	%	n	%	n	%	n	%
1. Refractive error	0	0.0%	1	1.9%	38	15.4%	247	65.7%
2. Aphakia uncorrected	2	3.6%	1	1.9%	0	0.0%	1	0.3%
3. Cataract untreated	36	64.3%	46	85.2%	177	72.0%	93	24.7%
4. Cataract surgical complications	3	5.4%	4	7.4%	17	6.9%	20	5.3%
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	0	0.0%	0	0.0%
6. Non Trachomatous corneal opacity	5	8.9%	0	0.0%	0	0.0%	2	0.5%
7. Phthisis	4	7.1%	0	0.0%	0	0.0%	1	0.3%
8. Onchocerciasis	0	0.0%	0	0.0%	0	0.0%	0	0.0%
9. Glaucoma	3	5.4%	0	0.0%	2	0.8%	4	1.1%
10. Diabetic retinopathy	0	0.0%	1	1.9%	4	1.6%	3	0.8%
11. ARMD	1	1.8%	0	0.0%	3	1.2%	0	0.0%
12. Other posterior segment disease	0	0.0%	1	1.9%	5	2.0%	5	1.3%
13. All other globe/CNS abnormalities	2	3.6%	0	0.0%	0	0.0%	0	0.0%
Total	**56**	**100.0%**	**54**	**100.0%**	**246**	**100.0%**	**376**	**100.0%**

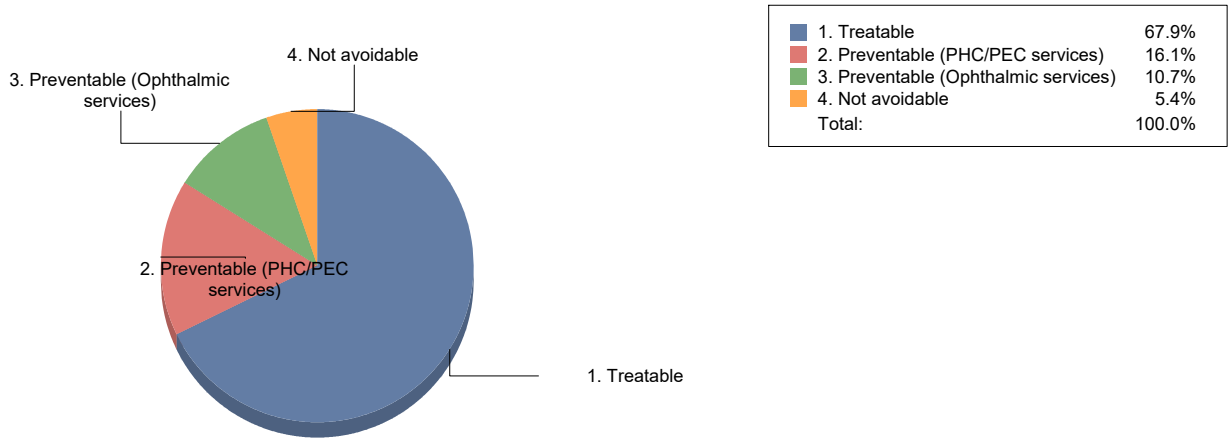
Blindness, SVI, MVI and EVI in persons by intervention category

A. Treatable (1,2,3)	38	67.9%	48	88.9%	215	87.4%	341	90.7%
B. Preventable (PHC/PEC services) (5,6,7,8)	9	16.1%	0	0.0%	0	0.0%	3	0.8%
C. Preventable (Ophthalmic services) (4,9,10)	6	10.7%	5	9.3%	23	9.4%	27	7.2%
D. Avoidable (A+B+C)	53	94.6%	53	98.2%	238	96.8%	371	98.7%
E. Posterior segment causes (8,9,10,11,12)	4	7.1%	2	3.7%	14	5.7%	12	3.2%

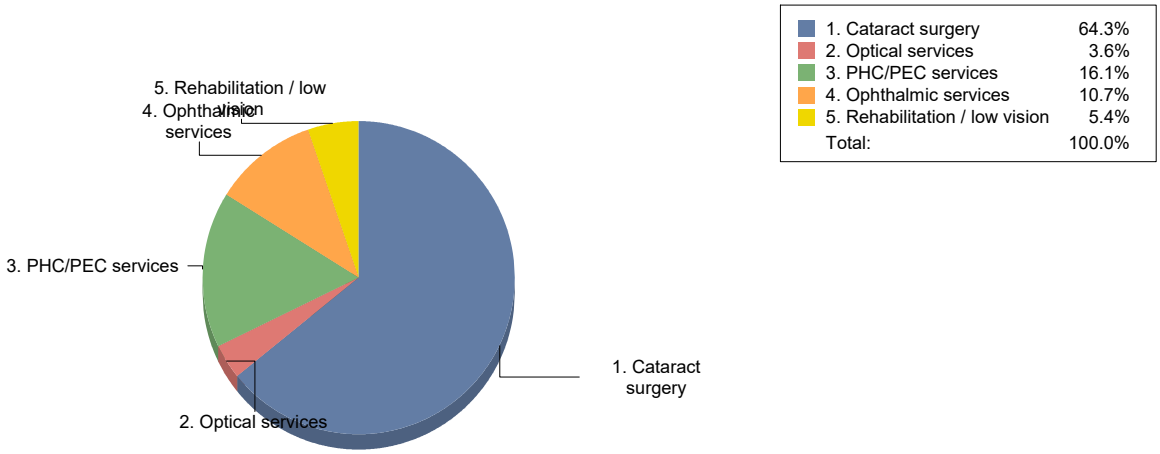
7. Graph: main cause of blindness in persons



8. Graph: main category of blindness in persons



9. Graph: action required to reduce blindness



10. Cataract surgical coverage (persons) - percentage

	Males	Females	Total
VA < 3/60	92.1	94.1	93.3
VA < 6/60	87.7	90.2	89.2
VA < 6/18	70.7	74.0	72.7

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

	Males		Females		Total	
	n	%	n	%	n	%
Need not felt	5	23.8%	12	48.0%	**17**	**37.0%**
Fear	8	38.1%	4	16.0%	**12**	**26.1%**
Cost	2	9.5%	5	20.0%	**7**	**15.2%**
Treatment denied by provider	0	0.0%	0	0.0%	**0**	**0.0%**
Unaware treatment is possible	0	0.0%	1	4.0%	**1**	**2.2%**
Cannot access treatment	1	4.8%	0	0.0%	**1**	**2.2%**
Local reason	5	23.8%	3	12.0%	**8**	**17.4%**
Total	**21**	**100.0%**	**25**	**100.0%**	**46**	**100.0%**

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

	Males		Females		Total	
	n	%	n	%	n	%
Very good: can see 6/12	178	54.8%	313	62.2%	491	59.3%
Good: can see 6/18	60	18.5%	95	18.9%	155	18.7%
Borderline: can see 6/60	55	16.9%	55	10.9%	110	13.3%
Poor: cannot see 6/60	32	9.8%	40	8.0%	72	8.7%
Total	**325**	**100.0%**	**503**	**100.0%**	**828**	**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	4	10.8%	487	61.6%	**491**	**59.3%**
Good: can see 6/18	8	21.6%	147	18.6%	**155**	**18.7%**
Borderline: can see 6/60	5	13.5%	105	13.3%	**110**	**13.3%**
Poor: cannot see 6/60	20	54.1%	52	6.6%	**72**	**8.7%**
Total	**37**	**100.0%**	**791**	**100.0%**	**828**	**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%	491	100.0%
Good: can see 6/18	6	15.0%	67	35.8%	81	77.1%	1	20.0%	0	0.0%
Borderline: can see 6/60	9	22.5%	80	42.8%	20	19.0%	1	20.0%	0	0.0%
Poor: cannot see 6/60	25	62.5%	40	21.4%	4	3.8%	3	60.0%	0	0.0%
Total	**40**	**100.0%**	**187**	**100.0%**	**105**	**100.0%**	**5**	**100.0%**	**491**	**100.0%**

RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

SAMPLE RESULTS - NOT ADJUSTED FOR AGE AND SEX

Date and time of report: 05-Feb-16 12:09:40PM

This report is for the survey area: thane

Year and month when survey was conducted: 1201- 1 until 2016- 1

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	1,209	89.6%	131	9.7%	4	0.3%	5	0.4%	**1,349**	**100.0%**
Females	1,595	96.6%	44	2.7%	7	0.4%	5	0.3%	**1,651**	**100.0%**
Total	**2,804**	**93.5%**	**175**	**5.8%**	**11**	**0.4%**	**10**	**0.3%**	**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	20	1.7% (0.9-2.4)	30	1.9% (1.3-2.5)	**50**	**1.8% (1.3-2.3)**
All blind eyes	142	5.9% (4.6-7.2)	186	5.8% (4.7-6.9)	**328**	**5.9% (4.9-6.8)**
Blindness - VA < 3/60 in the better eye with available correction (presenting VA)						
All bilateral blindness	24	2.0% (1.1-2.8)	32	2.0% (1.4-2.6)	**56**	**2.0% (1.4-2.6)**
All blind eyes	157	6.5% (5.0-8.0)	198	6.2% (5.1-7.3)	**355**	**6.3% (5.3-7.4)**
Severe visual impairment (SVI) - VA<6/60 - 3/60 in the better eye with available correction						
All bilateral Severe VI	22	1.8% (1.1-2.5)	32	2.0% (1.2-2.9)	**54**	**1.9% (1.3-2.6)**
All Severe VI eyes	76	3.1% (2.3-4.0)	96	3.0% (2.4-3.7)	**172**	**3.1% (2.4-3.7)**
Moderate visual impairment (MVI) - VA<6/18 - 6/60 in the better eye with available correction						
All bilateral MVI	103	8.5% (6.3-10.7)	143	9.0% (7.4-10.5)	**246**	**8.8% (7.3-10.3)**
All Moderate VI eyes	254	10.5% (8.6-12.4)	374	11.7% (10.0-13.5)	**628**	**11.2% (9.7-12.7)**
Early visual impairment (EVI) - VA<6/12 - 6/18 in the better eye with available correction						
All bilateral EVI	150	12.4% (9.9-14.9)	226	14.2% (11.9-16.4)	**376**	**13.4% (11.5-15.3)**
All Early VI eyes	338	14.0% (11.9-16.1)	484	15.2% (13.2-17.1)	**822**	**14.7% (13.0-16.3)**

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	24	2.0% (1.1-2.8)	32	2.0% (1.4-2.6)	**56**	**2.0% (1.4-2.6)**
All blind eyes	157	6.5% (5.0-8.0)	198	6.2% (5.1-7.3)	**355**	**6.3% (5.3-7.4)**
VA<6/60 in the better eye, with available correction (presenting VA)						
All bilateral cases	46	3.8% (2.7-5.0)	64	4.0% (2.9-5.2)	**110**	**3.9% (2.9-4.9)**
All eyes	233	9.6% (7.9-11.4)	294	9.2% (7.8-10.7)	**527**	**9.4% (8.1-10.7)**
VA<6/18 in the better eye, with available correction (presenting VA)						
All bilateral cases	149	12.3% (9.6-15.1)	207	13.0% (10.9-15.0)	**356**	**12.7% (10.8-14.6)**
All eyes	487	20.1% (17.1-23.1)	668	20.9% (18.5-23.4)	**1,155**	**20.6% (18.4-22.8)**
VA<6/12 in the better eye, with available correction (presenting VA)						
All bilateral cases	299	24.7% (21.0-28.4)	433	27.2% (23.9-30.4)	**732**	**26.1% (23.2-29.0)**
All eyes	825	34.1% (30.5-37.8)	1,152	36.1% (33.0-39.2)	**1,977**	**35.3% (32.4-38.1)**

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	1	4.2%	1	3.1%	**2**	**3.6%**
3. Cataract untreated	15	62.5%	21	65.6%	**36**	**64.3%**
4. Cataract surgical complications	2	8.3%	1	3.1%	**3**	**5.4%**
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	**0**	**0.0%**
6. Non Trachomatous corneal opacity	3	12.5%	2	6.3%	**5**	**8.9%**
7. Phthisis	1	4.2%	3	9.4%	**4**	**7.1%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	0	0.0%	3	9.4%	**3**	**5.4%**
10. Diabetic retinopathy	0	0.0%	0	0.0%	**0**	**0.0%**
11. ARMD	1	4.2%	0	0.0%	**1**	**1.8%**
12. Other posterior segment disease	0	0.0%	0	0.0%	**0**	**0.0%**
13. All other globe/CNS abnormalities	1	4.2%	1	3.1%	**2**	**3.6%**
Total	**24**	**100.0%**	**32**	**100.0%**	**56**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	16	66.7%	22	68.8%	38	67.9%
B. Preventable (PHC/PEC services) (5,6,7,8)	4	16.7%	5	15.6%	9	16.1%
C. Preventable (Ophthalmic services) (4,9,10)	2	8.3%	4	12.5%	6	10.7%
D. Avoidable (A+B+C)	22	91.7%	31	96.9%	53	94.6%
E. Posterior segment causes (8,9,10,11,12)	1	4.2%	3	9.4%	4	7.1%

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	2	1.3%	2	1.0%	**4**	**1.1%**
3. Cataract untreated	87	55.4%	121	61.1%	**208**	**58.6%**
4. Cataract surgical complications	9	5.7%	13	6.6%	**22**	**6.2%**
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	**0**	**0.0%**
6. Non Trachomatous corneal opacity	16	10.2%	12	6.1%	**28**	**7.9%**
7. Phthisis	11	7.0%	11	5.6%	**22**	**6.2%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	8	5.1%	13	6.6%	**21**	**5.9%**
10. Diabetic retinopathy	1	0.6%	0	0.0%	**1**	**0.3%**
11. ARMD	2	1.3%	1	0.5%	**3**	**0.8%**
12. Other posterior segment disease	15	9.6%	13	6.6%	**28**	**7.9%**
13. All other globe/CNS abnormalities	6	3.8%	12	6.1%	**18**	**5.1%**
Total	**157**	**100.0%**	**198**	**100.0%**	**355**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	89	56.7%	123	62.1%	212	59.7%
B. Preventable (PHC/PEC services) (5,6,7,8)	27	17.2%	23	11.6%	50	14.1%
C. Preventable (Ophthalmic services) (4,9,10)	18	11.5%	26	13.1%	44	12.4%
D. Avoidable (A+B+C)	134	85.4%	172	86.9%	306	86.2%
E. Posterior segment causes (8,9,10,11,12)	26	16.6%	27	13.6%	53	14.9%

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	1	4.5%	0	0.0%	**1**	**1.9%**
2. Aphakia uncorrected	0	0.0%	1	3.1%	**1**	**1.9%**
3. Cataract untreated	19	86.4%	27	84.4%	**46**	**85.2%**
4. Cataract surgical complications	2	9.1%	2	6.3%	**4**	**7.4%**
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	0	0.0%	1	3.1%	**1**	**1.9%**
11. ARMD	0	0.0%	0	0.0%	**0**	**0.0%**
12. Other posterior segment disease	0	0.0%	1	3.1%	**1**	**1.9%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**22**	**100.0%**	**32**	**100.0%**	**54**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	20	90.9%	28	87.5%	48	88.9%
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)	2	9.1%	3	9.4%	5	9.3%
D. Avoidable (A+B+C)	22	100.0%	31	96.9%	53	98.2%
E. Posterior segment causes (8,9,10,11,12)	0	0.0%	2	6.3%	2	3.7%

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	2	2.6%	3	3.1%	**5**	**2.9%**
2. Aphakia uncorrected	0	0.0%	0	0.0%	**0**	**0.0%**
3. Cataract untreated	63	82.9%	79	82.3%	**142**	**82.6%**
4. Cataract surgical complications	9	11.8%	9	9.4%	**18**	**10.5%**
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	**0**	**0.0%**
6. Non Trachomatous corneal opacity	0	0.0%	1	1.0%	**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	1	1.3%	0	0.0%	**1**	**0.6%**
10. Diabetic retinopathy	1	1.3%	2	2.1%	**3**	**1.7%**
11. ARMD	0	0.0%	0	0.0%	**0**	**0.0%**
12. Other posterior segment disease	0	0.0%	1	1.0%	**1**	**0.6%**
13. All other globe/CNS abnormalities	0	0.0%	1	1.0%	**1**	**0.6%**
Total	**76**	**100.0%**	**96**	**100.0%**	**172**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	65	85.5%	82	85.4%	147	85.5%
B. Preventable (PHC/PEC services) (5,6,7,8)	0	0.0%	1	1.0%	1	0.6%
C. Preventable (Ophthalmic services) (4,9,10)	11	14.5%	11	11.5%	22	12.8%
D. Avoidable (A+B+C)	76	100.0%	94	97.9%	170	98.8%
E. Posterior segment causes (8,9,10,11,12)	2	2.6%	3	3.1%	5	2.9%

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	16	15.5%	22	15.4%	**38**	**15.4%**
2. Aphakia uncorrected	0	0.0%	0	0.0%	**0**	**0.0%**
3. Cataract untreated	70	68.0%	107	74.8%	**177**	**72.0%**
4. Cataract surgical complications	11	10.7%	6	4.2%	**17**	**6.9%**
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	1	1.0%	1	0.7%	**2**	**0.8%**
10. Diabetic retinopathy	2	1.9%	2	1.4%	**4**	**1.6%**
11. ARMD	1	1.0%	2	1.4%	**3**	**1.2%**
12. Other posterior segment disease	2	1.9%	3	2.1%	**5**	**2.0%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**103**	**100.0%**	**143**	**100.0%**	**246**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	86	83.5%	129	90.2%	215	87.4%
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)	14	13.6%	9	6.3%	23	9.4%
D. Avoidable (A+B+C)	100	97.1%	138	96.5%	238	96.8%
E. Posterior segment causes (8,9,10,11,12)	6	5.8%	8	5.6%	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	52	20.5%	80	21.4%	**132**	**21.0%**
2. Aphakia uncorrected	1	0.4%	1	0.3%	**2**	**0.3%**
3. Cataract untreated	141	55.5%	225	60.2%	**366**	**58.3%**
4. Cataract surgical complications	40	15.7%	40	10.7%	**80**	**12.7%**
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	**0**	**0.0%**
6. Non Trachomatous corneal opacity	1	0.4%	4	1.1%	**5**	**0.8%**
7. Phthisis	0	0.0%	0	0.0%	**0**	**0.0%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	3	1.2%	3	0.8%	**6**	**1.0%**
10. Diabetic retinopathy	6	2.4%	5	1.3%	**11**	**1.8%**
11. ARMD	2	0.8%	6	1.6%	**8**	**1.3%**
12. Other posterior segment disease	7	2.8%	9	2.4%	**16**	**2.5%**
13. All other globe/CNS abnormalities	1	0.4%	1	0.3%	**2**	**0.3%**
Total	**254**	**100.0%**	**374**	**100.0%**	**628**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	194	76.4%	306	81.8%	500	79.6%
B. Preventable (PHC/PEC services) (5,6,7,8)	1	0.4%	4	1.1%	5	0.8%
C. Preventable (Ophthalmic services) (4,9,10)	49	19.3%	48	12.8%	97	15.4%
D. Avoidable (A+B+C)	244	96.1%	358	95.7%	602	95.9%
E. Posterior segment causes (8,9,10,11,12)	18	7.1%	23	6.1%	41	6.5%

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	101	67.3%	146	64.6%	**247**	**65.7%**
2. Aphakia uncorrected	1	0.7%	0	0.0%	**1**	**0.3%**
3. Cataract untreated	33	22.0%	60	26.5%	**93**	**24.7%**
4. Cataract surgical complications	9	6.0%	11	4.9%	**20**	**5.3%**
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	**0**	**0.0%**
6. Non Trachomatous corneal opacity	1	0.7%	1	0.4%	**2**	**0.5%**
7. Phthisis	0	0.0%	1	0.4%	**1**	**0.3%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	2	1.3%	2	0.9%	**4**	**1.1%**
10. Diabetic retinopathy	1	0.7%	2	0.9%	**3**	**0.8%**
11. ARMD	0	0.0%	0	0.0%	**0**	**0.0%**
12. Other posterior segment disease	2	1.3%	3	1.3%	**5**	**1.3%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**150**	**100.0%**	**226**	**100.0%**	**376**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	135	90.0%	206	91.2%	341	90.7%
B. Preventable (PHC/PEC services) (5,6,7,8)	1	0.7%	2	0.9%	3	0.8%
C. Preventable (Ophthalmic services) (4,9,10)	12	8.0%	15	6.6%	27	7.2%
D. Avoidable (A+B+C)	148	98.7%	223	98.7%	371	98.7%
E. Posterior segment causes (8,9,10,11,12)	5	3.3%	7	3.1%	12	3.2%

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	229	67.8%	336	69.4%	**565**	**68.7%**
2. Aphakia uncorrected	2	0.6%	0	0.0%	**2**	**0.2%**
3. Cataract untreated	66	19.5%	93	19.2%	**159**	**19.3%**
4. Cataract surgical complications	28	8.3%	39	8.1%	**67**	**8.2%**
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	**0**	**0.0%**
6. Non Trachomatous corneal opacity	1	0.3%	1	0.2%	**2**	**0.2%**
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	0.6%	3	0.6%	**5**	**0.6%**
10. Diabetic retinopathy	4	1.2%	6	1.2%	**10**	**1.2%**
11. ARMD	2	0.6%	2	0.4%	**4**	**0.5%**
12. Other posterior segment disease	4	1.2%	4	0.8%	**8**	**1.0%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**338**	**100.0%**	**484**	**100.0%**	**822**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	297	87.9%	429	88.6%	726	88.3%
B. Preventable (PHC/PEC services) (5,6,7,8)	1	0.3%	1	0.2%	2	0.2%
C. Preventable (Ophthalmic services) (4,9,10)	34	10.1%	48	9.9%	82	10.0%
D. Avoidable (A+B+C)	332	98.2%	478	98.8%	810	98.5%
E. Posterior segment causes (8,9,10,11,12)	12	3.6%	15	3.1%	27	3.3%

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	12	1.0% (0.4-1.6)	14	0.9% (0.4-1.4)	**26**	**0.9% (0.5-1.3)**
Unilateral cataract	57	4.7% (3.5-5.9)	91	5.7% (4.4-7.0)	**148**	**5.3% (4.2-6.3)**
Cataract eyes	81	3.4% (2.4-4.3)	119	3.7% (2.9-4.5)	**200**	**3.6% (2.8-4.3)**
Cataract and VA<6/60 with best correction or pinhole						
Bilateral cataract	21	1.7% (1.0-2.5)	25	1.6% (0.9-2.2)	**46**	**1.6% (1.1-2.2)**
Unilateral cataract	77	6.4% (5.2-8.4)	110	6.9% (5.5-8.0)	**187**	**6.7% (5.6-7.9)**
Cataract eyes	119	4.9% (3.7-6.2)	160	5.0% (4.1-5.9)	**279**	**5.0% (4.1-5.9)**
Cataract and VA<6/18 with best correction or pinhole						
Bilateral cataract	65	5.4% (3.9-6.9)	88	5.5% (4.1-6.9)	**153**	**5.5% (4.3-6.6)**
Unilateral cataract	118	9.8% (8.1-11.4)	160	10.0% (8.5-11.6)	**278**	**9.9% (8.7-11.1)**
Cataract eyes	248	10.3% (8.3-12.2)	336	10.5% (9.0-12.1)	**584**	**10.4% (8.9-11.9)**
Cataract and VA<6/12 with best correction or pinhole						
Bilateral cataract	112	9.3% (7.3-11.2)	173	10.9% (9.0-12.7)	**285**	**10.2% (8.5-11.8)**
Unilateral cataract	136	11.3% (9.5-13.0)	175	11.0% (9.2-12.7)	**311**	**11.1% (9.9-12.3)**
Cataract eyes	360	14.9% (12.6-17.2)	521	16.3% (14.4-18.3)	**881**	**15.7% (13.9-17.5)**

13. Sample prevalence of (pseudo)aphakia

	Males		Females		Total	
	n	% (95%CI)	n	% (95%CI)	n	% (95%CI)
Bilateral (pseudo)aphakia	110	9.1% (7.5-10.7)	177	11.1% (9.3-12.9)	**287**	**10.2% (8.8-11.7)**
Unilateral (pseudo)aphakia	105	8.7% (6.9-10.4)	151	9.5% (7.6-11.4)	**256**	**9.1% (7.6-10.7)**
(Pseudo)aphakic eyes	325	13.4% (11.7-15.1)	505	15.8% (13.7-18.0)	**830**	**14.8% (13.2-16.4)**

14. Cataract Surgical Coverage

	Males	Females	Total
Cataract Surgical Coverage (eyes) - percentage			
VA < 3/60	80.1	80.9	80.6
VA < 6/60	73.2	75.9	74.8
VA < 6/18	56.7	60.1	58.7
Cataract Surgical Coverage (persons) - percentage			
VA < 3/60	92.1	94.1	93.3
VA < 6/60	87.7	90.2	89.2
VA < 6/18	70.7	74.0	72.7

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

	Males		Females		Total	
	n	%	n	%	n	%
First eyes	215	66.2	328	65.0	**543**	**65.4**
Second eyes	110	33.9	177	35.1	**287**	**34.6**

16. Uncorrected refractive error and uncorrected presbyopia

	Males		Females		Total	
	n	%	n	%	n	%
Total refractive errors	513	42.4	582	36.5	**1,095**	**39.1**
Uncorrected refractive errors	120	9.9	170	10.7	**290**	**10.3**
Uncorrected presbyopia	668	55.3	1,086	68.1	**1,754**	**62.6**

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

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59	2	0.3	6	0.7	**8**	**0.5**
60 - 69	2	0.5	6	1.2	**8**	**0.9**
70 - 79	4	2.7	0	0.0	**4**	**1.3**
80+	1	2.3	1	1.9	**2**	**2.1**
Total	9	0.7	13	0.8	**22**	**0.8**

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	3	33.3%	2	15.4%	**5**	**22.7%**
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	**0**	**0.0%**
6. Non Trachomatous corneal opacity	2	22.2%	0	0.0%	**2**	**9.1%**
7. Phthisis	0	0.0%	2	15.4%	**2**	**9.1%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	0	0.0%	2	15.4%	**2**	**9.1%**
10. Diabetic retinopathy	1	11.1%	1	7.7%	**2**	**9.1%**
11. ARMD	1	11.1%	2	15.4%	**3**	**13.6%**
12. Other posterior segment disease	1	11.1%	3	23.1%	**4**	**18.2%**
13. All other globe/CNS abnormalities	1	11.1%	1	7.7%	**2**	**9.1%**
Total	**9**	**100.0%**	**13**	**100.0%**	**22**	**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)	2	22.2%	2	15.4%	4	18.2%
C. Preventable (Ophthalmic services) (4,9,10)	4	44.4%	5	38.5%	9	40.9%
D. Avoidable (A+B+C)	6	66.7%	7	53.9%	13	59.1%
E. Posterior segment causes (8,9,10,11,12)	3	33.3%	8	61.5%	11	50.0%

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+	4	16.7	6	18.8	**10**	**17.9**
BCVA<6/60 - 3/60	1	4.6	0	0.0	**1**	**1.9**
BCVA<6/18 - 6/60	4	3.9	7	4.9	**11**	**4.5**
Total	9	6.0	13	6.3	**22**	**6.2**

RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

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

Date and time of report: 05-Feb-16 12:09:56PM

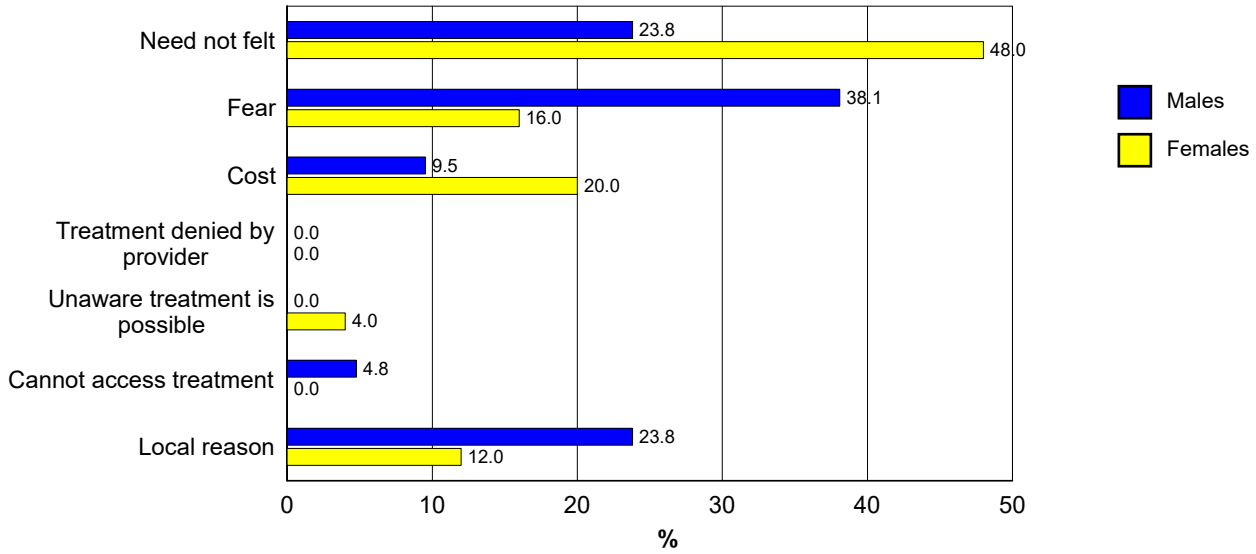
This report is for the survey area: thane

Year and month when survey was conducted: 1201- 1 until 2016- 1

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.

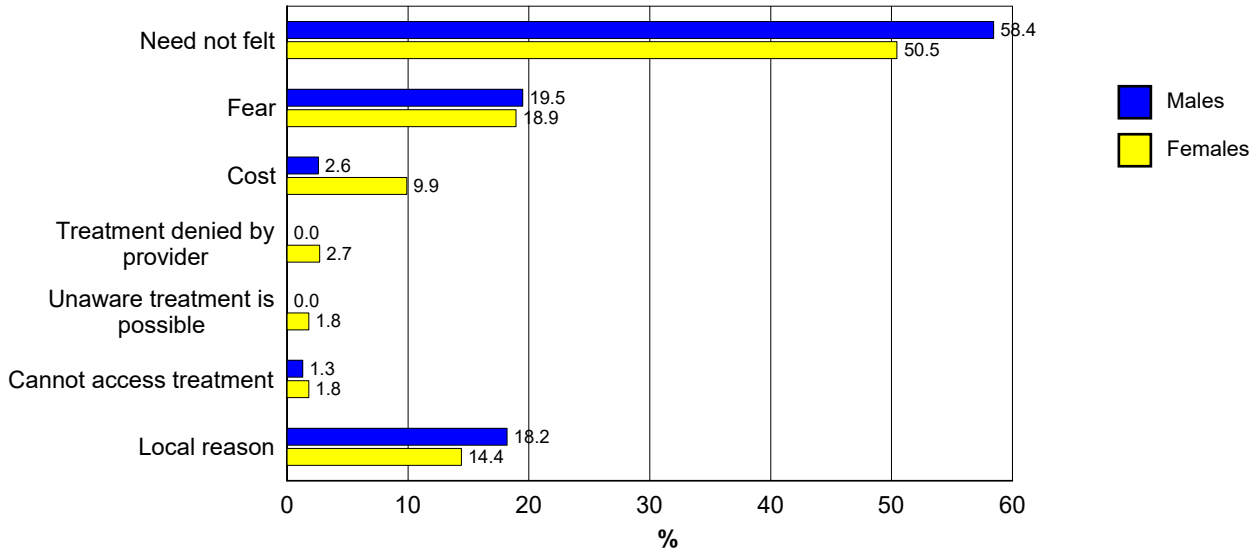
1. Barriers to cataract surgery in sample (bilateral BCVA<6/60 due to cataract)

	Males		Females		Total	
	n	%	n	%	n	%
Need not felt	5	23.8%	12	48.0%	17	37.0%
Fear	8	38.1%	4	16.0%	12	26.1%
Cost	2	9.5%	5	20.0%	7	15.2%
Treatment denied by provider	0	0.0%	0	0.0%	0	0.0%
Unaware treatment is possible	0	0.0%	1	4.0%	1	2.2%
Cannot access treatment	1	4.8%	0	0.0%	1	2.2%
Local reason	5	23.8%	3	12.0%	8	17.4%
Total	**21**	**100.0%**	**25**	**100.0%**	**46**	**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	45	58.4%	56	50.5%	101	53.7%
Fear	15	19.5%	21	18.9%	36	19.1%
Cost	2	2.6%	11	9.9%	13	6.9%
Treatment denied by provider	0	0.0%	3	2.7%	3	1.6%
Unaware treatment is possible	0	0.0%	2	1.8%	2	1.1%
Cannot access treatment	1	1.3%	2	1.8%	3	1.6%
Local reason	14	18.2%	16	14.4%	30	16.0%
Total	**77**	**100.0%**	**111**	**100.0%**	**188**	**100.0%**



RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

VISUAL OUTCOME AFTER CATARACT SURGERY (LONG-TERM OUTCOME)

Date and time of report:	05-Feb-16	12:10:09PM
This report is for the survey area:	thane	
Year and month when survey was conducted:	1201- 1 until 2016- 1	

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	4	10.8%	487	61.6%	0	0.0%	**491**	**59.3%**
Good: can see 6/18	8	21.6%	147	18.6%	0	0.0%	**155**	**18.7%**
Borderline: can see 6/60	5	13.5%	105	13.3%	0	0.0%	**110**	**13.3%**
Poor: cannot see 6/60	20	54.1%	52	6.6%	0	0.0%	**72**	**8.7%**
Total	**37**	**100.0%**	**791**	**100.0%**	**0**	**0.0%**	**828**	**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	8	21.6%	583	73.7%	0	0.0%	**591**	**71.4%**
Good: can see 6/18	7	18.9%	107	13.5%	0	0.0%	**114**	**13.8%**
Borderline: can see 6/60	4	10.8%	57	7.2%	0	0.0%	**61**	**7.4%**
Poor: cannot see 6/60	18	48.6%	44	5.6%	0	0.0%	**62**	**7.5%**
Total	**37**	**100.0%**	**791**	**100.0%**	**0**	**0.0%**	**828**	**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	244	66.3%	141	58.3%	106	48.6%	**491**	**59.3%**
Good: can see 6/18	64	17.4%	38	15.7%	53	24.3%	**155**	**18.7%**
Borderline: can see 6/60	40	10.9%	40	16.5%	30	13.8%	**110**	**13.3%**
Poor: cannot see 6/60	20	5.4%	23	9.5%	29	13.3%	**72**	**8.7%**
Total	**368**	**100.0%**	**242**	**100.0%**	**218**	**100.0%**	**828**	**100.0%**

4. Age at time of surgery in males and females

	Males		Females		Total	
	Eyes	%	Eyes	%	Eyes	%
1 - 29	2	0.6%	0	0.0%	**2**	**0.2%**
30 - 39	6	1.8%	1	0.2%	**7**	**0.8%**
40 - 49	20	6.2%	53	10.5%	**73**	**8.8%**
50 - 59	111	34.2%	198	39.4%	**309**	**37.3%**
60 - 69	131	40.3%	171	34.0%	**302**	**36.5%**
70 - 79	44	13.5%	72	14.3%	**116**	**14.0%**
80+	11	3.4%	8	1.6%	**19**	**2.3%**
Total	**325**	**100.0%**	**503**	**100.0%**	**828**	**100.0%**

5. Place of surgery by sex

	Males		Females		Total	
	Eyes	%	Eyes	%	Eyes	%
Government Hosp.	179	55.1	281	55.9	**460**	**55.6**
Voluntary/charitable hospital	21	6.5	30	6.0	**51**	**6.2**
Private hospital	115	35.4	183	36.4	**298**	**36.0**
Eyecamp	10	3.1	9	1.8	**19**	**2.3**
Total	**325**	**100.0**	**503**	**100.0**	**828**	**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	226	49.1	32	62.7	218	73.2	15	78.9	**491**	**59.3**
Good: can see 6/18	105	22.8	8	15.7	40	13.4	2	10.5	**155**	**18.7**
Borderline: can see 6/60	72	15.7	10	19.6	27	9.1	1	5.3	**110**	**13.3**
Poor: cannot see 6/60	57	12.4	1	2.0	13	4.4	1	5.3	**72**	**8.7**
Total	**460**	**100.0**	**51**	**100.0**	**298**	**100.0**	**19**	**100.0**	**828**	**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	491	100.0	**491**	**59.3**
Good: can see 6/18	6	15.0	67	35.8	81	77.1	1	20.0	0	0.0	**155**	**18.7**
Borderline: can see 6/60	9	22.5	80	42.8	20	19.0	1	20.0	0	0.0	**110**	**13.3**
Poor: cannot see 6/60	25	62.5	40	21.4	4	3.8	3	60.0	0	0.0	**72**	**8.7**
Total	**40**	**100.0**	**187**	**100.0**	**105**	**100.0**	**5**	**100.0**	**491**	**100.0**	**828**	**100.0**

8. Proportion and type of surgery

	Males		Females		Total	
	Eyes	%	Eyes	%	Eyes	%
Non-IOL	20	6.2	17	3.4	**37**	**4.5**
IOL	305	93.8	486	96.6	**791**	**95.5**
Couching	0	0.0	0	0.0	**0**	**0.0**
Total	**325**	**100.0**	**503**	**100.0**	**828**	**100.0**

RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

INDICATORS BY SEX AND BY AGE GROUP - FINDINGS FROM SAMPLE

Date and time of report:	05-Feb-16	12:10:25PM
This report is for the survey area:	thane	
Year and month when survey was conducted:	1201- 1 until 2016- 1	

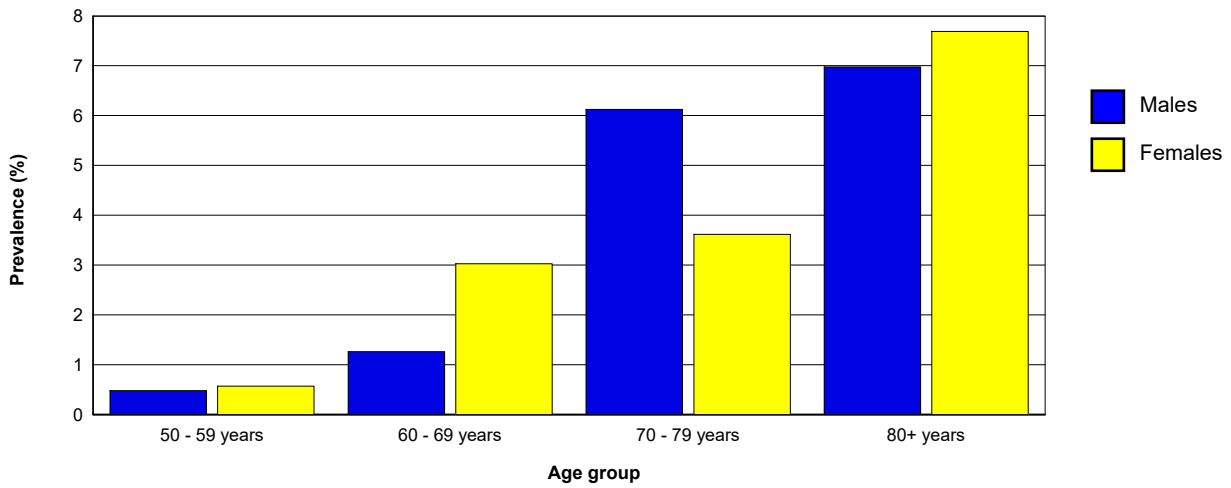
The sample size of the Rapid Assessment is sufficient to provide an acceptable accuracy of the overall prevalence of bilateral blindness (VA <3/60). The accuracy of prevalence estimates for any subgroup is far less and caution should be taken in the interpretation of these data. Confidence intervals 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	623	51.5%	881	55.2%	1,504	53.4%
60 - 69 years	396	32.8%	496	31.1%	892	31.9%
70 - 79 years	147	12.2%	166	10.4%	313	11.3%
80+ years	43	3.6%	52	3.3%	95	3.4%
Total	**1,209**	**100.0%**	**1,595**	**100.0%**	**2,804**	**100.0%**

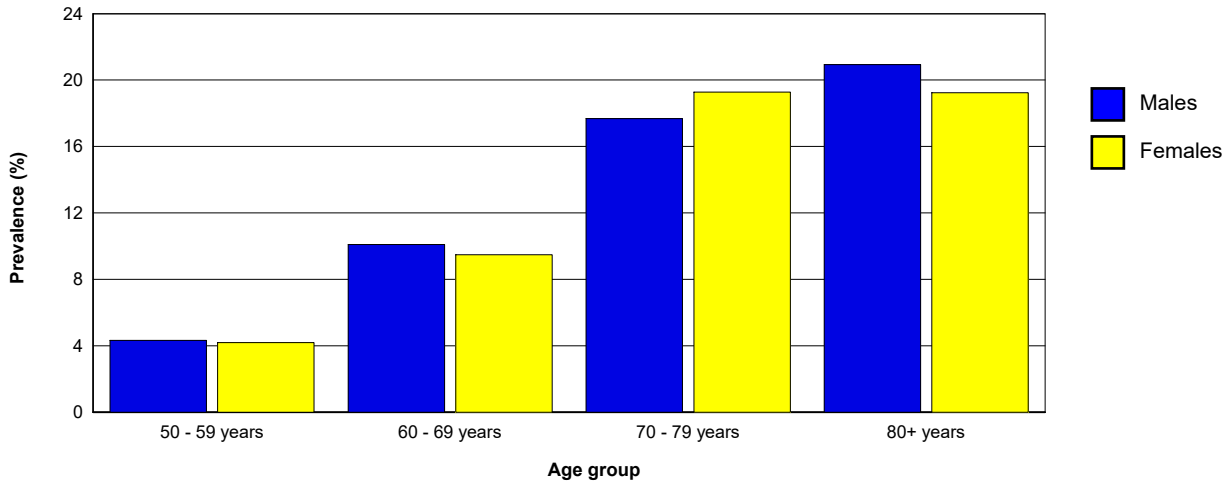
2. Prevalence of people with bilateral blindness - VA <3/60 in better eye with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	3	0.5%	5	0.6%	8	0.5%
60 - 69 years	5	1.3%	15	3.0%	20	2.2%
70 - 79 years	9	6.1%	6	3.6%	15	4.8%
80+ years	3	7.0%	4	7.7%	7	7.4%
Total	**20**	**1.7%**	**30**	**1.9%**	**50**	**1.8%**



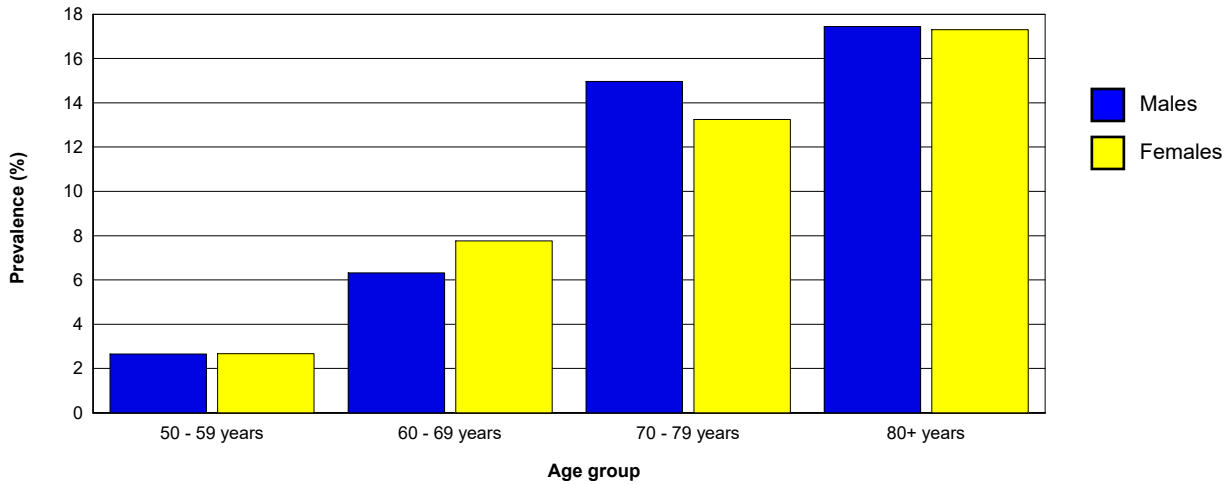
3. Prevalence of people with unilateral blindness - VA <3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	27	4.3%	37	4.2%	64	4.3%
60 - 69 years	40	10.1%	47	9.5%	87	9.8%
70 - 79 years	26	17.7%	32	19.3%	58	18.5%
80+ years	9	20.9%	10	19.2%	19	20.0%
Total	**102**	**8.4%**	**126**	**7.9%**	**228**	**8.1%**



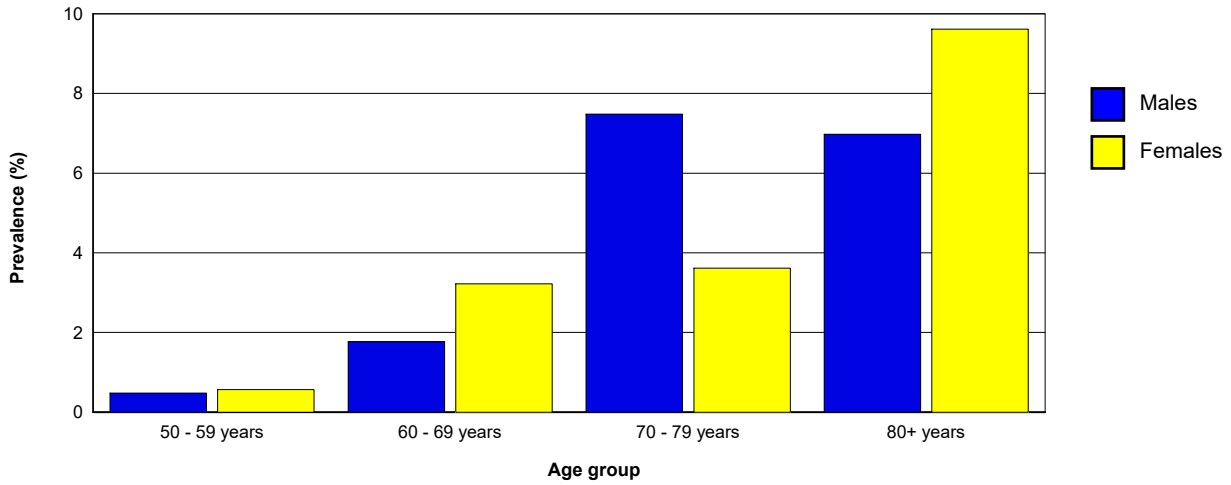
4. Prevalence of blind eyes - VA <3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	33	2.6%	47	2.7%	80	2.7%
60 - 69 years	50	6.3%	77	7.8%	127	7.1%
70 - 79 years	44	15.0%	44	13.3%	88	14.1%
80+ years	15	17.4%	18	17.3%	33	17.4%
Total	**142**	**5.9%**	**186**	**5.8%**	**328**	**5.8%**



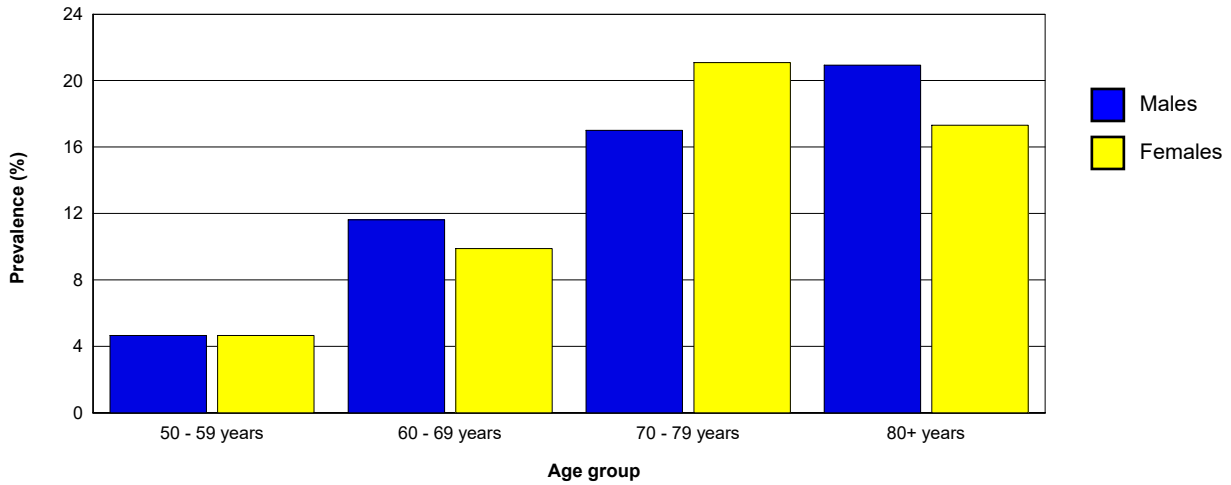
5. Prevalence of people with bilateral blindness - VA <3/60 in better eye with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	3	0.5%	5	0.6%	8	0.5%
60 - 69 years	7	1.8%	16	3.2%	23	2.6%
70 - 79 years	11	7.5%	6	3.6%	17	5.4%
80+ years	3	7.0%	5	9.6%	8	8.4%
Total	**24**	**2.0%**	**32**	**2.0%**	**56**	**2.0%**



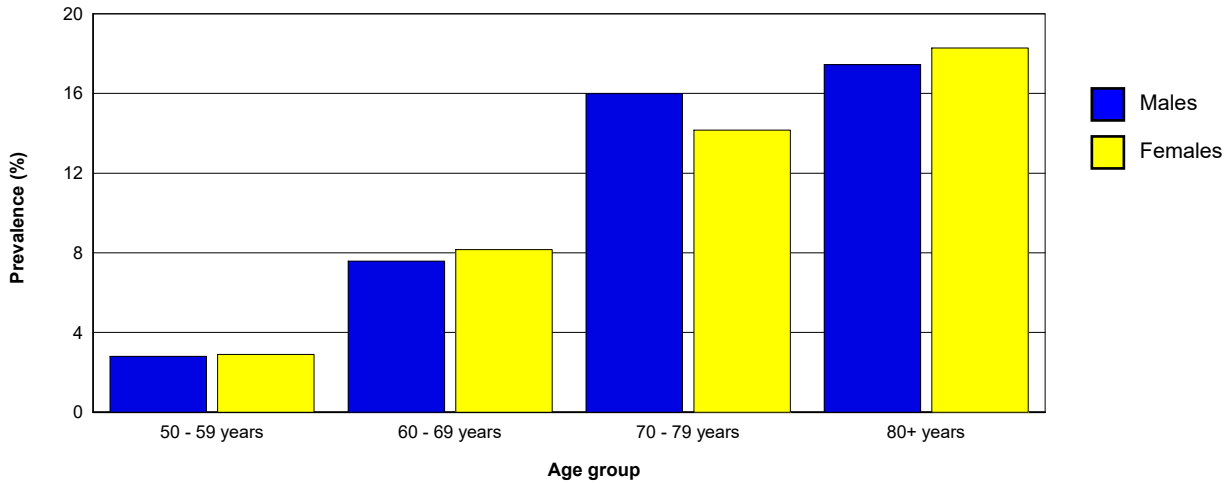
6. Prevalence of people with unilateral blindness - VA <3/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	29	4.7%	41	4.7%	70	4.7%
60 - 69 years	46	11.6%	49	9.9%	95	10.7%
70 - 79 years	25	17.0%	35	21.1%	60	19.2%
80+ years	9	20.9%	9	17.3%	18	18.9%
Total	**109**	**9.0%**	**134**	**8.4%**	**243**	**8.7%**



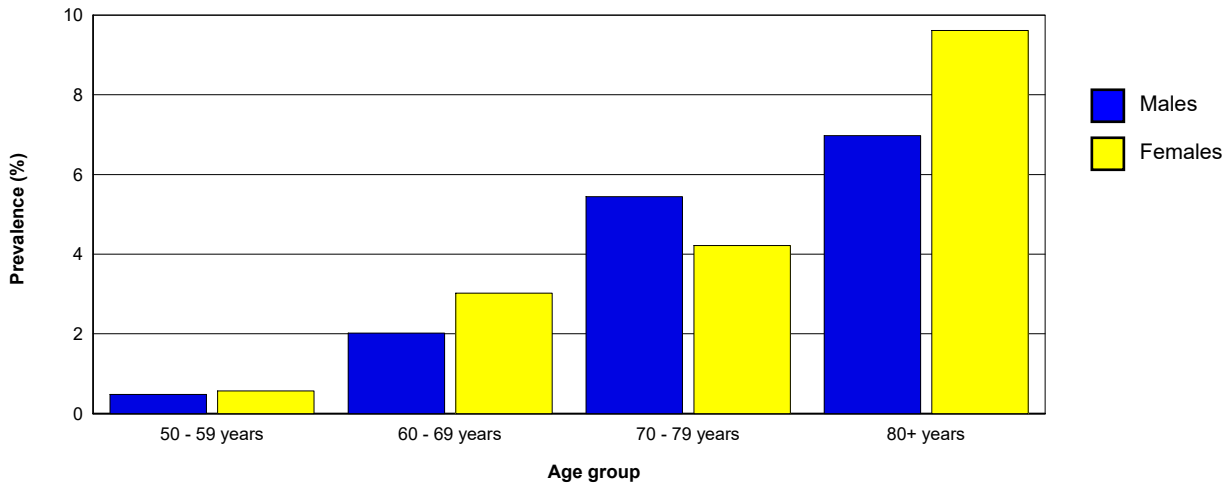
7. Prevalence of blind eyes - VA <3/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	35	2.8%	51	2.9%	86	2.9%
60 - 69 years	60	7.6%	81	8.2%	141	7.9%
70 - 79 years	47	16.0%	47	14.2%	94	15.0%
80+ years	15	17.4%	19	18.3%	34	17.9%
Total	**157**	**6.5%**	**198**	**6.2%**	**355**	**6.3%**



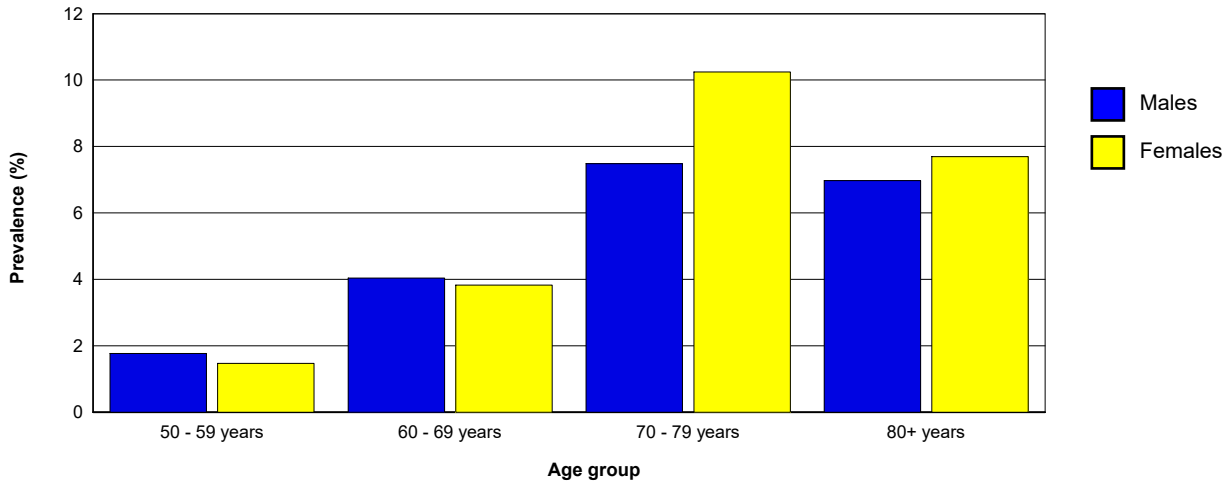
8. Prevalence of people with bilateral severe visual impairment - VA<6/60-3/60 in better eye with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	3	0.5%	5	0.6%	8	0.5%
60 - 69 years	8	2.0%	15	3.0%	23	2.6%
70 - 79 years	8	5.4%	7	4.2%	15	4.8%
80+ years	3	7.0%	5	9.6%	8	8.4%
Total	**22**	**1.8%**	**32**	**2.0%**	**54**	**1.9%**



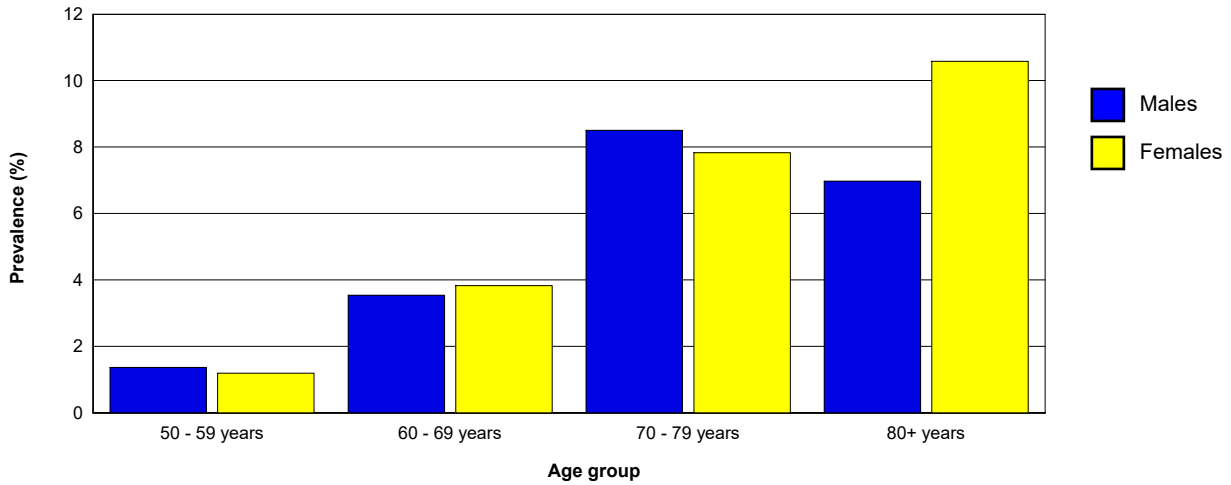
9. Prevalence of people with unilateral severe visual impairment - VA <6/60-3/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	11	1.8%	13	1.5%	24	1.6%
60 - 69 years	16	4.0%	19	3.8%	35	3.9%
70 - 79 years	11	7.5%	17	10.2%	28	8.9%
80+ years	3	7.0%	4	7.7%	7	7.4%
Total	**41**	**3.4%**	**53**	**3.3%**	**94**	**3.4%**



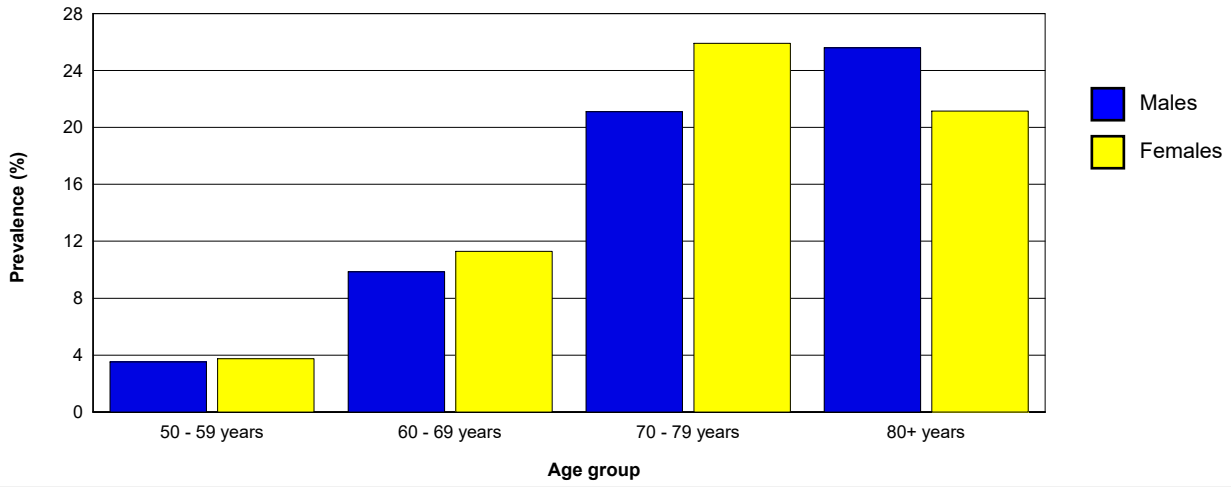
10. Prevalence of SVI eyes - VA VA<6/60-3/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	17	1.4%	21	1.2%	38	1.3%
60 - 69 years	28	3.5%	38	3.8%	66	3.7%
70 - 79 years	25	8.5%	26	7.8%	51	8.1%
80+ years	6	7.0%	11	10.6%	17	8.9%
Total	**76**	**3.1%**	**96**	**3.0%**	**172**	**3.1%**



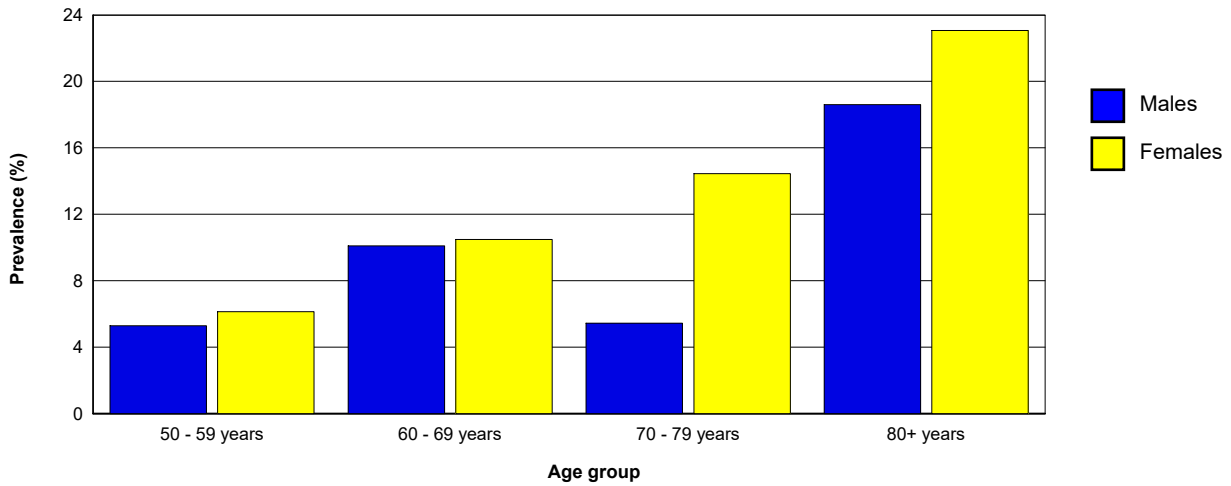
11. Prevalence of people with bilateral moderate visual impairment - VA <6/18-6/60 in better eye with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	22	3.5%	33	3.7%	55	3.7%
60 - 69 years	39	9.8%	56	11.3%	95	10.7%
70 - 79 years	31	21.1%	43	25.9%	74	23.6%
80+ years	11	25.6%	11	21.2%	22	23.2%
Total	**103**	**8.5%**	**143**	**9.0%**	**246**	**8.8%**



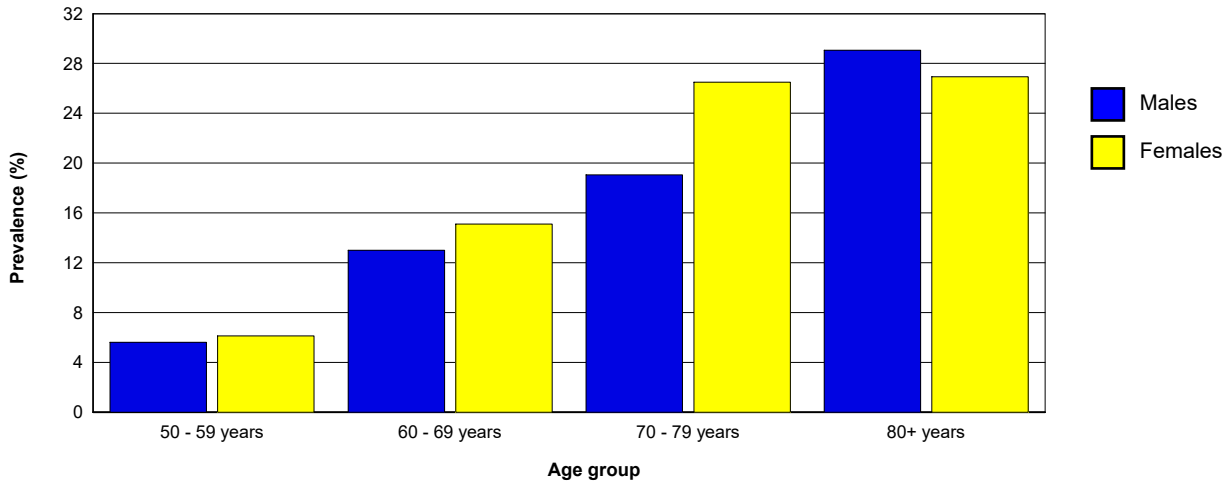
12. Prevalence of people with unilateral visual impairment - VA <6/18-6/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	33	5.3%	54	6.1%	87	5.8%
60 - 69 years	40	10.1%	52	10.5%	92	10.3%
70 - 79 years	8	5.4%	24	14.5%	32	10.2%
80+ years	8	18.6%	12	23.1%	20	21.1%
Total	**89**	**7.4%**	**142**	**8.9%**	**231**	**8.2%**



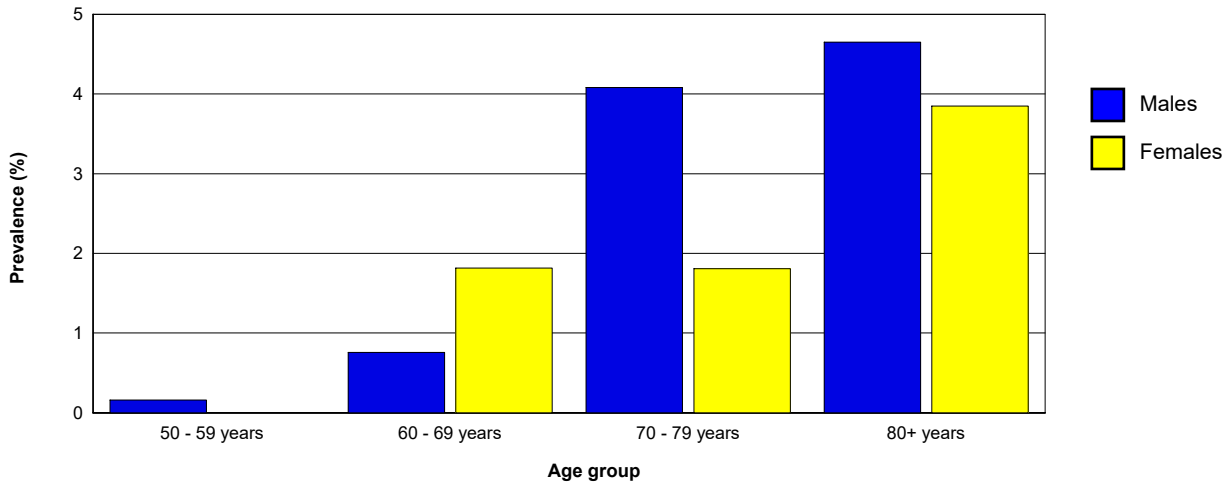
13. Prevalence of MVI eyes - VA<6/18-6/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	70	5.6%	108	6.1%	178	5.9%
60 - 69 years	103	13.0%	150	15.1%	253	14.2%
70 - 79 years	56	19.0%	88	26.5%	144	23.0%
80+ years	25	29.1%	28	26.9%	53	27.9%
Total	**254**	**10.5%**	**374**	**11.7%**	**628**	**11.2%**



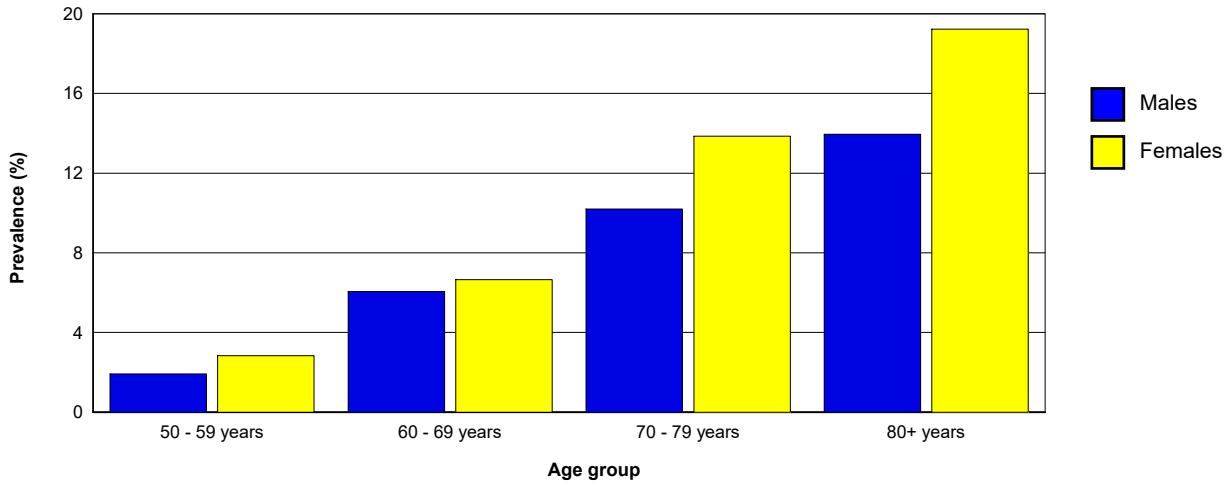
14. Prevalence of people bilateral blind due to cataract - VA<3/60 in better eye with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	1	0.2%	0	0.0%	1	0.1%
60 - 69 years	3	0.8%	9	1.8%	12	1.3%
70 - 79 years	6	4.1%	3	1.8%	9	2.9%
80+ years	2	4.7%	2	3.8%	4	4.2%
Total	**12**	**1.0%**	**14**	**0.9%**	**26**	**0.9%**



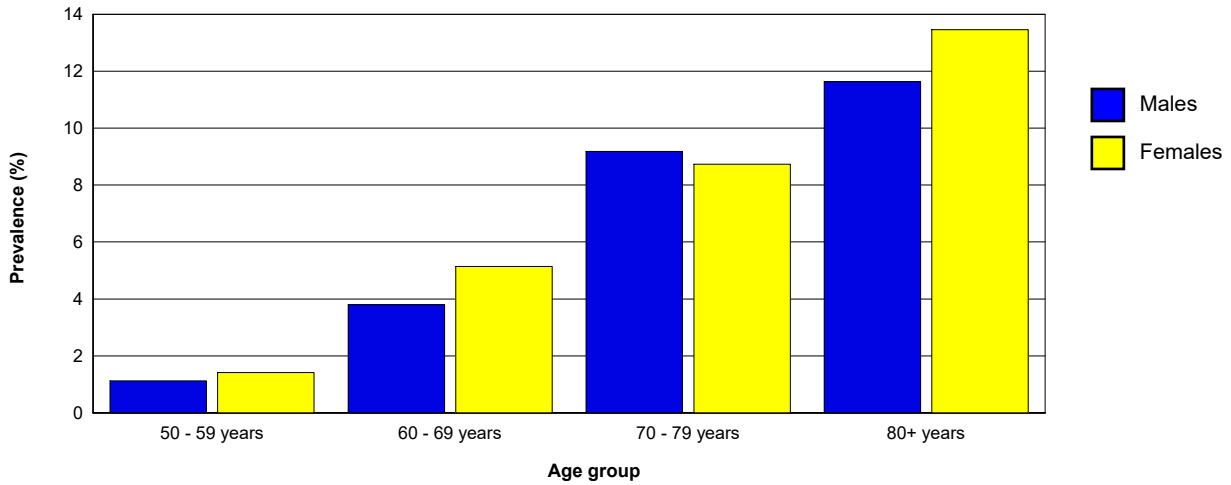
15. Prevalence of people unilateral blind due to cataract - VA <3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	12	1.9%	25	2.8%	37	2.5%
60 - 69 years	24	6.1%	33	6.7%	57	6.4%
70 - 79 years	15	10.2%	23	13.9%	38	12.1%
80+ years	6	14.0%	10	19.2%	16	16.8%
Total	**57**	**4.7%**	**91**	**5.7%**	**148**	**5.3%**



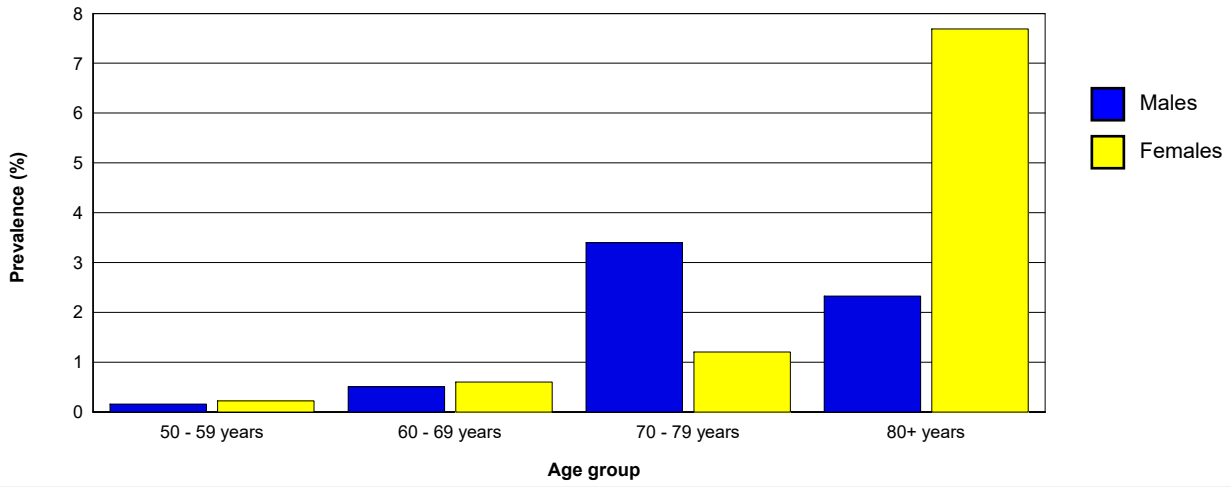
16. Prevalence of cataract blind eyes - VA <3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	14	1.1%	25	1.4%	39	1.3%
60 - 69 years	30	3.8%	51	5.1%	81	4.5%
70 - 79 years	27	9.2%	29	8.7%	56	8.9%
80+ years	10	11.6%	14	13.5%	24	12.6%
Total	**81**	**3.3%**	**119**	**3.7%**	**200**	**3.6%**



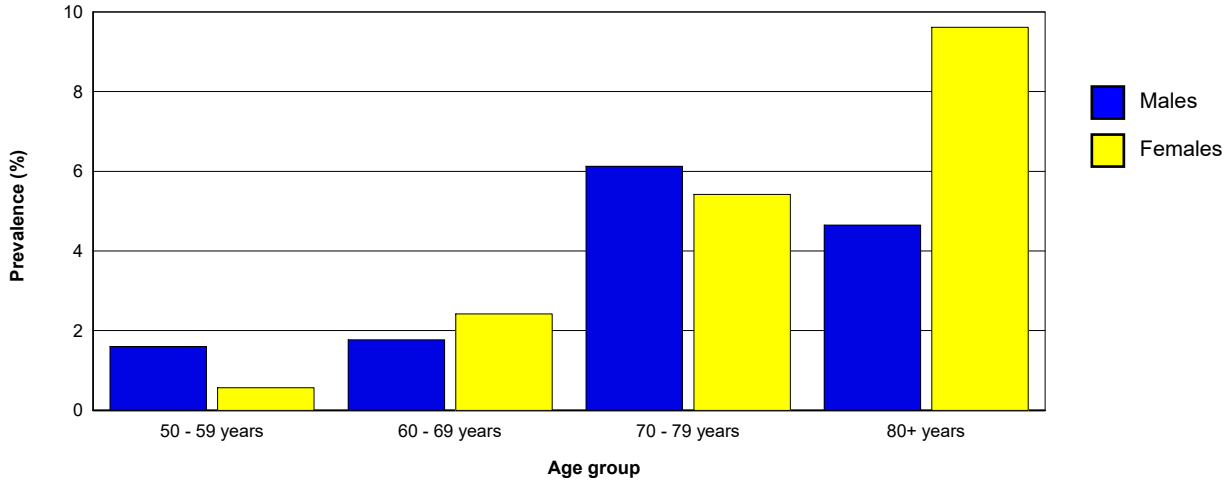
17. Prevalence of people with bilateral severe visual impairment due to cataract - VA <6/60-3/60 - best eye, best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	1	0.2%	2	0.2%	3	0.2%
60 - 69 years	2	0.5%	3	0.6%	5	0.6%
70 - 79 years	5	3.4%	2	1.2%	7	2.2%
80+ years	1	2.3%	4	7.7%	5	5.3%
Total	**9**	**0.7%**	**11**	**0.7%**	**20**	**0.7%**



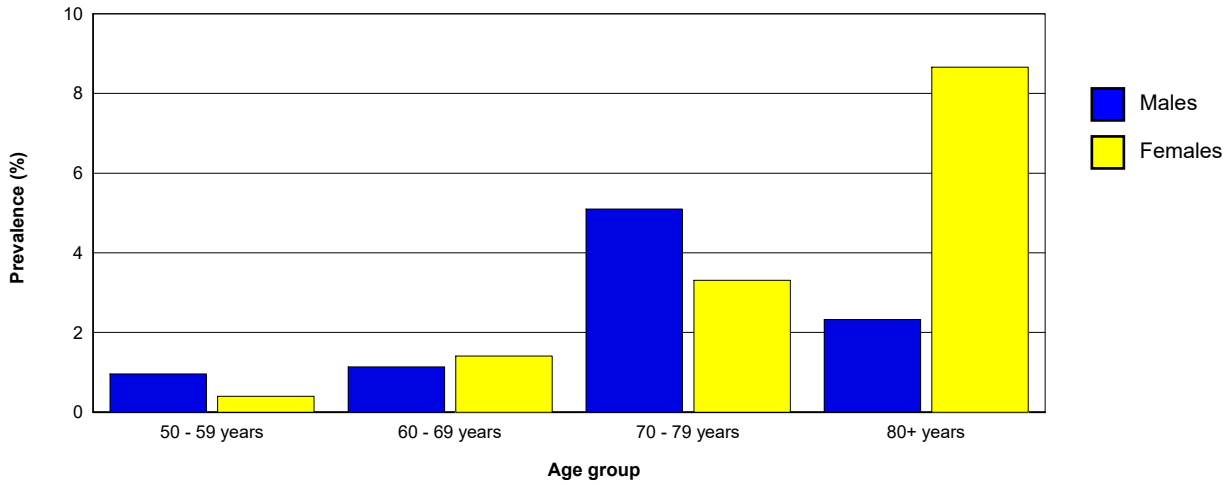
18. Prevalence of people with unilateral severe visual impairment due to cataract - VA<6/60-3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	10	1.6%	5	0.6%	15	1.0%
60 - 69 years	7	1.8%	12	2.4%	19	2.1%
70 - 79 years	9	6.1%	9	5.4%	18	5.8%
80+ years	2	4.7%	5	9.6%	7	7.4%
Total	**28**	**2.3%**	**31**	**1.9%**	**59**	**2.1%**



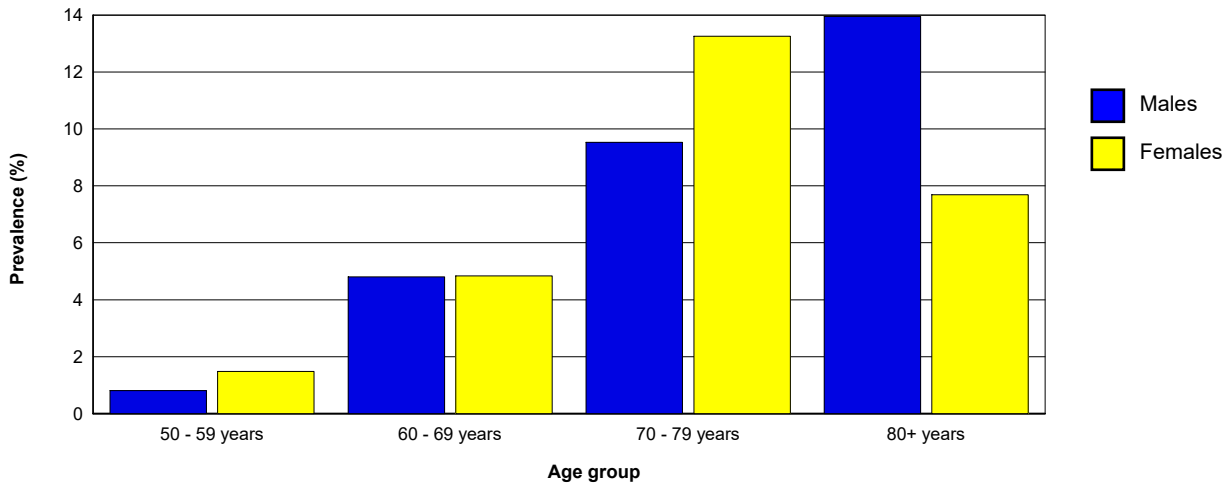
19. Prevalence of cataract SVI eyes - VA<6/60-3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	12	1.0%	7	0.4%	19	0.6%
60 - 69 years	9	1.1%	14	1.4%	23	1.3%
70 - 79 years	15	5.1%	11	3.3%	26	4.2%
80+ years	2	2.3%	9	8.7%	11	5.8%
Total	**38**	**1.6%**	**41**	**1.3%**	**79**	**1.4%**



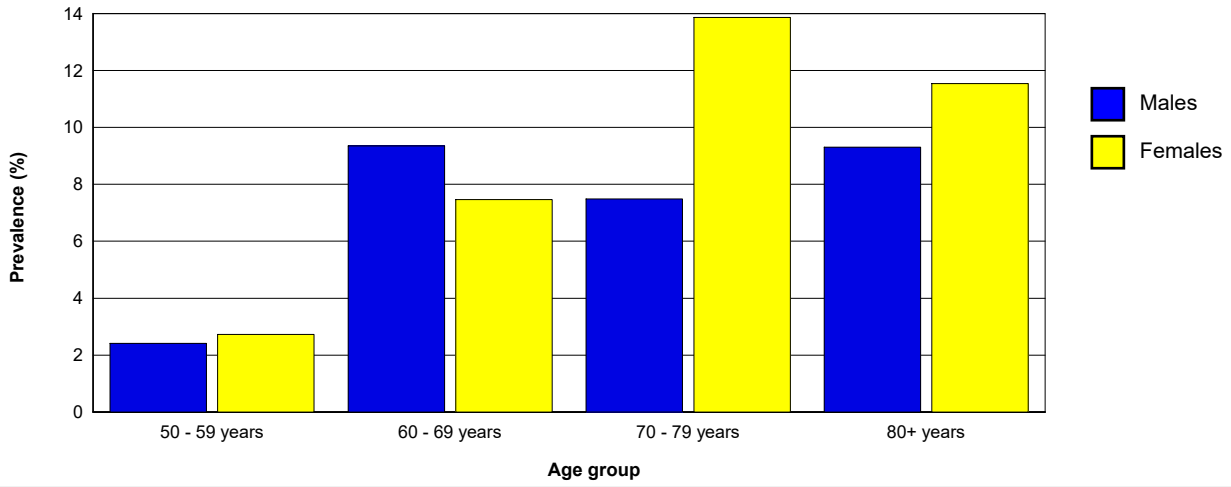
20. Prevalence of people with bilateral moderate visual impairment due to cataract - VA<6/18-6/60 - best eye, best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	5	0.8%	13	1.5%	18	1.2%
60 - 69 years	19	4.8%	24	4.8%	43	4.8%
70 - 79 years	14	9.5%	22	13.3%	36	11.5%
80+ years	6	14.0%	4	7.7%	10	10.5%
Total	**44**	**3.6%**	**63**	**3.9%**	**107**	**3.8%**



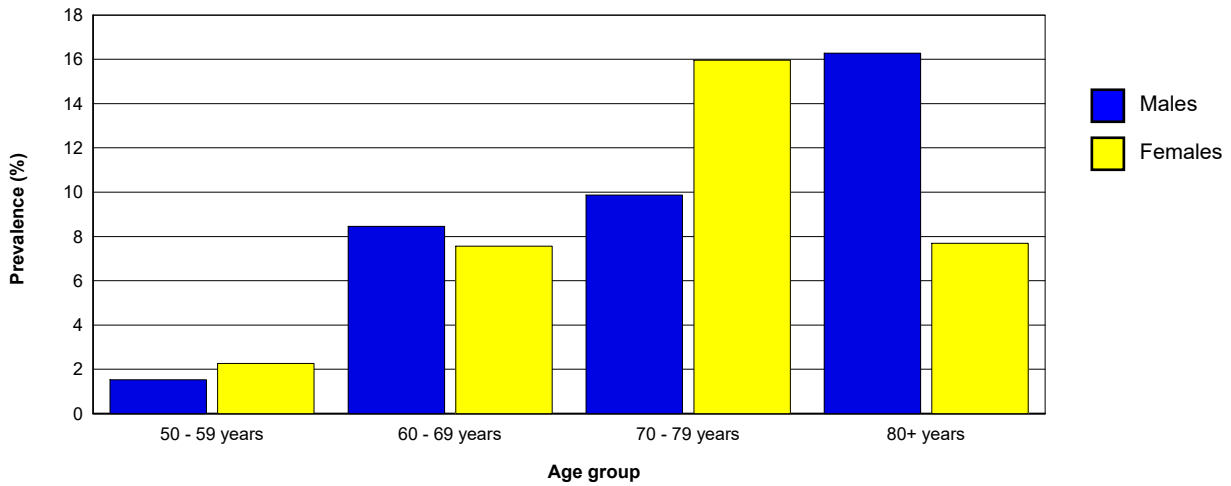
21. Prevalence of people with unilateral moderate visual impairment due to cataract - VA<6/18-6/60 best corrected

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	15	2.4%	24	2.7%	39	2.6%
60 - 69 years	37	9.3%	37	7.5%	74	8.3%
70 - 79 years	11	7.5%	23	13.9%	34	10.9%
80+ years	4	9.3%	6	11.5%	10	10.5%
Total	**67**	**5.5%**	**90**	**5.6%**	**157**	**5.6%**



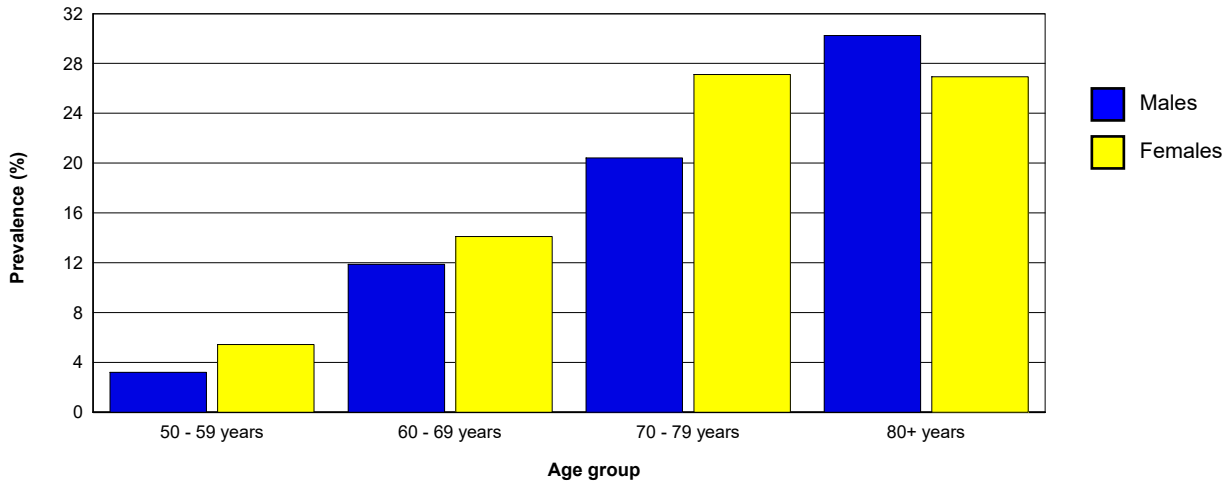
22. Prevalence of cataract MVI eyes - VA <6/18-6/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	19	1.5%	40	2.3%	59	2.0%
60 - 69 years	67	8.5%	75	7.6%	142	8.0%
70 - 79 years	29	9.9%	53	16.0%	82	13.1%
80+ years	14	16.3%	8	7.7%	22	11.6%
Total	**129**	**5.3%**	**176**	**5.5%**	**305**	**5.4%**



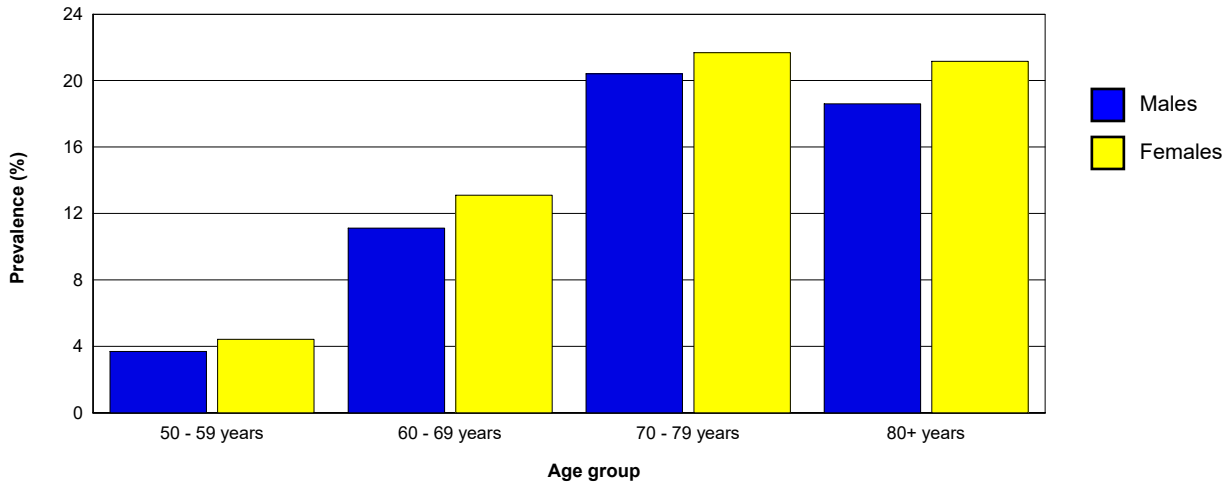
23. Prevalence of people with bilateral (pseudo)aphakia

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	20	3.2%	48	5.4%	68	4.5%
60 - 69 years	47	11.9%	70	14.1%	117	13.1%
70 - 79 years	30	20.4%	45	27.1%	75	24.0%
80+ years	13	30.2%	14	26.9%	27	28.4%
Total	**110**	**9.1%**	**177**	**11.1%**	**287**	**10.2%**



24. Prevalence of people with unilateral (pseudo)aphakia

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	23	3.7%	39	4.4%	62	4.1%
60 - 69 years	44	11.1%	65	13.1%	109	12.2%
70 - 79 years	30	20.4%	36	21.7%	66	21.1%
80+ years	8	18.6%	11	21.2%	19	20.0%
Total	**105**	**8.7%**	**151**	**9.5%**	**256**	**9.1%**



RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

AGE AND SEX ADJUSTED PREVALENCE AND ESTIMATED NUMBERS

Date and time of report: 05-Feb-16 12:10:54PM

This report is for the survey area: thane

Year and month when survey was conducted: 1201- 1 until 2016- 1

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.

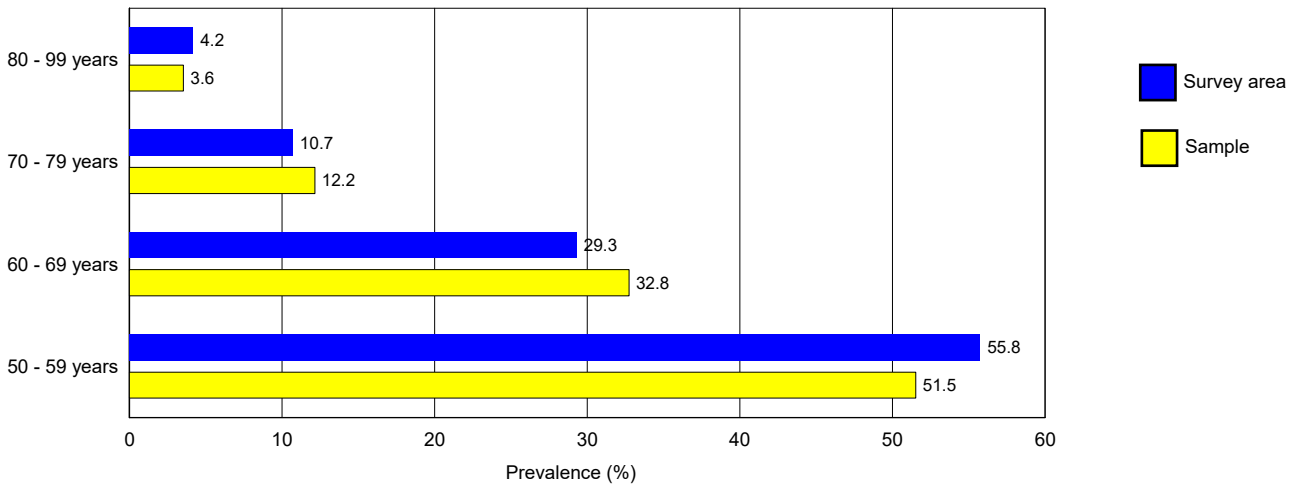
1. Age and sex distribution of people examined in the sample

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	623	51.5%	881	55.2%	**1,504**	**53.6%**
60 - 69 years	396	32.8%	496	31.1%	**892**	**31.8%**
70 - 79 years	147	12.2%	166	10.4%	**313**	**11.2%**
80 - 99 years	43	3.6%	52	3.3%	**95**	**3.4%**
Total	**1,209**	**100.0%**	**1,595**	**100.0%**	**2,804**	**100.0%**

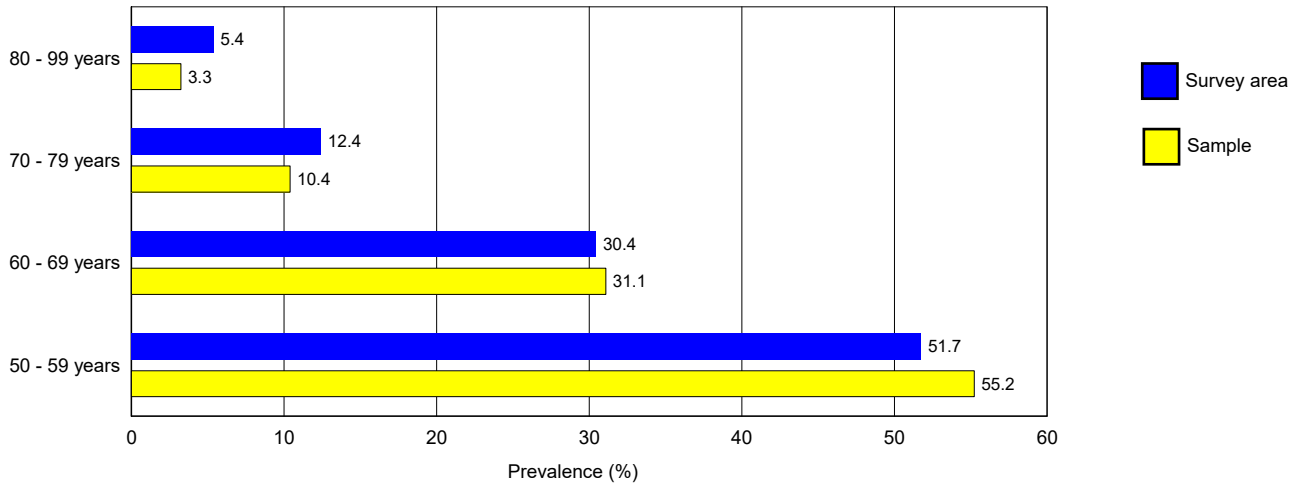
2. Total number of people aged 50+ in survey area

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	458,599	55.8%	391,824	51.7%	**850,423**	**53.8%**
60 - 69 years	241,116	29.3%	230,616	30.4%	**471,732**	**29.9%**
70 - 79 years	88,223	10.7%	94,119	12.4%	**182,342**	**11.5%**
80 - 99 years	34,585	4.2%	40,839	5.4%	**75,424**	**4.8%**
Total	**822,523**	**100.0%**	**757,398**	**100.0%**	**1,579,921**	**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	13,066	1.6 (0.8 - 2.3)	15,741	2.1 (1.5 - 2.7)	28,807	1.8 (1.3 - 2.3)
All eyes	93,208	5.7 (4.4 - 6.9)	95,788	6.3 (5.2 - 7.4)	188,996	6.0 (5.0 - 7.0)
Blindness - VA < 3/60 in the better eye with available correction (presenting VA)						
All bilateral cases	15,485	1.9 (1.0 - 2.7)	16,992	2.2 (1.6 - 2.9)	32,477	2.1 (1.5 - 2.6)
All eyes	102,569	6.2 (4.7 - 7.7)	101,913	6.7 (5.6 - 7.8)	204,482	6.5 (5.4 - 7.5)
Severe visual impairment (SVI) - VA<6/60 - 3/60 in the better eye with available correction						
All bilateral cases	14,293	1.7 (1.1 - 2.4)	17,094	2.3 (1.4 - 3.1)	31,387	2.0 (1.3 - 2.6)
All eyes	49,393	3.0 (2.2 - 3.9)	50,389	3.3 (2.7 - 4.0)	99,782	3.2 (2.5 - 3.8)
Moderate visual impairment (MVI) - VA<6/18 - 6/60 in the better eye with available correction						
All bilateral cases	67,393	8.2 (6.0 - 10.4)	73,733	9.7 (8.2 - 11.3)	141,126	8.9 (7.4 - 10.4)
All eyes	167,960	10.2 (8.3 - 12.1)	189,660	12.5 (10.8 - 14.3)	357,620	11.3 (9.8 - 12.8)
Early visual impairment (EVI) - VA<6/12 - 6/18 in the better eye with available correction						
All bilateral cases	99,821	12.1 (9.6 - 14.6)	110,471	14.6 (12.3 - 16.8)	210,292	13.3 (11.4 - 15.2)
All eyes	224,725	13.7 (11.5 - 15.8)	233,086	15.4 (13.4 - 17.3)	457,811	14.5 (12.8 - 16.2)

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	15,485	1.9 (1.0 - 2.7)	16,992	2.2 (1.6 - 2.9)	32,477	2.1 (1.5 - 2.6)
All eyes	102,569	6.2 (4.7 - 7.7)	101,913	6.7 (5.6 - 7.8)	204,482	6.5 (5.4 - 7.5)
VA<6/60 in the better eye, with available correction (presenting VA)						
All bilateral cases	29,779	3.6 (2.5 - 4.8)	34,086	4.5 (3.3 - 5.7)	63,865	4.0 (3.1 - 5.0)
All eyes	151,960	9.2 (7.5 - 11.0)	152,302	10.1 (8.6 - 11.5)	304,262	9.6 (8.3 - 11.0)
VA<6/18 in the better eye, with available correction (presenting VA)						
All bilateral cases	97,171	11.8 (9.1 - 14.6)	107,819	14.2 (12.2 - 16.3)	204,990	13.0 (11.1 - 14.9)
All eyes	319,920	19.4 (16.4 - 22.5)	341,962	22.6 (20.2 - 25.0)	661,882	20.9 (18.7 - 23.1)
VA<6/12 in the better eye, with available correction (presenting VA)						
All bilateral cases	196,993	24.0 (20.2 - 27.7)	218,290	28.8 (25.6 - 32.1)	415,283	26.3 (23.4 - 29.2)
All eyes	544,645	33.1 (29.5 - 36.8)	575,048	38.0 (34.8 - 41.1)	1,119,693	35.4 (32.6 - 38.3)

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	7,773	0.9 (0.3 - 1.5)	7,457	1.0 (0.5 - 1.5)	15,230	1.0 (0.5 - 1.4)
Unilateral cataract	37,274	4.5 (3.4 - 5.7)	47,357	6.3 (4.9 - 7.6)	84,631	5.4 (4.3 - 6.4)
Cataract eyes	52,819	3.2 (2.2 - 4.2)	62,269	4.1 (3.3 - 4.9)	115,088	3.6 (2.9 - 4.4)
Cataract and SVI - VA<6/60 - 3/60 in better eye with best correction or pinhole						
Bilateral cataract	5,759	0.7 (0.4 - 1.0)	6,559	0.9 (0.6 - 1.1)	12,318	0.8 (0.6 - 1.0)
Unilateral cataract	16,019	1.9 (1.0 - 2.9)	13,321	1.8 (1.1 - 2.4)	29,340	1.9 (1.3 - 2.4)
Cataract eyes	24,924	1.5 (0.9 - 2.1)	22,927	1.5 (1.1 - 2.0)	47,851	1.5 (1.1 - 1.9)
Cataract and Moderate VI (MVI) - VA<6/18 - 6/60 in better eye with best correction or pinhole						
Bilateral cataract	28,478	3.5 (2.5 - 4.4)	32,556	4.3 (3.5 - 5.1)	61,034	3.9 (3.2 - 4.6)
Unilateral cataract	34,940	4.2 (2.9 - 5.5)	34,756	4.6 (3.3 - 5.9)	69,696	4.4 (3.3 - 5.5)
Cataract eyes	83,446	5.1 (3.9 - 6.2)	88,994	5.9 (4.7 - 7.0)	172,440	5.5 (4.5 - 6.4)
Cataract and Early VI (EVI) - VA<6/12 - 6/18 in better eye with best correction or pinhole						
Bilateral cataract	30,728	1.9 (1.2 - 2.6)	43,299	2.9 (2.1 - 3.6)	74,027	2.3 (1.8 - 2.8)
Unilateral cataract	29,910	1.8 (0.1 - 3.6)	28,846	1.9 (0.6 - 3.2)	58,756	1.9 (0.6 - 3.1)
Cataract eyes	73,741	4.5 (3.3 - 5.7)	93,525	6.2 (5.1 - 7.3)	167,266	5.3 (4.4 - 6.2)

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	7,773	0.9 (0.3 - 1.5)	7,457	1.0 (0.5 - 1.5)	15,230	1.0 (0.5 - 1.4)
Unilateral cataract	37,274	4.5 (3.4 - 5.7)	47,357	6.3 (4.9 - 7.6)	84,631	5.4 (4.3 - 6.4)
Cataract eyes	52,819	3.2 (2.2 - 4.2)	62,269	4.1 (3.3 - 4.9)	115,088	3.6 (2.9 - 4.4)
Cataract and VA<6/60 with best correction or pinhole						
Bilateral cataract	13,531	1.6 (1.0 - 2.3)	14,015	1.9 (1.3 - 2.4)	27,546	1.7 (1.3 - 2.2)
Unilateral cataract	53,294	6.5 (4.8 - 8.1)	60,677	8.0 (6.5 - 9.5)	113,971	7.2 (6.0 - 8.5)
Cataract eyes	77,744	4.7 (3.5 - 6.0)	85,196	5.6 (4.7 - 6.5)	162,940	5.2 (4.2 - 6.1)
Cataract and VA<6/18 with best correction or pinhole						
Bilateral cataract	42,009	5.1 (4.1 - 6.1)	46,572	6.1 (5.2 - 7.1)	88,581	5.6 (4.8 - 6.4)
Unilateral cataract	88,234	10.7 (8.3 - 13.1)	95,433	12.6 (10.3 - 14.9)	183,667	11.6 (9.7 - 13.5)
Cataract eyes	161,189	9.8 (7.8 - 11.8)	174,190	11.5 (9.9 - 13.1)	335,379	10.6 (9.1 - 12.1)
Cataract and VA<6/12 with best correction or pinhole						
Bilateral cataract	72,737	8.8 (7.6 - 10.1)	89,869	11.9 (10.6 - 13.1)	162,606	10.3 (9.3 - 11.2)
Unilateral cataract	118,144	14.4 (11.2 - 17.5)	124,279	16.4 (13.6 - 19.2)	242,423	15.3 (12.9 - 17.8)
Cataract eyes	234,931	14.3 (11.9 - 16.6)	267,717	17.7 (15.7 - 19.6)	502,648	15.9 (14.1 - 17.7)

9. Adjusted results for aphakia and pseudophakia

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Bilateral (pseudo)aphakia	71,800	8.7 (7.1 - 10.4)	90,404	11.9 (10.1 - 13.8)	162,204	10.3 (8.8 - 11.7)
Unilateral (pseudo)aphakia	68,161	8.3 (6.5 - 10.0)	76,617	10.1 (8.2 - 12.0)	144,778	9.2 (7.6 - 10.7)
Eyes (pseudo)aphakia	211,760	12.9 (11.2 - 14.6)	257,425	17.0 (14.8 - 19.1)	469,185	14.8 (13.2 - 16.5)

10. Adjusted results for cataract surgical coverage

	Males	Females	Total
Cataract Surgical Coverage (eyes) - percentage			
VA < 3/60	80.0	80.5	80.3
VA < 6/60	73.1	75.1	74.2
VA < 6/18	56.8	59.6	58.3
Cataract Surgical Coverage (persons) - percentage			
VA < 3/60	93.0	94.4	93.8
VA < 6/60	89.1	90.3	89.7
VA < 6/18	73.5	75.2	74.4