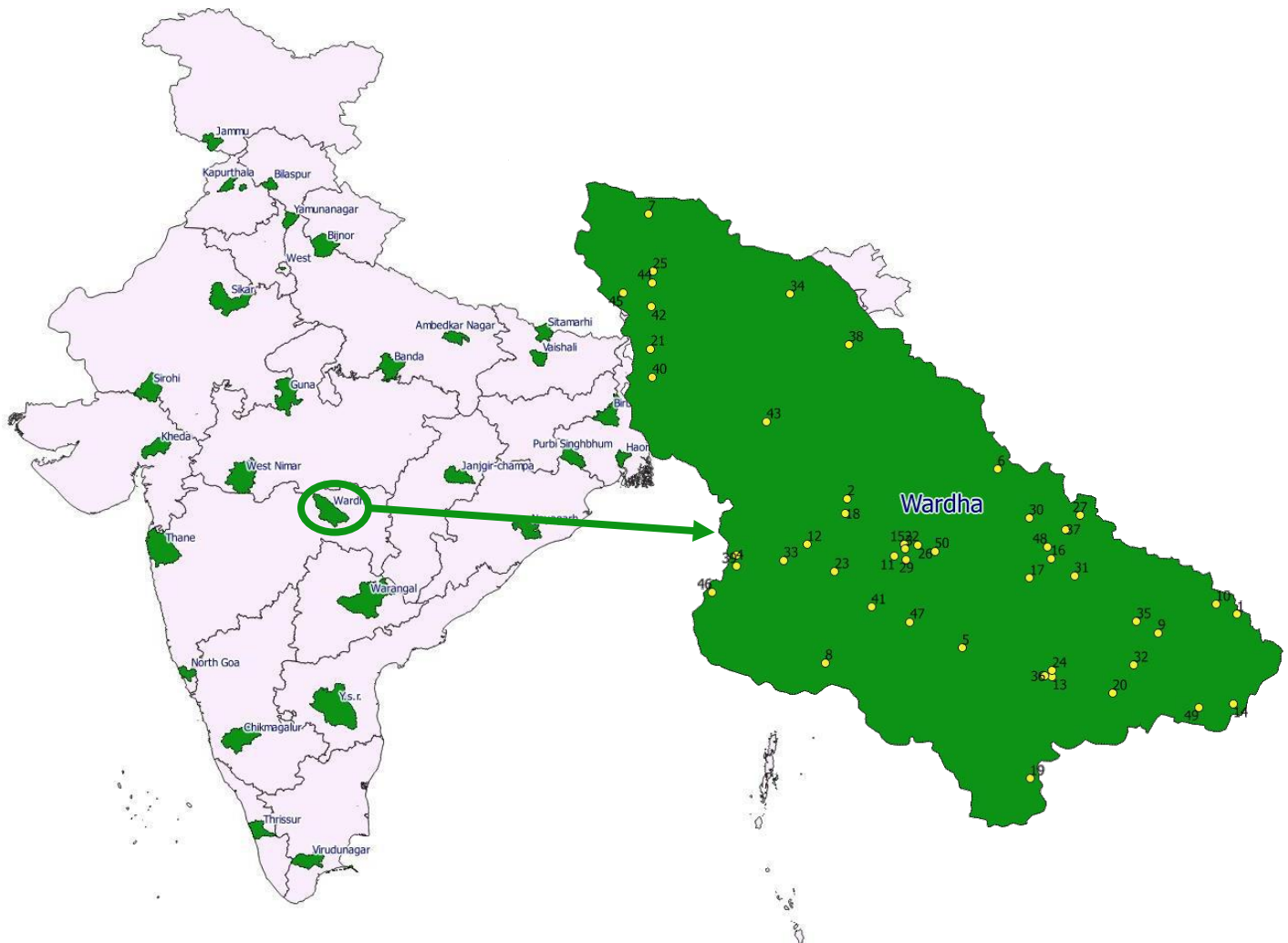




NPCB National Blindness Survey: 2015-2018

DISTRICT SUMMARY REPORT

Wardha, Maharashtra





NPCB National Blindness Survey: 2015-2018

DISTRICT SUMMARY REPORT

Wardha, 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-Apr-16 2:16:32PM

This report is for the survey area: WARDHA

Year and month when survey was conducted: 2016- 3 until 2016- 3

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	1,260	89.0%	154	10.9%	2	0.1%	0	0.0%	1,416	100.0%
Females	1,499	94.6%	83	5.2%	1	0.1%	1	0.1%	1,584	100.0%
Total	2,759	92.0%	237	7.9%	3	0.1%	1	0.0%	3,000	100.0%

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

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	487	38.7%	654	43.6%	1,141	41.4%
60 - 69 years	437	34.7%	532	35.5%	969	35.1%
70 - 79 years	242	19.2%	247	16.5%	489	17.7%
80+ years	94	7.5%	66	4.4%	160	5.8%
Total	1,260	100.0%	1,499	100.0%	2,759	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	26	2.1 (1.3 - 2.9)	29	1.9 (1.2 - 2.6)	55	2.0 (1.5 - 2.5)
Severe VI	28	2.2 (1.4 - 3.0)	37	2.5 (1.7 - 3.2)	65	2.4 (1.8 - 2.9)
Moderate VI	118	9.4 (7.6 - 11.2)	138	9.2 (7.5 - 10.9)	256	9.3 (7.9 - 10.6)
Early VI	162	12.9 (11.0 - 14.7)	230	15.3 (12.9 - 17.8)	392	14.2 (12.3 - 16.1)
Functional Low Vision	10	0.8 (0.2 - 1.3)	14	0.9 (0.4 - 1.5)	24	0.9 (0.5 - 1.3)

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	2,454	1.8 (1.0 - 2.6)	2,979	2.2 (1.5 - 2.9)	5,434	2.0 (1.5 - 2.5)
Severe VI	2,582	1.9 (1.1 - 2.7)	3,691	2.8 (2.0 - 3.5)	6,274	2.3 (1.8 - 2.9)
Moderate VI	11,864	8.7 (6.9 - 10.5)	13,562	10.1 (8.4 - 11.8)	25,423	9.4 (8.1 - 10.8)
Early VI	16,820	12.4 (10.5 - 14.2)	21,137	15.8 (13.3 - 18.2)	37,954	14.1 (12.2 - 15.9)
Functional Low Vision	957	0.7 (0.2 - 1.2)	1,387	1.0 (0.5 - 1.6)	2,344	0.9 (0.5 - 1.3)

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	0	0.0 (0.0 - 0.0)	3	0.5 (0.0 - 1.1)	3	0.3 (0.0 - 0.6)
60 - 69 years	4	0.9 (0.1 - 1.8)	4	0.8 (0.0 - 1.5)	8	0.8 (0.3 - 1.3)
70 - 79 years	11	4.6 (1.8 - 7.3)	12	4.9 (2.6 - 7.1)	23	4.7 (3.2 - 6.2)
80+ years	11	11.7 (5.0 - 18.4)	10	15.2 (7.7 - 22.6)	21	13.1 (7.7 - 18.5)
All 50+ years	26	2.1 (1.3 - 2.9)	29	1.9 (1.2 - 2.6)	55	2.0 (1.5 - 2.5)

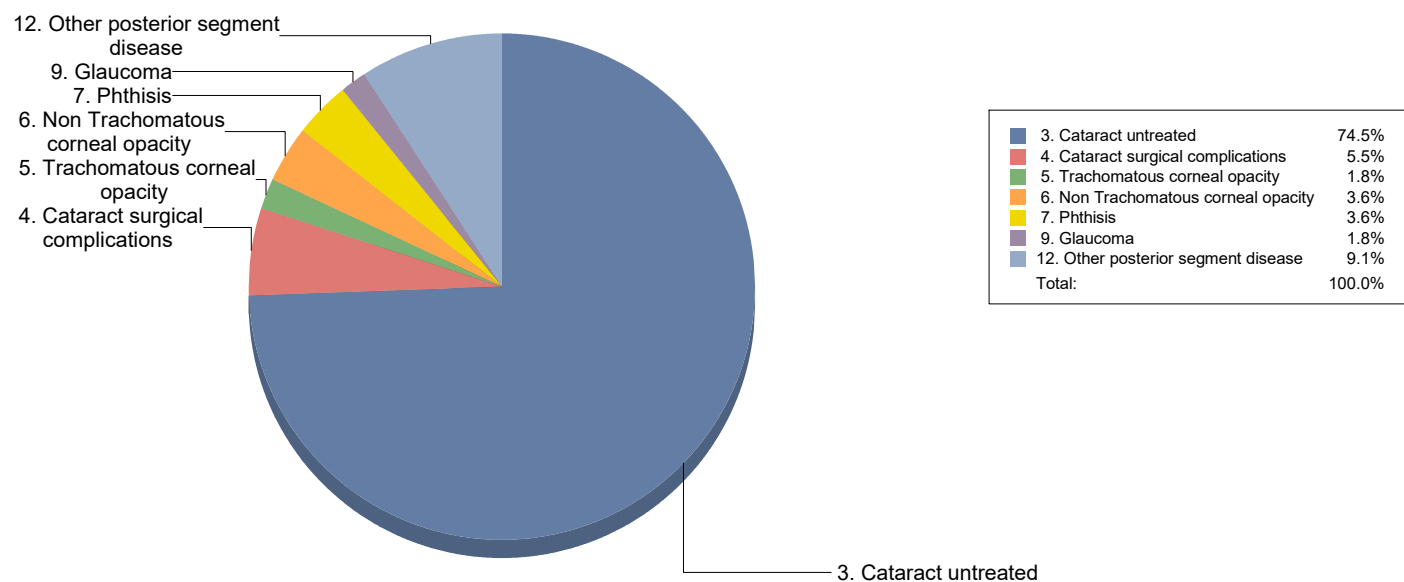
6. Principal cause of blindness, severe (SVI), moderate (MVI) and early (EVI) visual impairment in persons (PVA)

	Blindness		Severe VI		Moderate VI		Early VI	
	n	%	n	%	n	%	n	%
1. Refractive error	0	0.0%	0	0.0%	44	17.2%	285	72.7%
2. Aphakia uncorrected	0	0.0%	0	0.0%	0	0.0%	0	0.0%
3. Cataract untreated	41	74.5%	50	76.9%	184	71.9%	96	24.5%
4. Cataract surgical complications	3	5.5%	5	7.7%	21	8.2%	9	2.3%
5. Trachomatous corneal opacity	1	1.8%	0	0.0%	0	0.0%	0	0.0%
6. Non Trachomatous corneal opacity	2	3.6%	1	1.5%	0	0.0%	0	0.0%
7. Phthisis	2	3.6%	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	1	1.8%	2	3.1%	1	0.4%	0	0.0%
10. Diabetic retinopathy	0	0.0%	0	0.0%	2	0.8%	0	0.0%
11. ARMD	0	0.0%	0	0.0%	0	0.0%	0	0.0%
12. Other posterior segment disease	5	9.1%	7	10.8%	4	1.6%	2	0.5%
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	55	100.0%	65	100.0%	256	100.0%	392	100.0%

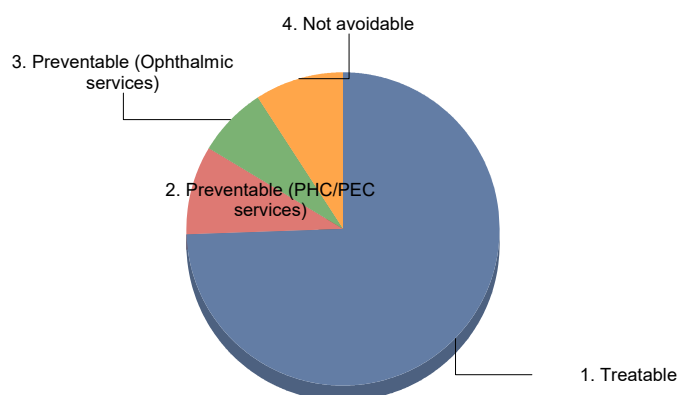
Blindness, SVI, MVI and EVI in persons by intervention category

A. Treatable (1,2,3)	41	74.6%	50	76.9%	228	89.1%	381	97.2%
B. Preventable (PHC/PEC services) (5,6,7,8)	5	9.1%	1	1.5%	0	0.0%	0	0.0%
C. Preventable (Ophthalmic services) (4,9,10)	4	7.3%	7	10.8%	24	9.4%	9	2.3%
D. Avoidable (A+B+C)	50	90.9%	58	89.2%	252	98.4%	390	99.5%
E. Posterior segment causes (8,9,10,11,12)	6	10.9%	9	13.9%	7	2.7%	2	0.5%

7. Graph: main cause of blindness in persons

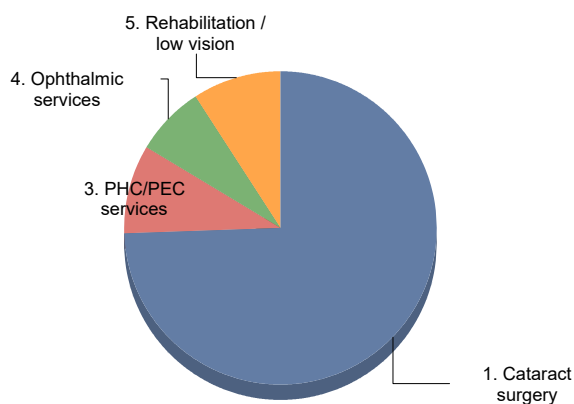


8. Graph: main category of blindness in persons



1. Treatable	74.5%
2. Preventable (PHC/PEC services)	9.1%
3. Preventable (Ophthalmic services)	7.3%
4. Not avoidable	9.1%
Total:	100.0%

9. Graph: action required to reduce blindness



1. Cataract surgery	74.5%
2. PHC/PEC services	9.1%
3. PHC/PEC services	9.1%
4. Ophthalmic services	7.3%
5. Rehabilitation / low vision	9.1%
Total:	100.0%

10. Cataract surgical coverage (persons) - percentage

	Males	Females	Total
VA < 3/60	89.1	90.9	90.2
VA < 6/60	84.4	85.6	85.1
VA < 6/18	68.2	73.2	71.1

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

	n	Males %	n	Females %	n	Total %
Need not felt	6	27.3%	8	26.7%	14	26.9%
Fear	7	31.8%	14	46.7%	21	40.4%
Cost	7	31.8%	4	13.3%	11	21.2%
Treatment denied by provider	0	0.0%	0	0.0%	0	0.0%
Unaware treatment is possible	0	0.0%	0	0.0%	0	0.0%
Cannot access treatment	0	0.0%	1	3.3%	1	1.9%
Local reason	2	9.1%	3	10.0%	5	9.6%
Total	22	100.0%	30	100.0%	52	100.0%

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

	Males		Females		Total	
	n	%	n	%	n	%
Very good: can see 6/12	144	52.7%	196	47.5%	340	49.6%
Good: can see 6/18	52	19.0%	92	22.3%	144	21.0%
Borderline: can see 6/60	35	12.8%	69	16.7%	104	15.2%
Poor: cannot see 6/60	42	15.4%	56	13.6%	98	14.3%
Total	273	100.0%	413	100.0%	686	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	6	18.2%	334	51.1%	340	49.6%
Good: can see 6/18	5	15.2%	139	21.3%	144	21.0%
Borderline: can see 6/60	7	21.2%	97	14.9%	104	15.2%
Poor: cannot see 6/60	15	45.5%	83	12.7%	98	14.3%
Total	33	100.0%	653	100.0%	686	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%	340	100.0%
Good: can see 6/18	4	7.1%	34	21.4%	103	85.1%	3	30.0%	0	0.0%
Borderline: can see 6/60	4	7.1%	79	49.7%	18	14.9%	3	30.0%	0	0.0%
Poor: cannot see 6/60	48	85.7%	46	28.9%	0	0.0%	4	40.0%	0	0.0%
Total	56	100.0%	159	100.0%	121	100.0%	10	100.0%	340	100.0%

RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

SAMPLE RESULTS - NOT ADJUSTED FOR AGE AND SEX

Date and time of report: 05-Apr-16 2:18:20PM

This report is for the survey area: WARDHA

Year and month when survey was conducted: 2016- 3 until 2016- 3

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	1,260	89.0%	154	10.9%	2	0.1%	0	0.0%	1,416	100.0%
Females	1,499	94.6%	83	5.2%	1	0.1%	1	0.1%	1,584	100.0%
Total	2,759	92.0%	237	7.9%	3	0.1%	1	0.0%	3,000	100.0%

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

	Males		Females		Total	
	n	% (95%CI)	n	% (95%CI)	n	% (95%CI)
Blindness - VA < 3/60 in the better eye with best correction or pinhole						
All bilateral blindness	23	1.8% (1.1-2.5)	28	1.9% (1.2-2.6)	51	1.9% (1.3-2.4)
All blind eyes	164	6.5% (5.4-7.6)	185	6.2% (5.2-7.1)	349	6.3% (5.5-7.1)
Blindness - VA < 3/60 in the better eye with available correction (presenting VA)						
All bilateral blindness	26	2.1% (1.3-2.9)	29	1.9% (1.2-2.6)	55	2.0% (1.5-2.5)
All blind eyes	187	7.4% (6.2-8.6)	195	6.5% (5.5-7.5)	382	6.9% (6.1-7.7)
Severe visual impairment (SVI) - VA<6/60 - 3/60 in the better eye with available correction						
All bilateral Severe VI	28	2.2% (1.4-3.0)	37	2.5% (1.7-3.2)	65	2.4% (1.8-2.9)
All Severe VI eyes	83	3.3% (2.5-4.1)	102	3.4% (2.6-4.2)	185	3.4% (2.8-3.9)
Moderate visual impairment (MVI) - VA<6/18 - 6/60 in the better eye with available correction						
All bilateral MVI	118	9.4% (7.6-11.2)	138	9.2% (7.5-10.9)	256	9.3% (7.9-10.6)
All Moderate VI eyes	287	11.4% (10.0-12.8)	340	11.3% (9.9-12.8)	627	11.4% (10.3-12.5)
Early visual impairment (EVI) - VA<6/12 - 6/18 in the better eye with available correction						
All bilateral EVI	162	12.9% (11.0-14.7)	230	15.3% (12.9-17.8)	392	14.2% (12.3-16.1)
All Early VI eyes	364	14.4% (12.8-16.1)	491	16.4% (14.2-18.6)	855	15.5% (13.8-17.2)

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	26	2.1% (1.3-2.9)	29	1.9% (1.2-2.6)	55	2.0% (1.5-2.5)
All blind eyes	187	7.4% (6.2-8.6)	195	6.5% (5.5-7.5)	382	6.9% (6.1-7.7)
VA<6/60 in the better eye, with available correction (presenting VA)						
All bilateral cases	54	4.3% (3.1-5.5)	66	4.4% (3.4-5.4)	120	4.4% (3.5-5.2)
All eyes	270	10.7% (9.2-12.3)	297	9.9% (8.5-11.3)	567	10.3% (9.2-11.3)
VA<6/18 in the better eye, with available correction (presenting VA)						
All bilateral cases	172	13.7% (11.6-15.7)	204	13.6% (11.6-15.6)	376	13.6% (12.0-15.3)
All eyes	557	22.1% (19.9-24.3)	637	21.3% (19.2-23.3)	1,194	21.6% (20.1-23.2)
VA<6/12 in the better eye, with available correction (presenting VA)						
All bilateral cases	334	26.5% (23.5-29.5)	434	29.0% (25.6-32.3)	768	27.8% (25.1-30.6)
All eyes	921	36.6% (33.6-39.5)	1,128	37.6% (34.5-40.7)	2,049	37.1% (34.6-39.7)

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

	n	Males %	n	Females %	n	Total %
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	21	80.8%	20	69.0%	41	74.5%
4. Cataract surgical complications	1	3.8%	2	6.9%	3	5.5%
5. Trachomatous corneal opacity	0	0.0%	1	3.4%	1	1.8%
6. Non Trachomatous corneal opacity	0	0.0%	2	6.9%	2	3.6%
7. Phthisis	1	3.8%	1	3.4%	2	3.6%
8. Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
9. Glaucoma	1	3.8%	0	0.0%	1	1.8%
10. Diabetic retinopathy	0	0.0%	0	0.0%	0	0.0%
11. ARMD	0	0.0%	0	0.0%	0	0.0%
12. Other posterior segment disease	2	7.7%	3	10.3%	5	9.1%
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	0	0.0%
Total	26	100.0%	29	100.0%	55	100.0%

Intervention by this visual impairment

A. Treatable (1,2,3)	21	80.8%	20	69.0%	41	74.6%
B. Preventable (PHC/PEC services) (5,6,7,8)	1	3.9%	4	13.8%	5	9.1%
C. Preventable (Ophthalmic services) (4,9,10)	2	7.7%	2	6.9%	4	7.3%
D. Avoidable (A+B+C)	24	92.3%	26	89.7%	50	90.9%
E. Posterior segment causes (8,9,10,11,12)	3	11.5%	3	10.3%	6	10.9%

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

	n	Males %	n	Females %	n	Total %
1. Refractive error	1	0.5%	0	0.0%	1	0.3%
2. Aphakia uncorrected	0	0.0%	0	0.0%	0	0.0%
3. Cataract untreated	113	60.4%	106	54.4%	219	57.3%
4. Cataract surgical complications	12	6.4%	16	8.2%	28	7.3%
5. Trachomatous corneal opacity	0	0.0%	2	1.0%	2	0.5%
6. Non Trachomatous corneal opacity	15	8.0%	18	9.2%	33	8.6%
7. Phthisis	15	8.0%	13	6.7%	28	7.3%
8. Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
9. Glaucoma	8	4.3%	4	2.1%	12	3.1%
10. Diabetic retinopathy	1	0.5%	1	0.5%	2	0.5%
11. ARMD	0	0.0%	0	0.0%	0	0.0%
12. Other posterior segment disease	21	11.2%	33	16.9%	54	14.1%
13. All other globe/CNS abnormalities	1	0.5%	2	1.0%	3	0.8%
Total	187	100.0%	195	100.0%	382	100.0%

Intervention by this visual impairment

A. Treatable (1,2,3)	114	61.0%	106	54.4%	220	57.6%
B. Preventable (PHC/PEC services) (5,6,7,8)	30	16.0%	33	16.9%	63	16.5%
C. Preventable (Ophthalmic services) (4,9,10)	21	11.2%	21	10.8%	42	11.0%
D. Avoidable (A+B+C)	165	88.2%	160	82.1%	325	85.1%
E. Posterior segment causes (8,9,10,11,12)	30	16.0%	38	19.5%	68	17.8%

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

	n	Males %	n	Females %	n	Total %
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	23	82.1%	27	73.0%	50	76.9%
4. Cataract surgical complications	2	7.1%	3	8.1%	5	7.7%
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	0	0.0%
6. Non Trachomatous corneal opacity	0	0.0%	1	2.7%	1	1.5%
7. Phthisis	0	0.0%	0	0.0%	0	0.0%
8. Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
9. Glaucoma	1	3.6%	1	2.7%	2	3.1%
10. Diabetic retinopathy	0	0.0%	0	0.0%	0	0.0%
11. ARMD	0	0.0%	0	0.0%	0	0.0%
12. Other posterior segment disease	2	7.1%	5	13.5%	7	10.8%
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	0	0.0%
Total	28	100.0%	37	100.0%	65	100.0%

Intervention by this visual impairment

A. Treatable (1,2,3)	23	82.1%	27	73.0%	50	76.9%
B. Preventable (PHC/PEC services) (5,6,7,8)	0	0.0%	1	2.7%	1	1.5%
C. Preventable (Ophthalmic services) (4,9,10)	3	10.7%	4	10.8%	7	10.8%
D. Avoidable (A+B+C)	26	92.9%	32	86.5%	58	89.2%
E. Posterior segment causes (8,9,10,11,12)	3	10.7%	6	16.2%	9	13.9%

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

	n	Males %	n	Females %	n	Total %
1. Refractive error	1	1.2%	1	1.0%	2	1.1%
2. Aphakia uncorrected	0	0.0%	0	0.0%	0	0.0%
3. Cataract untreated	61	73.5%	78	76.5%	139	75.1%
4. Cataract surgical complications	10	12.0%	9	8.8%	19	10.3%
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	0	0.0%
6. Non Trachomatous corneal opacity	2	2.4%	2	2.0%	4	2.2%
7. Phthisis	0	0.0%	0	0.0%	0	0.0%
8. Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
9. Glaucoma	1	1.2%	1	1.0%	2	1.1%
10. Diabetic retinopathy	0	0.0%	1	1.0%	1	0.5%
11. ARMD	0	0.0%	1	1.0%	1	0.5%
12. Other posterior segment disease	7	8.4%	9	8.8%	16	8.6%
13. All other globe/CNS abnormalities	1	1.2%	0	0.0%	1	0.5%
Total	83	100.0%	102	100.0%	185	100.0%

Intervention by this visual impairment

A. Treatable (1,2,3)	62	74.7%	79	77.5%	141	76.2%
B. Preventable (PHC/PEC services) (5,6,7,8)	2	2.4%	2	2.0%	4	2.2%
C. Preventable (Ophthalmic services) (4,9,10)	11	13.3%	11	10.8%	22	11.9%
D. Avoidable (A+B+C)	75	90.4%	92	90.2%	167	90.3%
E. Posterior segment causes (8,9,10,11,12)	8	9.6%	12	11.8%	20	10.8%

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

	n	Males %	n	Females %	n	Total %
1. Refractive error	26	22.0%	18	13.0%	44	17.2%
2. Aphakia uncorrected	0	0.0%	0	0.0%	0	0.0%
3. Cataract untreated	83	70.3%	101	73.2%	184	71.9%
4. Cataract surgical complications	8	6.8%	13	9.4%	21	8.2%
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%	1	0.7%	1	0.4%
10. Diabetic retinopathy	1	0.8%	1	0.7%	2	0.8%
11. ARMD	0	0.0%	0	0.0%	0	0.0%
12. Other posterior segment disease	0	0.0%	4	2.9%	4	1.6%
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	0	0.0%
Total	118	100.0%	138	100.0%	256	100.0%

Intervention by this visual impairment

A. Treatable (1,2,3)	109	92.4%	119	86.2%	228	89.1%
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)	9	7.6%	15	10.9%	24	9.4%
D. Avoidable (A+B+C)	118	100.0%	134	97.1%	252	98.4%
E. Posterior segment causes (8,9,10,11,12)	1	0.9%	6	4.4%	7	2.7%

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

	n	Males %	n	Females %	n	Total %
1. Refractive error	65	22.6%	68	20.0%	133	21.2%
2. Aphakia uncorrected	0	0.0%	0	0.0%	0	0.0%
3. Cataract untreated	186	64.8%	207	60.9%	393	62.7%
4. Cataract surgical complications	27	9.4%	52	15.3%	79	12.6%
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	0	0.0%
6. Non Trachomatous corneal opacity	4	1.4%	3	0.9%	7	1.1%
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	1	0.3%	1	0.3%	2	0.3%
11. ARMD	0	0.0%	0	0.0%	0	0.0%
12. Other posterior segment disease	3	1.0%	8	2.4%	11	1.8%
13. All other globe/CNS abnormalities	1	0.3%	0	0.0%	1	0.2%
Total	287	100.0%	340	100.0%	627	100.0%

Intervention by this visual impairment

A. Treatable (1,2,3)	251	87.5%	275	80.9%	526	83.9%
B. Preventable (PHC/PEC services) (5,6,7,8)	4	1.4%	3	0.9%	7	1.1%
C. Preventable (Ophthalmic services) (4,9,10)	28	9.8%	54	15.9%	82	13.1%
D. Avoidable (A+B+C)	283	98.6%	332	97.6%	615	98.1%
E. Posterior segment causes (8,9,10,11,12)	4	1.4%	10	2.9%	14	2.2%

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

	n	Males %	n	Females %	n	Total %
1. Refractive error	107	66.0%	178	77.4%	285	72.7%
2. Aphakia uncorrected	0	0.0%	0	0.0%	0	0.0%
3. Cataract untreated	51	31.5%	45	19.6%	96	24.5%
4. Cataract surgical complications	4	2.5%	5	2.2%	9	2.3%
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%	0	0.0%	0	0.0%
11. ARMD	0	0.0%	0	0.0%	0	0.0%
12. Other posterior segment disease	0	0.0%	2	0.9%	2	0.5%
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	0	0.0%
Total	162	100.0%	230	100.0%	392	100.0%

Intervention by this visual impairment

A. Treatable (1,2,3)	158	97.5%	223	97.0%	381	97.2%
B. Preventable (PHC/PEC services) (5,6,7,8)	0	0.0%	0	0.0%	0	0.0%
C. Preventable (Ophthalmic services) (4,9,10)	4	2.5%	5	2.2%	9	2.3%
D. Avoidable (A+B+C)	162	100.0%	228	99.1%	390	99.5%
E. Posterior segment causes (8,9,10,11,12)	0	0.0%	2	0.9%	2	0.5%

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

	n	Males %	n	Females %	n	Total %
1. Refractive error	251	69.0%	380	77.4%	631	73.8%
2. Aphakia uncorrected	0	0.0%	0	0.0%	0	0.0%
3. Cataract untreated	103	28.3%	78	15.9%	181	21.2%
4. Cataract surgical complications	10	2.7%	25	5.1%	35	4.1%
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	0	0.0%
6. Non Trachomatous corneal opacity	0	0.0%	1	0.2%	1	0.1%
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%	2	0.4%	2	0.2%
10. Diabetic retinopathy	0	0.0%	0	0.0%	0	0.0%
11. ARMD	0	0.0%	0	0.0%	0	0.0%
12. Other posterior segment disease	0	0.0%	5	1.0%	5	0.6%
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	0	0.0%
Total	364	100.0%	491	100.0%	855	100.0%

Intervention by this visual impairment

A. Treatable (1,2,3)	354	97.3%	458	93.3%	812	95.0%
B. Preventable (PHC/PEC services) (5,6,7,8)	0	0.0%	1	0.2%	1	0.1%
C. Preventable (Ophthalmic services) (4,9,10)	10	2.7%	27	5.5%	37	4.3%
D. Avoidable (A+B+C)	364	100.0%	486	99.0%	850	99.4%
E. Posterior segment causes (8,9,10,11,12)	0	0.0%	7	1.4%	7	0.8%

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	14	1.1% (0.5-1.7)	17	1.1% (0.6-1.7)	31	1.1% (0.8-1.5)
Unilateral cataract	73	5.8% (4.5-7.1)	75	5.0% (3.7-6.3)	148	5.4% (4.4-6.3)
Cataract eyes	101	4.0% (3.1-4.9)	109	3.6% (2.8-4.5)	210	3.8% (3.1-4.5)
Cataract and VA<6/60 with best correction or pinhole						
Bilateral cataract	22	1.8% (0.9-2.6)	30	2.0% (1.3-2.7)	52	1.9% (1.4-2.4)
Unilateral cataract	93	7.4% (5.3-8.5)	88	5.9% (6.1-9.1)	181	6.6% (6.2-8.4)
Cataract eyes	137	5.4% (4.3-6.5)	148	4.9% (3.9-6.0)	285	5.2% (4.4-6.0)
Cataract and VA<6/18 with best correction or pinhole						
Bilateral cataract	62	4.9% (3.5-6.4)	71	4.7% (3.7-5.7)	133	4.8% (3.9-5.7)
Unilateral cataract	141	11.2% (9.4-12.9)	139	9.3% (7.6-10.9)	280	10.2% (8.9-11.3)
Cataract eyes	265	10.5% (8.9-12.2)	281	9.4% (7.9-10.8)	546	9.9% (8.8-11.0)
Cataract and VA<6/12 with best correction or pinhole						
Bilateral cataract	142	11.3% (9.2-13.3)	152	10.1% (8.4-11.9)	294	10.7% (9.3-12.0)
Unilateral cataract	189	15.0% (12.9-17.1)	176	11.7% (10.2-13.2)	365	13.2% (11.8-14.6)
Cataract eyes	473	18.8% (16.4-21.1)	480	16.0% (14.1-18.0)	953	17.3% (15.7-18.9)

13. Sample prevalence of (pseudo)aphakia

	Males		Females		Total	
	n	% (95%CI)	n	% (95%CI)	n	% (95%CI)
Bilateral (pseudo)aphakia	77	6.1% (4.5-7.7)	133	8.9% (7.6-10.1)	210	7.6% (6.5-8.7)
Unilateral (pseudo)aphakia	119	9.4% (7.9-11.0)	147	9.8% (8.3-11.3)	266	9.6% (8.4-10.8)
(Pseudo)aphakic eyes	273	10.8% (8.9-12.8)	413	13.8% (12.4-15.2)	686	12.4% (11.1-13.7)

14. Cataract Surgical Coverage

	Males	Females	Total
Cataract Surgical Coverage (eyes) - percentage			
VA < 3/60	73.0	79.1	76.6
VA < 6/60	66.6	73.6	70.7
VA < 6/18	50.7	59.5	55.7
Cataract Surgical Coverage (persons) - percentage			
VA < 3/60	89.2	90.9	90.2
VA < 6/60	84.4	85.6	85.1
VA < 6/18	68.2	73.2	71.1

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

	Males		Females		Total	
	n	%	n	%	n	%
First eyes	196	71.8	280	67.8	476	69.4
Second eyes	77	28.2	133	32.2	210	30.6

16. Uncorrected refractive error and uncorrected presbyopia

	Males		Females		Total	
	n	%	n	%	n	%
Total refractive errors	498	39.5	648	43.2	1,146	41.5
Uncorrected refractive errors	133	10.6	196	13.1	329	11.9
Uncorrected presbyopia	857	68.0	997	66.5	1,854	67.2

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

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59	0	0.0	3	0.5	3	0.3
60 - 69	4	0.9	3	0.6	7	0.7
70 - 79	3	1.2	4	1.6	7	1.4
80+	3	3.2	4	6.1	7	4.4
Total	10	0.8	14	0.9	24	0.9

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	30.0%	1	7.1%	4	16.7%
5. Trachomatous corneal opacity	0	0.0%	1	7.1%	1	4.2%
6. Non Trachomatous corneal opacity	0	0.0%	2	14.3%	2	8.3%
7. Phthisis	1	10.0%	1	7.1%	2	8.3%
8. Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
9. Glaucoma	2	20.0%	1	7.1%	3	12.5%
10. Diabetic retinopathy	0	0.0%	1	7.1%	1	4.2%
11. ARMD	0	0.0%	0	0.0%	0	0.0%
12. Other posterior segment disease	4	40.0%	7	50.0%	11	45.8%
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	0	0.0%
Total	10	100.0%	14	100.0%	24	100.0%

Intervention by this visual impairment

A. Treatable (1,2,3)	0	0.0%	0	0.0%	0	0.0%
B. Preventable (PHC/PEC services) (5,6,7,8)	1	10.0%	4	28.6%	5	20.8%
C. Preventable (Ophthalmic services) (4,9,10)	5	50.0%	3	21.4%	8	33.3%
D. Avoidable (A+B+C)	6	60.0%	7	50.0%	13	54.2%
E. Posterior segment causes (8,9,10,11,12)	6	60.0%	9	64.3%	15	62.5%

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	19.2	4	13.8	9	16.4
BCVA<6/60 - 3/60	1	3.6	3	8.1	4	6.2
BCVA<6/18 - 6/60	4	3.4	7	5.1	11	4.3
Total	10	5.8	14	6.9	24	6.4

RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

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

Date and time of report:

05-Apr-16

2:19:03PM

This report is for the survey area:

WARDHA

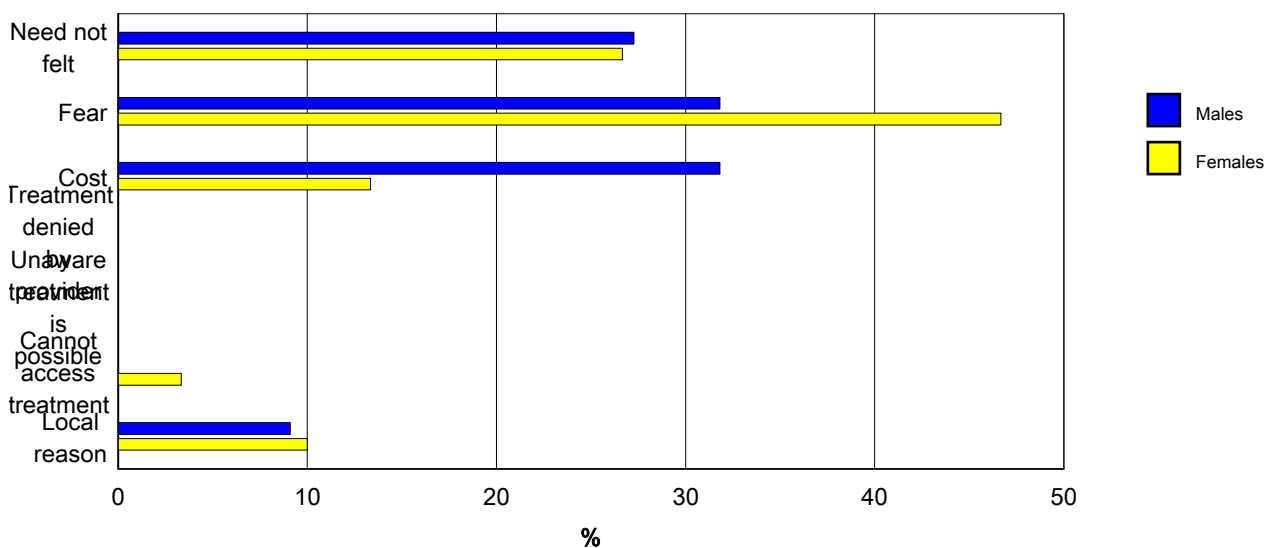
Year and month when survey was conducted:

2016- 3 until 2016- 3

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.

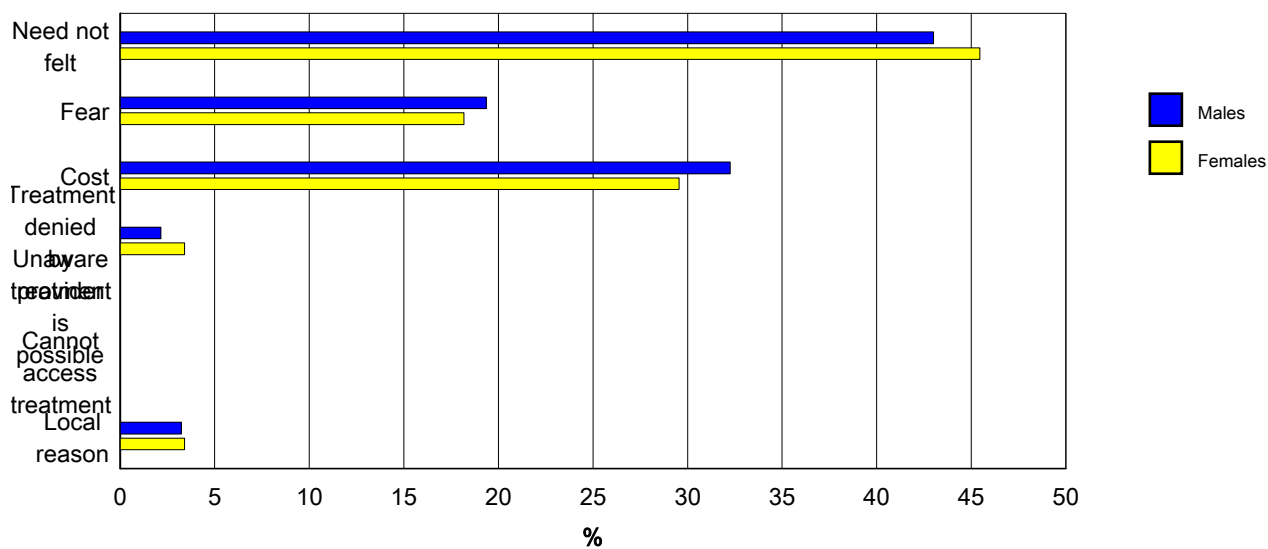
1. Barriers to cataract surgery in sample (bilateral BCVA<6/60 due to cataract)

	Males		Females		Total	
	n	%	n	%	n	%
Need not felt	6	27.3%	8	26.7%	14	26.9%
Fear	7	31.8%	14	46.7%	21	40.4%
Cost	7	31.8%	4	13.3%	11	21.2%
Treatment denied by provider	0	0.0%	0	0.0%	0	0.0%
Unaware treatment is possible	0	0.0%	0	0.0%	0	0.0%
Cannot access treatment	0	0.0%	1	3.3%	1	1.9%
Local reason	2	9.1%	3	10.0%	5	9.6%
Total	22	100.0%	30	100.0%	52	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	40	43.0%	40	45.5%	80	44.2%
Fear	18	19.4%	16	18.2%	34	18.8%
Cost	30	32.3%	26	29.5%	56	30.9%
Treatment denied by provider	2	2.2%	3	3.4%	5	2.8%
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	3	3.2%	3	3.4%	6	3.3%
Total	93	100.0%	88	100.0%	181	100.0%



RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

VISUAL OUTCOME AFTER CATARACT SURGERY (LONG-TERM OUTCOME)

Date and time of report: 05-Apr-16 2:19:36PM

This report is for the survey area: WARDHA

Year and month when survey was conducted: 2016- 3 until 2016- 3

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	6	18.2%	334	51.1%	0	0.0%	340	49.6%
Good: can see 6/18	5	15.2%	139	21.3%	0	0.0%	144	21.0%
Borderline: can see 6/60	7	21.2%	97	14.9%	0	0.0%	104	15.2%
Poor: cannot see 6/60	15	45.5%	83	12.7%	0	0.0%	98	14.3%
Total	33	100.0%	653	100.0%	0	0.0%	686	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	12	36.4%	451	69.1%	0	0.0%	463	67.5%
Good: can see 6/18	4	12.1%	80	12.3%	0	0.0%	84	12.2%
Borderline: can see 6/60	4	12.1%	58	8.9%	0	0.0%	62	9.0%
Poor: cannot see 6/60	13	39.4%	64	9.8%	0	0.0%	77	11.2%
Total	33	100.0%	653	100.0%	0	0.0%	686	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	161	56.5%	102	49.3%	77	39.7%	340	49.6%
Good: can see 6/18	70	24.6%	41	19.8%	33	17.0%	144	21.0%
Borderline: can see 6/60	34	11.9%	36	17.4%	34	17.5%	104	15.2%
Poor: cannot see 6/60	20	7.0%	28	13.5%	50	25.8%	98	14.3%
Total	285	100.0%	207	100.0%	194	100.0%	686	100.0%

4. Age at time of surgery in males and females

	Males		Females		Total	
	Eyes	%	Eyes	%	Eyes	%
1 - 29	0	0.0%	1	0.2%	1	0.1%
30 - 39	1	0.4%	0	0.0%	1	0.1%
40 - 49	8	2.9%	18	4.4%	26	3.8%
50 - 59	39	14.3%	107	25.9%	146	21.3%
60 - 69	104	38.1%	172	41.6%	276	40.2%
70 - 79	103	37.7%	101	24.5%	204	29.7%
80+	18	6.6%	14	3.4%	32	4.7%
Total	273	100.0%	413	100.0%	686	100.0%

5. Place of surgery by sex

	Males		Females		Total	
	Eyes	%	Eyes	%	Eyes	%
Government Hosp.	146	53.5	232	56.2	378	55.1
Voluntary/charitable hospital	26	9.5	39	9.4	65	9.5
Private hospital	80	29.3	101	24.5	181	26.4
Eyecamp	21	7.7	41	9.9	62	9.0
Total	273	100.0	413	100.0	686	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	149	39.4	30	46.2	129	71.3	32	51.6	340	49.6
Good: can see 6/18	90	23.8	15	23.1	24	13.3	15	24.2	144	21.0
Borderline: can see 6/60	65	17.2	11	16.9	17	9.4	11	17.7	104	15.2
Poor: cannot see 6/60	74	19.6	9	13.8	11	6.1	4	6.5	98	14.3
Total	378	100.0	65	100.0	181	100.0	62	100.0	686	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	340	100.0	340	49.6
Good: can see 6/18	4	7.1	34	21.4	103	85.1	3	30.0	0	0.0	144	21.0
Borderline: can see 6/60	4	7.1	79	49.7	18	14.9	3	30.0	0	0.0	104	15.2
Poor: cannot see 6/60	48	85.7	46	28.9	0	0.0	4	40.0	0	0.0	98	14.3
Total	56	100.0	159	100.0	121	100.0	10	100.0	340	100.0	686	100.0

8. Proportion and type of surgery

	Males		Females		Total	
	Eyes	%	Eyes	%	Eyes	%
Non-IOL	20	7.3	13	3.1	33	4.8
IOL	253	92.7	400	96.9	653	95.2
Couching	0	0.0	0	0.0	0	0.0
Total	273	100.0	413	100.0	686	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-Apr-16 2:20:09PM

This report is for the survey area: WARDHA

Year and month when survey was conducted: 2016- 3 until 2016- 3

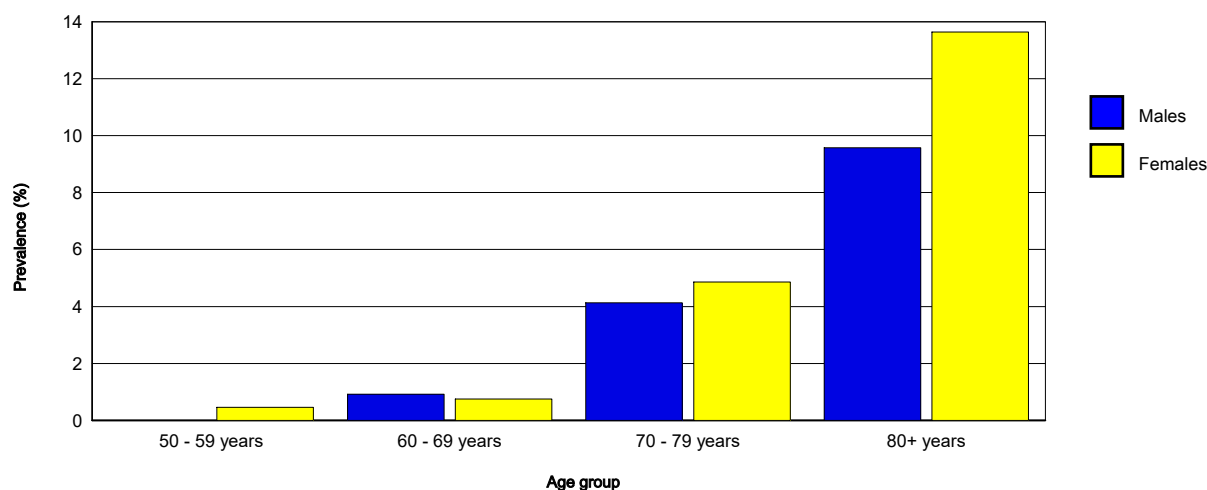
The sample size of the Rapid Assessment is sufficient to provide an acceptable accuracy of the overall prevalence of bilateral blindness (VA <3/60). The accuracy of prevalence estimates for any subgroup is far less and caution should be taken in the interpretation of these data. Confidence intervals 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	487	38.7%	654	43.6%	1,141	41.1%
60 - 69 years	437	34.7%	532	35.5%	969	35.1%
70 - 79 years	242	19.2%	247	16.5%	489	17.8%
80+ years	94	7.5%	66	4.4%	160	5.9%
Total	1,260	100.0%	1,499	100.0%	2,759	100.0%

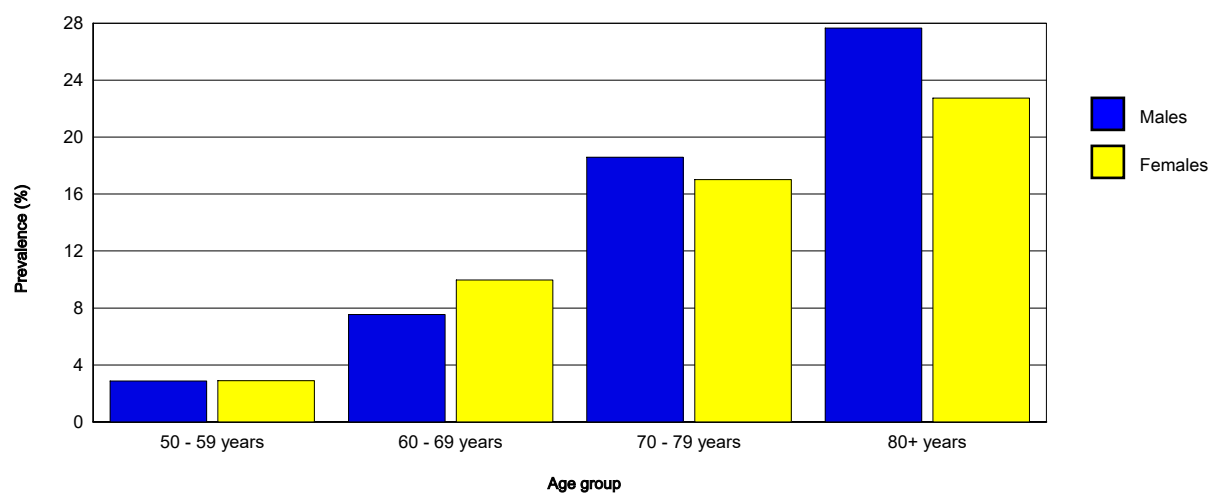
2. Prevalence of people with bilateral blindness - VA <3/60 in better eye with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	0	0.0%	3	0.5%	3	0.3%
60 - 69 years	4	0.9%	4	0.8%	8	0.8%
70 - 79 years	10	4.1%	12	4.9%	22	4.5%
80+ years	9	9.6%	9	13.6%	18	11.3%
Total	23	1.8%	28	1.9%	51	1.8%



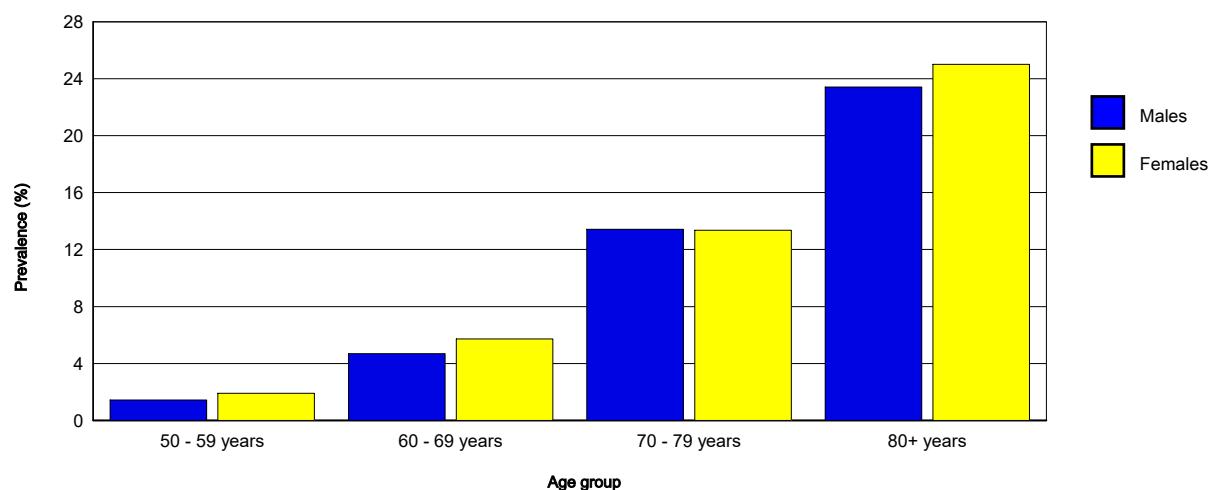
3. Prevalence of people with unilateral blindness - VA <3/60 with best correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	14	2.9%	19	2.9%	33	2.9%
60 - 69 years	33	7.6%	53	10.0%	86	8.9%
70 - 79 years	45	18.6%	42	17.0%	87	17.8%
80+ years	26	27.7%	15	22.7%	41	25.6%
Total	118	9.4%	129	8.6%	247	9.0%



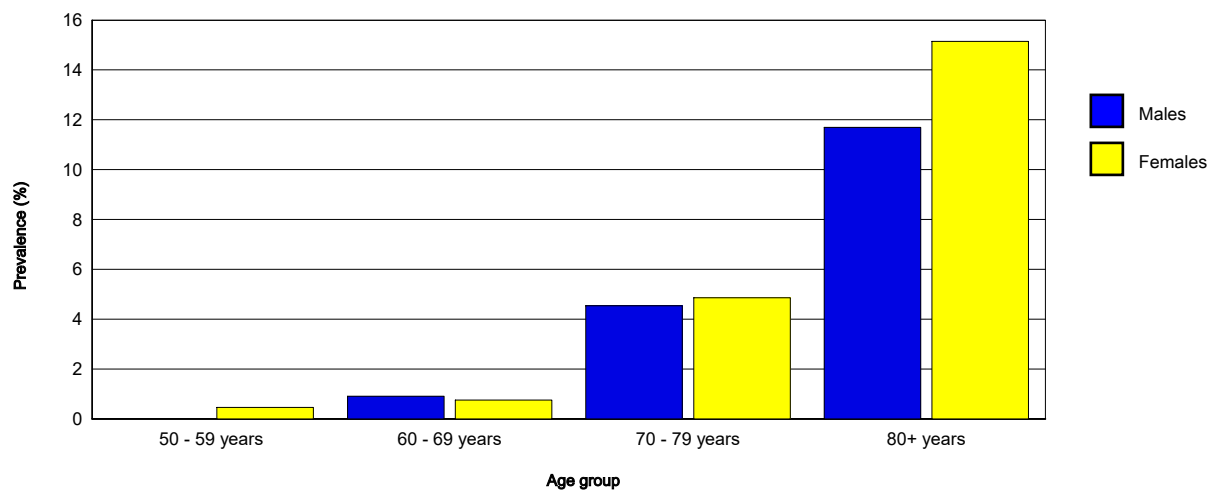
4. Prevalence of blind eyes - VA <3/60 with best correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	14	1.4%	25	1.9%	39	1.7%
60 - 69 years	41	4.7%	61	5.7%	102	5.3%
70 - 79 years	65	13.4%	66	13.4%	131	13.4%
80+ years	44	23.4%	33	25.0%	77	24.1%
Total	164	6.5%	185	6.2%	349	6.3%



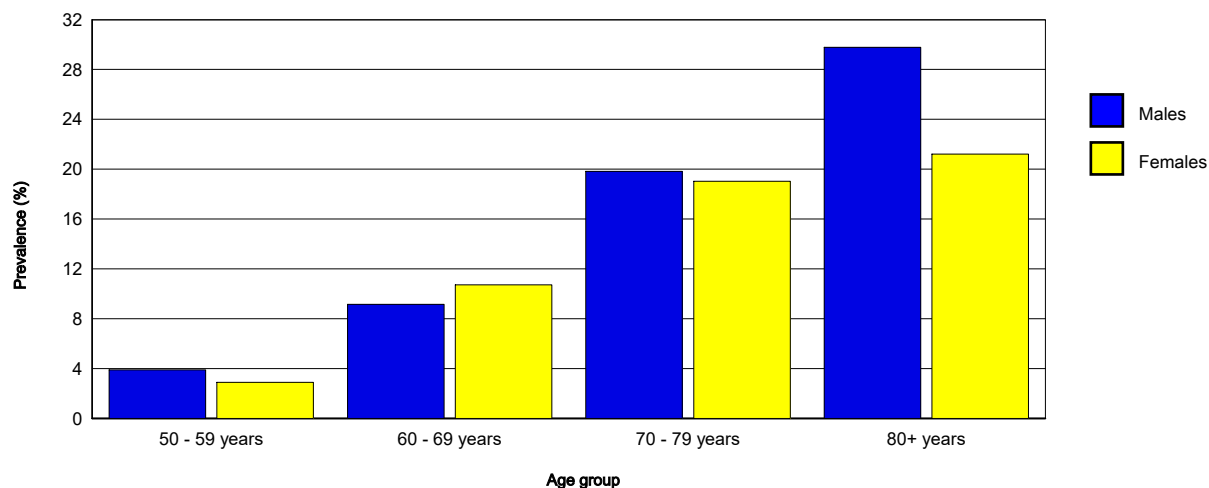
5. Prevalence of people with bilateral blindness - VA <3/60 in better eye with available correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	0	0.0%	3	0.5%	3	0.3%
60 - 69 years	4	0.9%	4	0.8%	8	0.8%
70 - 79 years	11	4.5%	12	4.9%	23	4.7%
80+ years	11	11.7%	10	15.2%	21	13.1%
Total	26	2.1%	29	1.9%	55	2.0%



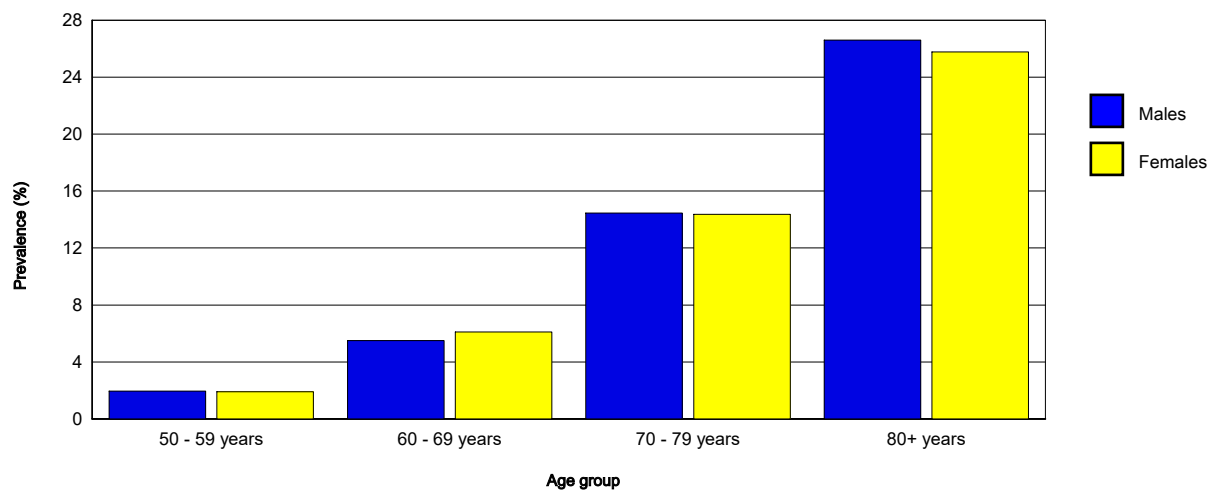
6. Prevalence of people with unilateral blindness - VA <3/60 with available correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	19	3.9%	19	2.9%	38	3.3%
60 - 69 years	40	9.2%	57	10.7%	97	10.0%
70 - 79 years	48	19.8%	47	19.0%	95	19.4%
80+ years	28	29.8%	14	21.2%	42	26.3%
Total	135	10.7%	137	9.1%	272	9.9%



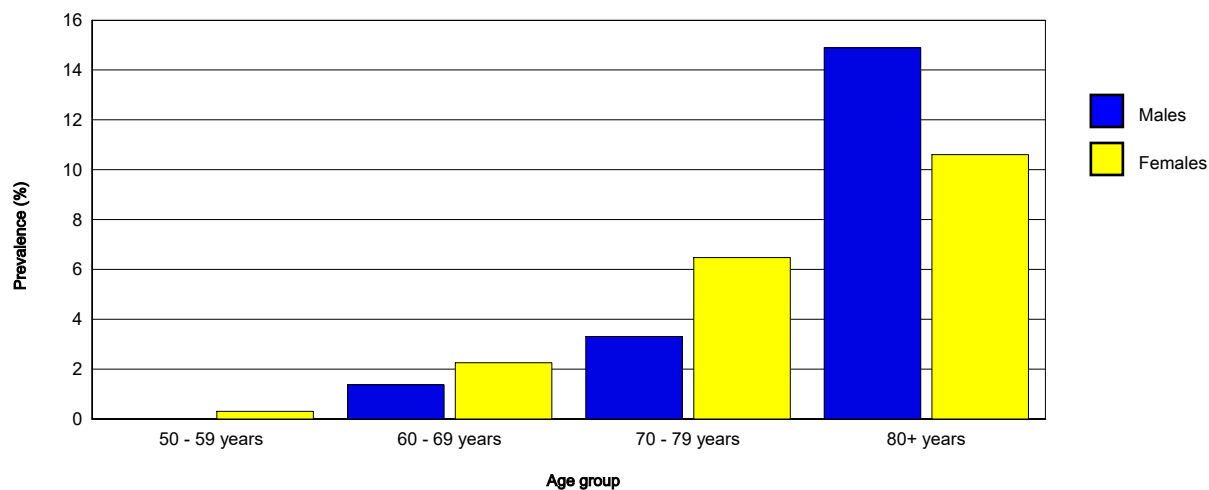
7. Prevalence of blind eyes - VA <3/60 with available correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	19	2.0%	25	1.9%	44	1.9%
60 - 69 years	48	5.5%	65	6.1%	113	5.8%
70 - 79 years	70	14.5%	71	14.4%	141	14.4%
80+ years	50	26.6%	34	25.8%	84	26.3%
Total	187	7.4%	195	6.5%	382	6.9%



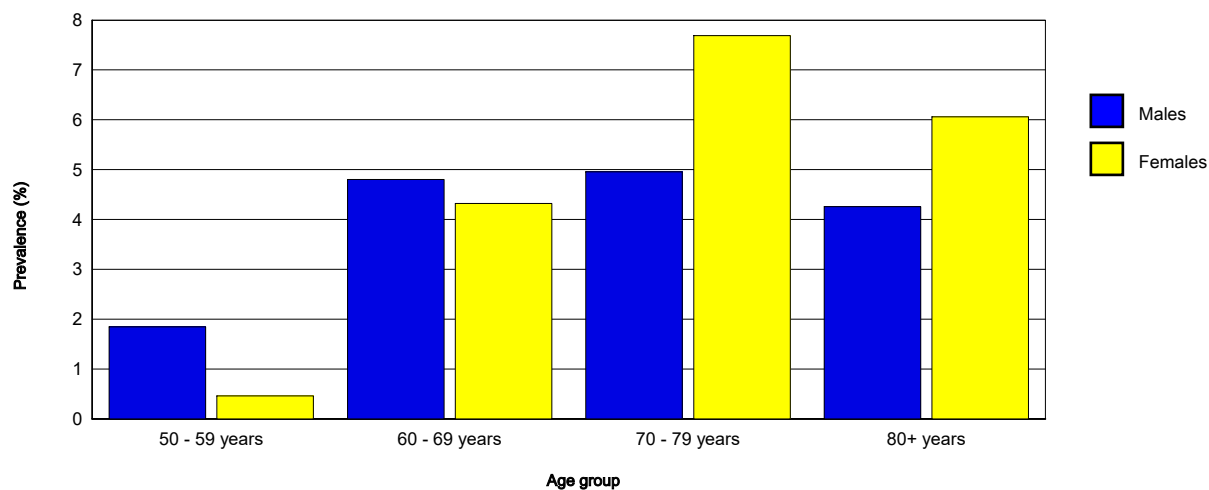
8. Prevalence of people with bilateral severe visual impairment - VA<6/60-3/60 in better eye with available correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	0	0.0%	2	0.3%	2	0.2%
60 - 69 years	6	1.4%	12	2.3%	18	1.9%
70 - 79 years	8	3.3%	16	6.5%	24	4.9%
80+ years	14	14.9%	7	10.6%	21	13.1%
Total	28	2.2%	37	2.5%	65	2.4%



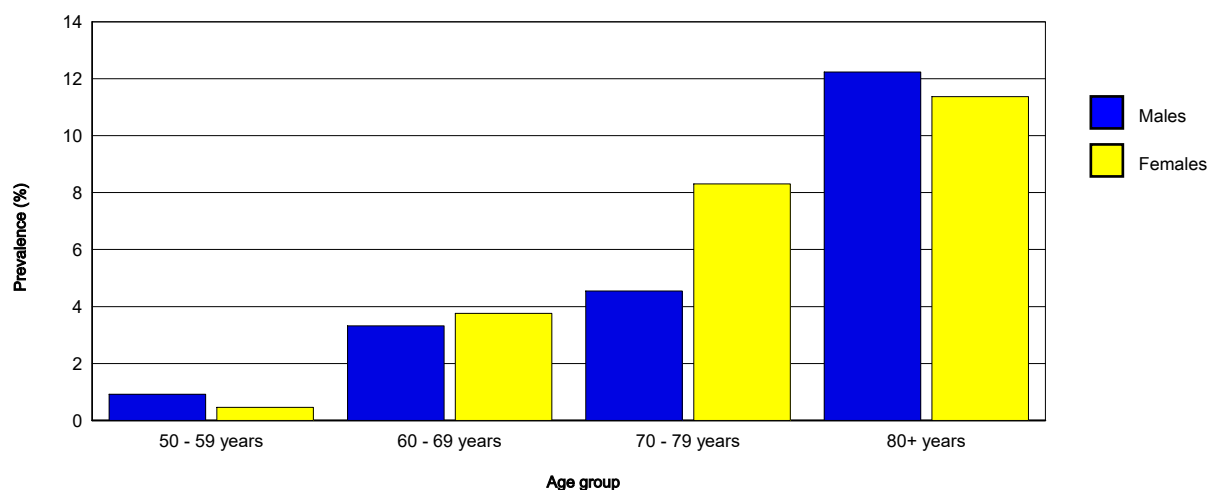
9. Prevalence of people with unilateral severe visual impairment - VA <6/60-3/60 with available correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	9	1.8%	3	0.5%	12	1.1%
60 - 69 years	21	4.8%	23	4.3%	44	4.5%
70 - 79 years	12	5.0%	19	7.7%	31	6.3%
80+ years	4	4.3%	4	6.1%	8	5.0%
Total	46	3.7%	49	3.3%	95	3.4%



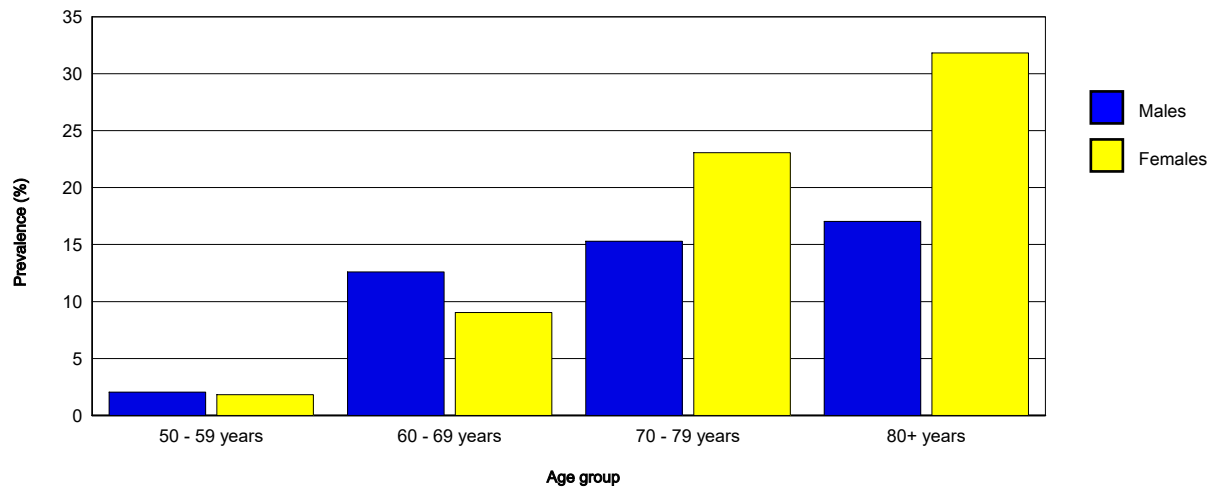
10. Prevalence of SVI eyes - VA VA<6/60-3/60 with available correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	9	0.9%	6	0.5%	15	0.7%
60 - 69 years	29	3.3%	40	3.8%	69	3.6%
70 - 79 years	22	4.5%	41	8.3%	63	6.4%
80+ years	23	12.2%	15	11.4%	38	11.9%
Total	83	3.3%	102	3.4%	185	3.4%



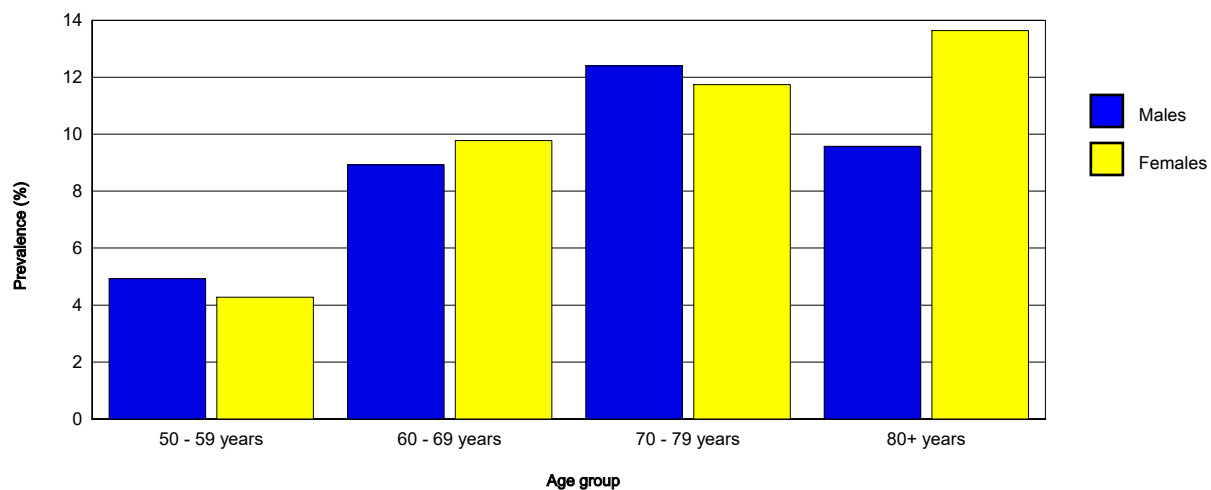
11. Prevalence of people with bilateral moderate visual impairment - VA <6/18-6/60 in better eye with available correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	10	2.1%	12	1.8%	22	1.9%
60 - 69 years	55	12.6%	48	9.0%	103	10.6%
70 - 79 years	37	15.3%	57	23.1%	94	19.2%
80+ years	16	17.0%	21	31.8%	37	23.1%
Total	118	9.4%	138	9.2%	256	9.3%



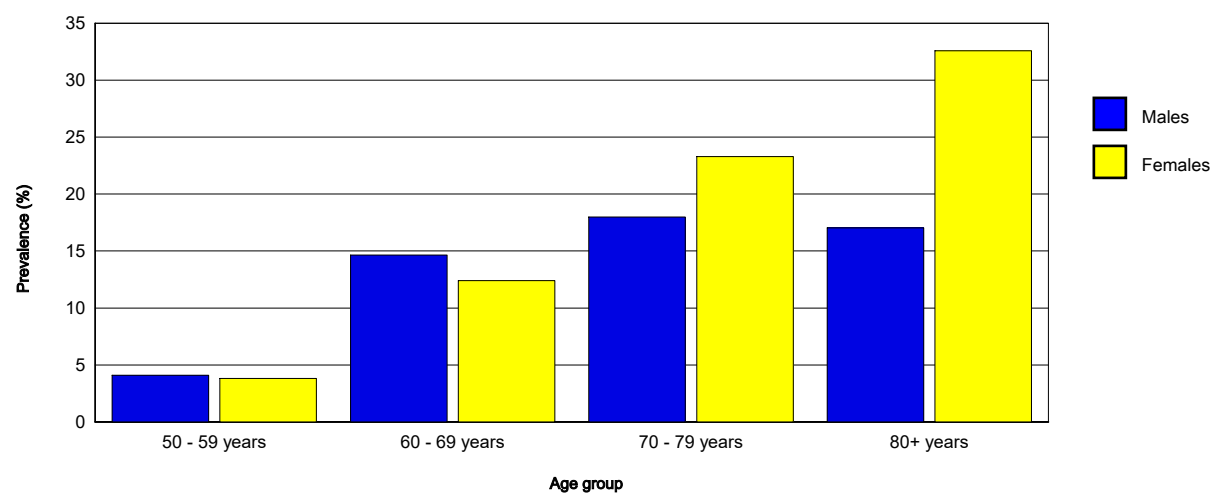
12. Prevalence of people with unilateral visual impairment - VA <6/18-6/60 with available correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	24	4.9%	28	4.3%	52	4.6%
60 - 69 years	39	8.9%	52	9.8%	91	9.4%
70 - 79 years	30	12.4%	29	11.7%	59	12.1%
80+ years	9	9.6%	9	13.6%	18	11.3%
Total	102	8.1%	118	7.9%	220	8.0%



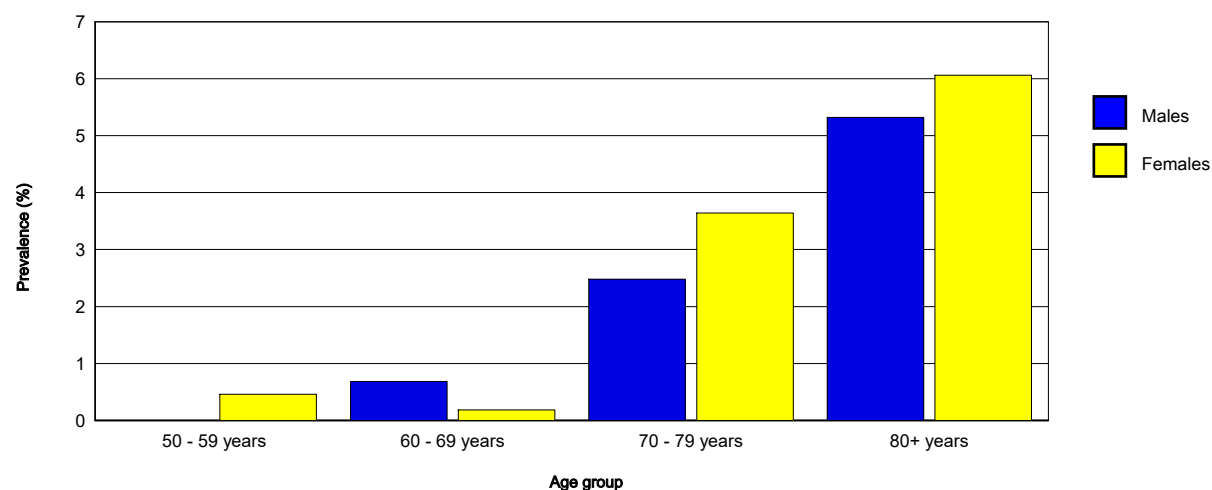
13. Prevalence of MVI eyes - VA<6/18-6/60 with available correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	40	4.1%	50	3.8%	90	3.9%
60 - 69 years	128	14.6%	132	12.4%	260	13.4%
70 - 79 years	87	18.0%	115	23.3%	202	20.7%
80+ years	32	17.0%	43	32.6%	75	23.4%
Total	287	11.4%	340	11.3%	627	11.4%



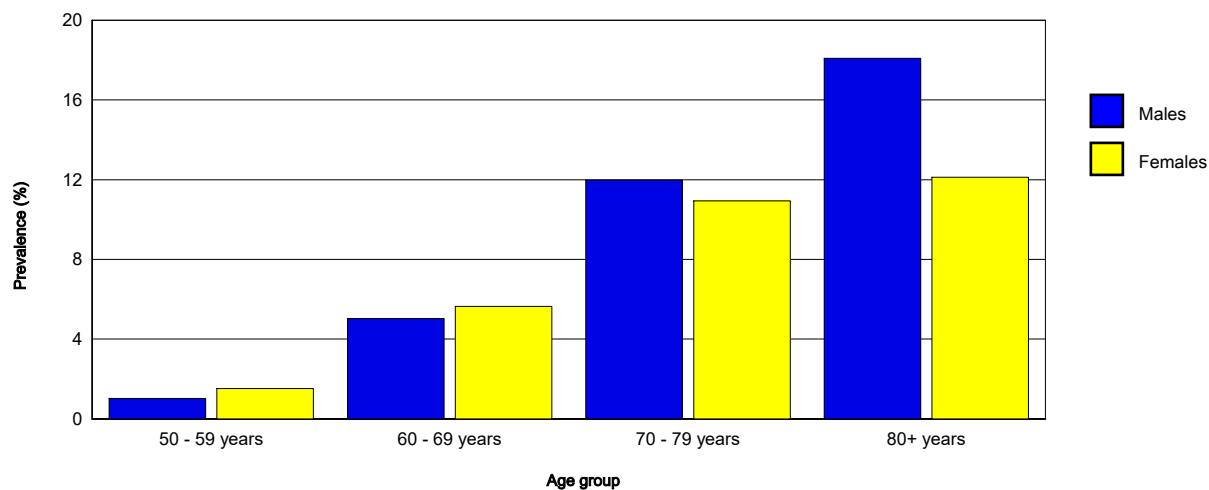
14. Prevalence of people bilateral blind due to cataract - VA<3/60 in better eye with best correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	0	0.0%	3	0.5%	3	0.3%
60 - 69 years	3	0.7%	1	0.2%	4	0.4%
70 - 79 years	6	2.5%	9	3.6%	15	3.1%
80+ years	5	5.3%	4	6.1%	9	5.6%
Total	14	1.1%	17	1.1%	31	1.1%



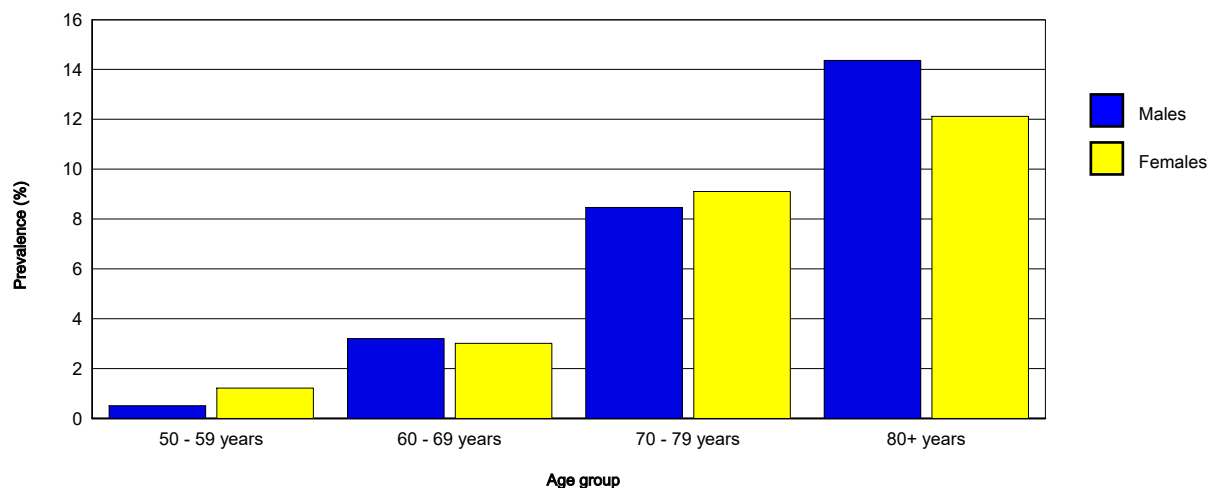
15. Prevalence of people unilateral blind due to cataract - VA <3/60 with best correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	5	1.0%	10	1.5%	15	1.3%
60 - 69 years	22	5.0%	30	5.6%	52	5.4%
70 - 79 years	29	12.0%	27	10.9%	56	11.5%
80+ years	17	18.1%	8	12.1%	25	15.6%
Total	73	5.8%	75	5.0%	148	5.4%



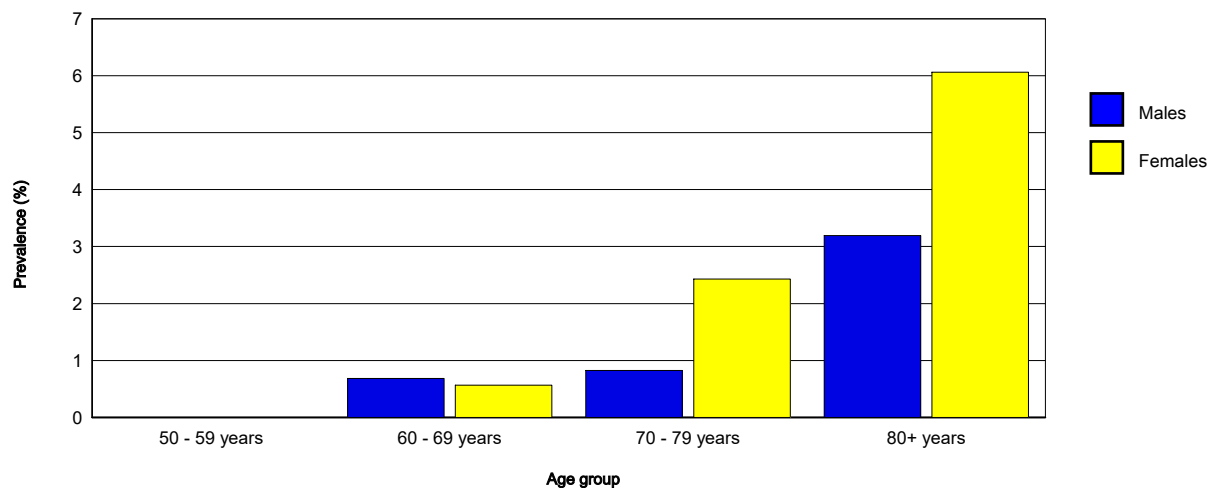
16. Prevalence of cataract blind eyes - VA <3/60 with best correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	5	0.5%	16	1.2%	21	0.9%
60 - 69 years	28	3.2%	32	3.0%	60	3.1%
70 - 79 years	41	8.5%	45	9.1%	86	8.8%
80+ years	27	14.4%	16	12.1%	43	13.4%
Total	101	4.0%	109	3.6%	210	3.8%



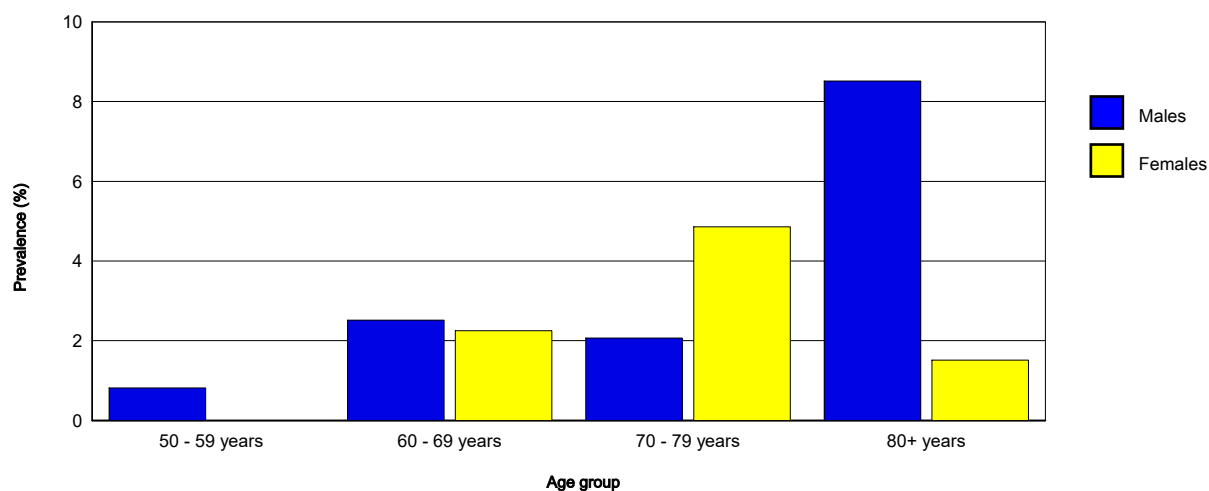
17. Prevalence of people with bilateral severe visual impairment due to cataract - VA <6/60-3/60 - best eye, best correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	0	0.0%	0	0.0%	0	0.0%
60 - 69 years	3	0.7%	3	0.6%	6	0.6%
70 - 79 years	2	0.8%	6	2.4%	8	1.6%
80+ years	3	3.2%	4	6.1%	7	4.4%
Total	8	0.6%	13	0.9%	21	0.8%



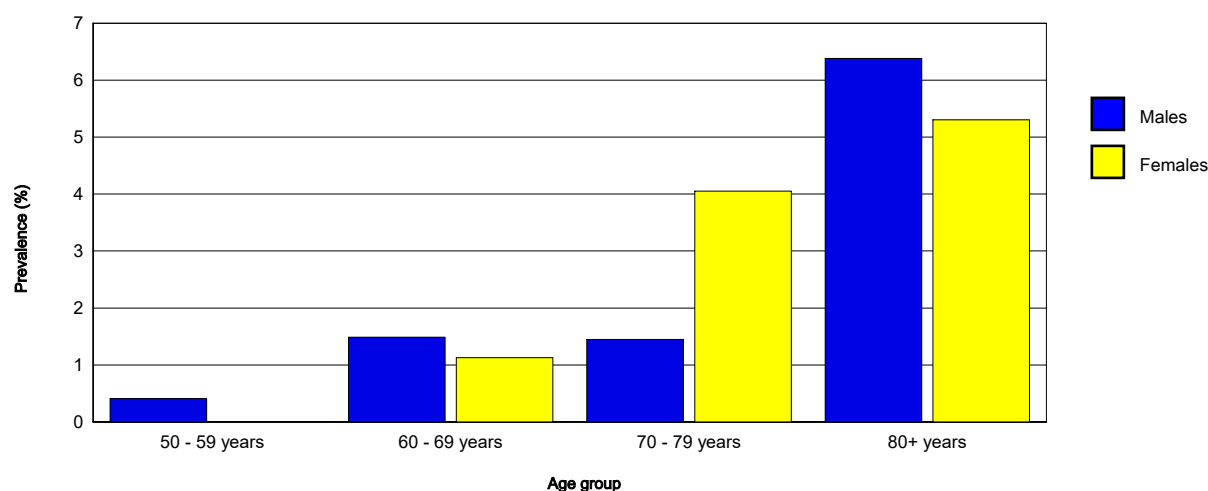
18. Prevalence of people with unilateral severe visual impairment due to cataract - VA <6/60-3/60 with best correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	4	0.8%	0	0.0%	4	0.4%
60 - 69 years	11	2.5%	12	2.3%	23	2.4%
70 - 79 years	5	2.1%	12	4.9%	17	3.5%
80+ years	8	8.5%	1	1.5%	9	5.6%
Total	28	2.2%	25	1.7%	53	1.9%



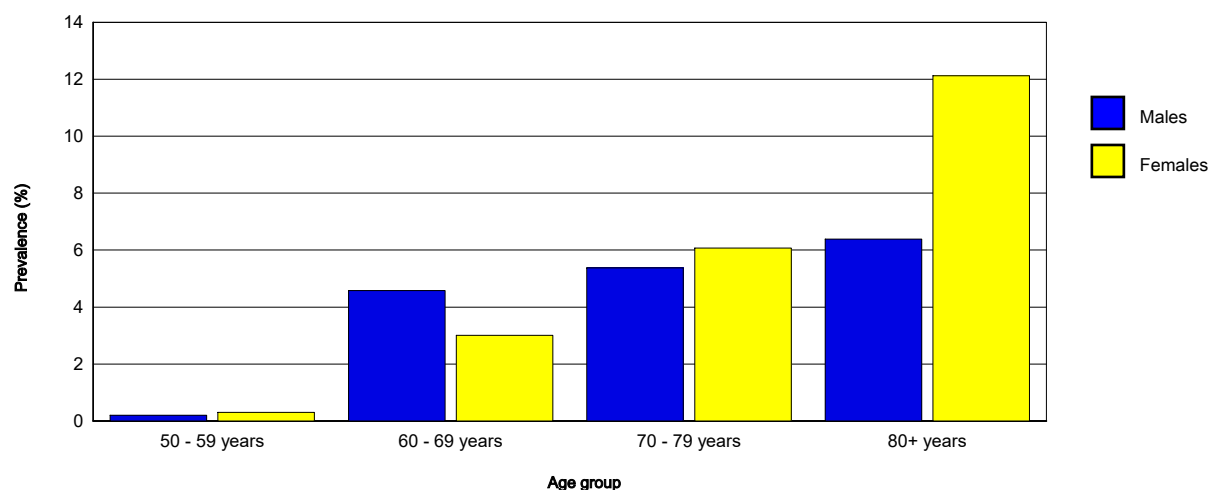
19. Prevalence of cataract SVI eyes - VA<6/60-3/60 with best correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	4	0.4%	0	0.0%	4	0.2%
60 - 69 years	13	1.5%	12	1.1%	25	1.3%
70 - 79 years	7	1.4%	20	4.0%	27	2.8%
80+ years	12	6.4%	7	5.3%	19	5.9%
Total	36	1.4%	39	1.3%	75	1.4%



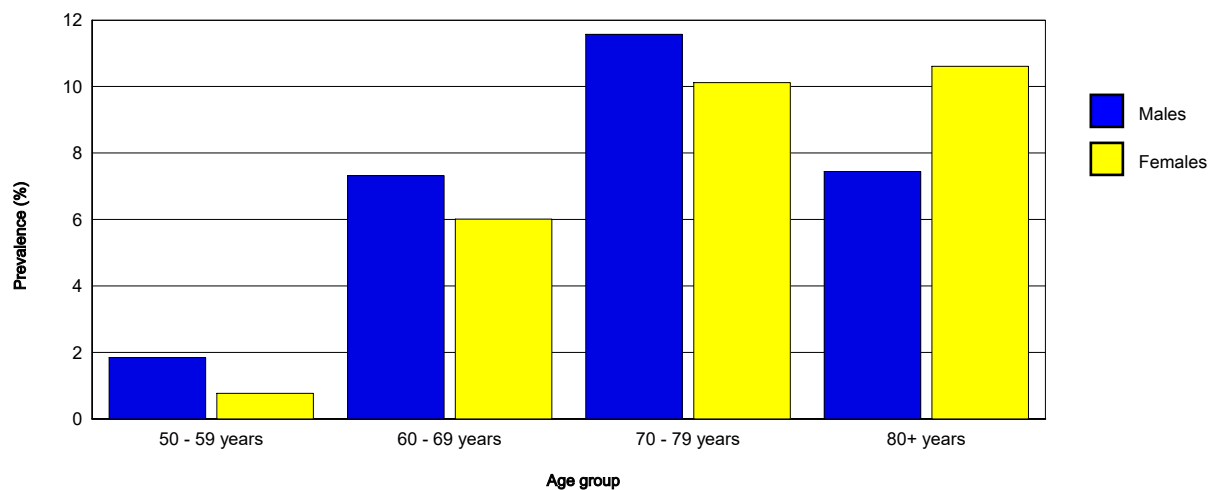
20. Prevalence of people with bilateral moderate visual impairment due to cataract - VA<6/18-6/60 - best eye, best correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	1	0.2%	2	0.3%	3	0.3%
60 - 69 years	20	4.6%	16	3.0%	36	3.7%
70 - 79 years	13	5.4%	15	6.1%	28	5.7%
80+ years	6	6.4%	8	12.1%	14	8.8%
Total	40	3.2%	41	2.7%	81	2.9%



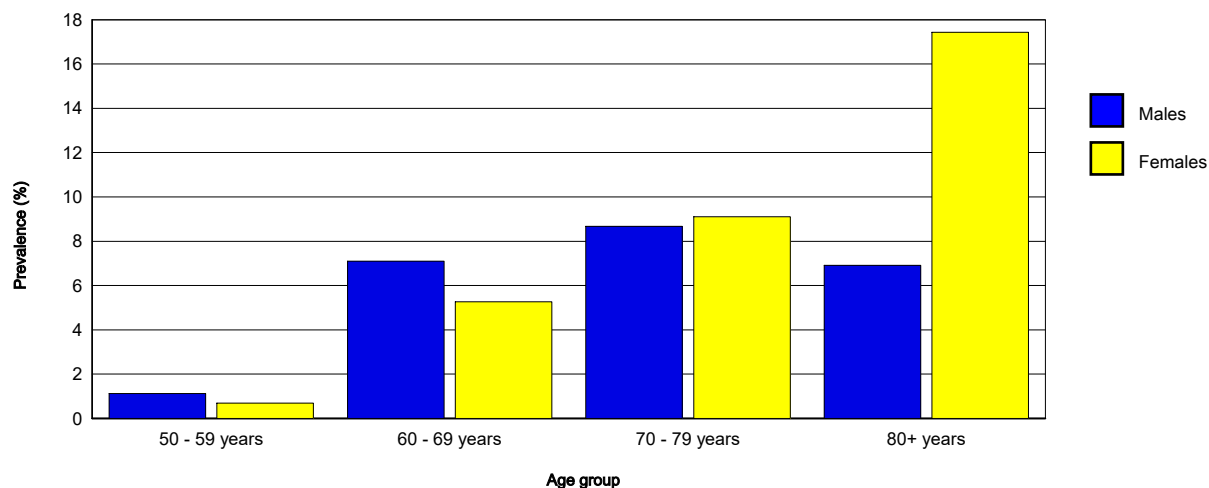
21. Prevalence of people with unilateral moderate visual impairment due to cataract - VA<6/18-6/60 best corrected

	n	Males %	n	Females %	n	Total %
50 - 59 years	9	1.8%	5	0.8%	14	1.2%
60 - 69 years	32	7.3%	32	6.0%	64	6.6%
70 - 79 years	28	11.6%	25	10.1%	53	10.8%
80+ years	7	7.4%	7	10.6%	14	8.8%
Total	76	6.0%	69	4.6%	145	5.3%



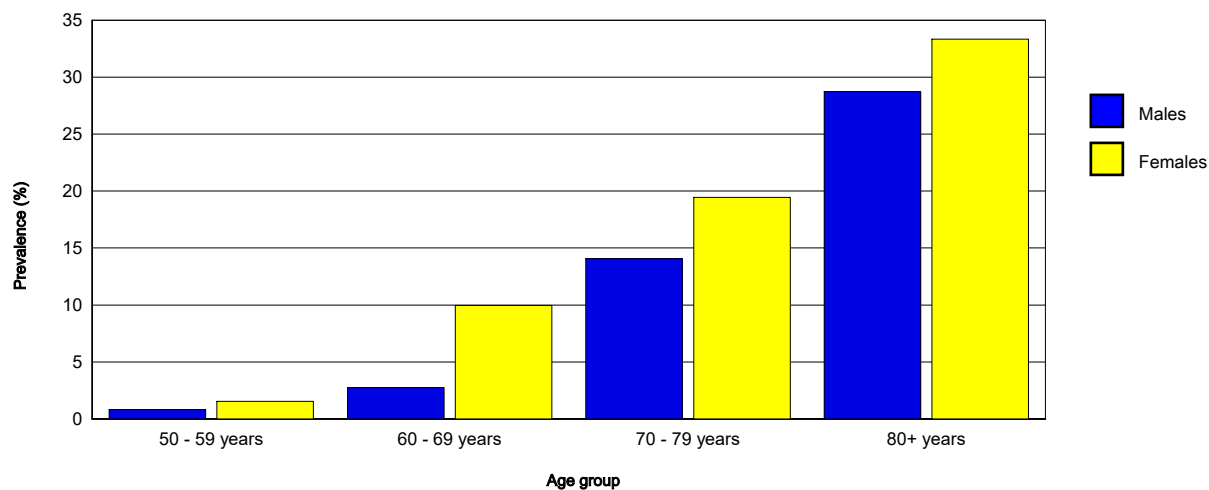
22. Prevalence of cataract MVI eyes - VA <6/18-6/60 with best correction

	n	Males %	n	Females %	n	Total %
50 - 59 years	11	1.1%	9	0.7%	20	0.9%
60 - 69 years	62	7.1%	56	5.3%	118	6.1%
70 - 79 years	42	8.7%	45	9.1%	87	8.9%
80+ years	13	6.9%	23	17.4%	36	11.3%
Total	128	5.1%	133	4.4%	261	4.7%



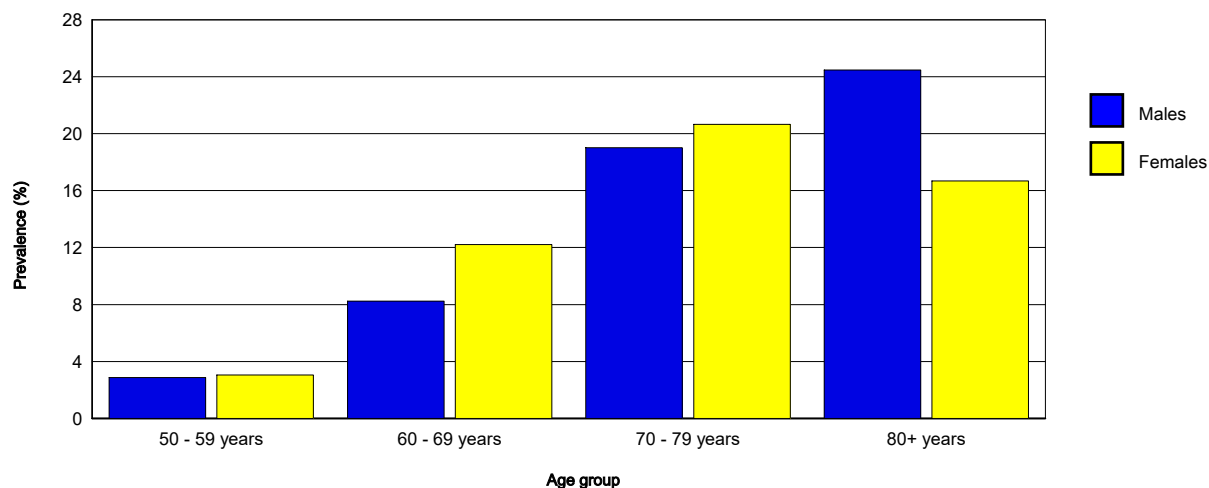
23. Prevalence of people with bilateral (pseudo)aphakia

	n	Males %	n	Females %	n	Total %
50 - 59 years	4	0.8%	10	1.5%	14	1.2%
60 - 69 years	12	2.7%	53	10.0%	65	6.7%
70 - 79 years	34	14.0%	48	19.4%	82	16.8%
80+ years	27	28.7%	22	33.3%	49	30.6%
Total	77	6.1%	133	8.9%	210	7.6%



24. Prevalence of people with unilateral (pseudo)aphakia

	n	Males %	n	Females %	n	Total %
50 - 59 years	14	2.9%	20	3.1%	34	3.0%
60 - 69 years	36	8.2%	65	12.2%	101	10.4%
70 - 79 years	46	19.0%	51	20.6%	97	19.8%
80+ years	23	24.5%	11	16.7%	34	21.3%
Total	119	9.4%	147	9.8%	266	9.6%



RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

AGE AND SEX ADJUSTED PREVALENCE AND ESTIMATED NUMBERS

Date and time of report:

05-Apr-16

2:22:17PM

This report is for the survey area:

WARDHA

Year and month when survey was conducted:

2016- 3 until 2016- 3

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.

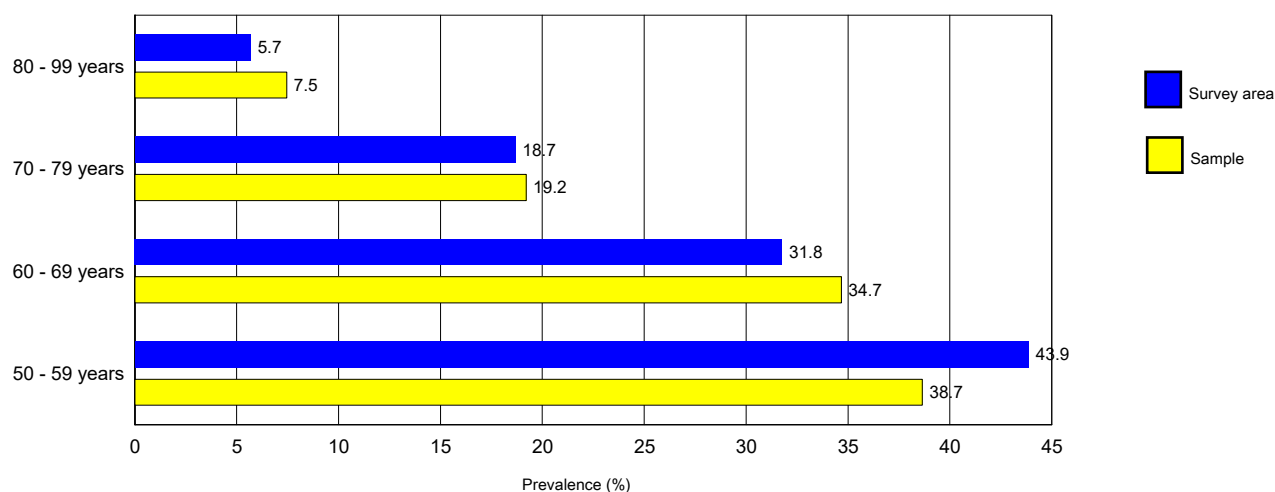
1. Age and sex distribution of people examined in the sample

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	487	38.7%	654	43.6%	1,141	41.4%
60 - 69 years	437	34.7%	532	35.5%	969	35.1%
70 - 79 years	242	19.2%	247	16.5%	489	17.7%
80 - 99 years	94	7.5%	66	4.4%	160	5.8%
Total	1,260	100.0%	1,499	100.0%	2,759	100.0%

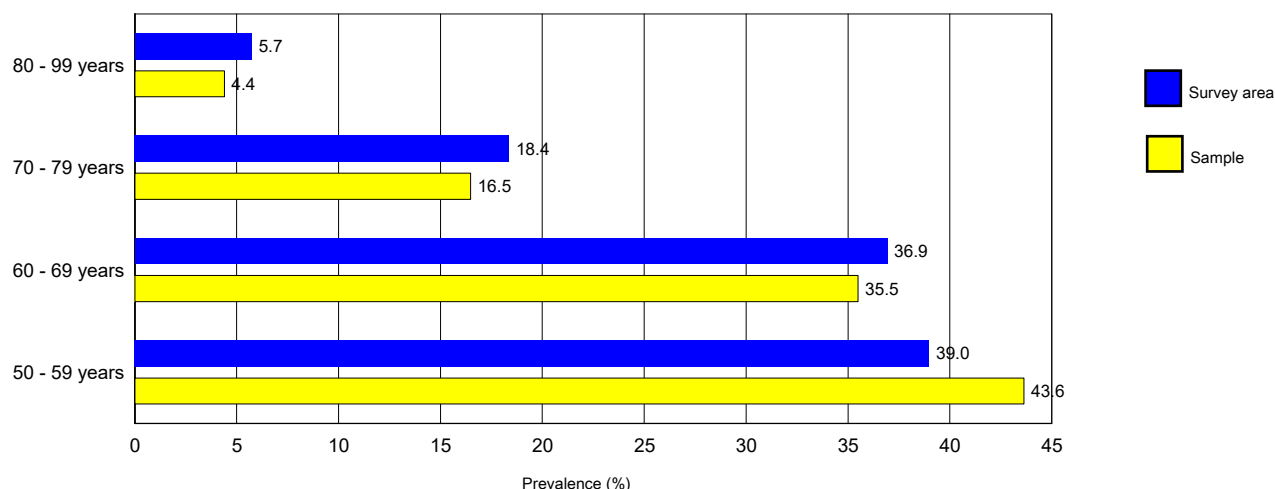
2. Total number of people aged 50+ in survey area

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	59,667	43.9%	52,258	39.0%	111,925	41.4%
60 - 69 years	43,202	31.8%	49,514	36.9%	92,716	34.3%
70 - 79 years	25,391	18.7%	24,634	18.4%	50,025	18.5%
80 - 99 years	7,744	5.7%	7,697	5.7%	15,441	5.7%
Total	136,004	100.0%	134,103	100.0%	270,107	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	2,185	1.6 (0.9 - 2.3)	2,859	2.1 (1.4 - 2.8)	5,044	1.9 (1.4 - 2.4)
All eyes	16,213	6.0 (4.9 - 7.1)	18,105	6.8 (5.8 - 7.7)	34,318	6.4 (5.6 - 7.2)
Blindness - VA < 3/60 in the better eye with available correction (presenting VA)						
All bilateral cases	2,455	1.8 (1.0 - 2.6)	2,975	2.2 (1.5 - 2.9)	5,430	2.0 (1.5 - 2.5)
All eyes	18,536	6.8 (5.6 - 8.0)	19,094	7.1 (6.1 - 8.1)	37,630	7.0 (6.2 - 7.8)
Severe visual impairment (SVI) - VA<6/60 - 3/60 in the better eye with available correction						
All bilateral cases	2,585	1.9 (1.1 - 2.7)	3,689	2.8 (2.0 - 3.5)	6,274	2.3 (1.8 - 2.9)
All eyes	8,173	3.0 (2.2 - 3.8)	10,040	3.7 (3.0 - 4.5)	18,213	3.4 (2.9 - 3.9)
Moderate visual impairment (MVI) - VA<6/18 - 6/60 in the better eye with available correction						
All bilateral cases	11,862	8.7 (6.9 - 10.5)	13,560	10.1 (8.4 - 11.8)	25,422	9.4 (8.1 - 10.8)
All eyes	29,319	10.8 (9.4 - 12.2)	32,764	12.2 (10.7 - 13.7)	62,083	11.5 (10.4 - 12.6)
Early visual impairment (EVI) - VA<6/12 - 6/18 in the better eye with available correction						
All bilateral cases	16,818	12.4 (10.5 - 14.2)	21,135	15.8 (13.3 - 18.2)	37,953	14.1 (12.2 - 15.9)
All eyes	38,102	14.0 (12.3 - 15.7)	44,633	16.6 (14.4 - 18.9)	82,735	15.3 (13.6 - 17.0)

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

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Blindness - VA < 3/60 in the better eye with available correction (presenting VA)						
All bilateral cases	2,455	1.8 (1.0 - 2.6)	2,975	2.2 (1.5 - 2.9)	5,430	2.0 (1.5 - 2.5)
All eyes	18,536	6.8 (5.6 - 8.0)	19,094	7.1 (6.1 - 8.1)	37,630	7.0 (6.2 - 7.8)
VA<6/60 in the better eye, with available correction (presenting VA)						
All bilateral cases	5,042	3.7 (2.5 - 4.9)	6,665	5.0 (3.9 - 6.0)	11,707	4.3 (3.5 - 5.2)
All eyes	26,710	9.8 (8.3 - 11.4)	29,133	10.9 (9.5 - 12.2)	55,843	10.3 (9.3 - 11.4)
VA<6/18 in the better eye, with available correction (presenting VA)						
All bilateral cases	16,905	12.4 (10.3 - 14.5)	20,224	15.1 (13.1 - 17.1)	37,129	13.7 (12.1 - 15.4)
All eyes	56,028	20.6 (18.4 - 22.8)	61,898	23.1 (21.0 - 25.1)	117,926	21.8 (20.2 - 23.4)
VA<6/12 in the better eye, with available correction (presenting VA)						
All bilateral cases	33,723	24.8 (21.8 - 27.8)	41,359	30.8 (27.5 - 34.2)	75,082	27.8 (25.1 - 30.5)
All eyes	94,131	34.6 (31.7 - 37.5)	106,532	39.7 (36.6 - 42.8)	200,663	37.1 (34.6 - 39.7)

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

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Cataract and VA<3/60 with best correction or pinhole						
Bilateral cataract	1,339	1.0 (0.4 - 1.6)	1,697	1.3 (0.7 - 1.8)	3,036	1.1 (0.8 - 1.5)
Unilateral cataract	7,232	5.3 (4.0 - 6.6)	7,217	5.4 (4.1 - 6.7)	14,449	5.3 (4.4 - 6.3)
Cataract eyes	9,907	3.6 (2.7 - 4.5)	10,610	4.0 (3.1 - 4.8)	20,517	3.8 (3.1 - 4.5)
Cataract and SVI - VA<6/60 - 3/60 in better eye with best correction or pinhole						
Bilateral cataract	754	0.6 (0.3 - 0.9)	1,343	1.0 (0.6 - 1.4)	2,097	0.8 (0.5 - 1.0)
Unilateral cataract	1,991	1.5 (0.7 - 2.3)	1,239	0.9 (0.3 - 1.6)	3,230	1.2 (0.7 - 1.7)
Cataract eyes	3,498	1.3 (0.8 - 1.8)	3,928	1.5 (1.0 - 2.0)	7,426	1.4 (1.0 - 1.7)
Cataract and Moderate VI (MVI) - VA<6/18 - 6/60 in better eye with best correction or pinhole						
Bilateral cataract	3,958	2.9 (2.2 - 3.6)	4,078	3.0 (2.3 - 3.8)	8,036	3.0 (2.5 - 3.5)
Unilateral cataract	5,039	3.7 (2.5 - 4.9)	4,946	3.7 (2.6 - 4.7)	9,985	3.7 (2.9 - 4.4)
Cataract eyes	12,955	4.8 (3.8 - 5.7)	13,101	4.9 (4.0 - 5.7)	26,056	4.8 (4.2 - 5.5)
Cataract and Early VI (EVI) - VA<6/12 - 6/18 in better eye with best correction or pinhole						
Bilateral cataract	8,012	2.9 (2.0 - 3.9)	7,777	2.9 (2.0 - 3.8)	15,789	2.9 (2.3 - 3.6)
Unilateral cataract	5,221	1.9 (0.1 - 3.7)	3,246	1.2 (-0.1 - 2.5)	8,467	1.6 (0.5 - 2.6)
Cataract eyes	21,245	7.8 (6.5 - 9.2)	18,802	7.0 (5.9 - 8.1)	40,047	7.4 (6.5 - 8.3)

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

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Cataract and VA<3/60 with best correction or pinhole						
Bilateral cataract	1,339	1.0 (0.4 - 1.6)	1,697	1.3 (0.7 - 1.8)	3,036	1.1 (0.8 - 1.5)
Unilateral cataract	7,232	5.3 (4.0 - 6.6)	7,217	5.4 (4.1 - 6.7)	14,449	5.3 (4.4 - 6.3)
Cataract eyes	9,907	3.6 (2.7 - 4.5)	10,610	4.0 (3.1 - 4.8)	20,517	3.8 (3.1 - 4.5)
Cataract and VA<6/60 with best correction or pinhole						
Bilateral cataract	2,091	1.5 (0.8 - 2.2)	3,041	2.3 (1.6 - 2.9)	5,132	1.9 (1.5 - 2.3)
Unilateral cataract	9,222	6.8 (5.3 - 8.2)	8,457	6.3 (4.7 - 7.9)	17,679	6.5 (5.4 - 7.7)
Cataract eyes	13,405	4.9 (3.8 - 6.0)	14,538	5.4 (4.4 - 6.5)	27,943	5.2 (4.4 - 6.0)
Cataract and VA<6/18 with best correction or pinhole						
Bilateral cataract	6,049	4.4 (3.4 - 5.5)	7,119	5.3 (4.4 - 6.2)	13,168	4.9 (4.2 - 5.6)
Unilateral cataract	14,260	10.5 (8.3 - 12.6)	13,403	10.0 (7.8 - 12.2)	27,663	10.2 (8.7 - 11.8)
Cataract eyes	26,360	9.7 (8.0 - 11.3)	27,641	10.3 (8.9 - 11.7)	54,001	10.0 (8.9 - 11.1)
Cataract and VA<6/12 with best correction or pinhole						
Bilateral cataract	14,063	10.3 (8.9 - 11.8)	14,897	11.1 (9.7 - 12.5)	28,960	10.7 (9.7 - 11.7)
Unilateral cataract	19,480	14.3 (11.1 - 17.5)	16,649	12.4 (9.5 - 15.3)	36,129	13.4 (11.2 - 15.5)
Cataract eyes	47,606	17.5 (15.2 - 19.8)	46,442	17.3 (15.4 - 19.3)	94,048	17.4 (15.8 - 19.0)

9. Adjusted results for aphakia and pseudophakia

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Bilateral (pseudo)aphakia	7,467	5.5 (3.9 - 7.1)	13,085	9.8 (8.5 - 11.0)	20,552	7.6 (6.5 - 8.7)
Unilateral (pseudo)aphakia	11,995	8.8 (7.2 - 10.4)	14,017	10.5 (8.9 - 12.0)	26,012	9.6 (8.4 - 10.8)
Eyes (pseudo)aphakia	26,931	9.9 (8.0 - 11.8)	40,186	15.0 (13.6 - 16.4)	67,117	12.4 (11.1 - 13.7)

10. Adjusted results for cataract surgical coverage

	Males	Females	Total
Cataract Surgical Coverage (eyes) - percentage			
VA < 3/60	73.1	79.1	76.6
VA < 6/60	66.8	73.4	70.6
VA < 6/18	50.5	59.2	55.4
Cataract Surgical Coverage (persons) - percentage			
VA < 3/60	90.4	92.1	91.4
VA < 6/60	86.1	87.1	86.7
VA < 6/18	70.6	75.9	73.7

RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

FINDINGS ON DIABETES AND DIABETIC RETINOPATHY

Date and time of report:

05-Apr-16

2:24:15PM

This report is for the survey area:

WARDHA

Year and month when survey was conducted:

2016- 3 until 2016- 3

The diagnosis of diabetes is based on either a history of known diabetes, or, in case the person is not known with diabetes, on a random blood sugar of 200 mg/dl or higher.

1. Prevalence of known and newly diagnosed diabetes by age group and by gender

	Males		Females		Total	
	n	p (95% CI)	n	p (95% CI)	n	p (95% CI)
50 - 59	33	6.8% (4.7-8.8)	36	5.5% (3.8-7.2)	69	6.0% (4.6-7.5)
60 - 69	46	10.5% (7.3-13.7)	53	10.0% (7.1-12.9)	99	10.2% (7.8-12.6)
70 - 79	31	12.8% (8.8-16.8)	25	10.1% (6.2-14.0)	56	11.5% (8.7-14.2)
80+	12	12.8% (6.8-18.7)	3	4.5% (0.0-9.5)	15	9.4% (5.6-13.1)
All ages	122	9.7% (7.8-11.5)	117	7.8% (6.1-9.5)	239	8.7% (7.3-10.0)

2. Diabetics and random blood sugar level

		Males		Females		Total	
		n	%	n	%	n	%
All diabetics	Known diabetes	83	68.0%	75	64.1%	158	66.1%
	Newly diagnosed diabetes	39	32.0%	42	35.9%	81	33.9%
	Total	122	100.0%	117	100.0%	239	100.0%
Known diabetes	Bloodsugar <200 mg/dl	50	60.2%	43	57.3%	93	58.9%
	Bloodsugar >200 mg/dl	33	39.8%	32	42.7%	65	41.1%
	Total	83	100.0%	75	100.0%	158	100.0%

3. Treatment in people with known diabetes

	Males		Females		Total	
	n	%	n	%	n	%
No treatment	5	6.0%	8	10.7%	13	8.2%
Diet only	1	1.2%	6	8.0%	7	4.4%
Tablets	73	88.0%	59	78.7%	132	83.5%
Insulin	2	2.4%	0	0.0%	2	1.3%
Tablets + Insulin	2	2.4%	2	2.7%	4	2.5%
Other	0	0.0%	0	0.0%	0	0.0%
Total	83	100.0%	75	100.0%	158	100.0%

4. Last eye examination for DR among known diabetics

	Males		Females		Total	
	n	%	n	%	n	%
Never had eye examination for DR	65	78.3%	64	85.3%	129	81.6%
0-12 months ago	11	13.3%	10	13.3%	21	13.3%
13-24 months ago	3	3.6%	0	0.0%	3	1.9%
>24 months ago	4	4.8%	1	1.3%	5	3.2%
Total	83	100.0%	75	100.0%	158	100.0%

5. Prevalence of DR in diabetics and in entire sample

	N	Among diabetics p (95% CI)	Full sample p (95% CI)
Retinopathy grade			
No retinopathy (R0)	216	90.4% (86.6-94.1)	7.8% (6.6-9.1)
Background DR - mild (R1)	12	5.0% (1.9-8.1)	0.4% (0.2-0.7)
Background DR - observable (R2)	2	0.8% (0.0-1.9)	0.1% (0.0-0.2)
Background DR - referable (R3)	3	1.3% (0.0-2.6)	0.1% (0.0-0.2)
Proliferative DR (R4)	0	0.0% (0.0-0.0)	0.0% (0.0-0.0)
Ungradable DR (R6)	2	0.8% (0.0-2.0)	0.1% (0.0-0.2)
Any retinopathy	19	7.9% (4.5-11.4)	0.7% (0.4-1.0)
Maculopathy grade			
No maculopathy (M0)	212	88.7% (84.2-93.2)	7.7% (6.4-8.9)
Maculopathy - observable (M1)	6	2.5% (0.0-5.2)	0.2% (0.0-0.5)
Maculopathy - referable (M2)	4	1.7% (0.1-3.2)	0.1% (0.0-0.3)
Any maculopathy	23	9.6% (5.5-13.7)	0.8% (0.5-1.2)
Any retinopathy and/or maculopathy	29	12.1% (7.5-16.8)	1.1% (0.6-1.5)
Sight threatening DR (R4 and/or M2)	5	2.1% (0.4-3.8)	0.2% (0.0-0.3)
Any laser scars	14	5.9% (2.5-9.2)	0.5% (0.2-0.8)

6. Prevalence of any retinopathy and/or maculopathy by age and gender

	Males			Females			Total
	n	p (95% CI)	n	p (95% CI)	n	p (95% CI)	p (95% CI)
50 - 59	2	6.1% (0.0-14.1)	2	5.6% (0.0-12.8)	4	5.8% (0.5-11.1)	
60 - 69	1	2.2% (0.0-6.4)	5	9.4% (1.0-17.8)	6	6.1% (0.8-11.3)	
70 - 79	2	6.5% (0.0-15.0)	2	8.0% (0.0-18.1)	4	7.1% (0.9-13.4)	
80+	2	16.7% (0.0-38.0)	1	33.3% (0.0-87.2)	3	20.0% (0.0-40.5)	
All ages	7	5.7% (1.9-9.6)	10	8.5% (3.3-13.8)	17	7.1% (3.8-10.5)	

7. Prevalence of MVI, SVI and blindness among people with and without diabetes

	Persons with diabetes			Persons without diabetes		
	n	p (95% CI)	n	p (95% CI)		
Normal vision	168	70.3% (64.2-76.4)	1,823	72.3% (69.7-75.0)		
Early VI	38	15.9% (11.0-20.8)	354	14.0% (12.1-16.0)		
Moderate VI	27	11.3% (7.7-14.9)	229	9.1% (7.6-10.6)		
Severe VI	3	1.3% (0.0-2.6)	62	2.5% (1.9-3.1)		
Blindness	1	0.4% (0.0-1.2)	27	1.1% (0.7-1.5)		

8. Causes of visual impairment among people with and without diabetes

	Blindness				Severe VI				Moderate VI				Early VI			
	DM		Non-DM		DM		Non-DM		DM		Non-DM		DM		Non-DM	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Refr. error	0	0%	0	0%	0	0%	0	0%	5	18%	39	17%	26	68%	259	73%
Cataract	3	100%	38	73%	2	66%	48	77%	17	62%	167	72%	11	28%	85	24%
DR	0	0%	0	0%	0	0%	0	0%	2	7%	0	0%	0	0%	0	0%
Other PSD	0	0%	6	11%	1	33%	8	12%	1	3%	4	1%	0	0%	2	0%
Other	0	0%	8	15%	0	0%	6	9%	2	7%	19	8%	1	2%	8	2%
Total	3	100%	52	100%	3	100%	62	100%	27	100%	229	100%	38	100%	354	100%