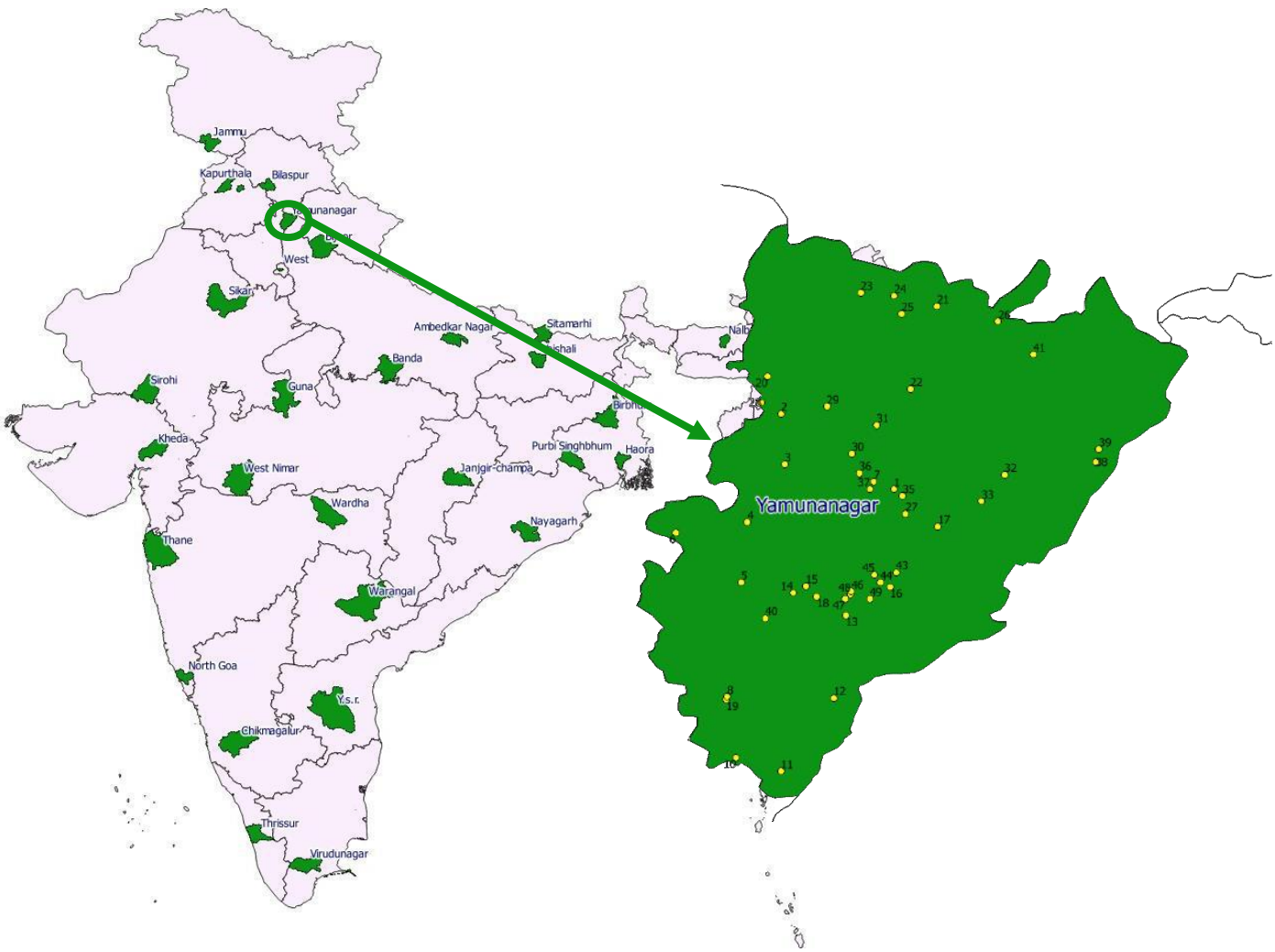
NPCB National Blindness Survey: 2015-2018

DISTRICT SUMMARY REPORT

Yamunanagar, Haryana



Community Ophthalmology

Dr. Rajendra Prasad Centre for Ophthalmic Sciences

AIIMS, New Delhi - 110029

NPCB National Blindness Survey: 2015-2018

DISTRICT SUMMARY REPORT

Yamunanagar, Haryana

April 2017

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RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

SUMMARY REPORT

Date and time of report: 13-Jan-16 2:04:44PM

This report is for the survey area: Yamuna Nagar

Year and month when survey was conducted: 2015-10 until 2015-10

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	1,151	86.7%	169	12.7%	2	0.2%	6	0.5%	**1,328**	**100.0%**
Females	1,634	97.7%	28	1.7%	4	0.2%	6	0.4%	**1,672**	**100.0%**
Total	**2,785**	92.8%	**197**	6.6%	**6**	0.2%	**12**	0.4%	**3,000**	**100.0%**

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

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	453	39.4%	770	47.1%	**1,223**	**43.9%**
60 - 69 years	418	36.3%	592	36.2%	**1,010**	**36.3%**
70 - 79 years	193	16.8%	183	11.2%	**376**	**13.5%**
80+ years	87	7.6%	89	5.4%	**176**	**6.3%**
Total	**1,151**	**100.0%**	**1,634**	**100.0%**	**2,785**	**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	2.1 (1.3 - 2.9)	35	2.1 (1.4 - 2.9)	59	2.1 (1.5 - 2.7)
Severe VI	13	1.1 (0.5 - 1.7)	15	0.9 (0.5 - 1.4)	28	1.0 (0.7 - 1.4)
Moderate VI	87	7.6 (5.7 - 9.4)	116	7.1 (6.0 - 8.2)	203	7.3 (6.3 - 8.3)
Early VI	72	6.3 (5.0 - 7.5)	146	8.9 (7.4 - 10.5)	218	7.8 (6.7 - 8.9)
Functional Low Vision	19	1.7 (0.9 - 2.4)	26	1.6 (0.9 - 2.3)	45	1.6 (1.1 - 2.1)

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	1,925	1.9 (1.1 - 2.7)	2,523	2.6 (1.8 - 3.4)	4,448	2.2 (1.6 - 2.8)
Severe VI	1,059	1.0 (0.4 - 1.6)	1,104	1.1 (0.7 - 1.6)	2,163	1.1 (0.7 - 1.4)
Moderate VI	7,132	6.9 (5.1 - 8.8)	7,609	7.8 (6.6 - 8.9)	14,737	7.3 (6.3 - 8.3)
Early VI	5,999	5.8 (4.5 - 7.1)	9,544	9.7 (8.2 - 11.2)	15,539	7.7 (6.6 - 8.8)
Functional Low Vision	1,571	1.5 (0.8 - 2.3)	1,846	1.9 (1.2 - 2.6)	3,416	1.7 (1.2 - 2.2)

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	1	0.2 (0.0 - 0.7)	4	0.5 (0.0 - 1.0)	5	0.4 (0.1 - 0.8)
60 - 69 years	4	1.0 (0.1 - 1.9)	6	1.0 (0.1 - 1.9)	10	1.0 (0.4 - 1.6)
70 - 79 years	10	5.2 (2.2 - 8.2)	12	6.6 (2.9 - 10.2)	22	5.9 (3.5 - 8.2)
80+ years	9	10.3 (3.6 - 17.1)	13	14.6 (7.2 - 22.0)	22	12.5 (7.6 - 17.4)
All 50+ years	24	2.1 (1.3 - 2.9)	35	2.1 (1.4 - 2.9)	59	2.1 (1.5 - 2.7)

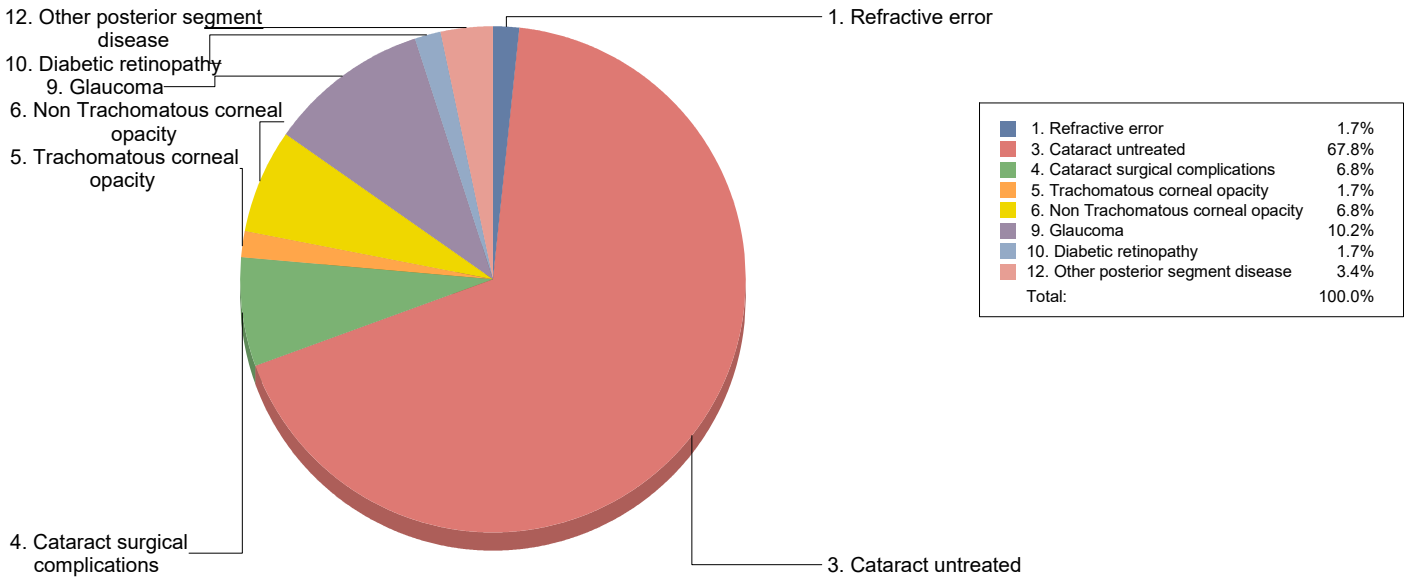
6. Principal cause of blindness, severe (SVI), moderate (MVI) and early (EVI) visual impairment in persons (PVA)

	Blindness		Severe VI		Moderate VI		Early VI	
	n	%	n	%	n	%	n	%
1. Refractive error	1	1.7%	1	3.6%	112	55.2%	175	80.3%
2. Aphakia uncorrected	0	0.0%	0	0.0%	1	0.5%	2	0.9%
3. Cataract untreated	40	67.8%	19	67.9%	59	29.1%	32	14.7%
4. Cataract surgical complications	4	6.8%	4	14.3%	10	4.9%	3	1.4%
5. Trachomatous corneal opacity	1	1.7%	0	0.0%	1	0.5%	0	0.0%
6. Non Trachomatous corneal opacity	4	6.8%	1	3.6%	2	1.0%	1	0.5%
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	6	10.2%	1	3.6%	6	3.0%	0	0.0%
10. Diabetic retinopathy	1	1.7%	0	0.0%	4	2.0%	1	0.5%
11. ARMD	0	0.0%	1	3.6%	3	1.5%	2	0.9%
12. Other posterior segment disease	2	3.4%	1	3.6%	5	2.5%	2	0.9%
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	**59**	**100.0%**	**28**	**100.0%**	**203**	**100.0%**	**218**	**100.0%**

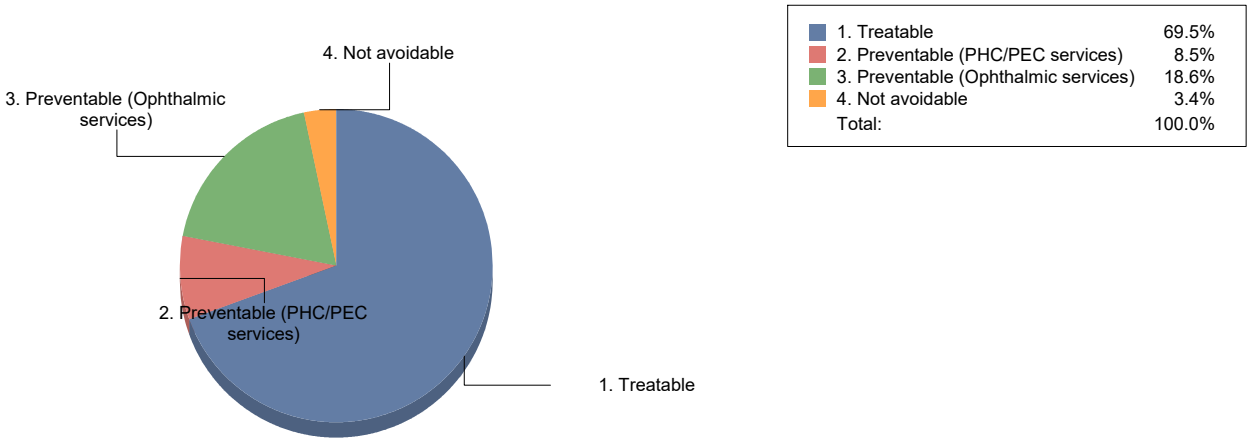
Blindness, SVI, MVI and EVI in persons by intervention category

A. Treatable (1,2,3)	41	69.5%	20	71.4%	172	84.7%	209	95.9%
B. Preventable (PHC/PEC services) (5,6,7,8)	5	8.5%	1	3.6%	3	1.5%	1	0.5%
C. Preventable (Ophthalmic services) (4,9,10)	11	18.6%	5	17.9%	20	9.9%	4	1.8%
D. Avoidable (A+B+C)	57	96.6%	26	92.9%	195	96.1%	214	98.2%
E. Posterior segment causes (8,9,10,11,12)	9	15.3%	3	10.7%	18	8.9%	5	2.3%

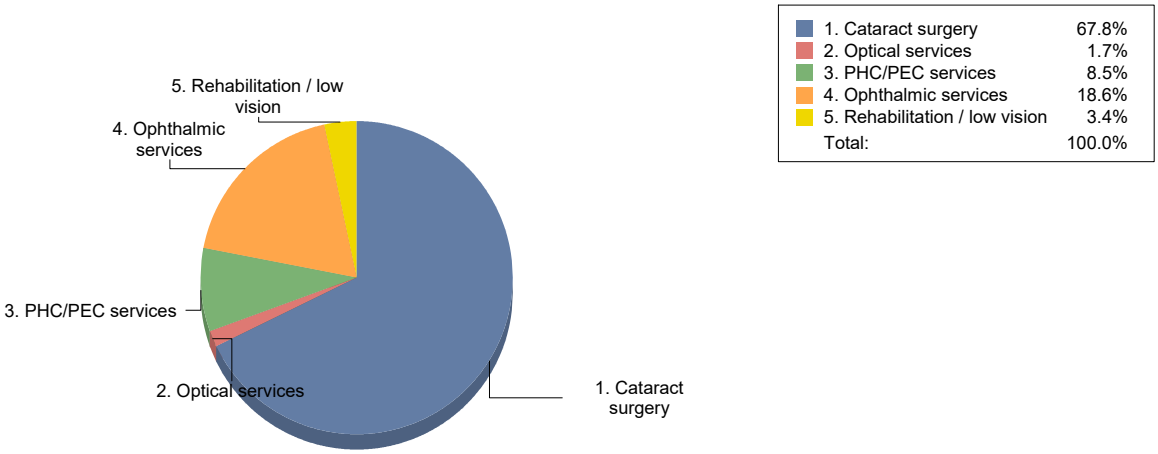
7. Graph: main cause of blindness in persons



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	95.0	92.9	93.7
VA < 6/60	92.1	90.7	91.2
VA < 6/18	79.8	83.4	82.0

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

	Males		Females		Total	
	n	%	n	%	n	%
Need not felt	5	41.7%	3	11.5%	**8**	**21.1%**
Fear	1	8.3%	1	3.8%	**2**	**5.3%**
Cost	0	0.0%	6	23.1%	**6**	**15.8%**
Treatment denied by provider	1	8.3%	5	19.2%	**6**	**15.8%**
Unaware treatment is possible	0	0.0%	0	0.0%	**0**	**0.0%**
Cannot access treatment	0	0.0%	0	0.0%	**0**	**0.0%**
Local reason	5	41.7%	11	42.3%	**16**	**42.1%**
Total	**12**	**100.0%**	**26**	**100.0%**	**38**	**100.0%**

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

	Males		Females		Total	
	n	%	n	%	n	%
Very good: can see 6/12	202	64.3%	280	59.8%	482	61.6%
Good: can see 6/18	36	11.5%	80	17.1%	116	14.8%
Borderline: can see 6/60	38	12.1%	60	12.8%	98	12.5%
Poor: cannot see 6/60	38	12.1%	48	10.3%	86	11.0%
Total	**314**	**100.0%**	**468**	**100.0%**	**782**	**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	14	21.5%	468	65.3%	**482**	**61.6%**
Good: can see 6/18	9	13.8%	107	14.9%	**116**	**14.8%**
Borderline: can see 6/60	12	18.5%	86	12.0%	**98**	**12.5%**
Poor: cannot see 6/60	30	46.2%	56	7.8%	**86**	**11.0%**
Total	**65**	**100.0%**	**717**	**100.0%**	**782**	**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%	482	100.0%
Good: can see 6/18	9	13.2%	23	27.4%	82	58.6%	2	25.0%	0	0.0%
Borderline: can see 6/60	25	36.8%	19	22.6%	52	37.1%	2	25.0%	0	0.0%
Poor: cannot see 6/60	34	50.0%	42	50.0%	6	4.3%	4	50.0%	0	0.0%
Total	**68**	**100.0%**	**84**	**100.0%**	**140**	**100.0%**	**8**	**100.0%**	**482**	**100.0%**

RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

SAMPLE RESULTS - NOT ADJUSTED FOR AGE AND SEX

Date and time of report: 13-Jan-16 2:05:27PM

This report is for the survey area: Yamuna Nagar

Year and month when survey was conducted: 2015-10 until 2015-10

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	1,151	86.7%	169	12.7%	2	0.2%	6	0.5%	**1,328**	**100.0%**
Females	1,634	97.7%	28	1.7%	4	0.2%	6	0.4%	**1,672**	**100.0%**
Total	**2,785**	**92.8%**	**197**	**6.6%**	**6**	**0.2%**	**12**	**0.4%**	**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	17	1.5% (0.8-2.2)	30	1.8% (1.2-2.5)	**47**	**1.7% (1.2-2.2)**
All blind eyes	166	7.2% (6.1-8.4)	233	7.1% (6.1-8.1)	**399**	**7.2% (6.3-8.0)**
Blindness - VA < 3/60 in the better eye with available correction (presenting VA)						
All bilateral blindness	24	2.1% (1.3-2.9)	35	2.1% (1.4-2.9)	**59**	**2.1% (1.5-2.7)**
All blind eyes	191	8.3% (7.1-9.5)	265	8.1% (7.0-9.2)	**456**	**8.2% (7.3-9.1)**
Severe visual impairment (SVI) - VA<6/60 - 3/60 in the better eye with available correction						
All bilateral Severe VI	13	1.1% (0.5-1.7)	15	0.9% (0.5-1.4)	**28**	**1.0% (0.7-1.4)**
All Severe VI eyes	62	2.7% (1.8-3.5)	61	1.9% (1.3-2.4)	**123**	**2.2% (1.7-2.7)**
Moderate visual impairment (MVI) - VA<6/18 - 6/60 in the better eye with available correction						
All bilateral MVI	87	7.6% (5.7-9.4)	116	7.1% (6.0-8.2)	**203**	**7.3% (6.3-8.3)**
All Moderate VI eyes	205	8.9% (7.5-10.4)	294	9.0% (7.8-10.1)	**499**	**9.0% (8.0-9.9)**
Early visual impairment (EVI) - VA<6/12 - 6/18 in the better eye with available correction						
All bilateral EVI	72	6.3% (5.0-7.5)	146	8.9% (7.4-10.5)	**218**	**7.8% (6.7-8.9)**
All Early VI eyes	174	7.6% (6.4-8.7)	331	10.1% (8.8-11.5)	**505**	**9.1% (8.0-10.1)**

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	2.1% (1.3-2.9)	35	2.1% (1.4-2.9)	**59**	**2.1% (1.5-2.7)**
All blind eyes	191	8.3% (7.1-9.5)	265	8.1% (7.0-9.2)	**456**	**8.2% (7.3-9.1)**
VA<6/60 in the better eye, with available correction (presenting VA)						
All bilateral cases	37	3.2% (2.3-4.2)	50	3.1% (2.2-3.9)	**87**	**3.1% (2.5-3.8)**
All eyes	253	11.0% (9.6-12.3)	326	10.0% (8.9-11.1)	**579**	**10.4% (9.5-11.3)**
VA<6/18 in the better eye, with available correction (presenting VA)						
All bilateral cases	124	10.8% (8.9-12.6)	166	10.2% (8.7-11.6)	**290**	**10.4% (9.2-11.6)**
All eyes	458	19.9% (17.9-21.9)	620	19.0% (17.4-20.5)	**1,078**	**19.4% (18.0-20.7)**
VA<6/12 in the better eye, with available correction (presenting VA)						
All bilateral cases	196	17.0% (14.9-19.1)	312	19.1% (17.0-21.2)	**508**	**18.2% (16.6-19.9)**
All eyes	632	27.5% (25.0-29.9)	951	29.1% (26.8-31.4)	**1,583**	**28.4% (26.5-30.3)**

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%	1	2.9%	**1**	**1.7%**
2. Aphakia uncorrected	0	0.0%	0	0.0%	**0**	**0.0%**
3. Cataract untreated	18	75.0%	22	62.9%	**40**	**67.8%**
4. Cataract surgical complications	1	4.2%	3	8.6%	**4**	**6.8%**
5. Trachomatous corneal opacity	0	0.0%	1	2.9%	**1**	**1.7%**
6. Non Trachomatous corneal opacity	2	8.3%	2	5.7%	**4**	**6.8%**
7. Phthisis	0	0.0%	0	0.0%	**0**	**0.0%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	2	8.3%	4	11.4%	**6**	**10.2%**
10. Diabetic retinopathy	1	4.2%	0	0.0%	**1**	**1.7%**
11. ARMD	0	0.0%	0	0.0%	**0**	**0.0%**
12. Other posterior segment disease	0	0.0%	2	5.7%	**2**	**3.4%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**24**	**100.0%**	**35**	**100.0%**	**59**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	18	75.0%	23	65.7%	41	69.5%
B. Preventable (PHC/PEC services) (5,6,7,8)	2	8.3%	3	8.6%	5	8.5%
C. Preventable (Ophthalmic services) (4,9,10)	4	16.7%	7	20.0%	11	18.6%
D. Avoidable (A+B+C)	24	100.0%	33	94.3%	57	96.6%
E. Posterior segment causes (8,9,10,11,12)	3	12.5%	6	17.1%	9	15.3%

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

	Males		Females		Total	
	n	%	n	%	n	%
1. Refractive error	3	1.6%	4	1.5%	**7**	**1.5%**
2. Aphakia uncorrected	1	0.5%	0	0.0%	**1**	**0.2%**
3. Cataract untreated	109	57.1%	167	63.0%	**276**	**60.5%**
4. Cataract surgical complications	7	3.7%	19	7.2%	**26**	**5.7%**
5. Trachomatous corneal opacity	1	0.5%	2	0.8%	**3**	**0.7%**
6. Non Trachomatous corneal opacity	27	14.1%	18	6.8%	**45**	**9.9%**
7. Phthisis	11	5.8%	8	3.0%	**19**	**4.2%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	14	7.3%	12	4.5%	**26**	**5.7%**
10. Diabetic retinopathy	2	1.0%	2	0.8%	**4**	**0.9%**
11. ARMD	1	0.5%	1	0.4%	**2**	**0.4%**
12. Other posterior segment disease	13	6.8%	25	9.4%	**38**	**8.3%**
13. All other globe/CNS abnormalities	2	1.0%	7	2.6%	**9**	**2.0%**
Total	**191**	**100.0%**	**265**	**100.0%**	**456**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	113	59.2%	171	64.5%	284	62.3%
B. Preventable (PHC/PEC services) (5,6,7,8)	39	20.4%	28	10.6%	67	14.7%
C. Preventable (Ophthalmic services) (4,9,10)	23	12.0%	33	12.5%	56	12.3%
D. Avoidable (A+B+C)	175	91.6%	232	87.5%	407	89.3%
E. Posterior segment causes (8,9,10,11,12)	30	15.7%	40	15.1%	70	15.4%

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%	1	6.7%	**1**	**3.6%**
2. Aphakia uncorrected	0	0.0%	0	0.0%	**0**	**0.0%**
3. Cataract untreated	9	69.2%	10	66.7%	**19**	**67.9%**
4. Cataract surgical complications	2	15.4%	2	13.3%	**4**	**14.3%**
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	**0**	**0.0%**
6. Non Trachomatous corneal opacity	0	0.0%	1	6.7%	**1**	**3.6%**
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	7.7%	0	0.0%	**1**	**3.6%**
10. Diabetic retinopathy	0	0.0%	0	0.0%	**0**	**0.0%**
11. ARMD	0	0.0%	1	6.7%	**1**	**3.6%**
12. Other posterior segment disease	1	7.7%	0	0.0%	**1**	**3.6%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**13**	**100.0%**	**15**	**100.0%**	**28**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	9	69.2%	11	73.3%	20	71.4%
B. Preventable (PHC/PEC services) (5,6,7,8)	0	0.0%	1	6.7%	1	3.6%
C. Preventable (Ophthalmic services) (4,9,10)	3	23.1%	2	13.3%	5	17.9%
D. Avoidable (A+B+C)	12	92.3%	14	93.3%	26	92.9%
E. Posterior segment causes (8,9,10,11,12)	2	15.4%	1	6.7%	3	10.7%

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	14	22.6%	6	9.8%	**20**	**16.3%**
2. Aphakia uncorrected	0	0.0%	1	1.6%	**1**	**0.8%**
3. Cataract untreated	33	53.2%	33	54.1%	**66**	**53.7%**
4. Cataract surgical complications	6	9.7%	10	16.4%	**16**	**13.0%**
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	**0**	**0.0%**
6. Non Trachomatous corneal opacity	2	3.2%	1	1.6%	**3**	**2.4%**
7. Phthisis	0	0.0%	0	0.0%	**0**	**0.0%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	3	4.8%	1	1.6%	**4**	**3.3%**
10. Diabetic retinopathy	1	1.6%	2	3.3%	**3**	**2.4%**
11. ARMD	2	3.2%	1	1.6%	**3**	**2.4%**
12. Other posterior segment disease	1	1.6%	3	4.9%	**4**	**3.3%**
13. All other globe/CNS abnormalities	0	0.0%	3	4.9%	**3**	**2.4%**
Total	**62**	**100.0%**	**61**	**100.0%**	**123**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	47	75.8%	40	65.6%	87	70.7%
B. Preventable (PHC/PEC services) (5,6,7,8)	2	3.2%	1	1.6%	3	2.4%
C. Preventable (Ophthalmic services) (4,9,10)	10	16.1%	13	21.3%	23	18.7%
D. Avoidable (A+B+C)	59	95.2%	54	88.5%	113	91.9%
E. Posterior segment causes (8,9,10,11,12)	7	11.3%	7	11.5%	14	11.4%

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	45	51.7%	67	57.8%	**112**	**55.2%**
2. Aphakia uncorrected	1	1.1%	0	0.0%	**1**	**0.5%**
3. Cataract untreated	27	31.0%	32	27.6%	**59**	**29.1%**
4. Cataract surgical complications	4	4.6%	6	5.2%	**10**	**4.9%**
5. Trachomatous corneal opacity	0	0.0%	1	0.9%	**1**	**0.5%**
6. Non Trachomatous corneal opacity	1	1.1%	1	0.9%	**2**	**1.0%**
7. Phthisis	0	0.0%	0	0.0%	**0**	**0.0%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	3	3.4%	3	2.6%	**6**	**3.0%**
10. Diabetic retinopathy	1	1.1%	3	2.6%	**4**	**2.0%**
11. ARMD	2	2.3%	1	0.9%	**3**	**1.5%**
12. Other posterior segment disease	3	3.4%	2	1.7%	**5**	**2.5%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**87**	**100.0%**	**116**	**100.0%**	**203**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	73	83.9%	99	85.3%	172	84.7%
B. Preventable (PHC/PEC services) (5,6,7,8)	1	1.2%	2	1.7%	3	1.5%
C. Preventable (Ophthalmic services) (4,9,10)	8	9.2%	12	10.3%	20	9.9%
D. Avoidable (A+B+C)	82	94.3%	113	97.4%	195	96.1%
E. Posterior segment causes (8,9,10,11,12)	9	10.3%	9	7.8%	18	8.9%

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	118	57.6%	179	60.9%	**297**	**59.5%**
2. Aphakia uncorrected	2	1.0%	0	0.0%	**2**	**0.4%**
3. Cataract untreated	52	25.4%	77	26.2%	**129**	**25.9%**
4. Cataract surgical complications	10	4.9%	10	3.4%	**20**	**4.0%**
5. Trachomatous corneal opacity	0	0.0%	1	0.3%	**1**	**0.2%**
6. Non Trachomatous corneal opacity	2	1.0%	2	0.7%	**4**	**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	4	2.0%	7	2.4%	**11**	**2.2%**
10. Diabetic retinopathy	1	0.5%	5	1.7%	**6**	**1.2%**
11. ARMD	2	1.0%	3	1.0%	**5**	**1.0%**
12. Other posterior segment disease	12	5.9%	7	2.4%	**19**	**3.8%**
13. All other globe/CNS abnormalities	2	1.0%	3	1.0%	**5**	**1.0%**
Total	**205**	**100.0%**	**294**	**100.0%**	**499**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	172	83.9%	256	87.1%	428	85.8%
B. Preventable (PHC/PEC services) (5,6,7,8)	2	1.0%	3	1.0%	5	1.0%
C. Preventable (Ophthalmic services) (4,9,10)	15	7.3%	22	7.5%	37	7.4%
D. Avoidable (A+B+C)	189	92.2%	281	95.6%	470	94.2%
E. Posterior segment causes (8,9,10,11,12)	19	9.3%	22	7.5%	41	8.2%

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	57	79.2%	118	80.8%	**175**	**80.3%**
2. Aphakia uncorrected	2	2.8%	0	0.0%	**2**	**0.9%**
3. Cataract untreated	11	15.3%	21	14.4%	**32**	**14.7%**
4. Cataract surgical complications	0	0.0%	3	2.1%	**3**	**1.4%**
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	**0**	**0.0%**
6. Non Trachomatous corneal opacity	0	0.0%	1	0.7%	**1**	**0.5%**
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	1.4%	0	0.0%	**1**	**0.5%**
11. ARMD	0	0.0%	2	1.4%	**2**	**0.9%**
12. Other posterior segment disease	1	1.4%	1	0.7%	**2**	**0.9%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**72**	**100.0%**	**146**	**100.0%**	**218**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	70	97.2%	139	95.2%	209	95.9%
B. Preventable (PHC/PEC services) (5,6,7,8)	0	0.0%	1	0.7%	1	0.5%
C. Preventable (Ophthalmic services) (4,9,10)	1	1.4%	3	2.1%	4	1.8%
D. Avoidable (A+B+C)	71	98.6%	143	98.0%	214	98.2%
E. Posterior segment causes (8,9,10,11,12)	2	2.8%	3	2.1%	5	2.3%

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	129	74.1%	261	78.9%	**390**	**77.2%**
2. Aphakia uncorrected	3	1.7%	0	0.0%	**3**	**0.6%**
3. Cataract untreated	26	14.9%	44	13.3%	**70**	**13.9%**
4. Cataract surgical complications	9	5.2%	14	4.2%	**23**	**4.6%**
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	**0**	**0.0%**
6. Non Trachomatous corneal opacity	1	0.6%	1	0.3%	**2**	**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%	1	0.3%	**1**	**0.2%**
10. Diabetic retinopathy	2	1.1%	0	0.0%	**2**	**0.4%**
11. ARMD	1	0.6%	3	0.9%	**4**	**0.8%**
12. Other posterior segment disease	3	1.7%	7	2.1%	**10**	**2.0%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**174**	**100.0%**	**331**	**100.0%**	**505**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	158	90.8%	305	92.1%	463	91.7%
B. Preventable (PHC/PEC services) (5,6,7,8)	1	0.6%	1	0.3%	2	0.4%
C. Preventable (Ophthalmic services) (4,9,10)	11	6.3%	15	4.5%	26	5.1%
D. Avoidable (A+B+C)	170	97.7%	321	97.0%	491	97.2%
E. Posterior segment causes (8,9,10,11,12)	6	3.4%	11	3.3%	17	3.4%

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	7	0.6% (0.1-1.1)	16	1.0% (0.5-1.4)	**23**	**0.8% (0.5-1.2)**
Unilateral cataract	83	7.2% (5.4-9.0)	122	7.5% (6.2-8.7)	**205**	**7.4% (6.3-8.4)**
Cataract eyes	97	4.2% (3.2-5.2)	154	4.7% (3.9-5.5)	**251**	**4.5% (3.8-5.2)**
Cataract and VA<6/60 with best correction or pinhole						
Bilateral cataract	12	1.0% (0.4-1.7)	22	1.4% (0.8-1.9)	**34**	**1.2% (0.8-1.6)**
Unilateral cataract	90	7.8% (5.7-8.0)	131	8.0% (6.7-9.5)	**221**	**7.9% (6.6-8.6)**
Cataract eyes	114	5.0% (3.9-6.0)	175	5.4% (4.5-6.2)	**289**	**5.2% (4.5-5.9)**
Cataract and VA<6/18 with best correction or pinhole						
Bilateral cataract	37	3.2% (2.2-4.3)	46	2.8% (2.1-3.6)	**83**	**3.0% (2.3-3.6)**
Unilateral cataract	112	9.7% (7.9-11.5)	171	10.5% (8.9-12.0)	**283**	**10.2% (9.0-11.3)**
Cataract eyes	186	8.1% (6.6-9.5)	263	8.1% (7.0-9.1)	**449**	**8.1% (7.1-9.0)**
Cataract and VA<6/12 with best correction or pinhole						
Bilateral cataract	47	4.1% (2.9-5.2)	69	4.2% (3.3-5.2)	**116**	**4.2% (3.4-4.9)**
Unilateral cataract	129	11.2% (9.3-13.2)	192	11.8% (10.0-13.5)	**321**	**11.5% (10.1-12.9)**
Cataract eyes	223	9.7% (8.0-11.4)	330	10.1% (8.9-11.3)	**553**	**9.9% (8.9-11.0)**

13. Sample prevalence of (pseudo)aphakia

	Males		Females		Total	
	n	% (95%CI)	n	% (95%CI)	n	% (95%CI)
Bilateral (pseudo)aphakia	95	8.3% (6.8-9.7)	137	8.4% (6.9-9.9)	**232**	**8.3% (7.1-9.5)**
Unilateral (pseudo)aphakia	124	10.8% (8.9-12.7)	194	11.9% (10.3-13.5)	**318**	**11.4% (9.9-12.9)**
(Pseudo)aphakic eyes	314	13.6% (12.0-15.3)	468	14.3% (12.6-16.1)	**782**	**14.0% (12.6-15.5)**

14. Cataract Surgical Coverage

	Males	Females	Total
Cataract Surgical Coverage (eyes) - percentage			
VA < 3/60	76.4	75.2	75.7
VA < 6/60	73.4	72.8	73.0
VA < 6/18	62.8	64.0	63.5
Cataract Surgical Coverage (persons) - percentage			
VA < 3/60	95.0	92.9	93.7
VA < 6/60	92.1	90.7	91.2
VA < 6/18	79.8	83.4	82.0

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

	Males		Females		Total	
	n	%	n	%	n	%
First eyes	219	69.8	331	70.7	**550**	**70.3**
Second eyes	95	30.3	137	29.3	**232**	**29.7**

16. Uncorrected refractive error and uncorrected presbyopia

	Males		Females		Total	
	n	%	n	%	n	%
Total refractive errors	246	21.4	403	24.7	**649**	**23.3**
Uncorrected refractive errors	105	9.1	187	11.4	**292**	**10.5**
Uncorrected presbyopia	854	74.2	1,291	79.0	**2,145**	**77.0**

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

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59	2	0.4	4	0.5	**6**	**0.5**
60 - 69	7	1.7	5	0.8	**12**	**1.2**
70 - 79	5	2.6	6	3.3	**11**	**2.9**
80+	5	5.8	11	12.4	**16**	**9.1**
Total	19	1.7	26	1.6	**45**	**1.6**

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	5	26.3%	9	34.6%	**14**	**31.1%**
5. Trachomatous corneal opacity	0	0.0%	1	3.8%	**1**	**2.2%**
6. Non Trachomatous corneal opacity	2	10.5%	4	15.4%	**6**	**13.3%**
7. Phthisis	0	0.0%	0	0.0%	**0**	**0.0%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	5	26.3%	3	11.5%	**8**	**17.8%**
10. Diabetic retinopathy	2	10.5%	3	11.5%	**5**	**11.1%**
11. ARMD	2	10.5%	2	7.7%	**4**	**8.9%**
12. Other posterior segment disease	3	15.8%	4	15.4%	**7**	**15.6%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**19**	**100.0%**	**26**	**100.0%**	**45**	**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	10.5%	5	19.2%	7	15.6%
C. Preventable (Ophthalmic services) (4,9,10)	12	63.2%	15	57.7%	27	60.0%
D. Avoidable (A+B+C)	14	73.7%	20	76.9%	34	75.6%
E. Posterior segment causes (8,9,10,11,12)	12	63.2%	12	46.2%	24	53.3%

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+	5	20.8	6	17.1	**11**	**18.6**
BCVA<6/60 - 3/60	3	23.1	5	33.3	**8**	**28.6**
BCVA<6/18 - 6/60	11	12.6	15	12.9	**26**	**12.8**
Total	19	15.3	26	15.7	**45**	**15.5**

RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

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

Date and time of report: 13-Jan-16 2:05:59PM

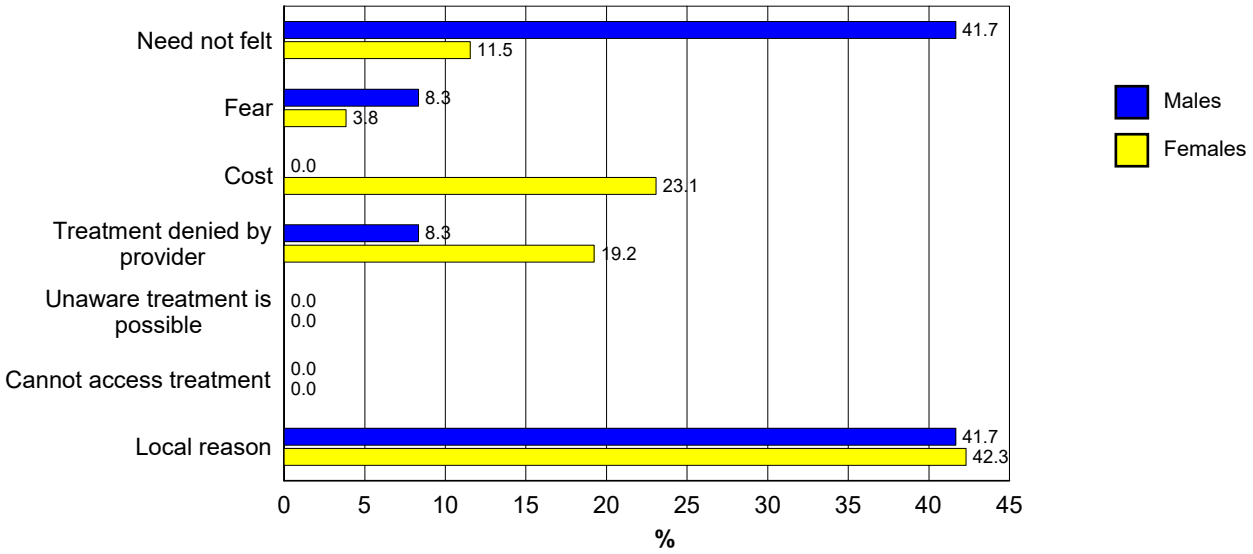
This report is for the survey area: Yamuna Nagar

Year and month when survey was conducted: 2015-10 until 2015-10

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.

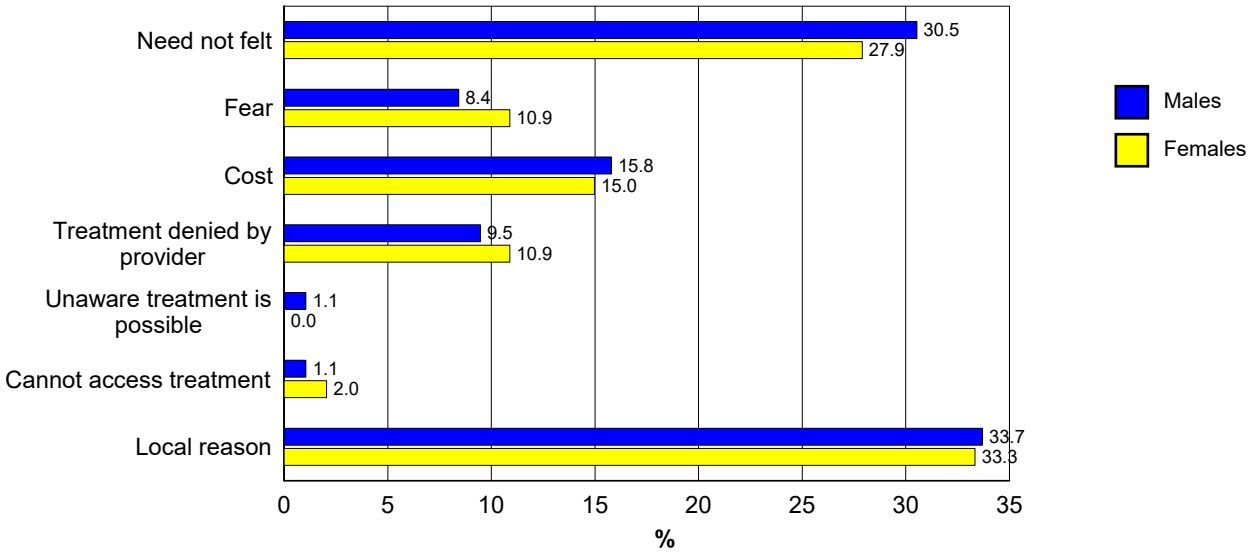
1. Barriers to cataract surgery in sample (bilateral BCVA<6/60 due to cataract)

	Males		Females		Total	
	n	%	n	%	n	%
Need not felt	5	41.7%	3	11.5%	8	21.1%
Fear	1	8.3%	1	3.8%	2	5.3%
Cost	0	0.0%	6	23.1%	6	15.8%
Treatment denied by provider	1	8.3%	5	19.2%	6	15.8%
Unaware treatment is possible	0	0.0%	0	0.0%	0	0.0%
Cannot access treatment	0	0.0%	0	0.0%	0	0.0%
Local reason	5	41.7%	11	42.3%	16	42.1%
Total	**12**	**100.0%**	**26**	**100.0%**	**38**	**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	29	30.5%	41	27.9%	70	28.9%
Fear	8	8.4%	16	10.9%	24	9.9%
Cost	15	15.8%	22	15.0%	37	15.3%
Treatment denied by provider	9	9.5%	16	10.9%	25	10.3%
Unaware treatment is possible	1	1.1%	0	0.0%	1	0.4%
Cannot access treatment	1	1.1%	3	2.0%	4	1.7%
Local reason	32	33.7%	49	33.3%	81	33.5%
Total	**95**	**100.0%**	**147**	**100.0%**	**242**	**100.0%**



RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

VISUAL OUTCOME AFTER CATARACT SURGERY (LONG-TERM OUTCOME)

Date and time of report:	13-Jan-16	2:06:23PM
This report is for the survey area:	Yamuna Nagar	
Year and month when survey was conducted:	2015-10 until 2015-10	

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	14	21.5%	468	65.3%	0	0.0%	**482**	**61.6%**
Good: can see 6/18	9	13.8%	107	14.9%	0	0.0%	**116**	**14.8%**
Borderline: can see 6/60	12	18.5%	86	12.0%	0	0.0%	**98**	**12.5%**
Poor: cannot see 6/60	30	46.2%	56	7.8%	0	0.0%	**86**	**11.0%**
Total	**65**	**100.0%**	**717**	**100.0%**	**0**	**0.0%**	**782**	**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	18	27.7%	564	78.7%	0	0.0%	**582**	**74.4%**
Good: can see 6/18	7	10.8%	66	9.2%	0	0.0%	**73**	**9.3%**
Borderline: can see 6/60	13	20.0%	46	6.4%	0	0.0%	**59**	**7.5%**
Poor: cannot see 6/60	27	41.5%	41	5.7%	0	0.0%	**68**	**8.7%**
Total	**65**	**100.0%**	**717**	**100.0%**	**0**	**0.0%**	**782**	**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	235	72.1%	122	58.9%	125	50.2%	**482**	**61.6%**
Good: can see 6/18	40	12.3%	37	17.9%	39	15.7%	**116**	**14.8%**
Borderline: can see 6/60	36	11.0%	28	13.5%	34	13.7%	**98**	**12.5%**
Poor: cannot see 6/60	15	4.6%	20	9.7%	51	20.5%	**86**	**11.0%**
Total	**326**	**100.0%**	**207**	**100.0%**	**249**	**100.0%**	**782**	**100.0%**

4. Age at time of surgery in males and females

	Males		Females		Total	
	Eyes	%	Eyes	%	Eyes	%
1 - 29	0	0.0%	3	0.6%	**3**	**0.4%**
30 - 39	0	0.0%	7	1.5%	**7**	**0.9%**
40 - 49	6	1.9%	31	6.6%	**37**	**4.7%**
50 - 59	61	19.4%	149	31.8%	**210**	**26.9%**
60 - 69	148	47.1%	197	42.1%	**345**	**44.1%**
70 - 79	70	22.3%	63	13.5%	**133**	**17.0%**
80+	29	9.2%	18	3.8%	**47**	**6.0%**
Total	**314**	**100.0%**	**468**	**100.0%**	**782**	**100.0%**

5. Place of surgery by sex

	Males		Females		Total	
	Eyes	%	Eyes	%	Eyes	%
Government Hosp.	88	28.0	172	36.8	**260**	**33.2**
Voluntary/charitable hospital	56	17.8	54	11.5	**110**	**14.1**
Private hospital	148	47.1	223	47.6	**371**	**47.4**
Eyecamp	22	7.0	19	4.1	**41**	**5.2**
Total	**314**	**100.0**	**468**	**100.0**	**782**	**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	156	60.0	68	61.8	238	64.2	20	48.8	**482**	**61.6**
Good: can see 6/18	38	14.6	17	15.5	59	15.9	2	4.9	**116**	**14.8**
Borderline: can see 6/60	27	10.4	17	15.5	47	12.7	7	17.1	**98**	**12.5**
Poor: cannot see 6/60	39	15.0	8	7.3	27	7.3	12	29.3	**86**	**11.0**
Total	**260**	**100.0**	**110**	**100.0**	**371**	**100.0**	**41**	**100.0**	**782**	**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	482	100.0	**482**	**61.6**
Good: can see 6/18	9	13.2	23	27.4	82	58.6	2	25.0	0	0.0	**116**	**14.8**
Borderline: can see 6/60	25	36.8	19	22.6	52	37.1	2	25.0	0	0.0	**98**	**12.5**
Poor: cannot see 6/60	34	50.0	42	50.0	6	4.3	4	50.0	0	0.0	**86**	**11.0**
Total	**68**	**100.0**	**84**	**100.0**	**140**	**100.0**	**8**	**100.0**	**482**	**100.0**	**782**	**100.0**

8. Proportion and type of surgery

	Males		Females		Total	
	Eyes	%	Eyes	%	Eyes	%
Non-IOL	17	5.4	48	10.3	**65**	**8.3**
IOL	297	94.6	420	89.7	**717**	**91.7**
Couching	0	0.0	0	0.0	**0**	**0.0**
Total	**314**	**100.0**	**468**	**100.0**	**782**	**100.0**

RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

INDICATORS BY SEX AND BY AGE GROUP - FINDINGS FROM SAMPLE

Date and time of report:	13-Jan-16 2:06:52PM
This report is for the survey area:	Yamuna Nagar
Year and month when survey was conducted:	2015-10 until 2015-10

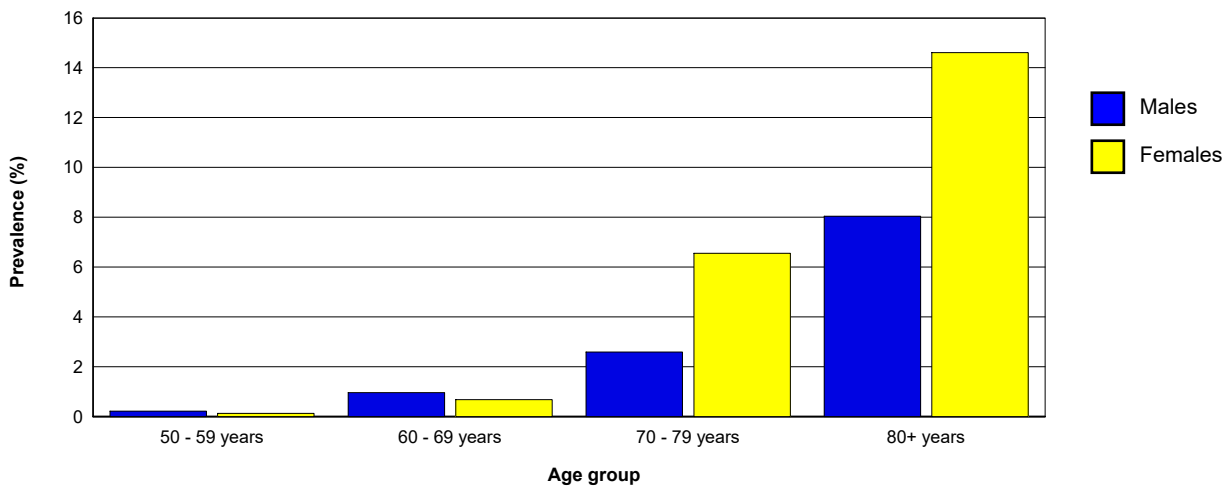
The sample size of the Rapid Assessment is sufficient to provide an acceptable accuracy of the overall prevalence of bilateral blindness (VA <3/60). The accuracy of prevalence estimates for any subgroup is far less and caution should be taken in the interpretation of these data. Confidence intervals 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	453	39.4%	770	47.1%	1,223	43.2%
60 - 69 years	418	36.3%	592	36.2%	1,010	36.3%
70 - 79 years	193	16.8%	183	11.2%	376	14.0%
80+ years	87	7.6%	89	5.4%	176	6.5%
Total	**1,151**	**100.0%**	**1,634**	**100.0%**	**2,785**	**100.0%**

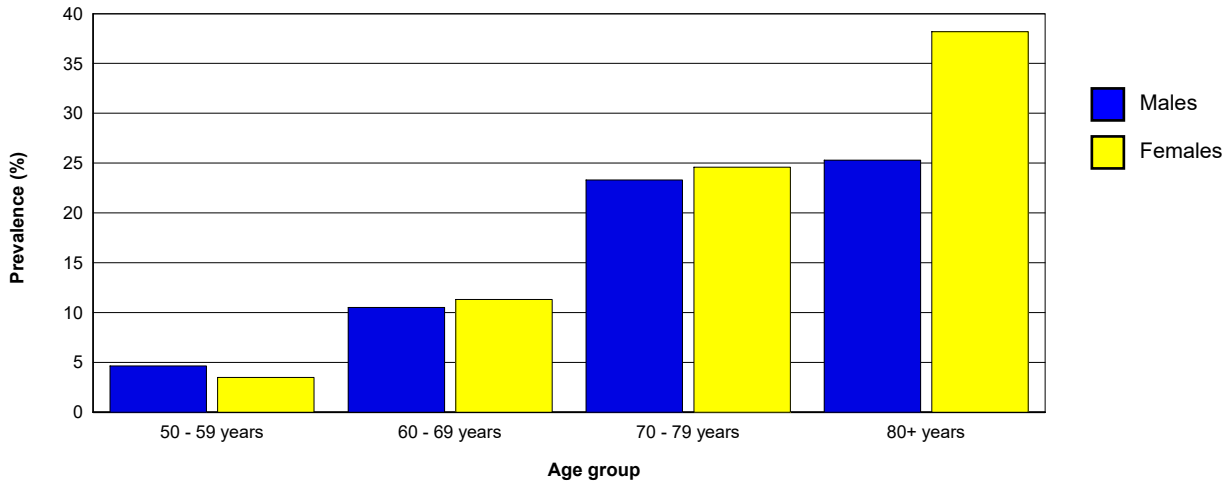
2. Prevalence of people with bilateral blindness - VA <3/60 in better eye with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	1	0.2%	1	0.1%	2	0.2%
60 - 69 years	4	1.0%	4	0.7%	8	0.8%
70 - 79 years	5	2.6%	12	6.6%	17	4.5%
80+ years	7	8.0%	13	14.6%	20	11.4%
Total	**17**	**1.5%**	**30**	**1.8%**	**47**	**1.7%**



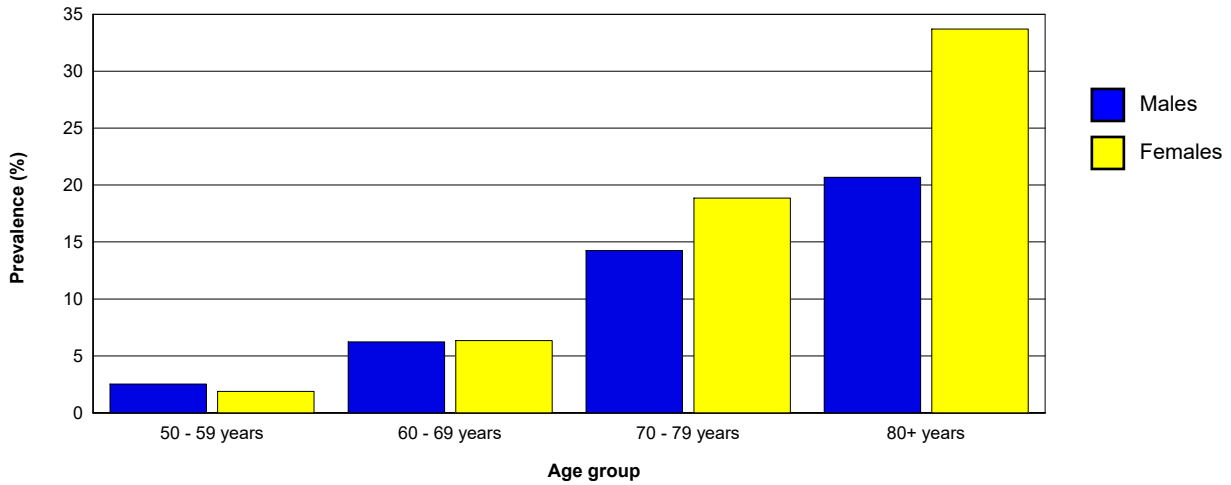
3. Prevalence of people with unilateral blindness - VA <3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	21	4.6%	27	3.5%	48	3.9%
60 - 69 years	44	10.5%	67	11.3%	111	11.0%
70 - 79 years	45	23.3%	45	24.6%	90	23.9%
80+ years	22	25.3%	34	38.2%	56	31.8%
Total	**132**	**11.5%**	**173**	**10.6%**	**305**	**11.0%**



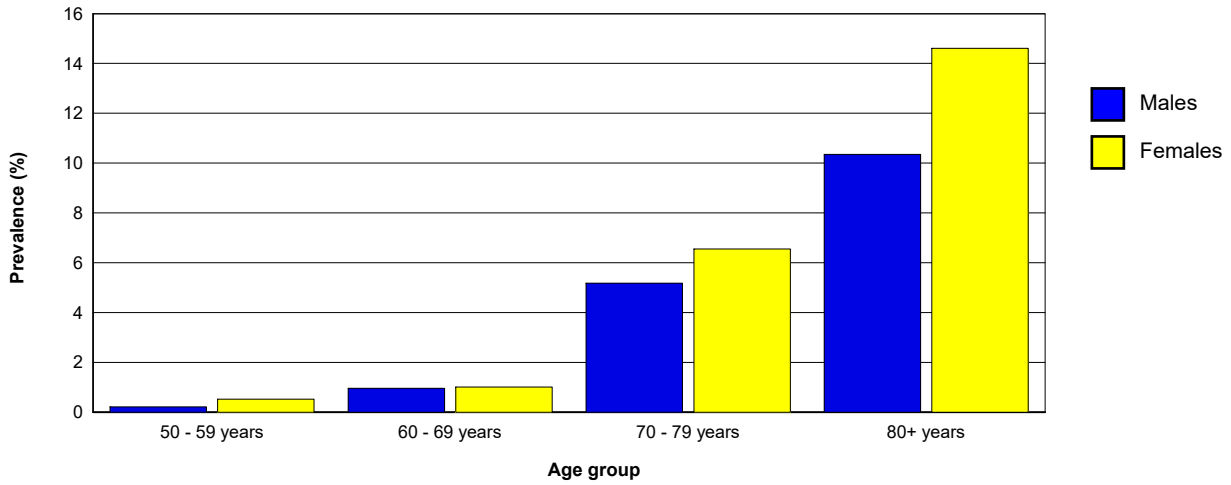
4. Prevalence of blind eyes - VA <3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	23	2.5%	29	1.9%	52	2.1%
60 - 69 years	52	6.2%	75	6.3%	127	6.3%
70 - 79 years	55	14.2%	69	18.9%	124	16.5%
80+ years	36	20.7%	60	33.7%	96	27.3%
Total	**166**	**7.2%**	**233**	**7.1%**	**399**	**7.2%**



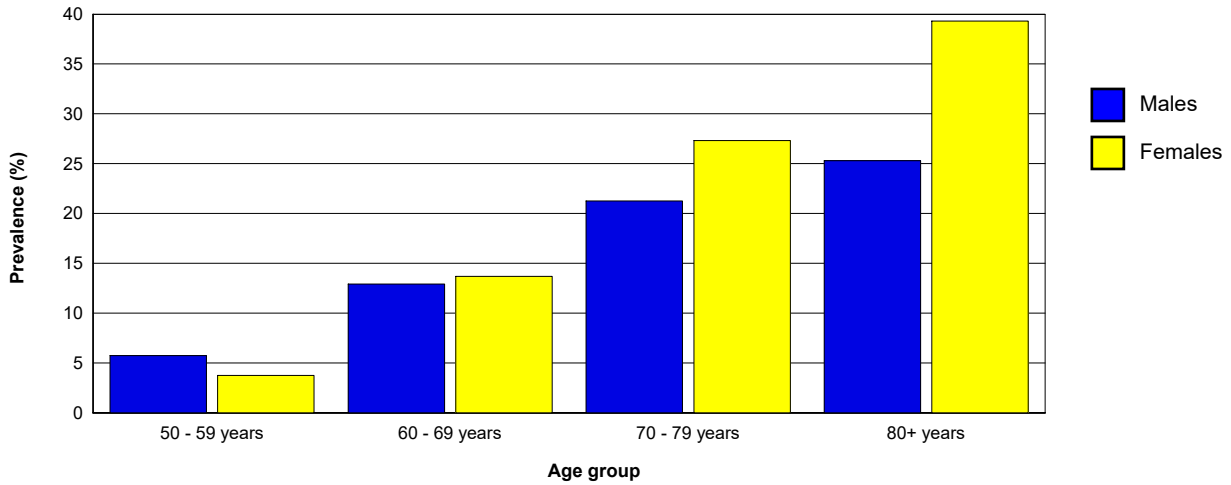
5. Prevalence of people with bilateral blindness - VA <3/60 in better eye with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	1	0.2%	4	0.5%	5	0.4%
60 - 69 years	4	1.0%	6	1.0%	10	1.0%
70 - 79 years	10	5.2%	12	6.6%	22	5.9%
80+ years	9	10.3%	13	14.6%	22	12.5%
Total	**24**	**2.1%**	**35**	**2.1%**	**59**	**2.1%**



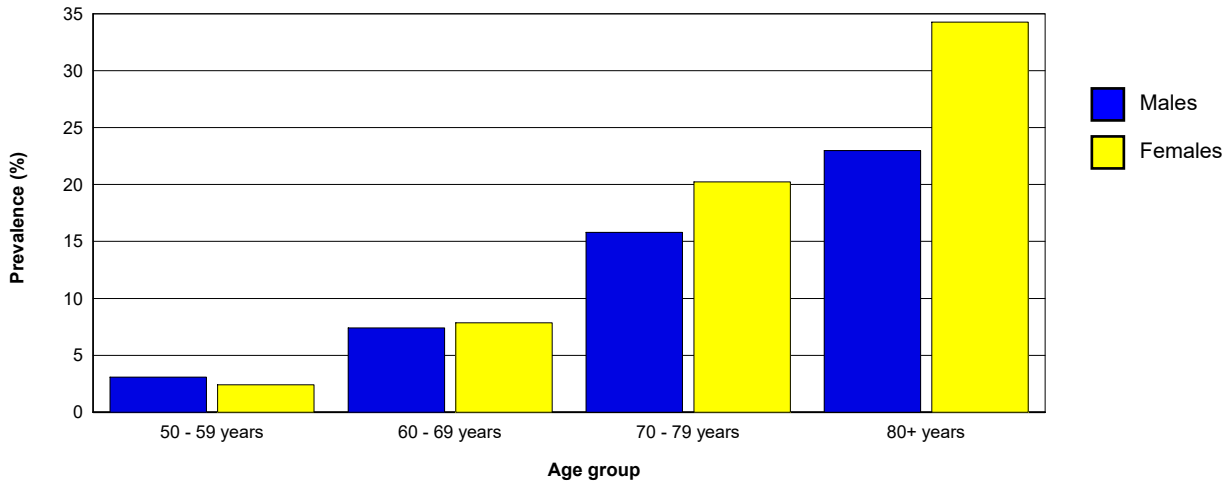
6. Prevalence of people with unilateral blindness - VA <3/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	26	5.7%	29	3.8%	55	4.5%
60 - 69 years	54	12.9%	81	13.7%	135	13.4%
70 - 79 years	41	21.2%	50	27.3%	91	24.2%
80+ years	22	25.3%	35	39.3%	57	32.4%
Total	**143**	**12.4%**	**195**	**11.9%**	**338**	**12.1%**



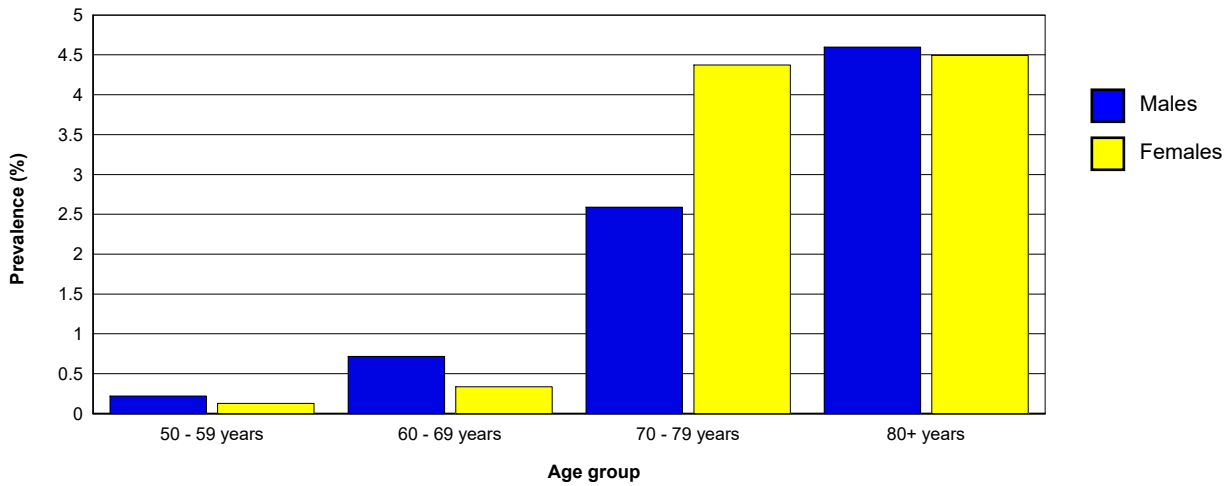
7. Prevalence of blind eyes - VA <3/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	28	3.1%	37	2.4%	65	2.7%
60 - 69 years	62	7.4%	93	7.9%	155	7.7%
70 - 79 years	61	15.8%	74	20.2%	135	18.0%
80+ years	40	23.0%	61	34.3%	101	28.7%
Total	**191**	**8.3%**	**265**	**8.1%**	**456**	**8.2%**



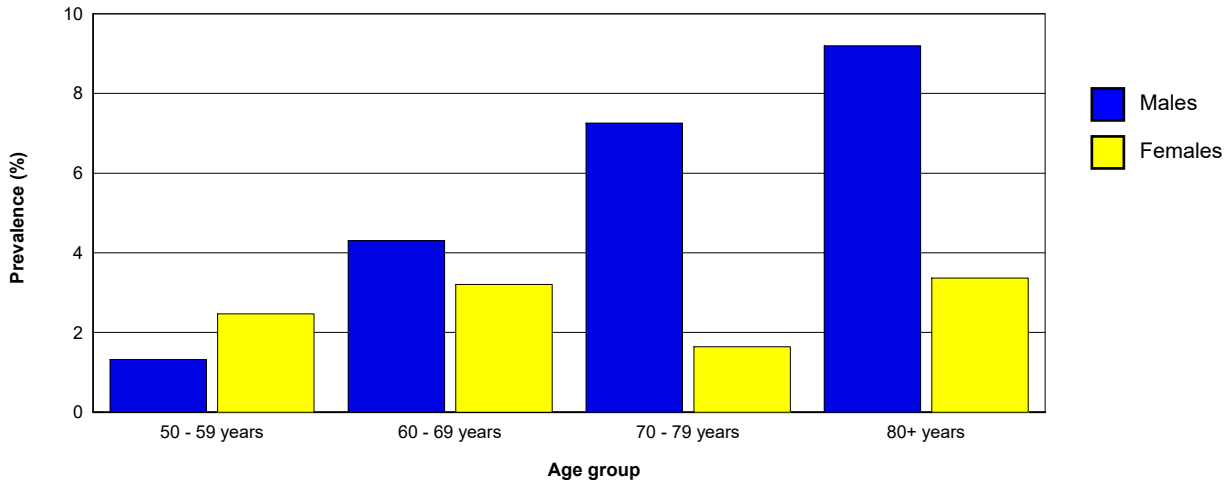
8. Prevalence of people with bilateral severe visual impairment - VA<6/60-3/60 in better eye with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	1	0.2%	1	0.1%	2	0.2%
60 - 69 years	3	0.7%	2	0.3%	5	0.5%
70 - 79 years	5	2.6%	8	4.4%	13	3.5%
80+ years	4	4.6%	4	4.5%	8	4.5%
Total	**13**	**1.1%**	**15**	**0.9%**	**28**	**1.0%**



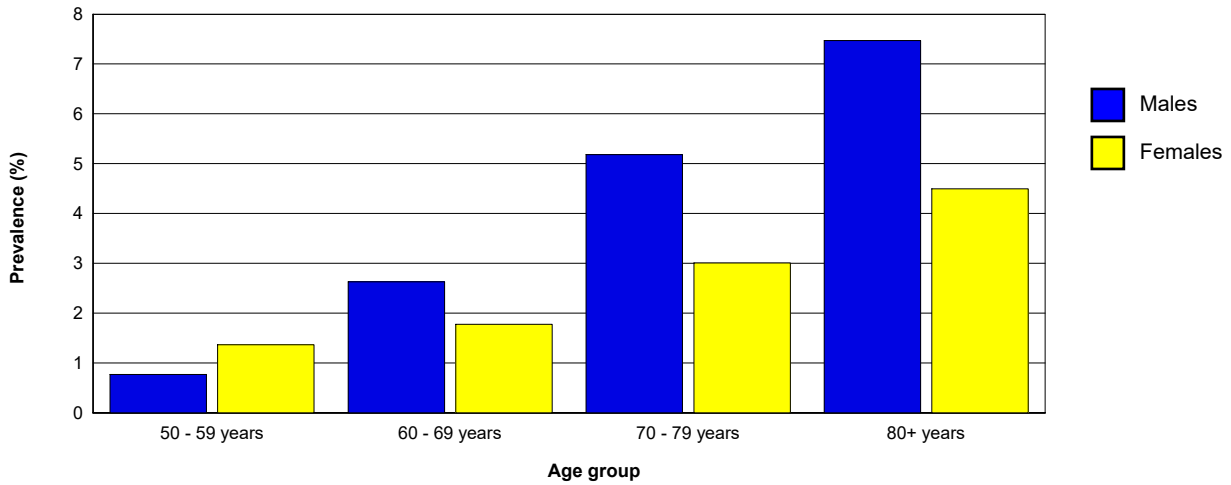
9. Prevalence of people with unilateral severe visual impairment - VA <6/60-3/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	6	1.3%	19	2.5%	25	2.0%
60 - 69 years	18	4.3%	19	3.2%	37	3.7%
70 - 79 years	14	7.3%	3	1.6%	17	4.5%
80+ years	8	9.2%	3	3.4%	11	6.3%
Total	**46**	**4.0%**	**44**	**2.7%**	**90**	**3.2%**



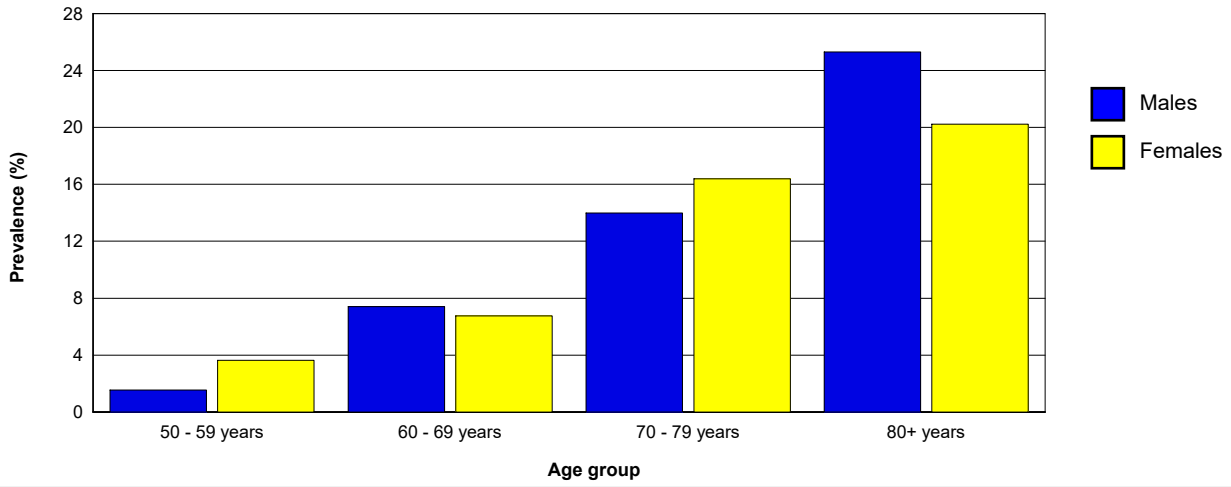
10. Prevalence of SVI eyes - VA VA<6/60-3/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	7	0.8%	21	1.4%	28	1.1%
60 - 69 years	22	2.6%	21	1.8%	43	2.1%
70 - 79 years	20	5.2%	11	3.0%	31	4.1%
80+ years	13	7.5%	8	4.5%	21	6.0%
Total	**62**	**2.7%**	**61**	**1.9%**	**123**	**2.2%**



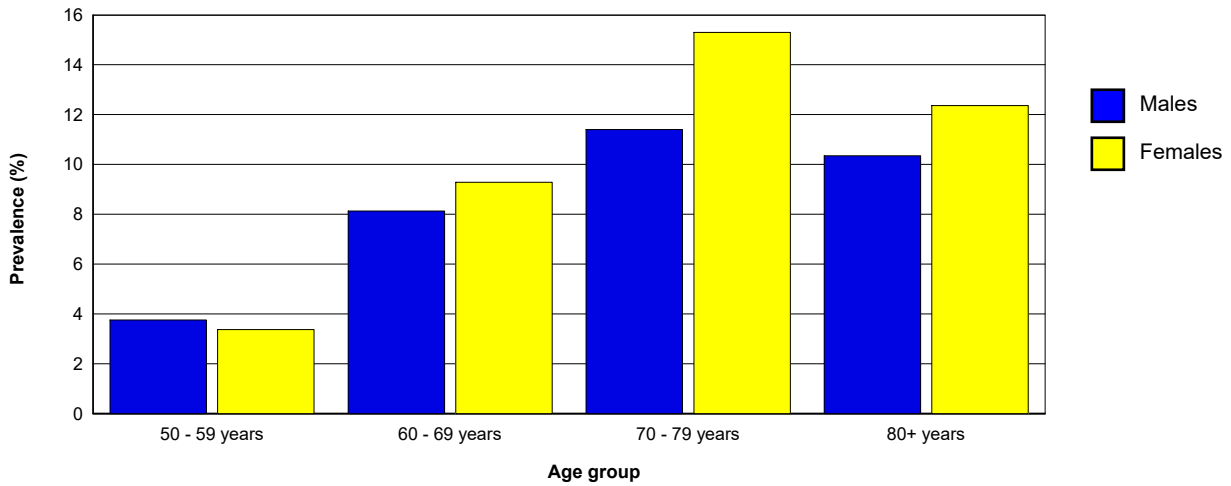
11. Prevalence of people with bilateral moderate visual impairment - VA <6/18-6/60 in better eye with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	7	1.5%	28	3.6%	35	2.9%
60 - 69 years	31	7.4%	40	6.8%	71	7.0%
70 - 79 years	27	14.0%	30	16.4%	57	15.2%
80+ years	22	25.3%	18	20.2%	40	22.7%
Total	**87**	**7.6%**	**116**	**7.1%**	**203**	**7.3%**



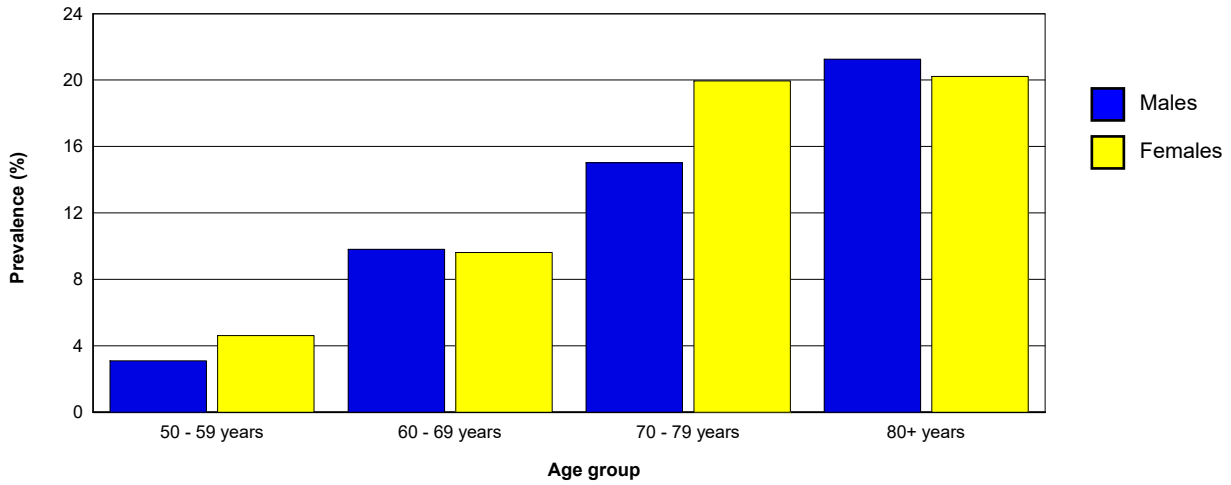
12. Prevalence of people with unilateral visual impairment - VA <6/18-6/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	17	3.8%	26	3.4%	43	3.5%
60 - 69 years	34	8.1%	55	9.3%	89	8.8%
70 - 79 years	22	11.4%	28	15.3%	50	13.3%
80+ years	9	10.3%	11	12.4%	20	11.4%
Total	**82**	**7.1%**	**120**	**7.3%**	**202**	**7.3%**



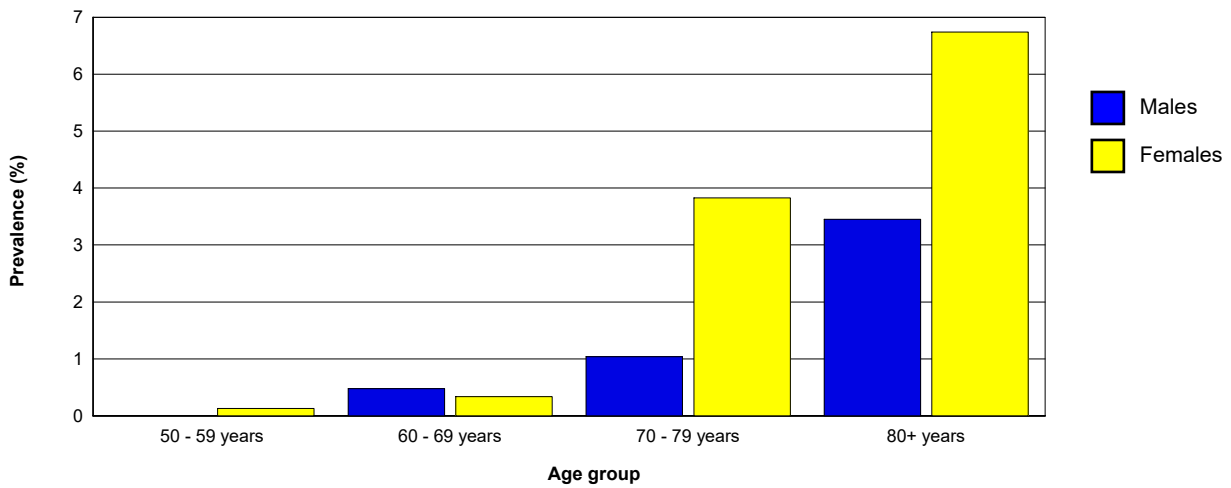
13. Prevalence of MVI eyes - VA<6/18-6/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	28	3.1%	71	4.6%	99	4.0%
60 - 69 years	82	9.8%	114	9.6%	196	9.7%
70 - 79 years	58	15.0%	73	19.9%	131	17.4%
80+ years	37	21.3%	36	20.2%	73	20.7%
Total	**205**	**8.9%**	**294**	**9.0%**	**499**	**9.0%**



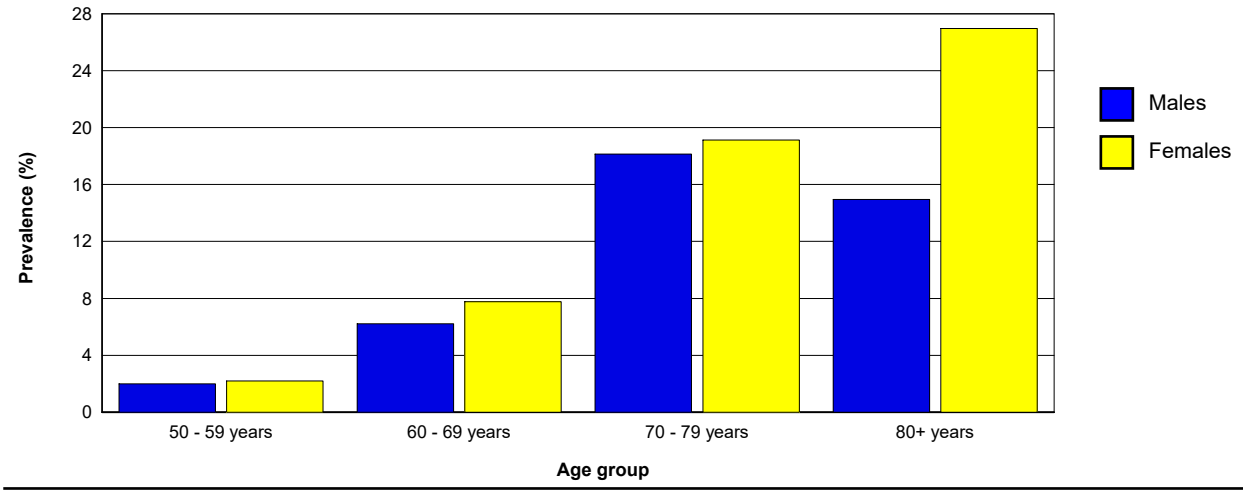
14. Prevalence of people bilateral blind due to cataract - VA<3/60 in better eye with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	0	0.0%	1	0.1%	1	0.1%
60 - 69 years	2	0.5%	2	0.3%	4	0.4%
70 - 79 years	2	1.0%	7	3.8%	9	2.4%
80+ years	3	3.4%	6	6.7%	9	5.1%
Total	**7**	**0.6%**	**16**	**1.0%**	**23**	**0.8%**



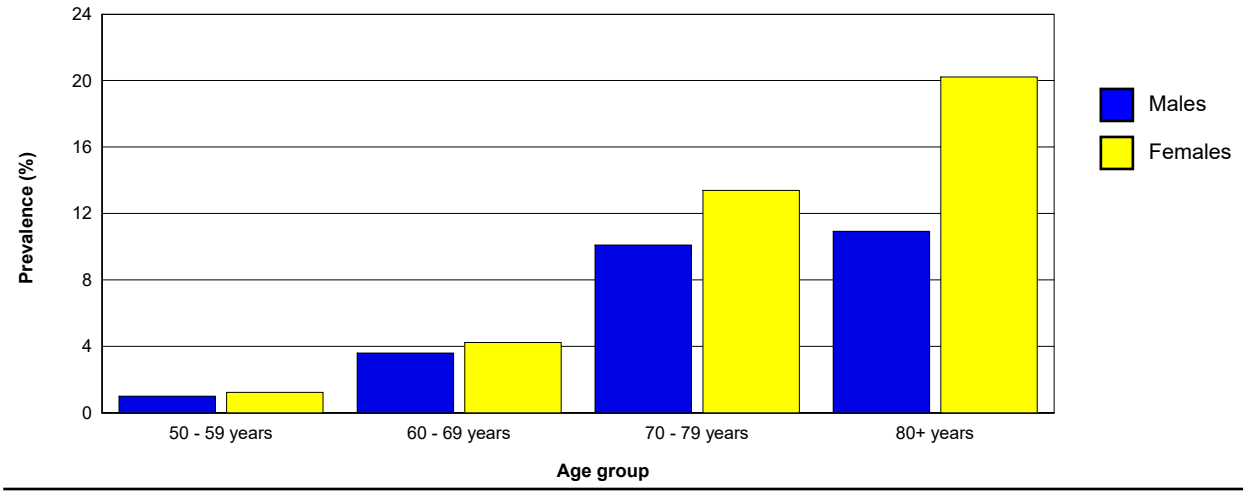
15. Prevalence of people unilateral blind due to cataract - VA <3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	9	2.0%	17	2.2%	26	2.1%
60 - 69 years	26	6.2%	46	7.8%	72	7.1%
70 - 79 years	35	18.1%	35	19.1%	70	18.6%
80+ years	13	14.9%	24	27.0%	37	21.0%
Total	**83**	**7.2%**	**122**	**7.5%**	**205**	**7.4%**



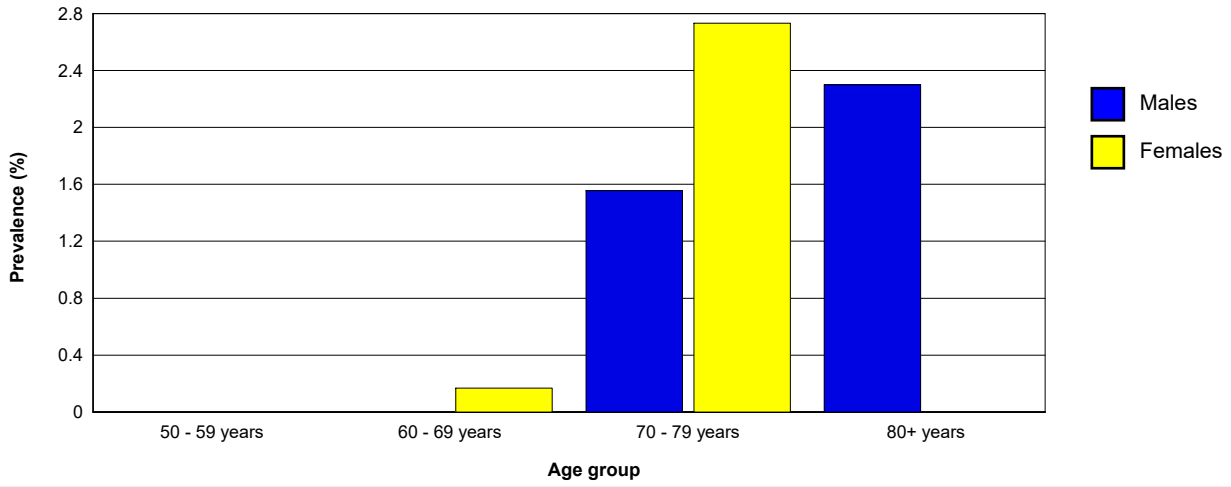
16. Prevalence of cataract blind eyes - VA <3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	9	1.0%	19	1.2%	28	1.1%
60 - 69 years	30	3.6%	50	4.2%	80	4.0%
70 - 79 years	39	10.1%	49	13.4%	88	11.7%
80+ years	19	10.9%	36	20.2%	55	15.6%
Total	**97**	**4.2%**	**154**	**4.7%**	**251**	**4.5%**



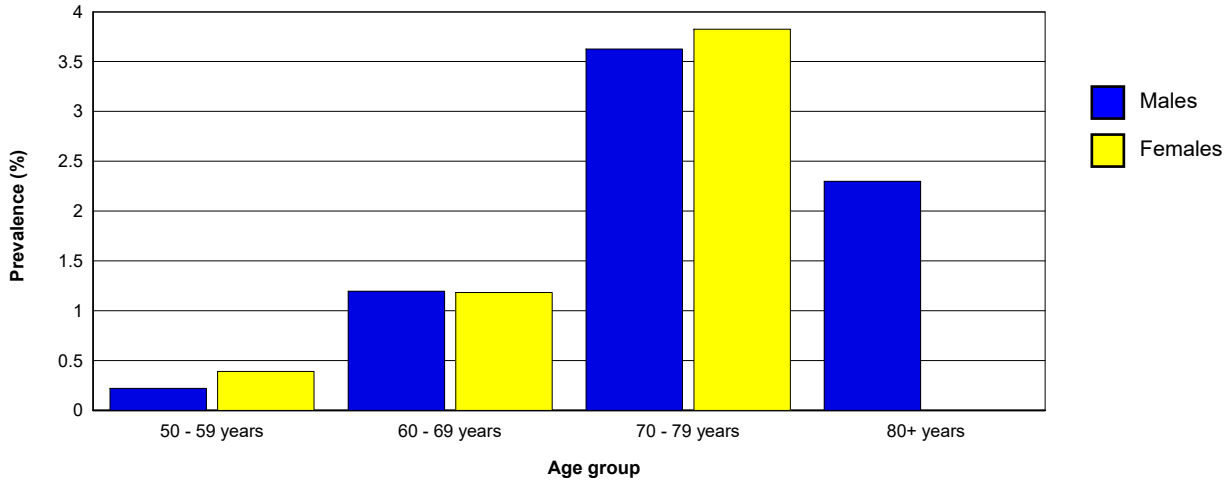
17. Prevalence of people with bilateral severe visual impairment due to cataract - VA <6/60-3/60 - best eye, best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	0	0.0%	0	0.0%	0	0.0%
60 - 69 years	0	0.0%	1	0.2%	1	0.1%
70 - 79 years	3	1.6%	5	2.7%	8	2.1%
80+ years	2	2.3%	0	0.0%	2	1.1%
Total	**5**	**0.4%**	**6**	**0.4%**	**11**	**0.4%**



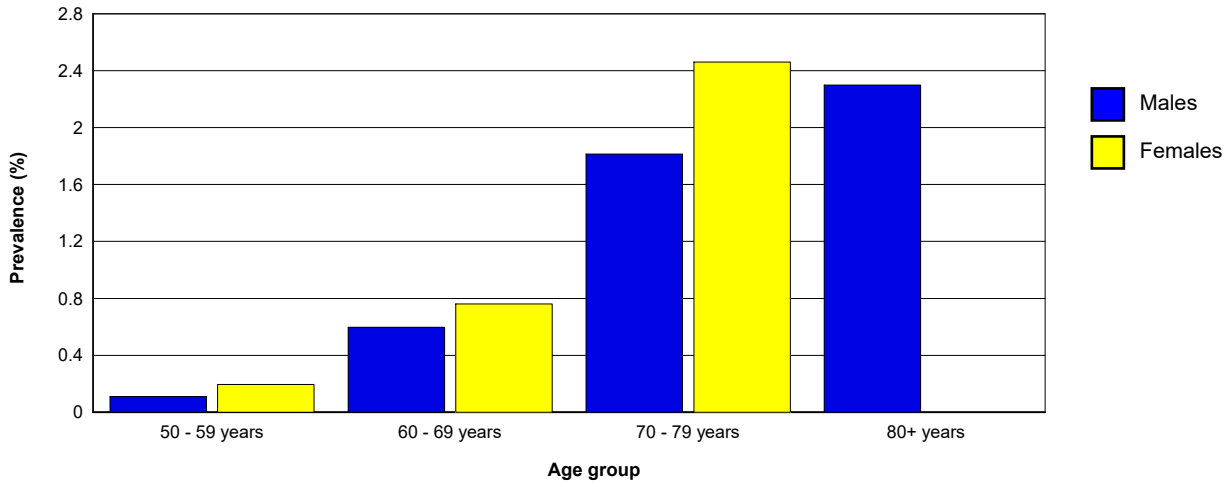
18. Prevalence of people with unilateral severe visual impairment due to cataract - VA<6/60-3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	1	0.2%	3	0.4%	4	0.3%
60 - 69 years	5	1.2%	7	1.2%	12	1.2%
70 - 79 years	7	3.6%	7	3.8%	14	3.7%
80+ years	2	2.3%	0	0.0%	2	1.1%
Total	**15**	**1.3%**	**17**	**1.0%**	**32**	**1.1%**



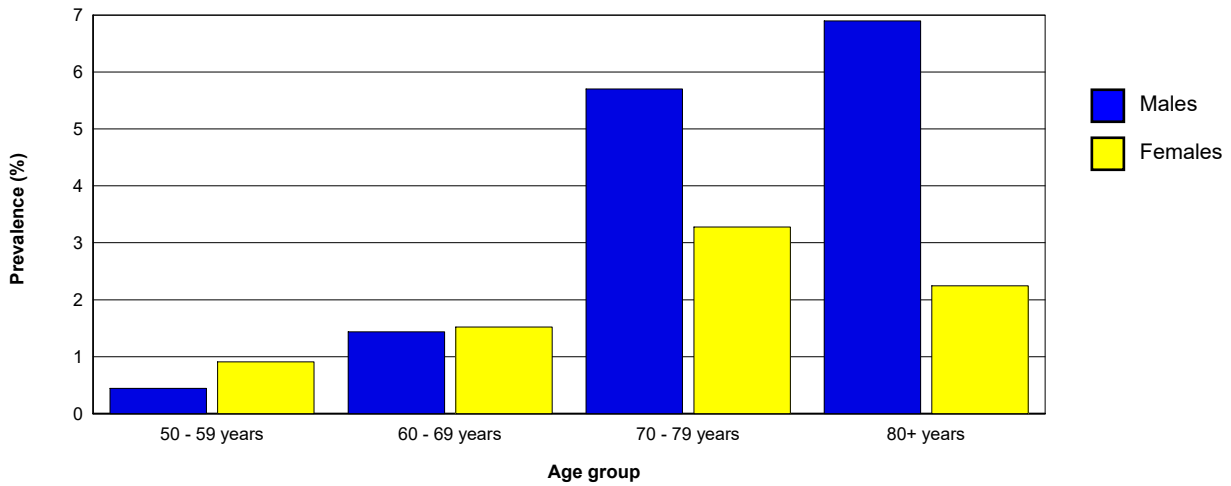
19. Prevalence of cataract SVI eyes - VA<6/60-3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	1	0.1%	3	0.2%	4	0.2%
60 - 69 years	5	0.6%	9	0.8%	14	0.7%
70 - 79 years	7	1.8%	9	2.5%	16	2.1%
80+ years	4	2.3%	0	0.0%	4	1.1%
Total	**17**	**0.7%**	**21**	**0.6%**	**38**	**0.7%**



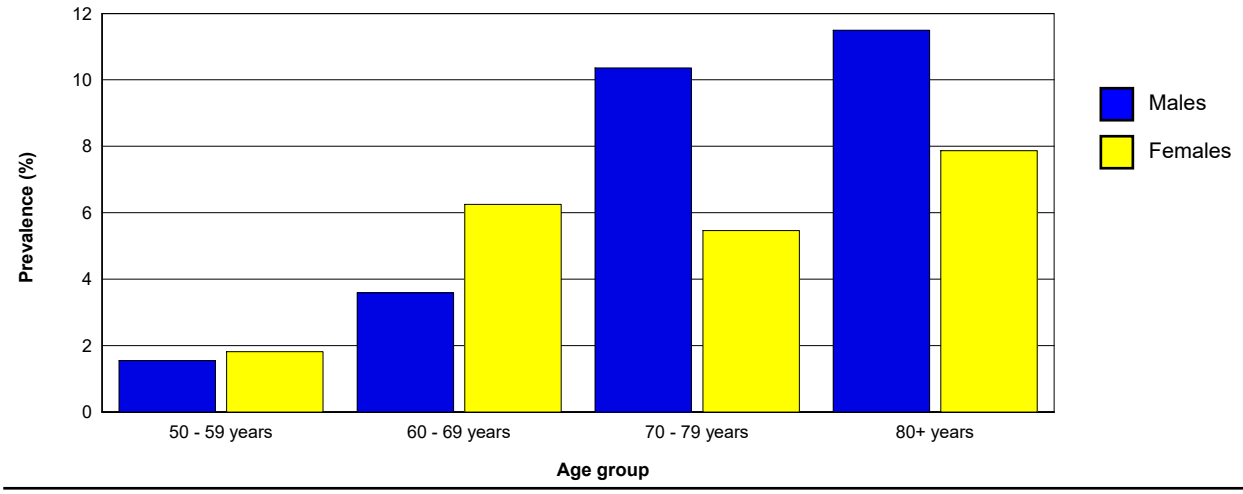
20. Prevalence of people with bilateral moderate visual impairment due to cataract - VA<6/18-6/60 - best eye, best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	2	0.4%	7	0.9%	9	0.7%
60 - 69 years	6	1.4%	9	1.5%	15	1.5%
70 - 79 years	11	5.7%	6	3.3%	17	4.5%
80+ years	6	6.9%	2	2.2%	8	4.5%
Total	**25**	**2.2%**	**24**	**1.5%**	**49**	**1.8%**



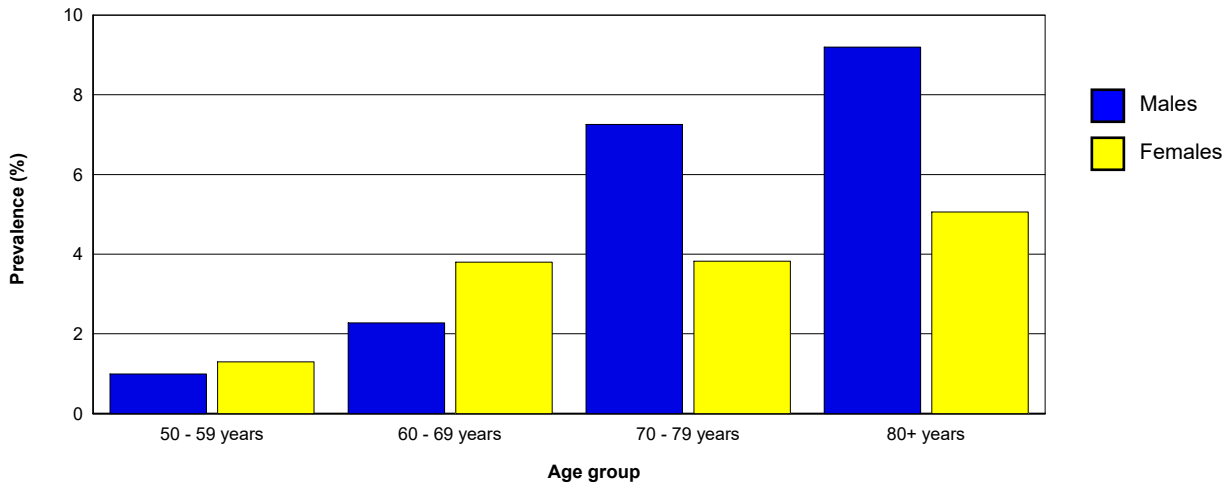
21. Prevalence of people with unilateral moderate visual impairment due to cataract - VA<6/18-6/60 best corrected

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	7	1.5%	14	1.8%	21	1.7%
60 - 69 years	15	3.6%	37	6.3%	52	5.1%
70 - 79 years	20	10.4%	10	5.5%	30	8.0%
80+ years	10	11.5%	7	7.9%	17	9.7%
Total	**52**	**4.5%**	**68**	**4.2%**	**120**	**4.3%**



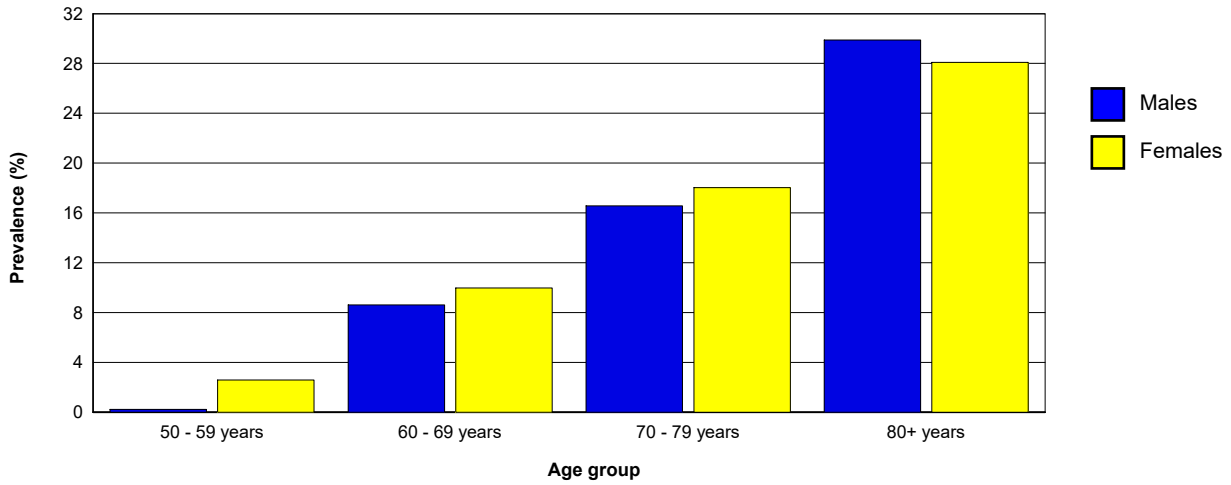
22. Prevalence of cataract MVI eyes - VA <6/18-6/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	9	1.0%	20	1.3%	29	1.2%
60 - 69 years	19	2.3%	45	3.8%	64	3.2%
70 - 79 years	28	7.3%	14	3.8%	42	5.6%
80+ years	16	9.2%	9	5.1%	25	7.1%
Total	**72**	**3.1%**	**88**	**2.7%**	**160**	**2.9%**



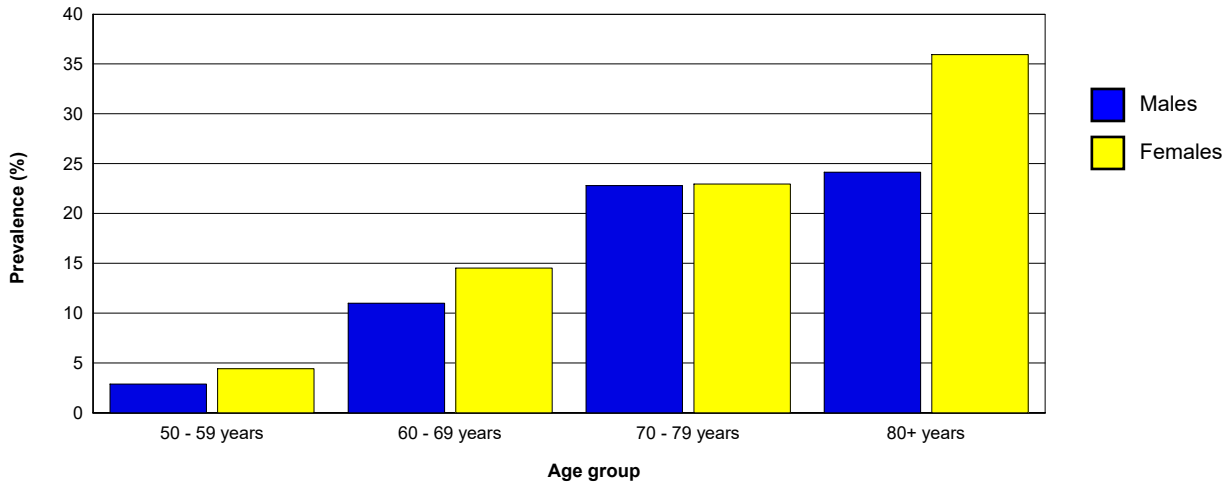
23. Prevalence of people with bilateral (pseudo)aphakia

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	1	0.2%	20	2.6%	21	1.7%
60 - 69 years	36	8.6%	59	10.0%	95	9.4%
70 - 79 years	32	16.6%	33	18.0%	65	17.3%
80+ years	26	29.9%	25	28.1%	51	29.0%
Total	**95**	**8.3%**	**137**	**8.4%**	**232**	**8.3%**



24. Prevalence of people with unilateral (pseudo)aphakia

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	13	2.9%	34	4.4%	47	3.8%
60 - 69 years	46	11.0%	86	14.5%	132	13.1%
70 - 79 years	44	22.8%	42	23.0%	86	22.9%
80+ years	21	24.1%	32	36.0%	53	30.1%
Total	**124**	**10.8%**	**194**	**11.9%**	**318**	**11.4%**



RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

AGE AND SEX ADJUSTED PREVALENCE AND ESTIMATED NUMBERS

Date and time of report: 13-Jan-16 2:08:42PM

This report is for the survey area: Yamuna Nagar

Year and month when survey was conducted: 2015-10 until 2015-10

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.

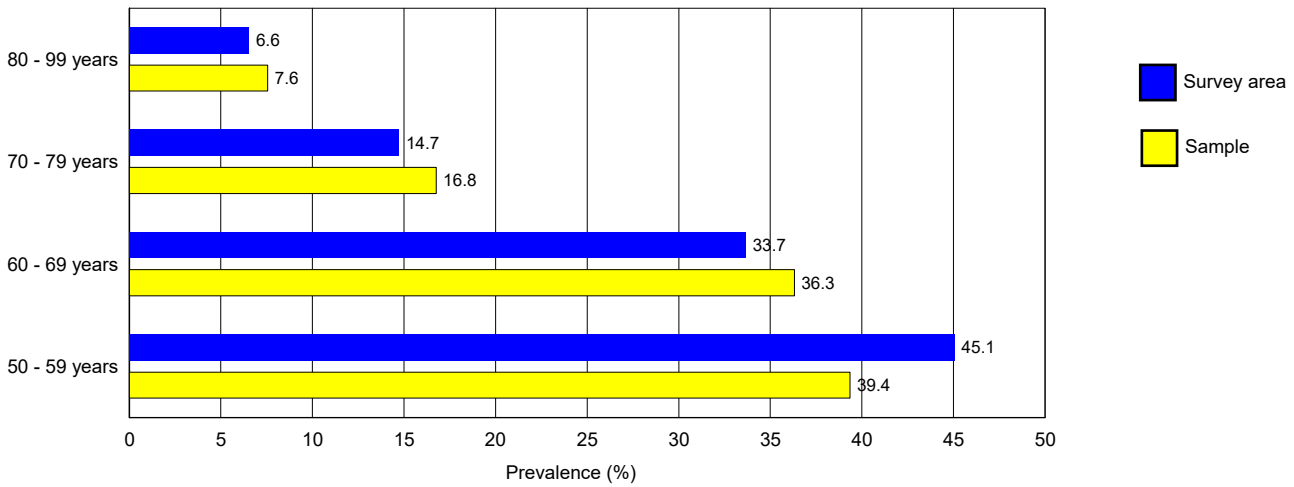
1. Age and sex distribution of people examined in the sample

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	453	39.4%	770	47.1%	**1,223**	**43.9%**
60 - 69 years	418	36.3%	592	36.2%	**1,010**	**36.3%**
70 - 79 years	193	16.8%	183	11.2%	**376**	**13.5%**
80 - 99 years	87	7.6%	89	5.4%	**176**	**6.3%**
Total	**1,151**	**100.0%**	**1,634**	**100.0%**	**2,785**	**100.0%**

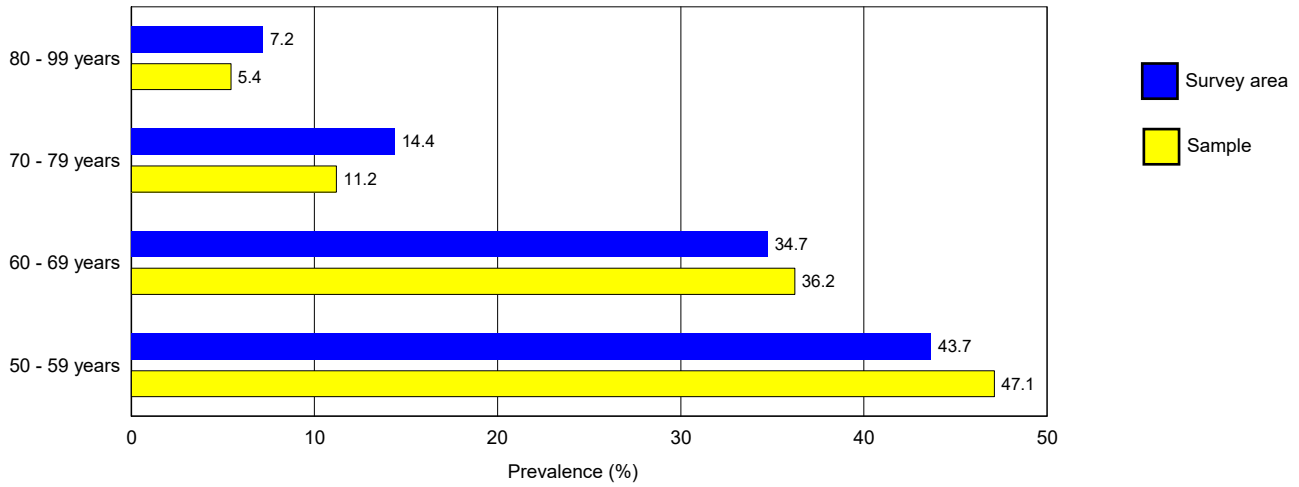
2. Total number of people aged 50+ in survey area

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	46,500	45.1%	42,877	43.7%	**89,377**	**44.4%**
60 - 69 years	34,730	33.7%	34,119	34.7%	**68,849**	**34.2%**
70 - 79 years	15,203	14.7%	14,133	14.4%	**29,336**	**14.6%**
80 - 99 years	6,761	6.6%	7,063	7.2%	**13,824**	**6.9%**
Total	**103,194**	**100.0%**	**98,192**	**100.0%**	**201,386**	**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	1,373	1.3 (0.6 - 2.0)	2,246	2.3 (1.6 - 3.0)	3,619	1.8 (1.3 - 2.3)
All eyes	13,811	6.7 (5.5 - 7.8)	16,028	8.2 (7.1 - 9.2)	29,839	7.4 (6.6 - 8.3)
Blindness - VA < 3/60 in the better eye with available correction (presenting VA)						
All bilateral cases	1,922	1.9 (1.1 - 2.7)	2,528	2.6 (1.8 - 3.4)	4,450	2.2 (1.6 - 2.8)
All eyes	15,939	7.7 (6.6 - 8.9)	17,976	9.2 (8.0 - 10.3)	33,915	8.4 (7.5 - 9.3)
Severe visual impairment (SVI) - VA<6/60 - 3/60 in the better eye with available correction						
All bilateral cases	1,057	1.0 (0.4 - 1.6)	1,106	1.1 (0.7 - 1.6)	2,163	1.1 (0.7 - 1.4)
All eyes	5,132	2.5 (1.6 - 3.3)	3,864	2.0 (1.4 - 2.5)	8,996	2.2 (1.7 - 2.7)
Moderate visual impairment (MVI) - VA<6/18 - 6/60 in the better eye with available correction						
All bilateral cases	7,132	6.9 (5.1 - 8.8)	7,609	7.7 (6.6 - 8.9)	14,741	7.3 (6.3 - 8.3)
All eyes	17,131	8.3 (6.8 - 9.8)	19,019	9.7 (8.5 - 10.8)	36,150	9.0 (8.0 - 9.9)
Early visual impairment (EVI) - VA<6/12 - 6/18 in the better eye with available correction						
All bilateral cases	5,996	5.8 (4.5 - 7.1)	9,543	9.7 (8.2 - 11.2)	15,539	7.7 (6.6 - 8.8)
All eyes	14,556	7.1 (5.9 - 8.2)	20,871	10.6 (9.3 - 12.0)	35,427	8.8 (7.8 - 9.8)

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	1,922	1.9 (1.1 - 2.7)	2,528	2.6 (1.8 - 3.4)	4,450	2.2 (1.6 - 2.8)
All eyes	15,939	7.7 (6.6 - 8.9)	17,976	9.2 (8.0 - 10.3)	33,915	8.4 (7.5 - 9.3)
VA<6/60 in the better eye, with available correction (presenting VA)						
All bilateral cases	2,979	2.9 (1.9 - 3.8)	3,633	3.7 (2.8 - 4.6)	6,612	3.3 (2.7 - 3.9)
All eyes	21,072	10.2 (8.9 - 11.6)	21,841	11.1 (10.0 - 12.2)	42,913	10.7 (9.8 - 11.5)
VA<6/18 in the better eye, with available correction (presenting VA)						
All bilateral cases	10,109	9.8 (7.9 - 11.7)	11,244	11.5 (10.0 - 12.9)	21,353	10.6 (9.4 - 11.8)
All eyes	38,202	18.5 (16.5 - 20.5)	40,858	20.8 (19.3 - 22.3)	79,060	19.6 (18.3 - 21.0)
VA<6/12 in the better eye, with available correction (presenting VA)						
All bilateral cases	16,107	15.6 (13.5 - 17.7)	20,786	21.2 (19.0 - 23.3)	36,893	18.3 (16.7 - 19.9)
All eyes	52,757	25.6 (23.1 - 28.0)	61,730	31.4 (29.2 - 33.7)	114,487	28.4 (26.5 - 30.3)

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	557	0.5 (0.0 - 1.1)	1,188	1.2 (0.7 - 1.7)	1,745	0.9 (0.5 - 1.2)
Unilateral cataract	6,851	6.6 (4.9 - 8.4)	8,206	8.4 (7.1 - 9.6)	15,057	7.5 (6.4 - 8.5)
Cataract eyes	7,966	3.9 (2.9 - 4.8)	10,581	5.4 (4.6 - 6.2)	18,547	4.6 (3.9 - 5.3)
Cataract and SVI - VA<6/60 - 3/60 in better eye with best correction or pinhole						
Bilateral cataract	391	0.4 (0.2 - 0.5)	444	0.5 (0.3 - 0.6)	835	0.4 (0.3 - 0.5)
Unilateral cataract	911	0.9 (0.3 - 1.5)	802	0.8 (0.4 - 1.2)	1,713	0.9 (0.6 - 1.1)
Cataract eyes	1,380	0.7 (0.3 - 1.0)	1,381	0.7 (0.4 - 1.0)	2,761	0.7 (0.5 - 0.9)
Cataract and Moderate VI (MVI) - VA<6/18 - 6/60 in better eye with best correction or pinhole						
Bilateral cataract	2,036	2.0 (1.4 - 2.5)	1,531	1.6 (1.2 - 1.9)	3,567	1.8 (1.5 - 2.1)
Unilateral cataract	3,098	3.0 (1.9 - 4.1)	3,340	3.4 (2.4 - 4.4)	6,438	3.2 (2.5 - 3.9)
Cataract eyes	5,952	2.9 (2.1 - 3.7)	5,502	2.8 (2.2 - 3.4)	11,454	2.8 (2.3 - 3.4)
Cataract and Early VI (EVI) - VA<6/12 - 6/18 in better eye with best correction or pinhole						
Bilateral cataract	790	0.4 (-0.1 - 0.8)	1,525	0.8 (0.4 - 1.2)	2,315	0.6 (0.3 - 0.9)
Unilateral cataract	1,800	0.9 (0.0 - 1.7)	2,125	1.1 (0.2 - 1.9)	3,925	1.0 (0.4 - 1.6)
Cataract eyes	2,984	1.4 (0.8 - 2.1)	4,284	2.2 (1.6 - 2.8)	7,268	1.8 (1.4 - 2.2)

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	557	0.5 (0.0 - 1.1)	1,188	1.2 (0.7 - 1.7)	1,745	0.9 (0.5 - 1.2)
Unilateral cataract	6,851	6.6 (4.9 - 8.4)	8,206	8.4 (7.1 - 9.6)	15,057	7.5 (6.4 - 8.5)
Cataract eyes	7,966	3.9 (2.9 - 4.8)	10,581	5.4 (4.6 - 6.2)	18,547	4.6 (3.9 - 5.3)
Cataract and VA<6/60 with best correction or pinhole						
Bilateral cataract	949	0.9 (0.4 - 1.5)	1,632	1.7 (1.1 - 2.2)	2,581	1.3 (0.9 - 1.7)
Unilateral cataract	7,762	7.5 (5.7 - 9.4)	9,009	9.2 (7.9 - 10.4)	16,771	8.3 (7.3 - 9.4)
Cataract eyes	9,345	4.5 (3.5 - 5.5)	11,961	6.1 (5.2 - 7.0)	21,306	5.3 (4.6 - 6.0)
Cataract and VA<6/18 with best correction or pinhole						
Bilateral cataract	2,985	2.9 (2.1 - 3.7)	3,162	3.2 (2.6 - 3.9)	6,147	3.1 (2.5 - 3.6)
Unilateral cataract	10,860	10.5 (8.1 - 12.9)	12,349	12.6 (10.9 - 14.3)	23,209	11.5 (10.2 - 12.9)
Cataract eyes	15,297	7.4 (6.0 - 8.9)	17,465	8.9 (7.8 - 10.0)	32,762	8.1 (7.2 - 9.1)
Cataract and VA<6/12 with best correction or pinhole						
Bilateral cataract	3,775	3.7 (2.6 - 4.7)	4,686	4.8 (4.0 - 5.5)	8,461	4.2 (3.6 - 4.8)
Unilateral cataract	12,659	12.3 (9.8 - 14.7)	14,474	14.7 (12.8 - 16.7)	27,133	13.5 (11.9 - 15.0)
Cataract eyes	18,281	8.9 (7.2 - 10.5)	21,749	11.1 (9.9 - 12.3)	40,030	9.9 (8.9 - 11.0)

9. Adjusted results for aphakia and pseudophakia

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Bilateral (pseudo)aphakia	7,636	7.4 (5.9 - 8.9)	9,047	9.2 (7.7 - 10.7)	16,683	8.3 (7.1 - 9.5)
Unilateral (pseudo)aphakia	10,254	9.9 (8.0 - 11.9)	12,633	12.9 (11.3 - 14.5)	22,887	11.4 (9.9 - 12.9)
Eyes (pseudo)aphakia	25,524	12.4 (10.7 - 14.1)	30,727	15.6 (13.9 - 17.4)	56,251	14.0 (12.6 - 15.4)

10. Adjusted results for cataract surgical coverage

	Males	Females	Total
Cataract Surgical Coverage (eyes) - percentage			
VA < 3/60	76.2	74.4	75.2
VA < 6/60	73.2	72.0	72.5
VA < 6/18	62.5	63.8	63.2
Cataract Surgical Coverage (persons) - percentage			
VA < 3/60	95.8	93.0	94.3
VA < 6/60	93.4	90.9	92.0
VA < 6/18	82.5	85.0	83.9