Rapid Assessment of Avoidable Blindness

in

Narail and Jamalpur Districts, Bangladesh

Survey Planning & Implementation: Child Sight Foundation, Dhaka, Bangladesh

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Report on Rapid Assessment of Avoidable Blindness

in

Narail and Jamalpur Districts of Bangladesh

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SUMMARY OF THE REPORT

Rapid Assessment of Avoidable Blindness in Narail District of Bangladesh

Summary:

- The all-age prevalence of blindness for Narail is estimated to be 0.34%.
- The all-age magnitude of blindness for Narail is estimated to be 2,551 people out of a population of 0.765 million.
- Avoidable causes of blindness (operated and unoperated cataract, refractive error and corneal scar) accounted for 80% of blindness, 92% of severe visual impairment and 93.5% of visual impairment.
- Cataract (73.8%) and sequelae related to cataract extraction (4.6%) accounted for 78.4% of all causes of bilateral blindness.
- Posterior segment disease **(**including glaucoma, diabetic retinopathy and age-related macular degeneration) is responsible for 20% of bilateral blindness.
- 67.6% of people with bilateral cataract VA<3/60 had had surgery and 44.9% at VA<6/18.

Subjects

- A total of 2,450 individuals aged 50 years and over were examined in the survey.
- The overall response rate for the survey was 97.6% (Women 98.2%, Men 96.6%).
- Of these 2, 450 subjects, 65 were bilaterally blind (<3/60 in the better eye based on presenting visual acuity, with available correction).

Crude Prevalence 50 years an older

- This corresponds to a crude prevalence of blindness of 2.72% in people aged 50 years and above (95% CI: 1.71-3.73%).
- The distribution of visual acuity status of the examined subjects is shown in table 2.

Magnitude of Blindness in Narail district

- In people aged over 50 years in Narail district the magnitude of blindness is estimated to be 1,756 people.
- The all-age prevalence of blindness for Narail district is estimated to be 0.34%.
- The all-age magnitude of blindness for Narail district is estimated to be 2,551 people out of a population of 0.765 million.

Blindness and Visual Acuity by Age

- The prevalence of blindness was associated with increasing age ranging from 1% in those aged 50-59 years to 13.3% in those aged 80 years and above. (Figure 1).
- Increasing age was associated with higher levels of impaired vision. In those aged 50-59, 97% had normal vision, compared with 68% in those aged 80 years and above (Figure 1).

Causes of Blindness in adults aged 50 years and older

- Avoidable causes of blindness (operated and unoperated cataract, refractive error and corneal scar) accounted for 80% of blindness, 92% of severe visual impairment and 93.5% of visual impairment.
- Cataract (73.8%) and sequelae related to cataract extraction (aphakia 3.1% and cataract surgical complications 1.5%) accounted for 78.5% of all causes of bilateral blindness. (Table 3).
- Posterior segment disease (20%) (including glaucoma, diabetic retinopathy and age-related macular degeneration) is the second cause of bilateral blindness.(Table 2).

Cataract Surgical Coverage

- Cataract surgical coverage was relatively high; 67.6% of people with bilateral cataract VA<3/60 had had surgery and 44.9% at VA<6/18. (Table 4).
- 14.4% of the 160 eyes that had undergone cataract surgery had a poor outcome with best correction (i.e VA<6/60). (Table 5).

Rapid Assessment of Avoidable Blindness in Jamalpur District of Bangladesh

Summary:

- The all-age prevalence of blindness for Jamalpur is estimated to be 0.35%.
- The all-age magnitude of blindness for Jamalpur is estimated to be 8,189 people out of a population of 2.31 million.
- Avoidable causes of blindness (operated and unoperated cataract, refractive error and corneal scar) accounted for 73.7% of blindness, 86.8% of severe visual impairment and 96.2% of visual impairment.
- Cataract (52.6%) and sequelae related to cataract extraction (5.3%) accounted for 57.9% of all causes of bilateral blindness.
- Posterior segment disease **(**including glaucoma, diabetic retinopathy and age-related macular degeneration) is responsible for 26.3% of bilateral blindness.
- 77.9% of people with bilateral cataract VA<3/60 had had surgery and 61.2% at VA<6/18.

Subjects

- A total of 3,050 individuals aged 50 years and over were examined in the survey.
- The overall response rate for the survey was 97.6% (Women 98.3%, Men 96.8%).
- Of these 3,050 subjects, 57 were bilaterally blind (<3/60 in the better eye based on presenting visual acuity, with available correction).

Crude Prevalence 50 years and older

- This corresponds to a crude prevalence of blindness of 1.91% in people aged 50 years and above (95% CI: 1.22-2.61%).
- The distribution of visual acuity status of the examined subjects is shown in table 7.

Magnitude of Blindness in Jamalpur district

- In people aged over 50 years in Jamalpur district the magnitude of blindness is estimated to be 5,782 people.
- The all-age prevalence of blindness for Jamalpur district is estimated to be 0.35%.
- The all-age magnitude of blindness for Jamalpur district is estimated to be 8.189 people out of a population of 2.31 million.

Blindness and Visual Acuity by Age

- The prevalence of blindness was associated with increasing age ranging from 1% in those aged 50-59 years to 11% in those aged 80 years and above. (Figure 2).
- Increasing age was associated with higher levels of impaired vision. In those aged 50-59, 96% had normal vision, compared with 68% in those aged 80 years and above (Figure 2).

Causes of Blindness in adults aged 50 years and older

- Avoidable causes of blindness (operated and un-operated cataract, refractive error and corneal scar) accounted for 73.7% of blindness, 86.8% of severe visual impairment and 96.2% of visual impairment.
- Cataract (52.6%) and sequelae related to cataract extraction (5.3%) accounted for 57.9% of all causes of bilateral blindness. (Table 8).
- Posterior segment disease **(**including glaucoma, diabetic retinopathy and age-related macular degeneration) is responsible for 26.3% of bilateral blindness.(Table 8).

Cataract Surgical Coverage

- Cataract surgical coverage was relatively high; 77.9% of people with bilateral cataract VA<3/60 had had surgery and 61.2% at VA<6/18. (Table 9).
- 7.3% of the 164 eyes that had undergone cataract surgery had a poor outcome with best correction (i.e VA<6/60). (Table 10).

PROJECT REPORT

AIM

The aim of this study was to conduct a Rapid Assessment of Avoidable Blindness in Narail and Jamalpur districts to estimate the prevalence and causes of blindness in people aged ≥50 years.

INTRODUCTION

Global estimates suggest that in 2002 there were more than 161 million people who were visually impaired (bilateral VA< 6/18 with best correction), of whom approximately 37 million were blind (bilateral VA< 3/60). There is a great deal of variation in the prevalence of visual impairment between countries, and this is largely dictated by the level of economic development. There is also variation in the prevalence of visual impairment within countries, as poor people or those living in rural areas have lower access to eye care services than urban dwellers and the wealthy. VISION 2020 – the right to sight, is the global initiative by WHO and IAPB to eliminate avoidable blindness by the year 2020. The priority diseases in the first phase of VISION 2020 are cataract, refractive error and low vision, childhood blindness, onchocerciasis and trachoma. These conditions constitute more than 75% of blinding diseases and are amenable to cost-effective preventive and curative interventions. The VISION 2020 strategy depends on the development of district-level plans for the prevention of avoidable blindness.

The National Blindness and Low Vision Survey of Bangladesh was conducted in Bangladesh in 2000. A nationally representative sample of 11,624 adults 30 years and older underwent detailed ophthalmic examination, of whom 1.4% were blind (95% confidence intervals 1.2%-1.6%), 80% of which was due to cataract. There was a two-fold variation in the prevalence of blindness between the richest and the poorest divisions.

The National Survey produced important data which have been used to plan a national strategy, but district-level planning and monitoring requires district-level prevalence data together with a needs assessment of eye care services. Eye care programmes are often limited in resources and need to allocate these as efficiently as possible. The efficient implementation and monitoring of eye care

programmes is constrained by the lack of data concerning the prevalence and causes of blindness and visual impairment. Large scale surveys of blindness are expensive and time consuming to conduct. The Rapid Assessment of Avoidable Blindness (RAAB) is a simple and rapid survey methodology that can provide data on the prevalence and causes of avoidable blindness. RAAB was successfully conducted in Satkhira in Bangladesh in 2005 which was used as a model in Narail and Jamalpur districts.

Narail is situated in Khulna division, located in the South-Western part of Bangladesh. It has an area of approximately 990.23 square kilometres with a population of about 7,76,813. Narail consists of 3 upazillas which is further subdivided into 2 pourasavas and 37 unions.

Jamalpur is situated in Dhaka division, located in the North-Eastern part of Bangladesh. It has an area of approximately 2031.98 square kilometres with inhabitants of about 23,02,139. Jamalpur consists of 7 upazillas which is further subdivided into 6 pourasavas and 68 unions.

METHODS

Sample selection

Narail

The expected prevalence of blindness in the adults aged ≥50 years in Khulna and was 5.7%. Allowing for a required confidence of 95%, a worst acceptable result of 3.0%, a population size of approximately 104,870 adults aged ≥50 years in Narail, a design effect of 1.5 for clusters of 50, and 10% non-response, the required sample size was estimated to be 2425 subjects. In total, 49 clusters of 50 adults aged ≥50 years were required for this survey.

Jamalpur

Similarly, allowing for a required confidence of 95%, a worst acceptable result of 3.1%, a population size of approximately 278,152 adults aged ≥50 years in Jamalpur, a design effect of 1.5 for clusters of 50, and 10% non-response, the required sample size was estimated to be 3050 subjects. In total, 61 clusters of 50 adults aged ≥50 years were required for this survey.

The clusters were selected through probability-proportionate to size sampling. Updated data from the 2001 national census was used as the sampling frame. We produced a list of all the enumeration areas in Narail/Jamalpur district with their respective populations aged ≥50 years, estimated using the population size of the enumeration areas and the population age-structure from the census data. The sampling frame was entered into specially designed spreadsheet. Using the RAAB software package, containing an automated programme, a list of population units (clusters) was selected for the survey from the sampling frame.

Households within clusters were selected through compact segment sampling. The cluster was visited two to three days before the survey by the cluster informers to inform them of the survey. The village leaders were asked if they could produce a sketch map of the enumeration area showing major landmarks and the approximate distribution of households. The enumeration area was divided into segments, so that each segment included approximately 50 people aged ≥ 50 years. For instance, if an

enumeration area included 250 people aged ≥ 50 years then it would be divided into five segments. One of the segments was chosen at random by drawing lots and all households in the segment were included sequentially until 50 people aged ≥ 50 years were identified. A household was defined as a group of people living and eating together for at least six months of the year. If the segment did not include 50 people aged ≥50 years then another segment was chosen at random and sampling continued.

The survey team visited households door-to-door, accompanied by a village guide. The purpose of the study and the examination procedure were explained to the subjects and verbal consent was obtained. The team conducted the visual examinations in the household. If an eligible person was absent, the survey team returned to the household on the same day at least two times to examine the individual before leaving the area. If after repeated visits the subject could not be examined, information about his/her visual status was collected from relatives or neighbours. The contact details of the project ophthalmologists including the cell number were left with the neighbours and vice versa to minimize the non-responders.

Ophthalmic examination

A standardised protocol was used for the Rapid Assessment of Avoidable Blindness. A survey record was completed for each eligible person that included seven sections: general information; vision and pinhole examination; lens examination; principal cause of vision impairment; history, if not examined; why cataract operation had not been done; details about cataract operation.

Visual acuity (VA) was measured by an ophthalmic assistant with a Snellen tumbling "E" chart using optotype size 6/18 (20/60) on one side and size 6/60 (20/200) on the other side at 6 or 3 metre distance. All measurements were taken in full daylight with available spectacle correction. If the VA was <6/18 in either eye then pinhole vision was also measured. Categories of visual impairment were defined as:

- Blindness - VA < 3/60 in the better eye with available correction.
- Severe visual impairment - VA≥3/60 - <6/60 in the better eye with available correction.
- Visual impairment - VA≥6/60 - <6/18 in the better eye with available correction.

All participants were examined by an ophthalmologist. The lens status was assessed by torch or by distant direct ophthalmoscopy in a shaded or dark environment without dilatation of the pupil. Lens status was graded as: “normal lens”, “obvious lens opacity present”, “lens absent (aphakia)”, or “IOL implantation without posterior capsule opacification” or “IOL implantation with posterior capsule opacification”. If the lens could not be examined (e.g. corneal scarring present) then “No view of lens” was noted. The ophthalmologist examined all eyes with a presenting VA<6/18 with a torch, direct ophthalmoscope and/or portable slit lamp. The examination was made with pupil dilation if the cause of visual impairment was not refractive error, cataract, aphakia, or corneal scar. The principal cause of blindness or visual impairment was recorded, according to the WHO convention where the major cause is assigned to the disorder that is easiest to treat.

Training

There were four teams, two for each district. Each team consisted of one ophthalmologist and one ophthalmic assistant. The teams received 5 days training. Inter-observer agreement was measured through repeat examination of 40 patients by each of the four teams. Measurement of VA, lens examination and cause of blindness were compared between the teams to ensure that it was of an acceptable standard (i.e. kappa ≥ 0.60). Teams were accompanied by field supervisors on every alternate day, to ensure that a high quality was maintained. The fieldwork was carried out from January till February, 2010.

Statistical analysis

A software programme developed for this survey (RAAB version 4.02) was used for data entry and automatic standardised data analysis. The prevalence estimates took account of the design effect (DEFF) when estimating the confidence intervals. This software package and manual was collected free of charge from www.iceh.co.uk.

ETHICAL APPROVAL

Ethical approval for this work was granted by the Institutional Review Board, Research, Evaluation, Advocacy and Development (READ) centre, Child Sight Foundation, Bangladesh. Informed consent was obtained from the subjects after explanation of the nature and possible consequences of the study. All people with operable cataract were referred for surgery to a linkage hospital. All people with other treatable conditions were referred for treatment.

RESULTS - NARAIL

The study population consisted of 2,450 people. 41 people (1.7%) were not available and 3 people (0.1%) refused to be examined and 16 (0.7%) were not capable so that 2,390 people were included in the survey (97.6%). Those who refused were females (100% of refusers were female) and those who were unavailable were more likely to be male (68.3% of unavailable were male). The sampled population was relatively representative of the district population in terms of age and sex distribution, although elderly people (70 years and above) were slightly over-represented in the sample (Table 1).

There were 65 bilaterally blind people with available correction, giving a sample prevalence of blindness of 2.72% (95% confidence interval (CI): 1.71-3.73%) with an observed DEFF of 2.38 (Table 2). The prevalence of bilateral severe visual impairment was 1.05% (95% CI: 0.64-1.45%; DEFF=1.0), and the prevalence of bilateral visual impairment was 6.44% (95% CI: 5.34-7.55%; DEFF=1.27). The prevalence of bilateral blindness was higher in females (3.39%) than in males (1.74%). The prevalence of visual impairment and blindness increased rapidly with age (Figure 1). There were 37 people who were pseudophakic or aphakic in both eyes and 86 had unilateral (pseudo) aphakia. Men were more likely to have bilateral (pseudo) aphakia (2.36%) than females (0.99%).

Cataract was the primary cause of bilateral blindness (73.5%) and bilateral severe visual impairment (72.0%) (Table 3). Posterior segment disease (including glaucoma, diabetic retinopathy and age-related macular degeneration) was the second leading cause of bilateral blindness (20.0%). Cataract was responsible for the majority of the bilateral severe visual impairment (72.0%) while refractive error (16.0%) was the second leading cause. Similar picture was observed for bilateral visual impairment, with cataract (50.0%) as the leading cause followed by refractive error (41.6%). Avoidable causes, that is, cataract (including unoperated and post-operative complications) refractive error, and corneal scar were responsible for almost all cases of bilateral blindness (80.0%), bilateral severe visual impairment (92.0%) and bilateral visual impairment (93.5%).

Extrapolating survey data to the age- and sex- distribution of Narail district, in the people aged ≥50 years there were estimated to be 615 blind men and 1,141 blind women, 354 severely visually impaired men and 372 severely visually impaired women, and 2,625 visually impaired men and 2086 visually impaired women. The age- and sex- adjusted prevalence of blindness was 2.14%, 0.88% for severe visual impairment and 5.74% for visual impairment. There are a total of 1,394 people (363 men and 1,031 women) with best corrected bilateral VA<6/60 due to cataract who require surgery.

The cataract surgical coverage (CSC) was moderately high for both people and eyes (Table 4). For people with VA < 3/60 the CSC was high (67.6%) and for eyes with cataract at VA < 6/60 the CSC was 41.3%.

Information was available on 160 eyes operated for cataract. Most of the surgeries were undertaken in private hospital (44.4%, eye camps (18.8%) or voluntary/charitable hospitals (30.0%). Few were conducted in government hospitals (6.9%). Outcome after surgery was relatively poor (Table 5). With available correction only 72.5% of eyes achieved a good outcome (VA≥6/18) after surgery, while 10.6% had a borderline outcome (<6/18-6/60), and 16.9% had a poor outcome (<6/60). This improved with best correction so that 78.8% of eyes achieved a good outcome. Most people were very satisfied (30.6%) or partially satisfied (46.3%) with the surgery, while few were indifferent (7.5%), partially dissatisfied (10.0%) or very dissatisfied (5.6%). People with a cataract causing a VA<6/60 in the better eye were asked why they had not gone for surgery. The most common reasons were “cannot afford the operation” (46.5%) and “no services” (18.6%) and “old age: no need” (18.6%).

RESULTS - JAMALPUR

The study population consisted of 3050 people. 50 people (1.60%) were not available and 22 people (0.7%) were not capable for examination so that 2,978 people were included in the survey (97.6%). Those who were unavailable were more likely to be male (74.0% of unavailable were male). The sampled population was relatively representative of the district population in terms of age and sex distribution (Table 6).

There were 57 bilaterally blind people with available correction, giving a sample prevalence of blindness of 1.9% (95% confidence interval (CI): 1.22-2.61%) with an observed DEFF of 1.98 (Table 7). The prevalence of bilateral severe visual impairment was 1.28% (95% CI: 0.82-1.73%; DEFF=1.25), and the prevalence of bilateral visual impairment was 7.89% (95% CI: 6.75-9.03%; DEFF=1.39). The prevalence estimates were similar in men and women. The prevalence of visual impairment and blindness increased rapidly with age (Figure 2). There were 42 people who were pseudophakic or aphakic in both eyes and 80 had unilateral (pseudo) aphakia. Men and women were equally likely to have (pseudo) aphakia.

Cataract was the primary cause of bilateral blindness (52.6%) (Table 8). Posterior segment disease (including glaucoma, diabetic retinopathy and age-related macular degeneration) was the second leading cause of bilateral blindness (26.3%). Refractive error was responsible for the majority of bilateral severe visual impairment (65.8%) and bilateral visual impairment (80.0%), followed by cataract (18.4%) and (15.7%) respectively. Avoidable causes, that is, cataract (including unoperated and post-operative complications) refractive error, and corneal scar were responsible for almost all cases of bilateral blindness (73.7%), bilateral severe visual impairment (86.8%) and bilateral visual impairment (96.2%).

Extrapolating survey data to the age- and sex- distribution of Jamalpur district, in the people aged ≥50 years there were estimated to be 1,967 blind men and 3,815 blind women, 1,977 severely visually impaired men and 1,614 severely visually impaired women, and 12,598 visually impaired men and 9,290 visually impaired women. The age- and sex- adjusted prevalence of blindness was 2.32%, 1.44%

for severe visual impairment and 8.78% for visual impairment. There are a total of 3,199 people (957 men and 2,242 women) with best corrected bilateral VA<6/60 due to cataract who require surgery.

The cataract surgical coverage (CSC) was moderately high for both people and eyes (Table 9). For people with VA < 3/60 the CSC was high (77.9%) and for eyes with cataract at VA < 6/60 the CSC was 76.0%.

Information was available on 164 eyes operated for cataract. Most of the surgeries were undertaken in private hospital (45.7%), eye camps (29.9%) or government hospitals (18.9%). Few were conducted in voluntary/charitable hospitals (5.5%). Outcome after surgery was relatively poor (Table 10). With available correction only 66.5% of eyes achieved a good outcome (VA≥6/18) after surgery, while 18.9% had a borderline outcome (<6/18-6/60), and 14.6% had a poor outcome (<6/60). This improved with best correction so that 80.5% of eyes achieved a good outcome. Most people were very satisfied (70.7%) or partially satisfied (22.6%) with the surgery, while few were indifferent (1.2%), very dissatisfied (5.5%). People with a cataract causing a VA<6/60 in the better eye were asked why they had not gone for surgery. The most common reasons were “can not afford” (76.0%) or, “unaware of treatment” (12.0%).

CONCLUSION

Despite high Cataract Surgical Coverage in both the districts, cataract remains the major cause of blindness. Needs assessment of the districts need to be incorporated to the survey to know the existing eyecare facilities and the cataract surgical rate. Visual outcome after cataract surgery is of concern. Implementing a monitoring system for cataract surgical results could sensitise surgeons to quality control, thereby improving outcomes after surgery. Efforts in raising awareness for avoidable causes of blindness has created substantial impact on people since “unaware of treatment” did not appear as the major barrier in these two districts. However, lack of uptake of surgical treatment due to financial constraints, remains the major reason for cataract still being the principal cause of avoidable blindness.

TABLES AND FIGURES

Table 1. Age and Gender composition of district and sample population- Narail

	Males		Females	
Age groups	District	Sample	District	Sample
50-54 yrs	13,081 (29.4%)	184 (18.9%)	11,118 (29.6%)	346 (24.5%)
55-59 yrs	8,382 (18.8%)	175 (17.9%)	7,228 (19.2%)	318 (22.5%)
60-64 yrs	8,031 (18.0%)	180 (18.5%)	6,918 (18.4%)	227 (16.05)
65-69 yrs	5,401 (12.1%)	133 (13.6%)	4,475 (11.9%)	175 (12.4%)
70-74 yrs	4,489 (10.1%)	131 (13.4%)	3,717 (9.9%)	155 (11.0%)
75-79 yrs	2,174 (4.9%)	77 (7.9%)	1,652 (4.4%)	93 (6.6%)
80-99 yrs	2,980 (6.7%)	95 (9.7%)	2,478 (6.6%)	101 (7.1%)

Table 2. Distribution by visual acuity with available correction in the better eye in adults aged 50 years and older- Narail.

VA with available correction	Males (n=1009)	Females (n=1441)	Total (n=2450)
VA < 3/60			
Bilateral blindness	17 (1.74%)	48 (3.39%)	65 (2.72%)
Blind eyes	97 (4.97%)	186 (6.57%)	283 (5.92%)
VA < 6/60 and VA ≥3/60			
Bilateral severe visual impairment	10 (1.03%)	15 (1.06%)	25 (1.05%)
Severe visually impaired eyes	35 (1.79%)	48 (1.70%)	83 (1.74%)
VA < 6/18 and VA≥6/60			
Bilateral visual impairment	67 (6.87%)	87 (6.15%)	154 (6.44%)
Unilateral visual impairment	188 (9.64%)	222 (7.84%)	410 (8.58%)
Bilateral aphakia	23 (2.36%)	14 (0.99%)	37 (1.55%)
Unilateral aphakia	34 (3.49%)	52 (3.67%)	86 (3.60%)
Aphakic eyes	80 (4.10%)	80 (2.83%)	160 (3.35%)

Table 3. Cause of blindness, severe visual impairment and visual impairment in people with available correction- Narail.

	Bilateral Blindness (VA < 3/60)	**Bilateral severe visual impairment (VA<6/60 - ≥3/60)**	**Bilateral visual impairment (VA < 6/18 - ≥6/60)**
	(n=65)	**(n=25)**	**(n=154)**
Refractive error	1 (1.5%)	4 (16%)	64 (41.6%)
Cataract, untreated	48 (73.5%)	18 (72%)	77 (50%)
Aphakia, uncorrected	2 (3.1%)	0	0
Surgical complications	1 (1.5%)	0	0
Phthysis	0	0	0
Other corneal scar	0	1 (4%)	3 (1.9%)
Posterior segment	**13 (20%)**	**2 (8%)**	**10 (6.5%)**
Globe abnormalities	0	0	0
Avoidable blindness	**52 (80 %)**	**23 (92%)**	**144 (93.5%)**

Table 4. Cataract surgical coverage (CSC) by person and eyes in people aged ≥50 years (best correction)- Narail

	CSC – Persons (95% CI)	CSC – Eyes (95% CI)
VA < 3/60		
Male	83.7%	61.5%
Female	58.6%	36.4%
Total	67.6%	45.7%
VA < 6/60		
Male	80.0%	55.9%
Female	54.2%	32.8%
Total	63.6%	41.3%
VA < 6/18		
Male	57.5%	36.4%
Female	37.4%	23.3%
Total	44.9%	28.4%

Table 5. Post-operative visual acuity in 160 eyes following cataract surgery, by IOL status- Narail.

	Non-IOL eyes (n=36)	IOL eyes (n=124)	All eyes (n=160)
Available correction			
Can see 6/18	21 (58.3%)	95 (76.6%)	116 (72.5%)
Cannot see 6/18, can see 6/60	3 (8.3%)	14 (11.3%)	17 (10.6%)
Cannot see 6/60	12 (33.3%)	15 (12.1%)	27 (16.9%)
Best correction			
Can see 6/18	23 (63.9%)	103 (83.1%)	126 (78.8%)
Cannot see 6/18, can see 6/60	2 (5.6%)	9 (7.3%)	11 (6.9%)
Cannot see 6/60	11 (30.6%)	12 (9.7%)	23 (14.4%)

Figure 1- Narail

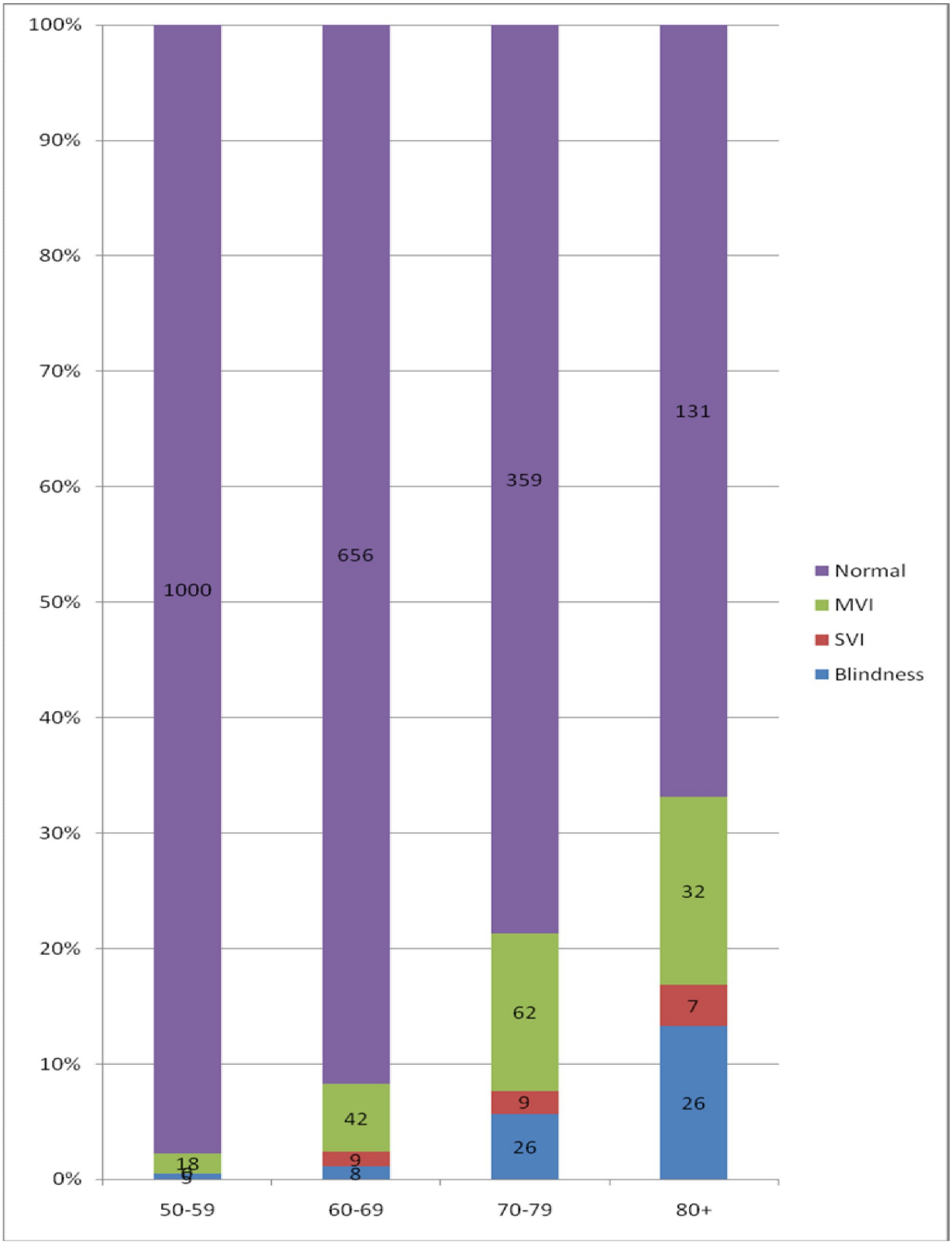


Table 6. Age and Gender composition of district and sample population- Jamalpur

	Males		Females	
Age groups	District	Sample	District	Sample
50-54 yrs	40,213 (29.4%)	266 (20.5%)	33,202 (29.6%)	666 (39.6%)
55-59 yrs	25,767 (18.8%)	307 (23.7%)	21,587 (19.2%)	392 (23.3%)
60-64 yrs	24,688 (18.0%)	243 (18.7%)	20,662 (18.4%)	270 (16.1%)
65-69 yrs	16,603 (12.1%)	160 (12.3%)	13,363 (11.9%)	161 (9.6%)
70-74 yrs	13,800 (10.1%)	155 (11.9%)	11,102 (9.9%)	98 (5.8%)
75-79 yrs	6,684 (4.9%)	85 (6.5%)	4,934 (4.4%)	44 (2.6%)
80-99 yrs	9,164 (6.7%)	82 (6.3%)	7,401 (6.6%)	49 (2.9%)

Table 7. Distribution by visual acuity with available correction in the better eye in adults aged 50 years and older- Jamalpur

VA with available correction	Males (n= 1341)	Females (n= 1709)	Total (n=3050)
VA < 3/60			
Bilateral blindness	20 (1.54%)	37 (2.20%)	57 (1.91%)
Blind eyes	120 (4.62%)	166 (4.94%)	286 (4.80%)
VA < 6/60 and VA ≥3/60			
Bilateral severe visual impairment	19 (1.46%)	19 (1.13%)	38 (1.28%)
Severe visually impaired eyes	68 (2.62%)	64 (1.90%)	132 (2.22%)
VA < 6/18 and VA≥6/60			
Bilateral visual impairment	128 (9.86%)	107 (6.37%)	235 (7.89%)
Moderate visual impairment eyes	325 (12.52%)	294 (8.75%)	619 (10.39%)
Bilateral aphakia	21 (1.62%)	21 (1.25%)	42 (1.41%)
Unilateral aphakia	27 (2.08%)	53 (3.15%)	80 (2.69%)
Aphakic eyes	69 (2.66%)	95 (2.83%)	164 (2.75%)

Table 8. Cause of blindness, severe visual impairment and visual impairment in people with available correction- Jamalpur

	Bilateral Blindness (VA < 3/60)	**Bilateral severe visual impairment (VA<6/60 - ≥3/60)**	**Bilateral visual impairment (VA < 6/18 - ≥6/60)**
	(n=57)	**(n=38)**	**(n=235)**
Refractive error	5 (8.8%)	25(65.8%)	188 (80%)
Cataract, untreated	30 (52.6%)	7 (18.4%)	37 (15.7%)
Aphakia, uncorrected	2 (3.5%)	0	1 (0.4%)
Surgical complications	1 (1.8%)	0	0
Phthysis	1 (1.8%)	0	0
Other corneal scar	3 (5.3%)	1 (2.6%)	0
Posterior segment	**15 (26.3%)**	**5 (13.2%)**	**9 (3.8%)**
Globe abnormalities	0	0	0
Avoidable blindness	**42 (73.7 %)**	**33 (86.8%)**	**226 (96.2%)**

Table 9. Cataract surgical coverage (CSC) by person and eyes in people aged ≥50 years (best correction) Jamalpur

	CSC – Persons (95% CI)	CSC – Eyes (95% CI)
VA < 3/60		
Male	86.0%	57.5%
Female	72.9%	49.2%
Total	77.9%	52.4%
VA < 6/60		
Male	80.4%	51.5%
Female	73.0%	46.1%
Total	76.0%	48.2%
VA < 6/18		
Male	62.2%	38.8%
Female	60.4%	38.9%
Total	61.2%	38.9%

Table 10. Post-operative visual acuity in 164 eyes following cataract surgery, by IOL status- Jamalpur

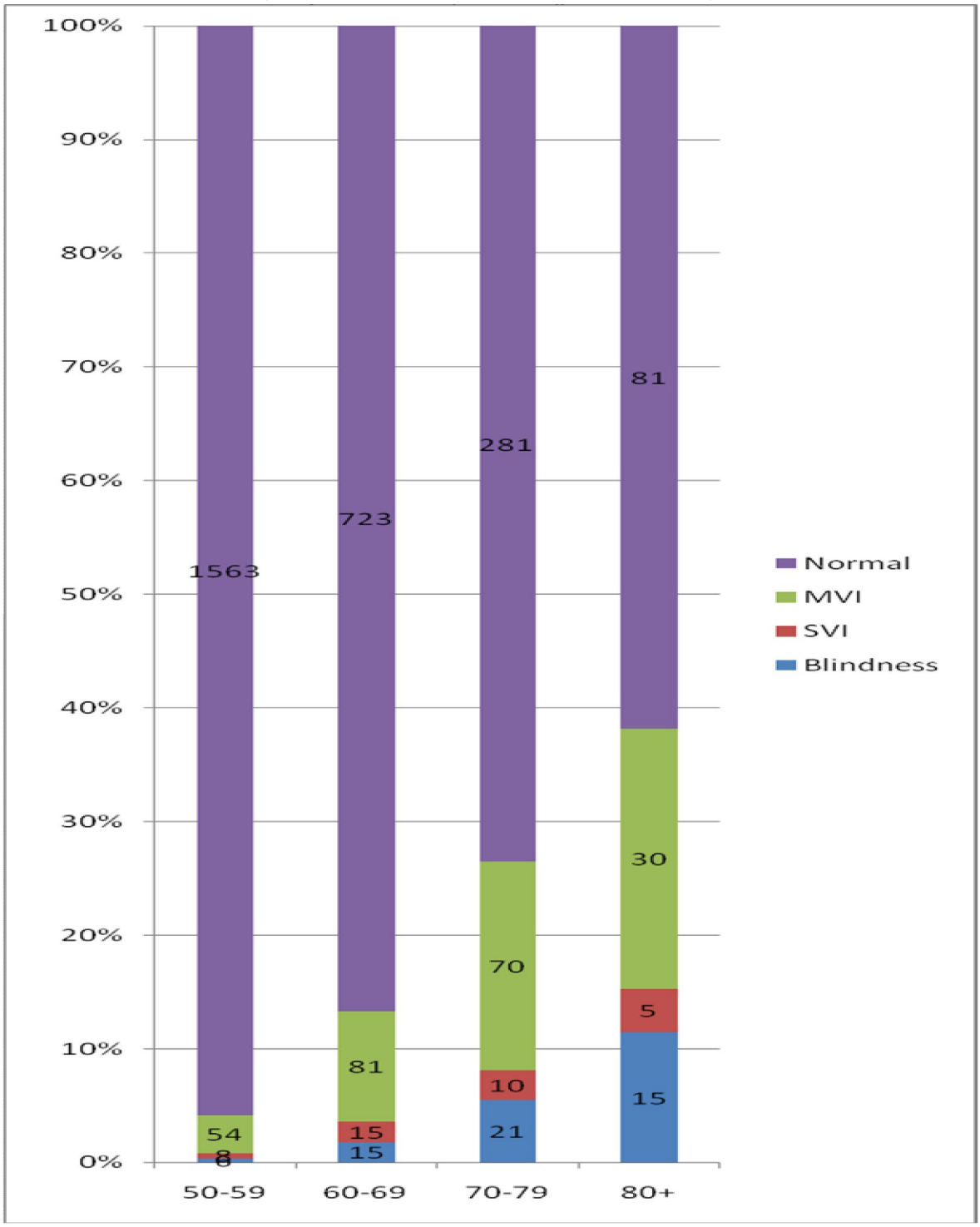
	Non-IOL eyes (n=37)	IOL eyes (n=127)	All eyes (n=164)
Available correction			
Can see 6/18	12 (32.4%)	97 (76.4%)	109 (66.5%)
Cannot see 6/18, can see 6/60	10 (27.0%)	21 (16.5%)	31 (18.9%)
Cannot see 6/60	15 (40.5%)	9 (7.1%)	24 (14.6%)
Best correction			
Can see 6/18	18 (48.6%)	114 (89.8%)	132 (80.5%)
Cannot see 6/18, can see 6/60	11 (29.7%)	9 (7.1%)	20 (12.2%)
Cannot see 6/60	8 (21.6%)	4 (3.1%)	12 (7.3%)

Date and time of report: 4/5/2010

This report is for the survey area: NARAIL

Year and month when survey was conducted: 2010- 1 until 2010- 2

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. Confidence intervals for prevalence of various conditions can be



SAMPLE RESULTS - NOT ADJUSTED FOR AGE AND SEX

Figure 2- Jamalpur

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

	Total eligible		Examined		Not available		Refused		Not capable		Coverage
	n	%	n	%	n	%	n	%	n	%	
Males	1,009	41.2%	975	40.8%	28	68.3%	0	0.0%	6	600.0%	96.6%
Females	1,441	58.8%	1,415	59.2%	13	31.7%	3		10		98.2%
Total	2,450		2,390	97.6%	41	1.7%	3	0.1%	16	0.7%	97.6%

1a. Average age of sample population, by examination status and by sex

	Examined	Not available	Refused	Not capable	Total
Males	63.4	61.1	0.0	70.0	63.4
Females	61.2	58.4	56.7	77.4	61.3
Total	62.1	60.3	56.7	74.6	62.1

2. Prevalence of blindness, severe visual impairment (SVI) and visual impairment (VI) - all

	Male		Female		Total	
Level of visual acuity	n	%	n	%	n	%
Blindness - VA<3/60 in the better eye, with best correction or pinhole (WHO definition)						
All bilateral blindness	16	1.64	47	3.32	63	2.64
All blind eyes	93	4.77	183	6.47	276	5.77
Blindness - VA<3/60 in the better eye, with available correction (presenting VA)						
All bilateral blindness	17	1.74	48	3.39	65	2.72
All blind eyes	97	4.97	186	6.57	283	5.92
Severe Visual Impairment (SVI) - VA<6/60 - 3/60 in the better eye, with available correction						
All bilateral SVI	10	1.03	15	1.06	25	1.05
All SVI eyes	35	1.79	48	1.70	83	1.74
Visual Impairment (VI) - VA<6/18 - 6/60 in the better eye, with available correction						
All bilateral VI	67	6.87	87	6.15	154	6.44
All VI eyes	188	9.64	222	7.84	410	8.58

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

	Male		Female		Total	
Level of visual acuity	n	%	n	%	n	%
Blindness - VA<3/60 in the better eye, with available correction (presenting VA)						
All bilateral blindness	17	1.74	48	3.39	65	2.72
All blind eyes	97	4.97	186	6.57	283	5.92
VA<6/60 in the better eye, with available correction (presenting VA)						
All bilateral cases	27	2.77	63	4.45	90	3.77
All eyes	132	6.77	234	8.27	366	7.66
VA<6/18 in the better eye, with available correction (presenting VA)						
All bilateral cases	94	9.64	150	10.60	244	10.21
All eyes	320	16.41	456	16.11	776	16.23

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

	Male		Female		Total	
	n	%	n	%	n	%
Refractive error	0	0.0%	1	2.1%	1	1.5%
Cataract, untreated	10	58.8%	38	79.2%	48	73.8%
Aphakia, uncorrected	2	11.8%	0	0.0%	2	3.1%
Total curable	**12**	**70.6%**	**39**	**81.3%**	**51**	**78.5%**
Surgical complications	0	0.0%	1	2.1%	1	1.5%
Trachoma	0	0.0%	0	0.0%	0	0.0%
Phthysis	0	0.0%	0	0.0%	0	0.0%
Other corneal scar	0	0.0%	0	0.0%	0	0.0%
Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
Total preventable	**0**	**0.0%**	**1**	**2.1%**	**1**	**1.5%**
Total avoidable	**12**	**70.6%**	**40**	**83.3%**	**52**	**80.0%**
Glaucoma	0	0.0%	0	0.0%	0	0.0%
Diabetic retinopathy	0	0.0%	0	0.0%	0	0.0%
Potentially preventable*	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**
Globe abnormality	0	0.0%	0	0.0%	0	0.0%
ARMD	0	0.0%	0	0.0%	0	0.0%
Other post. segment / CNS	5	29.4%	8	16.7%	13	20.0%
Total posterior segment	**5**	**29.4%**	**8**	**16.7%**	**13**	**20.0%**
	17	**100.0%**	**48**	**100.0%**	**65**	**100.0%**

* Because an accurate diagnosis of glaucoma and diabetic retinopathy can be difficult with the limited facilities used in a Rapid Assessment, these potentially or partially preventable causes are listed separately.

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

	Male		Female		Total	
	n	%	n	%	n	%
Refractive error	0	0.0%	2	1.1%	2	0.7%
Cataract, untreated	51	52.6%	138	74.2%	189	66.8%
Aphakia, uncorrected	5	5.2%	1	0.5%	6	2.1%
Total curable	**56**	**57.7%**	**141**	**75.8%**	**197**	**69.6%**
Surgical complications	3	3.1%	5	2.7%	8	2.8%
Trachoma	0	0.0%	0	0.0%	0	0.0%
Phthysis	3	3.1%	0	0.0%	3	1.1%
Other corneal scar	13	13.4%	6	3.2%	19	6.7%
Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
Total preventable	**19**	**19.6%**	**11**	**5.9%**	**30**	**10.6%**
Total avoidable	**75**	**77.3%**	**152**	**81.7%**	**227**	**80.2%**
Glaucoma	2	2.1%	2	1.1%	4	1.4%
Diabetic retinopathy	0	0.0%	0	0.0%	0	0.0%
Potentially preventable*	**2**	**2.1%**	**2**	**1.1%**	**4**	**1.4%**
Globe abnormality	6	6.2%	4	2.2%	10	3.5%
ARMD	0	0.0%	0	0.0%	0	0.0%
Other post. segment / CNS	14	14.4%	28	15.1%	42	14.8%
Total posterior segment	**22**	**22.7%**	**34**	**18.3%**	**56**	**19.8%**
	97	**100.0%**	**186**	**100.0%**	**283**	**100.0%**

* Because an accurate diagnosis of glaucoma and diabetic retinopathy can be difficult with the limited facilities used in a Rapid Assessment, these potentially or partially preventable causes are listed separately.

All bilateral blindness

10 15 25
35 48 83
1.06 1.70 1.05

94 150 244
320 456 776

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

	Male		Female		Total	
	n	%	n	%	n	%
Refractive error	2	20.0%	2	13.3%	4	16.0%
Cataract, untreated	6	60.0%	12	80.0%	18	72.0%
Aphakia, uncorrected	0	0.0%	0	0.0%	0	0.0%
Total curable	**8**	**80.0%**	**14**	**93.3%**	**22**	**88.0%**
Surgical complications	0	0.0%	0	0.0%	0	0.0%
Trachoma	0	0.0%	0	0.0%	0	0.0%
Phthysis	0	0.0%	0	0.0%	0	0.0%
Other corneal scar	1	10.0%	0	0.0%	1	4.0%
Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
Total preventable	**1**	**10.0%**	**0**	**0.0%**	**1**	**4.0%**
Total avoidable	**9**	**90.0%**	**14**	**93.3%**	**23**	**92.0%**
Glaucoma	0	0.0%	0	0.0%	0	0.0%
Diabetic retinopathy	0	0.0%	0	0.0%	0	0.0%
Potentially preventable*	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**
Globe abnormality	0	0.0%	0	0.0%	0	0.0%
ARMD	0	0.0%	0	0.0%	0	0.0%
Other post. segment / CNS	1	10.0%	1	6.7%	2	8.0%
Total posterior segment	**1**	**10.0%**	**1**	**6.7%**	**2**	**8.0%**
	10	**100.0%**	**15**	**100.0%**	**25**	**100.0%**

* Because an accurate diagnosis of glaucoma and diabetic retinopathy can be difficult with the limited facilities used in a Rapid Assessment, these potentially or partially preventable causes are listed separately.

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

	Male		Female		Total	
	n	%	n	%	n	%
Refractive error	11	31.4%	13	27.1%	24	28.9%
Cataract, untreated	17	48.6%	33	68.8%	50	60.2%
Aphakia, uncorrected	1	2.9%	0	0.0%	1	1.2%
Total curable	**29**	**82.9%**	**46**	**95.8%**	**75**	**90.4%**
Surgical complications	0	0.0%	0	0.0%	0	0.0%
Trachoma	0	0.0%	0	0.0%	0	0.0%
Phthysis	0	0.0%	0	0.0%	0	0.0%
Other corneal scar	2	5.7%	0	0.0%	2	2.4%
Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
Total preventable	**2**	**5.7%**	**0**	**0.0%**	**2**	**2.4%**
Total avoidable	**31**	**88.6%**	**46**	**95.8%**	**77**	**92.8%**
Glaucoma	0	0.0%	0	0.0%	0	0.0%
Diabetic retinopathy	0	0.0%	0	0.0%	0	0.0%
Potentially preventable*	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**
Globe abnormality	0	0.0%	0	0.0%	0	0.0%
ARMD	0	0.0%	0	0.0%	0	0.0%
Other post. segment / CNS	4	11.4%	2	4.2%	6	7.2%
Total posterior segment	**4**	**11.4%**	**2**	**4.2%**	**6**	**7.2%**
	35	**100.0%**	**48**	**100.0%**	**83**	**100.0%**

* Because an accurate diagnosis of glaucoma and diabetic retinopathy can be difficult with the limited facilities used in a Rapid Assessment, these potentially or partially preventable causes are listed separately.

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

	Male		Female		Total	
	n	%	n	%	n	%
Refractive error	30	44.8%	34	39.1%	64	41.6%
Cataract, untreated	31	46.3%	46	52.9%	77	50.0%
Aphakia, uncorrected	0	0.0%	0	0.0%	0	0.0%
Total curable	**61**	**91.0%**	**80**	**92.0%**	**141**	**91.6%**
Surgical complications	0	0.0%	0	0.0%	0	0.0%
Trachoma	0	0.0%	0	0.0%	0	0.0%
Phthysis	0	0.0%	0	0.0%	0	0.0%
Other corneal scar	3	4.5%	0	0.0%	3	1.9%
Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
Total preventable	**3**	**4.5%**	**0**	**0.0%**	**3**	**1.9%**
Total avoidable	**64**	**95.5%**	**80**	**92.0%**	**144**	**93.5%**
Glaucoma	0	0.0%	0	0.0%	0	0.0%
Diabetic retinopathy	0	0.0%	0	0.0%	0	0.0%
Potentially preventable*	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**
Globe abnormality	0	0.0%	0	0.0%	0	0.0%
ARMD	0	0.0%	2	2.3%	2	1.3%
Other post. segment / CNS	3	4.5%	5	5.7%	8	5.2%
Total posterior segment	**3**	**4.5%**	**7**	**8.0%**	**10**	**6.5%**
	67	**100.0%**	**87**	**100.0%**	**154**	**100.0%**

* Because an accurate diagnosis of glaucoma and diabetic retinopathy can be difficult with the limited facilities used in a Rapid Assessment, these potentially or partially preventable causes are listed separately.

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

	Male		Female		Total	
	n	%	n	%	n	%
Refractive error	91	48.4%	108	48.6%	199	48.5%
Cataract, untreated	72	38.3%	92	41.4%	164	40.0%
Aphakia, uncorrected	0	0.0%	0	0.0%	0	0.0%
Total curable	**163**	**86.7%**	**200**	**90.1%**	**363**	**88.5%**
Surgical complications	2	1.1%	2	0.9%	4	1.0%
Trachoma	0	0.0%	0	0.0%	0	0.0%
Phthysis	0	0.0%	0	0.0%	0	0.0%
Other corneal scar	8	4.3%	1	0.5%	9	2.2%
Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
Total preventable	**10**	**5.3%**	**3**	**1.4%**	**13**	**3.2%**
Total avoidable	**173**	**92.0%**	**203**	**91.4%**	**376**	**91.7%**
Glaucoma	2	1.1%	0	0.0%	2	0.5%
Diabetic retinopathy	1	0.5%	1	0.5%	2	0.5%
Potentially preventable*	**3**	**1.6%**	**1**	**0.5%**	**4**	**1.0%**
Globe abnormality	0	0.0%	0	0.0%	0	0.0%
ARMD	0	0.0%	4	1.8%	4	1.0%
Other post. segment / CNS	12	6.4%	14	6.3%	26	6.3%
Total posterior segment	**15**	**8.0%**	**19**	**8.6%**	**34**	**8.3%**
	188	**100.0%**	**222**	**100.0%**	**410**	**100.0%**

* Because an accurate diagnosis of glaucoma and diabetic retinopathy can be difficult with the limited facilities used in a Rapid Assessment, these potentially or partially preventable causes are listed separately.

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

	Male		Female		Total	
Level of visual acuity	n	%	n	%	n	%
Cataract blindness with VA<3/60 with best correction or pinhole						
Bilateral cataract blind	8	0.82	36	2.54	44	1.84
Unilateral cataract blind	34	3.49	68	4.81	102	4.27
Cataract blind eyes	50	2.56	140	4.95	190	3.97
Cataract with VA<6/60 with best correction or pinhole						
Bilateral cataract	11	1.13	44	3.11	55	2.30
Cataract eyes	63	3.23	164	5.80	227	4.75
Cataract with VA<6/18 with best correction or pinhole						
Bilateral cataract	37	3.79	92	6.50	129	5.40
Cataract eyes	140	7.18	264	9.33	404	8.45

NB. This table lists people and eyes with cataract and different levels of visual impairment. However, the primary cause of the visual impairment could be other than cataract

11. Sample prevalence of (pseudo)aphakia

	Male		Female		Total	
	n	%	n	%	n	%
Bilateral (pseudo)aphakia	23	2.36	14	0.99	37	1.55
Unilateral (pseudo)aphakia	34	3.49	52	3.67	86	3.60
(Pseudo)aphakic eyes	80	4.10	80	2.83	160	3.35

12. Cataract Surgical Coverage

Cataract Surgical Coverage (eyes) - percentage

	Male	Female	Total
VA < 3/60	61.5	36.4	45.7
VA < 6/60	55.9	32.8	41.3
VA < 6/18	36.4	23.3	28.4

Cataract Surgical Coverage (persons) - percentage

	Male	Female	Total
VA < 3/60	83.7	58.6	67.6
VA < 6/60	80.0	54.2	63.6
VA < 6/18	57.5	37.4	44.9

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

	Male		Female		Total	
	n	%	n	%	n	%
First eyes	57	71.3	66	82.5	123	76.9
Second eyes	23	28.8	14	17.5	37	23.1

14. Low Vision: people with VA<6/18 in the better eye with best correction.
not due to refractive error, cataract or uncorrected aphakia

	Male		Female		Total	
Age group	n	%	n	%	n	%
50 to 54 yrs	2	1.1	1	0.3	3	0.6
55 to 59 yrs	2	1.1	2	0.6	4	0.8
60 to 64 yrs	1	0.6	0	0.0	1	0.2
65 to 69 yrs	0	0.0	1	0.6	1	0.3
70 to 74 yrs	2	1.5	7	4.5	9	3.1
75 to 79 yrs	0	0.0	0	0.0	0	0.0
80 + yrs	1	1.1	4	4.0	5	2.6
Total	**8**	**0.8**	**15**	**1.1**	**23**	**1.0**

15. Comparison responders versus non-responders

	Non-responders		Responders	
	n	%	n	%
Not blind	117	97.5%	4,337	90.7%
Blind due to cataract	0	0.0%	190	4.0%
Blind due to other causes	2	1.7%	93	1.9%
Operated for	1	0.8%	160	3.3%
Total	120	100.0%	4,780	100.0%

INDICATORS BY SEX AND BY AGE GROUP - NOT ADJUSTED FOR AGE AND SEX

Date and time of report:	4/5/2010
This report is for the survey area	NARAIL
Year and month when survey was conducted:	2010- 1 until 2010- 2

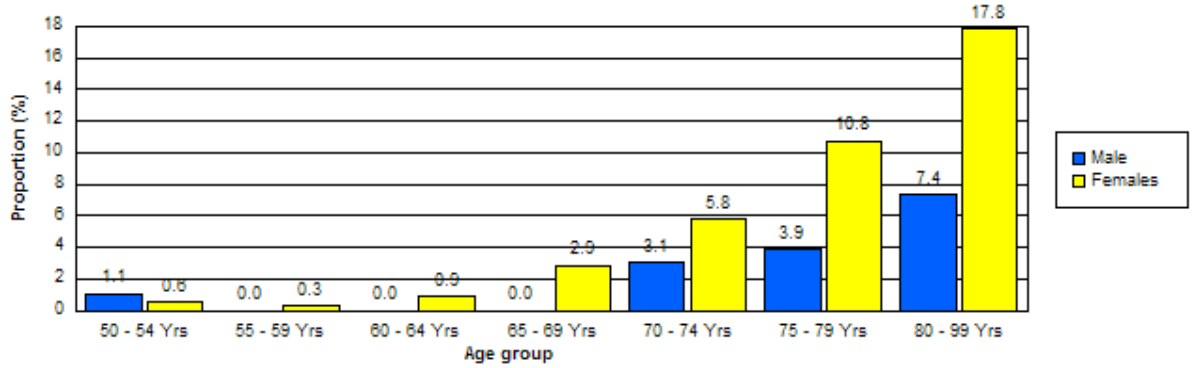
The sample size of the Rapid Assessment is sufficient to provide an acceptable accuracy of the overall prevalence of bilateral cataract blindness (VA <3/60). The accuracy of prevalence estimates for any subgroup is far less and caution should be taken in the interpretation of these data. Confidence intervals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

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	184	18.9	346	24.5	530	22.2
	175	17.9	318	22.5	493	20.6
	180	18.5	227	16.0	407	17.0
	133	13.6	175	12.4	308	12.9
	131	13.4	155	11.0	286	12.0
	77	7.9	93	6.6	170	7.1
	95	9.7	101	7.1	196	8.2
All ages	**975**	**100.0%**	**1,415**	**100.0%**	**2,390**	**100.0%**

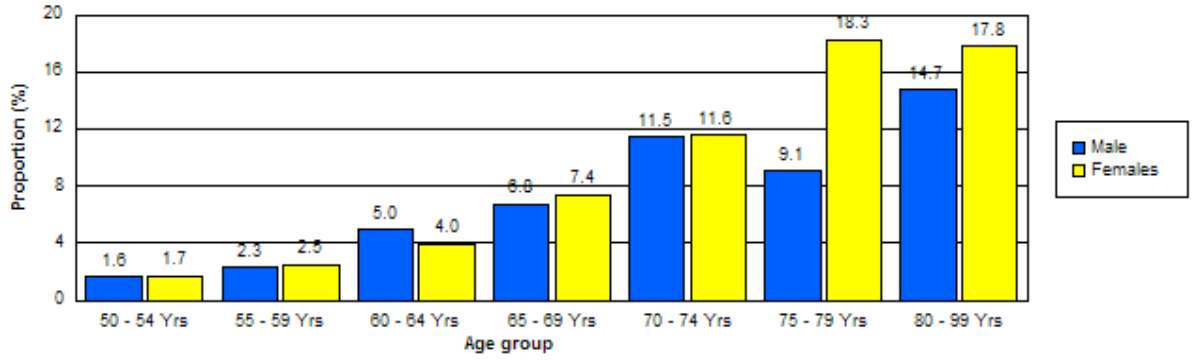
2. Prevalence of people with bilateral blindness - VA <3/60 in better eye with best correction (WHO definition of

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	2	1.1	2	0.6	4	0.8
	0	0.0	1	0.3	1	0.2
	0	0.0	2	0.9	2	0.5
	0	0.0	5	2.9	5	1.6
	4	3.1	9	5.8	13	4.5
	3	3.9	10	10.8	13	7.6
	7	7.4	18	17.8	25	12.8
All ages	**16**	**1.6**	**47**	**3.3**	**63**	**2.6**



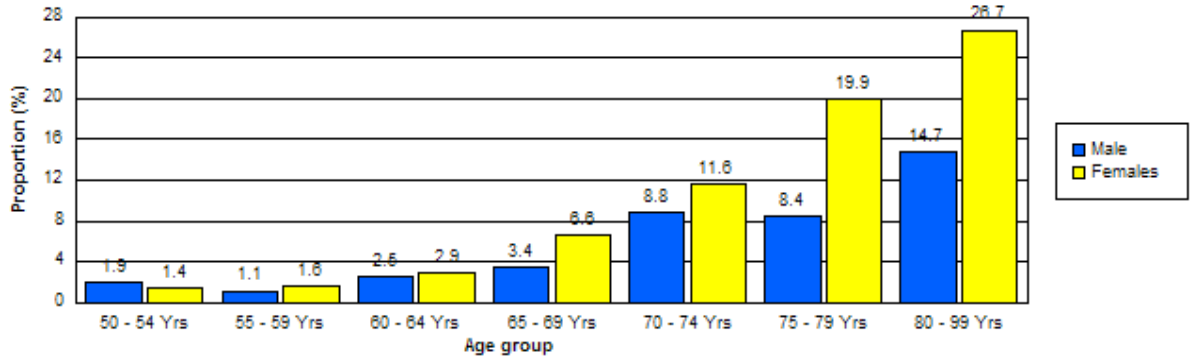
3. Prevalence of people with unilateral blindness - VA <3/60 with best correction (WHO definition of blindness)

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	3	1.6	6	1.7	9	1.7
	4	2.3	8	2.5	12	2.4
	9	5.0	9	4.0	18	4.4
	9	6.8	13	7.4	22	7.1
	15	11.5	18	11.6	33	11.5
	7	9.1	17	18.3	24	14.1
	14	14.7	18	17.8	32	16.3
All ages	**61**	**6.3**	**89**	**6.3**	**150**	**6.3**



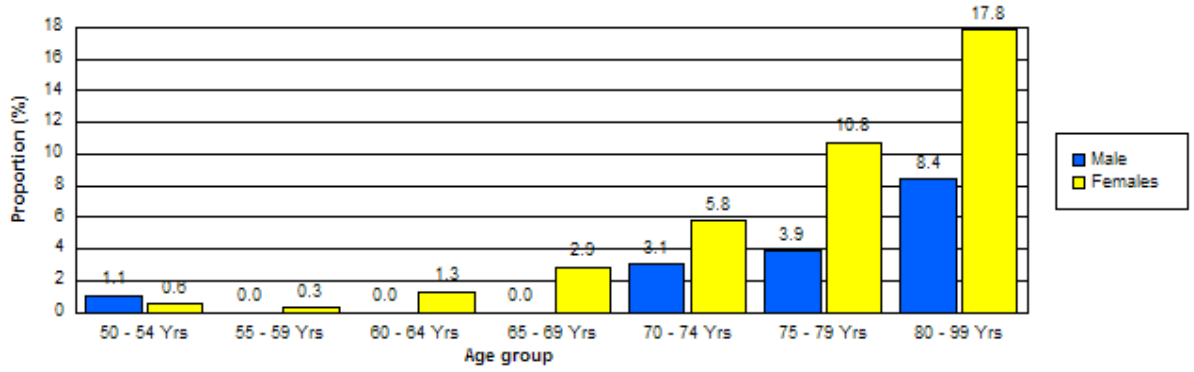
4. Prevalence of blind eyes - VA <3/60 with best correction (WHO definition of blindness)

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	7	1.9	10	1.4	17	1.6
	4	1.1	10	1.6	14	1.4
	9	2.5	13	2.9	22	2.7
	9	3.4	23	6.6	32	5.2
	23	8.8	36	11.6	59	10.3
	13	8.4	37	19.9	50	14.7
	28	14.7	54	26.7	82	20.9
All ages	**93**	**4.8**	**183**	**6.5**	**276**	**5.8**



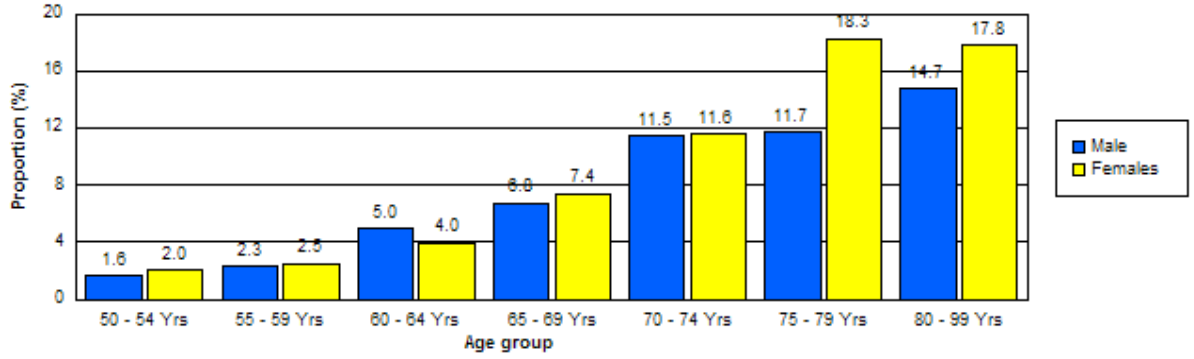
5. Prevalence of people with bilateral blindness - VA <3/60 in better eye with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	2	1.1	2	0.6	4	0.8
	0	0.0	1	0.3	1	0.2
	0	0.0	3	1.3	3	0.7
	0	0.0	5	2.9	5	1.6
	4	3.1	9	5.8	13	4.5
	3	3.9	10	10.8	13	7.6
	8	8.4	18	17.8	26	13.3
All ages	**17**	**1.7**	**48**	**3.4**	**65**	**2.7**



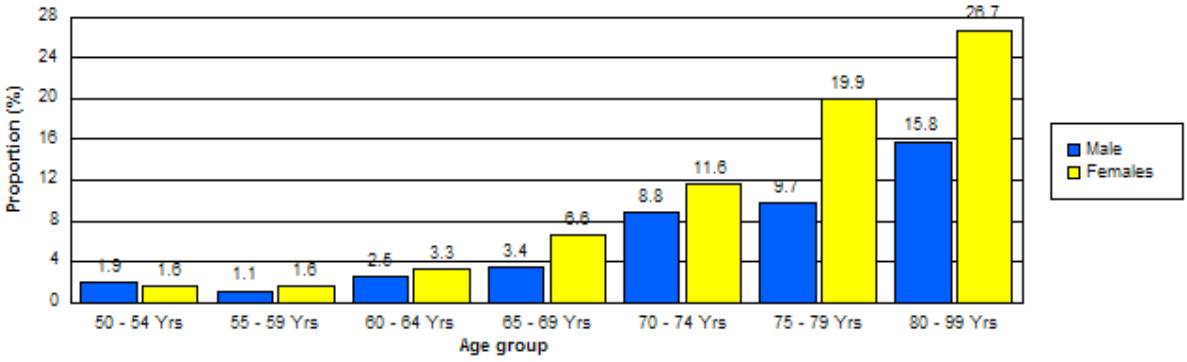
6. Prevalence of people with unilateral blindness - VA <3/60 with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	3	1.6	7	2.0	10	1.9
	4	2.3	8	2.5	12	2.4
	9	5.0	9	4.0	18	4.4
	9	6.8	13	7.4	22	7.1
	15	11.5	18	11.6	33	11.5
	9	11.7	17	18.3	26	15.3
	14	14.7	18	17.8	32	16.3
All ages	**63**	**6.5**	**90**	**6.4**	**153**	**6.4**



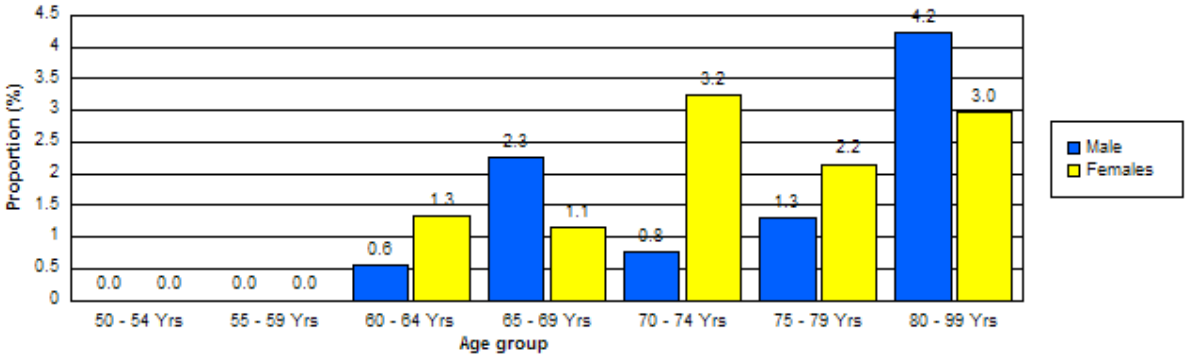
7. Prevalence of blind eyes - VA <3/60 with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	7	1.9	11	1.6	18	1.7
	4	1.1	10	1.6	14	1.4
	9	2.5	15	3.3	24	2.9
	9	3.4	23	6.6	32	5.2
	23	8.8	36	11.6	59	10.3
	15	9.7	37	19.9	52	15.3
	30	15.8	54	26.7	84	21.4
All ages	**97**	**5.0**	**186**	**6.6**	**283**	**5.9**



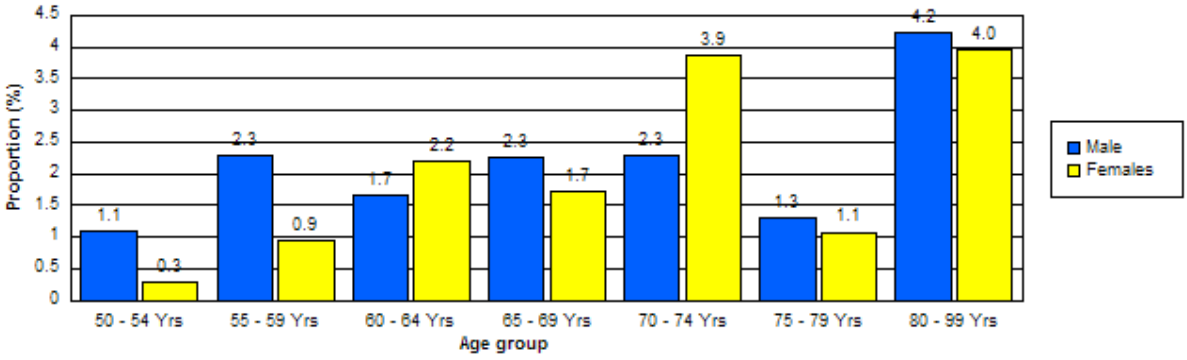
8. Prevalence of people with bilateral severe visual impairment - VA <6/60-3/60 in better eye with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	0	0.0
	1	0.6	3	1.3	4	1.0
	3	2.3	2	1.1	5	1.6
	1	0.8	5	3.2	6	2.1
	1	1.3	2	2.2	3	1.8
	4	4.2	3	3.0	7	3.6
All ages	**10**	**1.0**	**15**	**1.1**	**25**	**1.0**



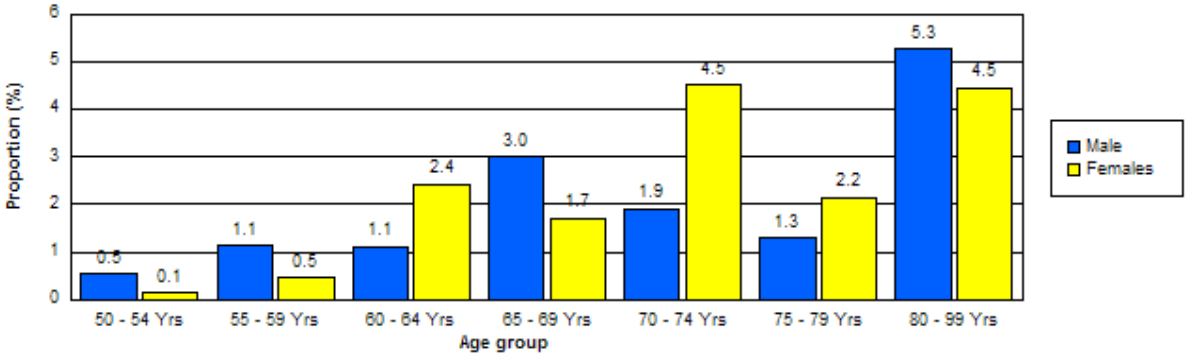
9. Prevalence of people with unilateral severe visual impairment - VA <6/60-3/60 with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	2	1.1	1	0.3	3	0.6
	4	2.3	3	0.9	7	1.4
	3	1.7	5	2.2	8	2.0
	3	2.3	3	1.7	6	1.9
	3	2.3	6	3.9	9	3.1
	1	1.3	1	1.1	2	1.2
	4	4.2	4	4.0	8	4.1
All ages	**20**	**2.1**	**23**	**1.6**	**43**	**1.8**



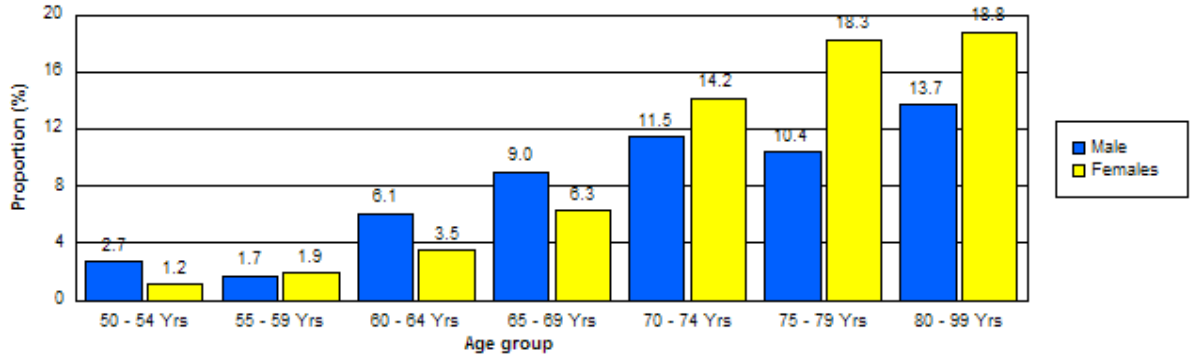
10. Prevalence of SVI eyes - VA VA<6/60-3/60 with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	2	0.5	1	0.1	3	0.3
	4	1.1	3	0.5	7	0.7
	4	1.1	11	2.4	15	1.8
	8	3.0	6	1.7	14	2.3
	5	1.9	14	4.5	19	3.3
	2	1.3	4	2.2	6	1.8
	10	5.3	9	4.5	19	4.8
All ages	**35**	**1.8**	**48**	**1.7**	**83**	**1.7**



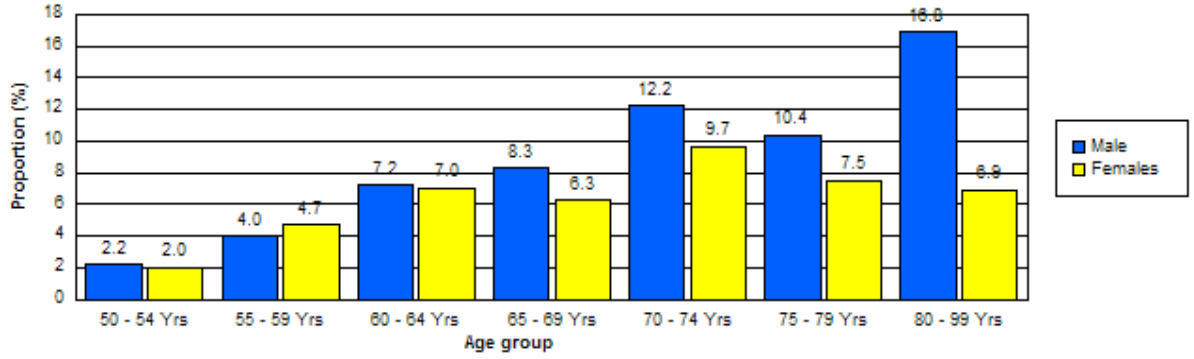
11. Prevalence of people with bilateral visual impairment - VA <6/18-6/60 in better eye with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	5	2.7	4	1.2	9	1.7
	3	1.7	6	1.9	9	1.8
	11	6.1	8	3.5	19	4.7
	12	9.0	11	6.3	23	7.5
	15	11.5	22	14.2	37	12.9
	8	10.4	17	18.3	25	14.7
	13	13.7	19	18.8	32	16.3
All ages	**67**	**6.9**	**87**	**6.1**	**154**	**6.4**



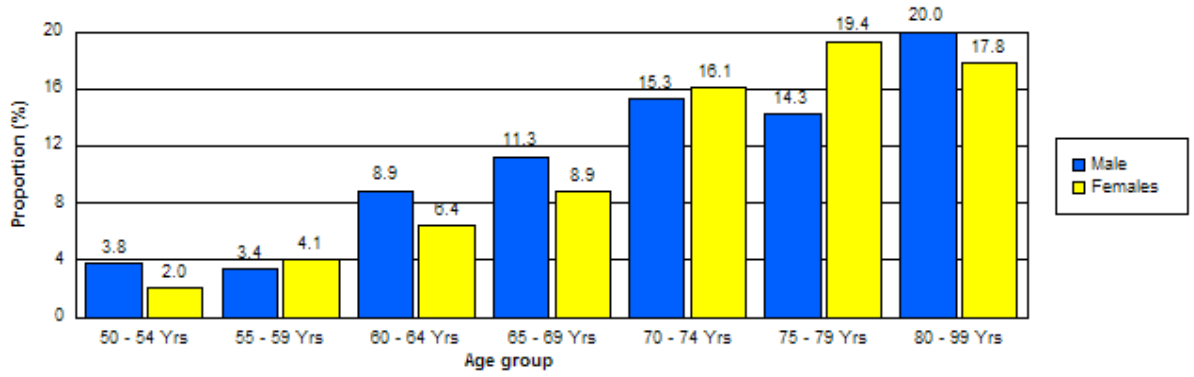
12. Prevalence of people with unilateral visual impairment - VA <6/18-6/60 with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	4	2.2	7	2.0	11	2.1
	7	4.0	15	4.7	22	4.5
	13	7.2	16	7.0	29	7.1
	11	8.3	11	6.3	22	7.1
	16	12.2	15	9.7	31	10.8
	8	10.4	7	7.5	15	8.8
	16	16.8	7	6.9	23	11.7
All ages	**75**	**7.7**	**78**	**5.5**	**153**	**6.4**



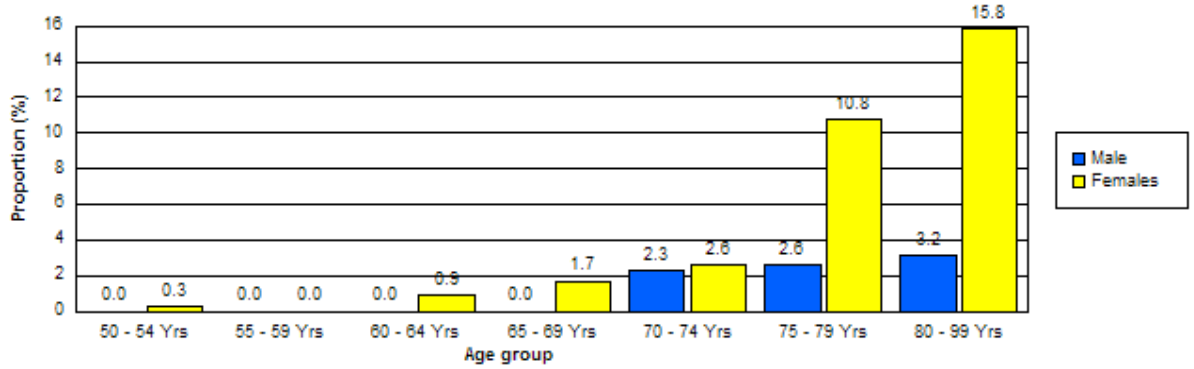
13. Prevalence of VI eyes - VA <6/18-6/60 with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	14	3.8	14	2.0	28	2.6
	12	3.4	26	4.1	38	3.9
	32	8.9	29	6.4	61	7.5
	30	11.3	31	8.9	61	9.9
	40	15.3	50	16.1	90	15.7
	22	14.3	36	19.4	58	17.1
	38	20.0	36	17.8	74	18.9
All ages	**188**	**9.6**	**222**	**7.8**	**410**	**8.6**



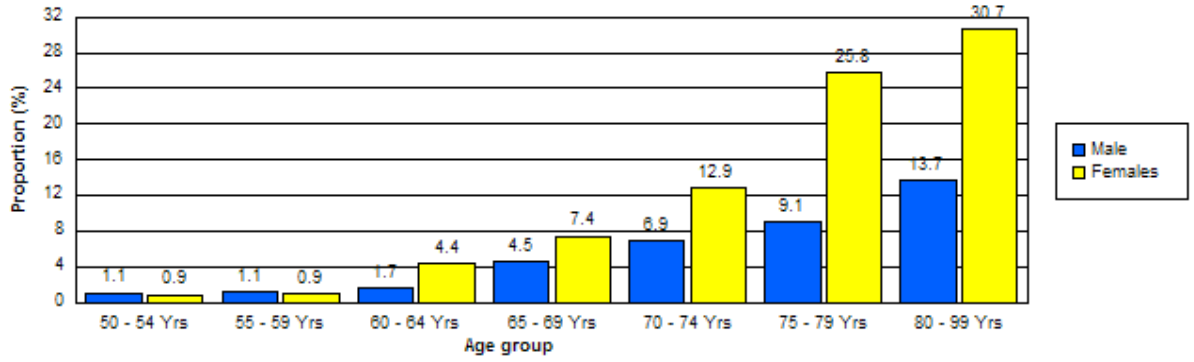
14. Prevalence of people bilateral blind due to cataract - VA <3/60 in better eye with best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	0	0.0	1	0.3	1	0.2
	0	0.0	0	0.0	0	0.0
	0	0.0	2	0.9	2	0.5
	0	0.0	3	1.7	3	1.0
	3	2.3	4	2.6	7	2.4
	2	2.6	10	10.8	12	7.1
	3	3.2	16	15.8	19	9.7
All ages	**8**	**0.8**	**36**	**2.5**	**44**	**1.8**



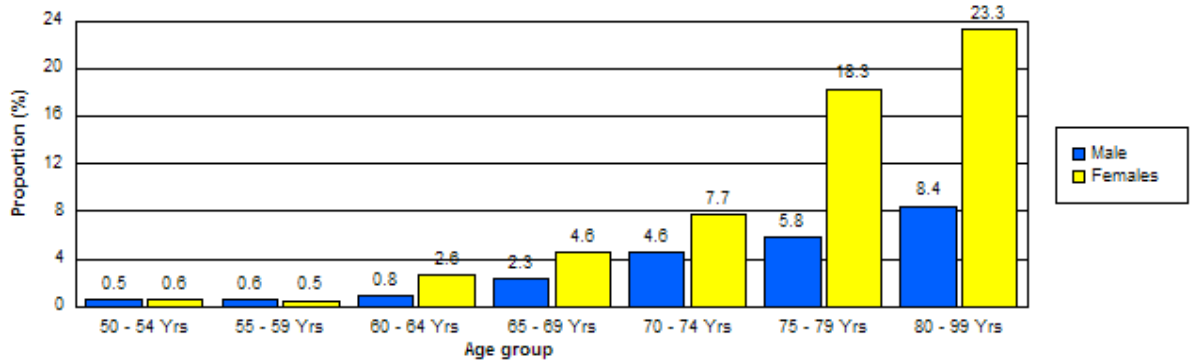
15. Prevalence of people unilateral blind due to cataract - VA <3/60 with best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	2	1.1	3	0.9	5	0.9
	2	1.1	3	0.9	5	1.0
	3	1.7	10	4.4	13	3.2
	6	4.5	13	7.4	19	6.2
	9	6.9	20	12.9	29	10.1
	7	9.1	24	25.8	31	18.2
	13	13.7	31	30.7	44	22.4
All ages	**42**	**4.3**	**104**	**7.3**	**146**	**6.1**



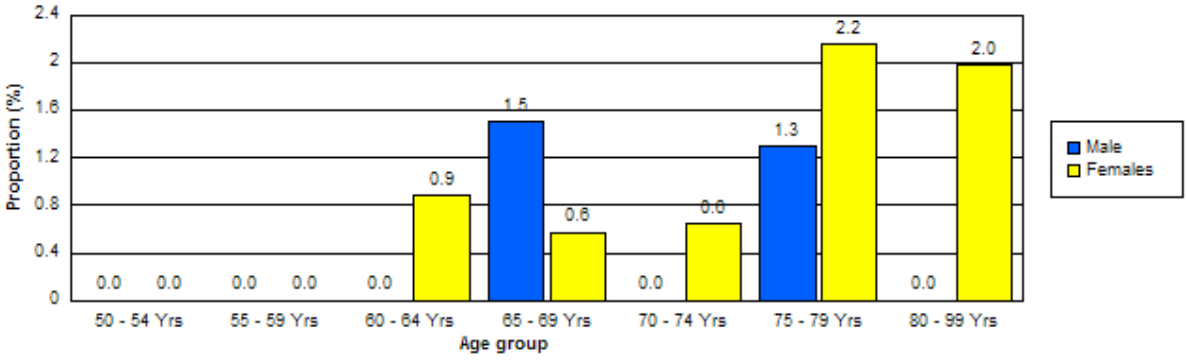
16. Prevalence of cataract blind eyes - VA <3/60 with best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	2	0.5	4	0.6	6	0.6
	2	0.6	3	0.5	5	0.5
	3	0.8	12	2.6	15	1.8
	6	2.3	16	4.6	22	3.6
	12	4.6	24	7.7	36	6.3
	9	5.8	34	18.3	43	12.6
	16	8.4	47	23.3	63	16.1
All ages	**50**	**2.6**	**140**	**4.9**	**190**	**4.0**



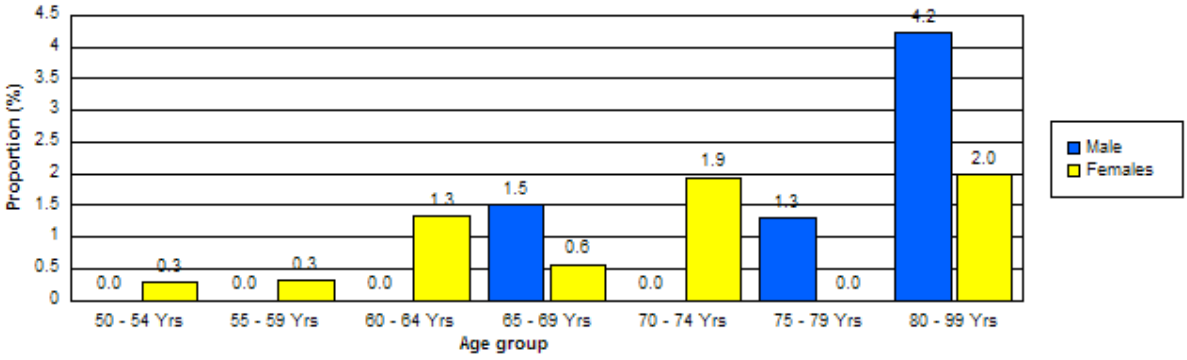
17. Prevalence of people with bilateral severe visual impairment due to cataract - VA <6/60-3/60 - best eye, best correctio

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	0	0.0
	0	0.0	2	0.9	2	0.5
	2	1.5	1	0.6	3	1.0
	0	0.0	1	0.6	1	0.3
	1	1.3	2	2.2	3	1.8
	0	0.0	2	2.0	2	1.0
All ages	**3**	**0.3**	**8**	**0.6**	**11**	**0.5**



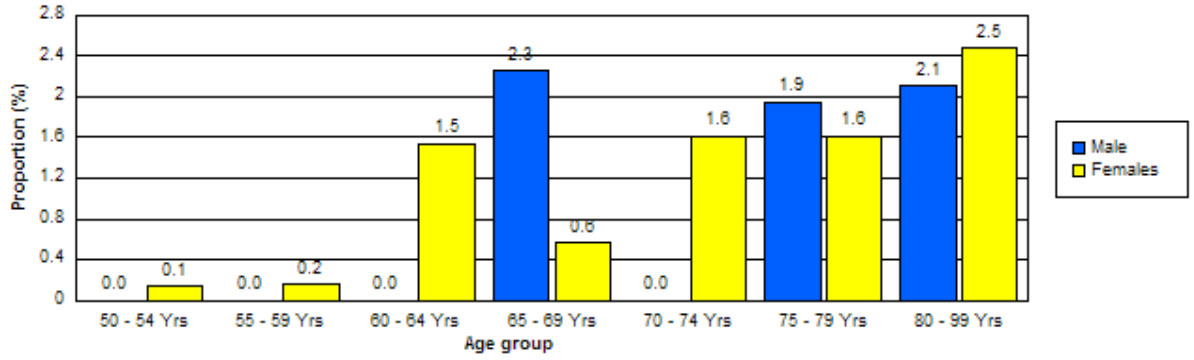
18. Prevalence of people with unilateral severe visual impairment due to cataract - VA <3/60-3/60 with best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	0	0.0	1	0.3	1	0.2
	0	0.0	1	0.3	1	0.2
	0	0.0	3	1.3	3	0.7
	2	1.5	1	0.6	3	1.0
	0	0.0	3	1.9	3	1.0
	1	1.3	0	0.0	1	0.6
	4	4.2	2	2.0	6	3.1
All ages	**7**	**0.7**	**11**	**0.8**	**18**	**0.8**



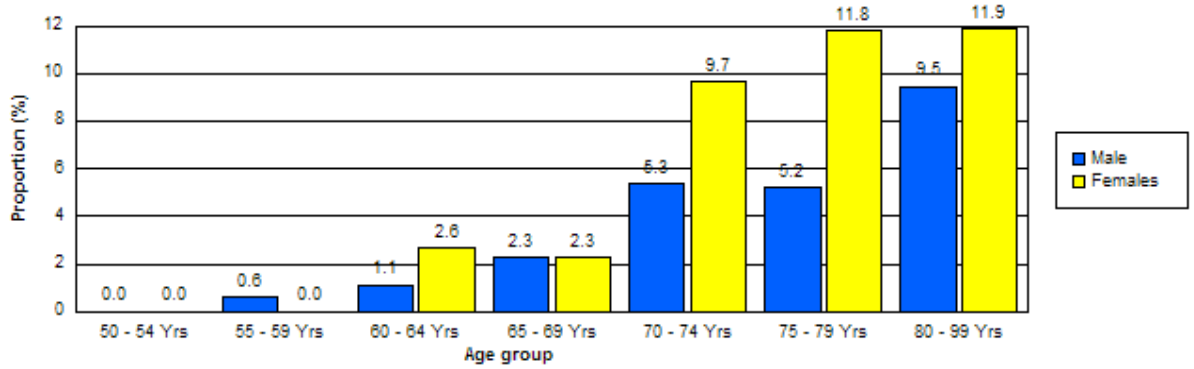
19. Prevalence of cataract SVI eyes - VA VA<6/60-3/60 with best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	0	0.0	1	0.1	1	0.1
	0	0.0	1	0.2	1	0.1
	0	0.0	7	1.5	7	0.9
	6	2.3	2	0.6	8	1.3
	0	0.0	5	1.6	5	0.9
	3	1.9	3	1.6	6	1.8
	4	2.1	5	2.5	9	2.3
All ages	**13**	**0.7**	**24**	**0.8**	**37**	**0.8**



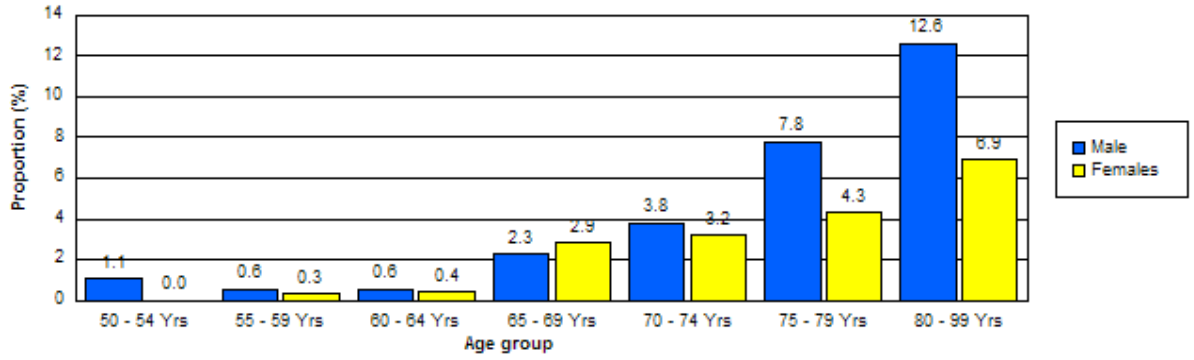
20. Prevalence of people with bilateral visual impairment due to cataract - VA <6/18-6/60 - best eye, best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	0	0.0	0	0.0	0	0.0
	1	0.6	0	0.0	1	0.2
	2	1.1	6	2.6	8	2.0
	3	2.3	4	2.3	7	2.3
	7	5.3	15	9.7	22	7.7
	4	5.2	11	11.8	15	8.8
	9	9.5	12	11.9	21	10.7
All ages	**26**	**2.7**	**48**	**3.4**	**74**	**3.1**



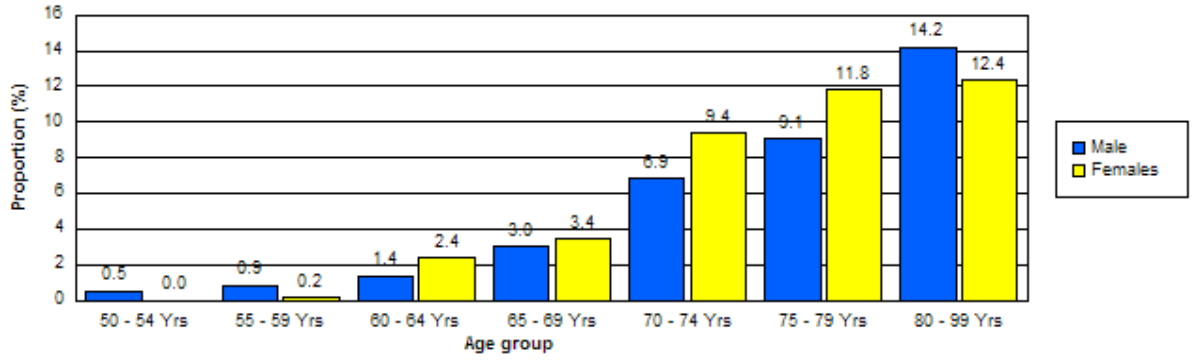
21. Prevalence of people with unilateral visual impairment due to cataract - VA <6/18-6/60 with best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	2	1.1	0	0.0	2	0.4
	1	0.6	1	0.3	2	0.4
	1	0.6	1	0.4	2	0.5
	3	2.3	5	2.9	8	2.6
	5	3.8	5	3.2	10	3.5
	6	7.8	4	4.3	10	5.9
	12	12.6	7	6.9	19	9.7
All ages	**30**	**3.1**	**23**	**1.6**	**53**	**2.2**



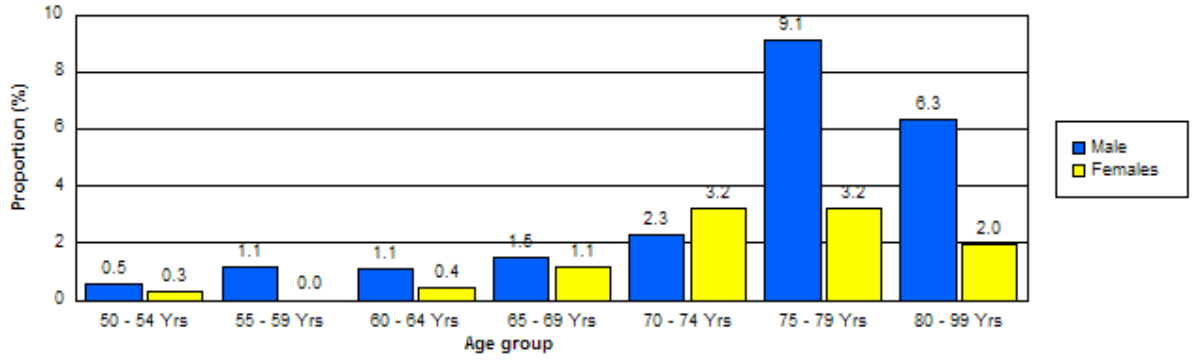
22. Prevalence of cataract VI eyes - VA <6/18-6/60 with best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	2	0.5	0	0.0	2	0.2
	3	0.9	1	0.2	4	0.4
	5	1.4	11	2.4	16	2.0
	8	3.0	12	3.4	20	3.2
	18	6.9	29	9.4	47	8.2
	14	9.1	22	11.8	36	10.6
	27	14.2	25	12.4	52	13.3
All ages	**77**	**3.9**	**100**	**3.5**	**177**	**3.7**



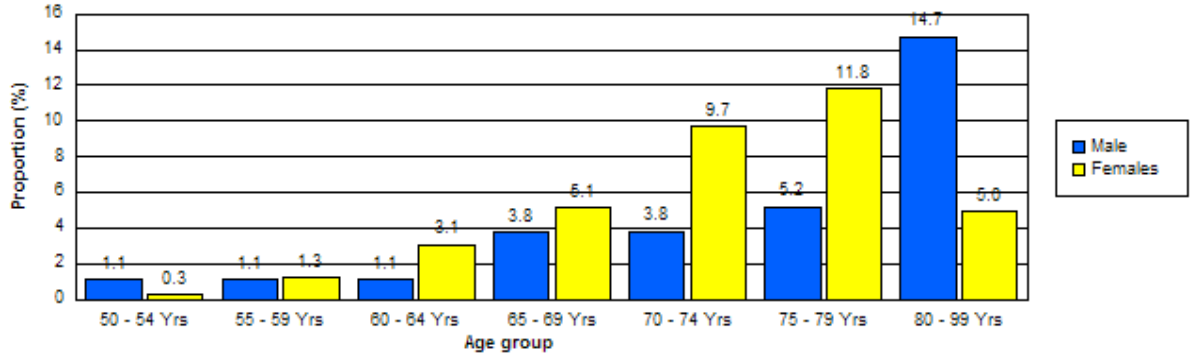
23. Prevalence of people with bilateral (pseudo)aphakia

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	1	0.5	1	0.3	2	0.4
	2	1.1	0	0.0	2	0.4
	2	1.1	1	0.4	3	0.7
	2	1.5	2	1.1	4	1.3
	3	2.3	5	3.2	8	2.8
	7	9.1	3	3.2	10	5.9
	6	6.3	2	2.0	8	4.1
All ages	**23**	**2.4**	**14**	**1.0**	**37**	**1.5**



24. Prevalence of people with unilateral (pseudo)aphakia

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	2	1.1	1	0.3	3	0.6
	2	1.1	4	1.3	6	1.2
	2	1.1	7	3.1	9	2.2
	5	3.8	9	5.1	14	4.5
	5	3.8	15	9.7	20	7.0
	4	5.2	11	11.8	15	8.8
	14	14.7	5	5.0	19	9.7
All ages	**34**	**3.5**	**52**	**3.7**	**86**	**3.6**



VISUAL OUTCOME AFTER CATARACT SURGERY (LONG-TERM OUTCOME)

1. Visual outcome after cataract surgery
2. Causes of poor visual outcome after cataract surgery
3. Data on cataract surgical services in survey area
4. Patient satisfaction after cataract surgery

Date and time of the report: 4/5/2010

This report is for the survey area NARAIL

Year and month when survey was completed: 2010- 1 until 2010- 2

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%,

1. Visual acuity of operated eyes in sample with available correction (PVA)

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	95	76.6%	21	58.3%	0	0.0%	116	72.5%
Cannot see 6/18, can see 6/60	14	11.3%	3	8.3%	0	0.0%	17	10.6%
Cannot see 6/60	15	12.1%	12	33.3%	0	0.0%	27	16.9%
Total	**124**	**100.0%**	**36**	**100.0%**	**0**	**100.0%**	**160**	**100.0%**

2. Visual acuity of operated eyes in sample with best correction (BCVA)

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	103	83.1%	23	63.9%	0	0.0%	126	78.8%
Cannot see 6/18, can see 6/60	9	7.3%	2	5.6%	0	0.0%	11	6.9%
Cannot see 6/60	12	9.7%	11	30.6%	0	0.0%	23	14.4%
Total	**124**	**100.0%**	**36**	**100.0%**	**0**	**100.0%**	**160**	**100.0%**

3. Visual acuity with available correction in eyes operated less than 5 years ago

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	53	76.8%	0	0.0%	0	0.0%	53	74.6%
Cannot see 6/18, can see 6/60	9	13.0%	0	0.0%	0	0.0%	9	12.7%
Cannot see 6/60	7	10.1%	2	100.0%	0	0.0%	9	12.7%
Total	**69**	**100.0%**	**2**	**100.0%**	**0**	**100.0%**	**71**	**100.0%**

4. Visual acuity with best correction in eyes operated less than 5 years ago

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	57	82.6%	0	0.0%	0	0.0%	57	80.3%
Cannot see 6/18, can see 6/60	6	8.7%	0	0.0%	0	0.0%	6	8.5%
Cannot see 6/60	6	8.7%	2	100.0%	0	0.0%	8	11.3%
Total	**69**	**100.0%**	**2**	**100.0%**	**0**	**100.0%**	**71**	**100.0%**

5. Visual acuity with available correction in eyes operated 5 or more years ago

Category of visual acuity	IOLs eyes	%	Non-IOLs eyes	%	Couching eyes	%	Total eyes	%
Can see 6/18	42	76.4%	21	61.8%	0	0.0%	63	70.8%
Cannot see 6/18, can see 6/60	5	9.1%	3	8.8%	0	0.0%	8	9.0%
Cannot see 6/60	8	14.5%	10	29.4%	0	0.0%	18	20.2%
Total	**55**	**100.0%**	**34**	**100.0%**	**0**	**100.0%**	**89**	**100.0%**

6. Visual acuity with best correction in eyes operated 5 or more years ago

Category of visual acuity	IOLs eyes	%	Non-IOLs eyes	%	Couching eyes	%	Total eyes	%
Can see 6/18	46	83.6%	23	67.6%	0	0.0%	69	77.5%
Cannot see 6/18, can see 6/60	3	5.5%	2	5.9%	0	0.0%	5	5.6%
Cannot see 6/60	6	10.9%	9	26.5%	0	0.0%	15	16.9%
Total	**55**	**100.0%**	**34**	**100.0%**	**0**	**100.0%**	**89**	**100.0%**

7. Age at time of surgery & type of surgery in males

Age group	IOLs eyes	%	Non-IOLs eyes	%	Couching eyes	%	Total eyes	%
Below 30 yrs	0	0.0%	2	8.0%	0	0.0%	2	2.5%
40 to 44	1	1.8%	0	0.0%	0	0.0%	1	1.3%
45 to 49	2	3.6%	2	8.0%	0	0.0%	4	5.0%
50 to 54	4	7.3%	6	24.0%	0	0.0%	10	12.5%
55 to 59	3	5.5%	4	16.0%	0	0.0%	7	8.8%
60 to 64	6	10.9%	1	4.0%	0	0.0%	7	8.8%
65 to 69	7	12.7%	5	20.0%	0	0.0%	12	15.0%
70 to 74	13	23.6%	4	16.0%	0	0.0%	17	21.3%
75 to 79	11	20.0%	1	4.0%	0	0.0%	12	15.0%
80 and older	8	14.5%	0	0.0%	0	0.0%	8	10.0%
Total	**55**	**100.0%**	**25**	**100.0%**	**0**	**100.0%**	**80**	**100.0%**

8. Age at time of surgery & type of surgery in females

Age group	IOLs eyes	%	Non-IOLs eyes	%	Couching eyes	%	Total eyes	%
45 to 49	4	5.8%	0	0.0%	0	0.0%	4	5.0%
50 to 54	5	7.2%	0	0.0%	0	0.0%	5	6.3%
55 to 59	7	10.1%	2	18.2%	0	0.0%	9	11.3%
60 to 64	19	27.5%	7	63.6%	0	0.0%	26	32.5%
65 to 69	15	21.7%	1	9.1%	0	0.0%	16	20.0%
70 to 74	12	17.4%	0	0.0%	0	0.0%	12	15.0%
75 to 79	3	4.3%	1	9.1%	0	0.0%	4	5.0%
80 and older	4	5.8%	0	0.0%	0	0.0%	4	5.0%
Total	**69**	**100.0%**	**11**	**100.0%**	**0**	**100.0%**	**80**	**100.0%**

9. Place of surgery by sex

	Males n	%	Females n	%	Total n	%
Government hospital	6	7.5%	5	6.3%	11	6.9%
Voluntary/Charitable hospital	19	23.8%	29	36.3%	48	30.0%
Private hospital	35	43.8%	36	45.0%	71	44.4%
Eye camp/Improvised setting	20	25.0%	10	12.5%	30	18.8%
Total	**80**	**100.0%**	**80**	**100.0%**	**160**	**100.0%**

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

Top: with IOL Bottom: without IOL	Govt. Hosp. eyes	 %	Vol. Hosp. eyes	 %	Pvt. Hosp. eyes	 %	Eye camp eyes	 %	Traditional eyes	 %
Can see 6/18	10	100.0%	20	60.6%	56	82.4%	9	69.2%	0	
Cannot see 6/18, can see 6/60	0	0.0%	7	21.2%	6	8.8%	1	7.7%	0	
Cannot see 6/60	0	0.0%	6	18.2%	6	8.8%	3	23.1%	0	
Total	**10**	**100.0%**	**33**	**100.0%**	**68**	**100.0%**	**13**	**100.0%**	**0**	**100.0%**
Can see 6/18	0	0.0%	10	66.7%	1	33.3%	10	58.8%	0	
Cannot see 6/18, can see 6/60	0	0.0%	1	6.7%	0	0.0%	2	11.8%	0	
Cannot see 6/60	1	100.0%	4	26.7%	2	66.7%	5	29.4%	0	
Total	**1**	**100.0%**	**15**	**100.0%**	**3**	**100.0%**	**17**	**100.0%**	**0**	**100.0%**

11. Use of spectacles by sex

	Males n	 %	Females n	 %	Total n	 %
Without glasses	42	52.5%	54	67.5%	96	60.0%
With glasses	38	47.5%	26	32.5%	64	40.0%
Total	**80**	**100.0%**	**80**	**100.0%**	**160**	**100.0%**

12. Are you satisfied with results of cataract surgery?

	Males n	 %	Females n	 %	Total n	 %
Very satisfied	21	26.3%	28	35.0%	49	30.6%
Partially satisfied	39	48.8%	35	43.8%	74	46.3%
Indifferent	9	11.3%	3	3.8%	12	7.5%
Partially dissatisfied	6	7.5%	10	12.5%	16	10.0%
very dissatisfied	5	6.3%	4	5.0%	9	5.6%
Total	**80**	**100.0%**	**80**	**100.0%**	**160**	**100.0%**

13. Post-op presenting VA and satisfaction with results of surgery

Top: with IOL Bottom: without IOL	Very satisfied eyes	 %	Part. satisfied eyes	 %	Indifferent eyes	 %	Part. unsat. eyes	 %	Very unsat. eyes	 %
Can see 6/18	43	100.0%	52	88.1%	0	0.0%	0	0.0%	0	0.0%
Cannot see 6/18, can see 6/60	0	0.0%	7	11.9%	4	57.1%	3	27.3%	0	0.0%
Cannot see 6/60	0	0.0%	0	0.0%	3	42.9%	8	72.7%	4	100.0%
Total	**43**	**100.0%**	**59**	**100.0%**	**7**	**100.0%**	**11**	**100.0%**	**4**	**100.0%**
Can see 6/18	6	100.0%	13	86.7%	1	20.0%	1	20.0%	0	0.0%
Cannot see 6/18, can see 6/60	0	0.0%	2	13.3%	0	0.0%	1	20.0%	0	0.0%
Cannot see 6/60	0	0.0%	0	0.0%	4	80.0%	3	60.0%	5	100.0%
Total	**6**	**100.0%**	**15**	**100.0%**	**5**	**100.0%**	**5**	**100.0%**	**5**	**100.0%**

14. Post-op presenting VA and causes of poor outcome in eyes operated less than 3 years ago

Top: with IOL Bottom: without IOL	Selection eyes	 %	Surgery eyes	 %	Spectacles eyes	 %	Sequelae eyes	 %	No relation eyes	 %
Can see 6/18	0	0.0%	0	0.0%	0	0.0%	0	0.0%	43	100.0%
Cannot see 6/18, can see 6/60	2	40.0%	0	0.0%	3	75.0%	2	100.0%	0	0.0%
Cannot see 6/60	3	60.0%	2	100.0%	1	25.0%	0	0.0%	0	0.0%
Total	**5**	**100.0%**	**2**	**100.0%**	**4**	**100.0%**	**2**	**100.0%**	**43**	**100.0%**
Cannot see 6/60	0		1	100.0%	0		0		0	
Total	**0**	**100.0%**	**1**	**100.0%**	**0**	**100.0%**	**0**	**100.0%**	**0**	**100.0%**

15. Post-op presenting VA and causes of poor outcome in eyes operated 3 or more years ago

Top: with IOL Bottom: without IOL	Selection eyes	 %	Surgery eyes	 %	Spectacles eyes	 %	Sequelae eyes	 %	No relation eyes	 %
Can see 6/18	0	0.0%	0	0.0%	0	0.0%	0	0.0%	52	98.1%
Cannot see 6/18, can see 6/60	0	0.0%	0	0.0%	4	80.0%	2	66.7%	1	1.9%
Cannot see 6/60	5	100.0%	2	100.0%	1	20.0%	1	33.3%	0	0.0%
Total	**5**	**100.0%**	**2**	**100.0%**	**5**	**100.0%**	**3**	**100.0%**	**53**	**100.0%**
Can see 6/18	0	0.0%	0	0.0%	0	0.0%	0	0.0%	21	100.0%
Cannot see 6/18, can see 6/60	0	0.0%	0	0.0%	2	22.2%	1	100.0%	0	0.0%
Cannot see 6/60	3	100.0%	1	100.0%	7	77.8%	0	0.0%	0	0.0%
Total	**3**	**100.0%**	**1**	**100.0%**	**9**	**100.0%**	**1**	**100.0%**	**21**	**100.0%**

16. Proportion and type of surgery

	Males n	 %	Females n	 %	Total n	 %
With IOL	55	68.8%	69	86.3%	124	77.5%
Without IOL	25	31.3%	11	13.8%	36	22.5%
Total	**80**	**100.0%**	**80**	**100.0%**	**160**	**100.0%**

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

For each patient, one or two reasons may be recorded. Therefore the number of barriers is higher than the number of people blind due to cataract.

Date and time of report: 4/5/2010

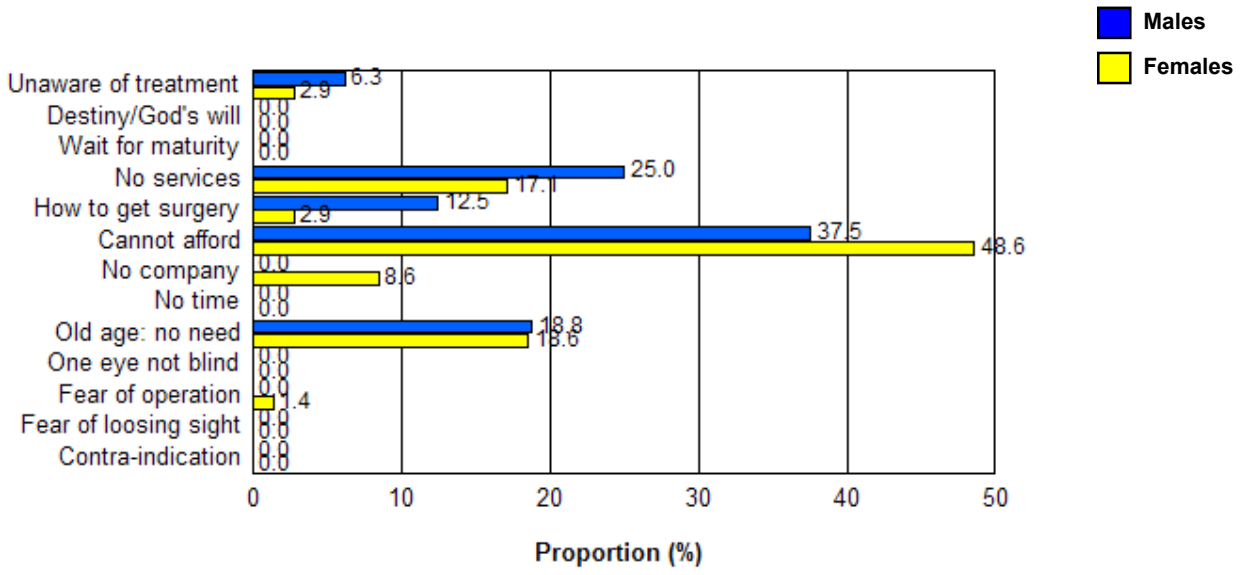
This report is for the survey area: NARAIL

Year and month when the survey was conducted: 2010- 1 until 2010- 2

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.

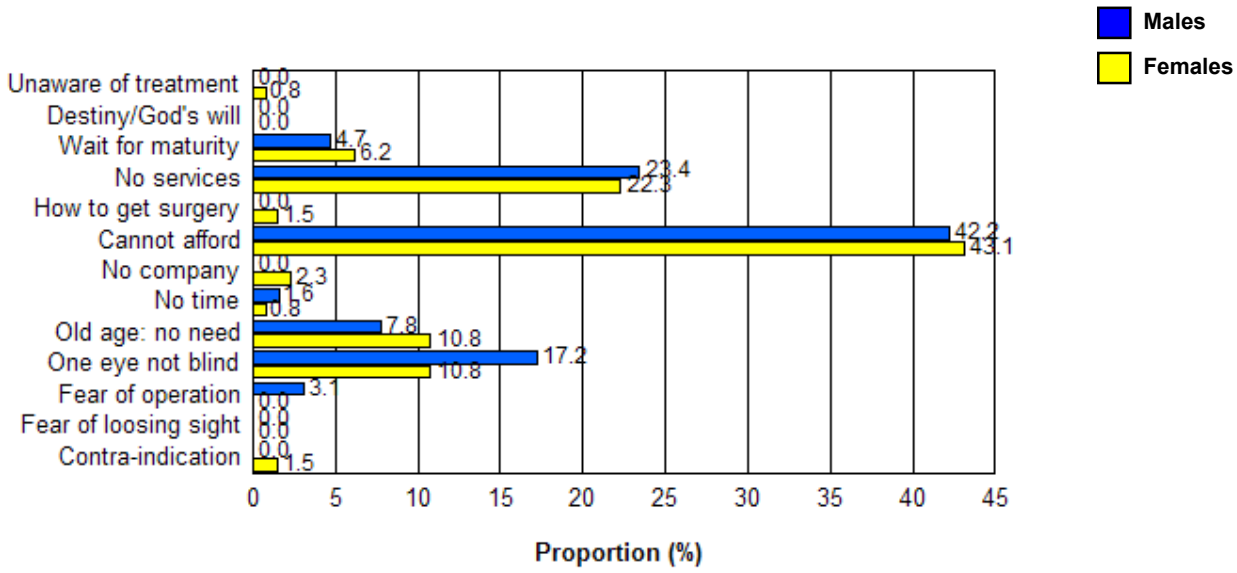
1. Barriers to cataract surgery, as indicated by persons in sample, bilateral blind due to cataract (VA<3/60, best corrected)

	Males		Females		Total	
Barriers	**n**	**%**	**n**	**%**	**n**	**%**
Unaware of treatment	1	6.3	2	2.9	3	3.5
Destiny/God's will	0	0.0	0	0.0	0	0.0
Wait for maturity	0	0.0	0	0.0	0	0.0
No services	4	25.0	12	17.1	16	18.6
How to get surgery	2	12.5	2	2.9	4	4.7
Cannot afford	6	37.5	34	48.6	40	46.5
No company	0	0.0	6	8.6	6	7.0
No time	0	0.0	0	0.0	0	0.0
Old age: no need	3	18.8	13	18.6	16	18.6
One eye not blind	0	0.0	0	0.0	0	0.0
Fear of operation	0	0.0	1	1.4	1	1.2
Fear of loosing sight	0	0.0	0	0.0	0	0.0
Contra-indication	0	0.0	0	0.0	0	0.0
All barriers	**16**	**100.0 %**	**70**	**100.0 %**	**86**	**100.0 %**



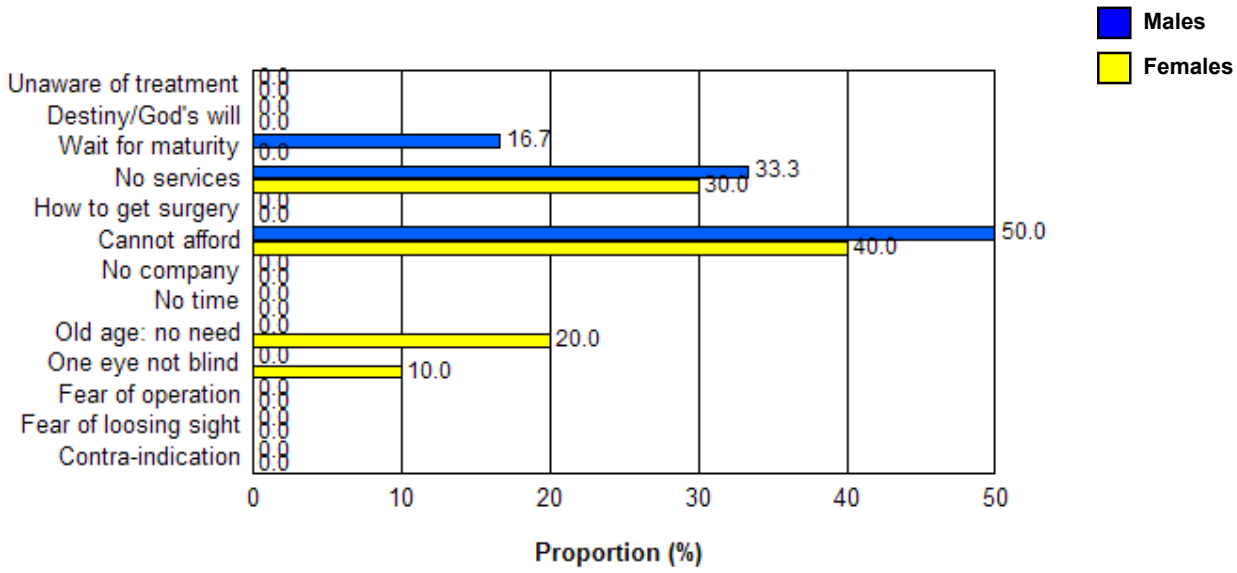
2. Barriers to cataract surgery, as indicated by persons in sample, unilateral blind due to cataract (VA<3/60, best corrected)

	Males		Females		Total	
Barriers	**n**	**%**	**n**	**%**	**n**	**%**
Unaware of treatment	0	0.0	1	0.8	1	0.5
Destiny/God's will	0	0.0	0	0.0	0	0.0
Wait for maturity	3	4.7	8	6.2	11	5.7
No services	15	23.4	29	22.3	44	22.7
How to get surgery	0	0.0	2	1.5	2	1.0
Cannot afford	27	42.2	56	43.1	83	42.8
No company	0	0.0	3	2.3	3	1.5
No time	1	1.6	1	0.8	2	1.0
Old age: no need	5	7.8	14	10.8	19	9.8
One eye not blind	11	17.2	14	10.8	25	12.9
Fear of operation	2	3.1	0	0.0	2	1.0
Fear of loosing sight	0	0.0	0	0.0	0	0.0
Contra-indication	0	0.0	2	1.5	2	1.0
All barriers	**64**	**100.0 %**	**130**	**100.0 %**	**194**	**100.0 %**



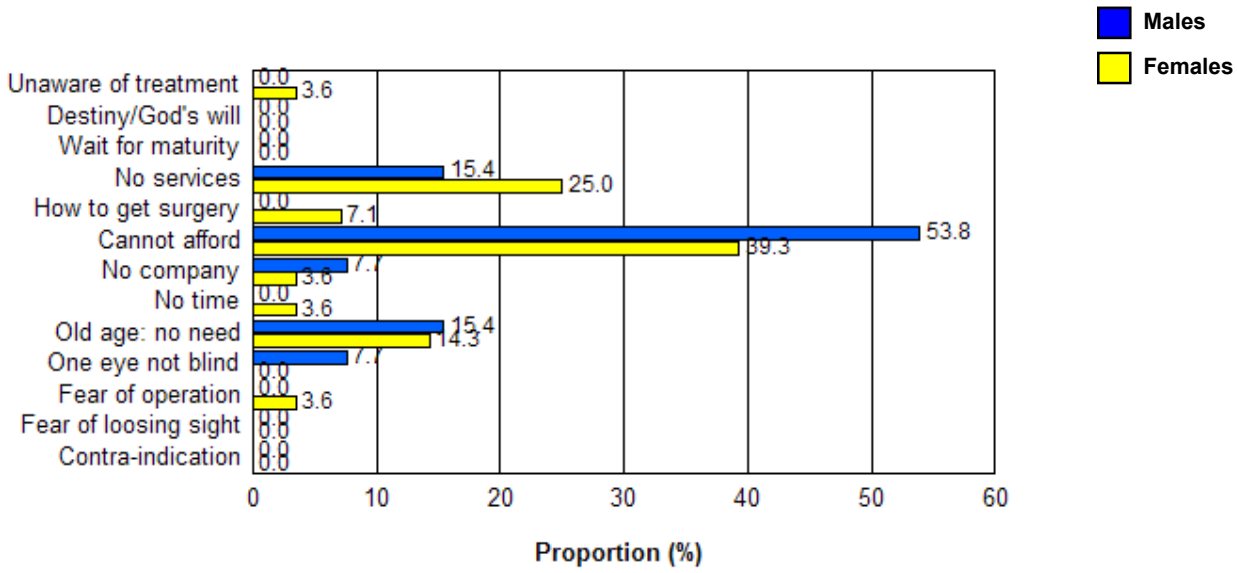
3. Barriers to cataract surgery, as indicated by persons in sample, with bilateral severe visual impairment due to cataract (VA<6/60 - 3/60, best corrected)

	Males		Females		Total	
Barriers	**n**	**%**	**n**	**%**	**n**	**%**
Unaware of treatment	0	0.0	0	0.0	0	0.0
Destiny/God's will	0	0.0	0	0.0	0	0.0
Wait for maturity	1	16.7	0	0.0	1	6.3
No services	2	33.3	3	30.0	5	31.3
How to get surgery	0	0.0	0	0.0	0	0.0
Cannot afford	3	50.0	4	40.0	7	43.8
No company	0	0.0	0	0.0	0	0.0
No time	0	0.0	0	0.0	0	0.0
Old age: no need	0	0.0	2	20.0	2	12.5
One eye not blind	0	0.0	1	10.0	1	6.3
Fear of operation	0	0.0	0	0.0	0	0.0
Fear of loosing sight	0	0.0	0	0.0	0	0.0
Contra-indication	0	0.0	0	0.0	0	0.0
All barriers	**6**	**100.0 %**	**10**	**100.0 %**	**16**	**100.0 %**



4. Barriers to cataract surgery, as indicated by persons in sample, with unilateral severe visual impairment due to cataract (VA<6/60 - 3/60, best corrected)

	Males		Females		Total	
Barriers	**n**	**%**	**n**	**%**	**n**	**%**
Unaware of treatment	0	0.0	1	3.6	1	2.4
Destiny/God's will	0	0.0	0	0.0	0	0.0
Wait for maturity	0	0.0	0	0.0	0	0.0
No services	2	15.4	7	25.0	9	22.0
How to get surgery	0	0.0	2	7.1	2	4.9
Cannot afford	7	53.8	11	39.3	18	43.9
No company	1	7.7	1	3.6	2	4.9
No time	0	0.0	1	3.6	1	2.4
Old age: no need	2	15.4	4	14.3	6	14.6
One eye not blind	1	7.7	0	0.0	1	2.4
Fear of operation	0	0.0	1	3.6	1	2.4
Fear of loosing sight	0	0.0	0	0.0	0	0.0
Contra-indication	0	0.0	0	0.0	0	0.0
All barriers	**13**	**100.0 %**	**28**	**100.0 %**	**41**	**100.0 %**



SAMPLING ERROR (CLUSTER SAMPLING) & DESIGN EFFECT

Date and time of the report: 4/5/2010

This report is for the survey area NARAIL

Year and month when survey was completed: 2010- 1 until 2010- 2

To assess the accuracy of the estimate of the prevalence of a condition in the RAAB survey, the sampling error for the prevalence estimate of that condition in cluster sampling (SEcrs) is calculated, using the formula's provided by:
Bennett S, Woods T, Liyanage WM, Smith DL.A simplified general method for cluster-sample surveys of health in developing countries. World Health Stat Q. 1991;44(3):98-106. The design effect (DEFF) is calculated by SEcrs^2 / SEsrs^2.

The table below shows the number of cases and the prevalence (sample prev.) of various conditions in the sample population, and the corresponding 95% confidence interval (CI 95%).
When the age and sex composition of the sample differs from that in the entire survey area, the actual prevalence may differ from that calculated in the sample. Run the report 'Age & sex adjusted results' to calculate the prevalence for and estimated number of people with the condition in the entire survey area. To calculate the prevalence interval at 95% confidence, take the age & sex adjusted prevalence from that report and subtract and add the Var. 95% to find the 95% lower confidence level and the 95% higher confidence level, respectively. Use the Var. 90% and the Var. 80% to calculate the prevalence intervals at 90% and 80% confidence. Var. 95% = 1.96 * SEcrs; Var. 90% = 1.65 * SEcrs; Var. 80% = 1.28 * SEcrs

Bilateral blind, best corrected			**Cluster sampling**					
	Cases in sample	**Sample prev.**	**CI 95%**	**Var. 95%**	**Var. 90%**	**Var. 80%**	**DEFF**	**SEcrs**
Male	16	1.64	0.84 - 2.44	0.80	0.67	0.52	1.00	0.41
Female	47	3.32	1.90 - 4.75	1.42	1.20	0.93	2.33	0.73
Total	**63**	**2.64**	**1.64 - 3.63**	**1.00**	**0.84**	**0.65**	**2.41**	**0.51**

Blind eyes, best corrected			**Cluster sampling**					
	Cases in sample	**Sample prev.**	**CI 95%**	**Var. 95%**	**Var. 90%**	**Var. 80%**	**DEFF**	**SEcrs**
Male	94	4.77	3.70 - 5.84	1.07	0.90	0.70	0.64	0.55
Female	184	6.47	5.01 - 7.92	1.46	1.22	0.95	1.29	0.74
Total	**276**	**5.77**	**4.66 - 6.89**	**1.11**	**0.93**	**0.73**	**1.42**	**0.57**

Bilateral SVI, best corrected			**Cluster sampling**					
	Cases in sample	**Sample prev.**	**CI 95%**	**Var. 95%**	**Var. 90%**	**Var. 80%**	**DEFF**	**SEcrs**
Male	6	0.62	0.06 - 1.17	0.55	0.46	0.36	1.27	0.28
Female	9	0.64	0.21 - 1.06	0.43	0.36	0.28	1.06	0.22
Total	**15**	**0.63**	**0.31 - 0.94**	**0.31**	**0.26**	**0.21**	**0.98**	**0.16**

SVI eyes, best corrected			**Cluster sampling**					
	Cases in sample	**Sample prev.**	**CI 95%**	**Var. 95%**	**Var. 90%**	**Var. 80%**	**DEFF**	**SEcrs**
Male	20	1.03	0.50 - 1.55	0.53	0.44	0.34	0.69	0.27
Female	26	0.92	0.47 - 1.37	0.45	0.38	0.30	0.83	0.23
Total	**46**	**0.96**	**0.63 - 1.30**	**0.33**	**0.28**	**0.22**	**0.73**	**0.17**

Bilateral VI, best corrected			**Cluster sampling**					
	Cases in sample	**Sample prev.**	**CI 95%**	**Var. 95%**	**Var. 90%**	**Var. 80%**	**DEFF**	**SEcrs**
Male	40	4.10	2.64 - 5.57	1.47	1.23	0.96	1.39	0.75
Female	60	4.24	3.08 - 5.40	1.16	0.97	0.76	1.21	0.59
Total	**100**	**4.18**	**3.24 - 5.13**	**0.94**	**0.79**	**0.62**	**1.38**	**0.48**

VI eyes, best corrected			**Cluster sampling**					
	Cases in sample	**Sample prev.**	**CI 95%**	**Var. 95%**	**Var. 90%**	**Var. 80%**	**DEFF**	**SEcrs**
Male	110	5.64	4.24 - 7.05	1.41	1.18	0.92	0.94	0.72
Female	134	4.73	3.58 - 5.89	1.15	0.97	0.75	1.09	0.59
Total	**244**	**5.10**	**4.20 - 6.01**	**0.91**	**0.76**	**0.59**	**1.05**	**0.46**

Bilateral blind, available correction			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	17	1.74	0.89 - 2.60	0.85	0.72	0.56	1.08	0.44
Female	48	3.39	1.96 - 4.82	1.43	1.20	0.93	2.30	0.73
Total	**65**	**2.72**	**1.71 - 3.73**	**1.01**	**0.84**	**0.66**	**2.38**	**0.51**

Blind eyes, available correction			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	98	4.97	3.88 - 6.07	1.10	0.92	0.72	0.65	0.56
Female	186	6.57	5.11 - 8.04	1.47	1.23	0.96	1.29	0.75
Total	**284**	**5.92**	**4.79 - 7.05**	**1.13**	**0.95**	**0.74**	**1.42**	**0.58**

Bilateral SVI, available correction			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	10	1.03	0.37 - 1.68	0.65	0.55	0.43	1.06	0.33
Female	15	1.06	0.53 - 1.59	0.53	0.45	0.35	1.00	0.27
Total	**25**	**1.05**	**0.64 - 1.45**	**0.41**	**0.34**	**0.27**	**1.00**	**0.21**

SVI eyes, available correction			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	36	1.79	1.07 - 2.52	0.73	0.61	0.47	0.76	0.37
Female	48	1.70	0.96 - 2.44	0.74	0.62	0.48	1.21	0.38
Total	**84**	**1.74**	**1.20 - 2.27**	**0.54**	**0.45**	**0.35**	**1.05**	**0.27**

Bilateral VI, available correction			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	67	6.87	5.17 - 8.57	1.70	1.43	1.11	1.15	0.87
Female	87	6.15	4.77 - 7.53	1.38	1.16	0.90	1.22	0.70
Total	**154**	**6.44**	**5.34 - 7.55**	**1.11**	**0.93**	**0.72**	**1.27**	**0.57**

VI eyes, available correction			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	188	9.64	7.75 - 11.54	1.90	1.59	1.24	1.05	0.97
Female	222	7.84	6.50 - 9.19	1.35	1.13	0.88	0.92	0.69
Total	**410**	**8.58**	**7.39 - 9.77**	**1.19**	**1.00**	**0.78**	**1.12**	**0.61**

Bilateral cataract blind			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	8	0.82	0.15 - 1.49	0.67	0.56	0.44	1.41	0.34
Female	36	2.54	1.30 - 3.78	1.24	1.04	0.81	2.28	0.63
Total	**44**	**1.84**	**0.99 - 2.69**	**0.85**	**0.71**	**0.56**	**2.48**	**0.43**

Unilateral cataract blind			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	34	3.49	2.12 - 4.86	1.37	1.15	0.90	1.42	0.70
Female	68	4.81	3.55 - 6.06	1.25	1.05	0.82	1.27	0.64
Total	**102**	**4.27**	**3.24 - 5.29**	**1.03**	**0.86**	**0.67**	**1.60**	**0.52**

Eyes cataract blind			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	50	2.56	1.54 - 3.59	1.03	0.86	0.67	1.07	0.52
Female	140	4.95	3.62 - 6.27	1.32	1.11	0.86	1.37	0.67
Total	**190**	**3.97**	**2.93 - 5.02**	**1.05**	**0.88**	**0.69**	**1.79**	**0.53**

Bilateral cataract SVI			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	3	0.31	-0.04 - 0.65	0.34	0.29	0.22	0.98	0.18
Female	5	0.35	0.06 - 0.65	0.30	0.25	0.19	0.92	0.15
Total	**8**	**0.33**	**0.12 - 0.55**	**0.21**	**0.18**	**0.14**	**0.86**	**0.11**

Unilateral cataract SVI			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	7	0.72	0.22 - 1.22	0.50	0.42	0.33	0.88	0.25
Female	14	0.99	0.34 - 1.64	0.65	0.55	0.43	1.60	0.33
Total	**21**	**0.88**	**0.45 - 1.30**	**0.42**	**0.36**	**0.28**	**1.28**	**0.22**

Eyes cataract SVI			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	14	0.67	0.26 - 1.07	0.41	0.34	0.26	0.63	0.21
Female	24	0.85	0.40 - 1.30	0.45	0.38	0.30	0.90	0.23
Total	**38**	**0.77**	**0.46 - 1.09**	**0.32**	**0.27**	**0.21**	**0.82**	**0.16**

Bilateral cataract VI			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	21	2.15	1.16 - 3.15	1.00	0.84	0.65	1.19	0.51
Female	29	2.05	1.23 - 2.87	0.82	0.69	0.53	1.22	0.42
Total	**50**	**2.09**	**1.44 - 2.74**	**0.65**	**0.55**	**0.43**	**1.28**	**0.33**

Unilateral cataract VI			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	35	3.59	2.37 - 4.81	1.22	1.02	0.80	1.09	0.62
Female	42	2.97	1.99 - 3.95	0.98	0.82	0.64	1.22	0.50
Total	**77**	**3.22**	**2.43 - 4.01**	**0.79**	**0.66**	**0.52**	**1.25**	**0.40**

Eyes cataract VI			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	78	3.95	2.73 - 5.17	1.22	1.02	0.80	1.00	0.62
Female	100	3.53	2.50 - 4.57	1.03	0.87	0.68	1.16	0.53
Total	**178**	**3.70**	**2.88 - 4.52**	**0.82**	**0.69**	**0.53**	**1.17**	**0.42**

Bilateral (pseudo)aphakia			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	23	2.36	1.27 - 3.44	1.08	0.91	0.71	1.30	0.55
Female	14	0.99	0.46 - 1.52	0.53	0.44	0.35	1.06	0.27
Total	**37**	**1.55**	**0.90 - 2.20**	**0.65**	**0.54**	**0.42**	**1.71**	**0.33**

Unilateral (pseudo)aphakia			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	34	3.49	2.31 - 4.66	1.18	0.99	0.77	1.05	0.60
Female	52	3.67	2.57 - 4.78	1.10	0.93	0.72	1.27	0.56
Total	**86**	**3.60**	**2.70 - 4.49**	**0.89**	**0.75**	**0.58**	**1.43**	**0.46**

Eyes (pseudo)aphakia			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	80	4.10	2.81 - 5.39	1.29	1.08	0.84	1.08	0.66
Female	80	2.83	2.12 - 3.53	0.70	0.59	0.46	0.67	0.36
Total	**160**	**3.35**	**2.56 - 4.13**	**0.78**	**0.66**	**0.51**	**1.18**	**0.40**

RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS
AGE AND SEX ADJUSTED

Date and time of the report: 4/5/2010

This report is for the survey area NARAIL

Year and month when survey was completed: 2010- 1 until 2010- 2

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,

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

Male	44,538	54.2%
Female	37,586	45.8%
Total	**82,124**	**100.0%**

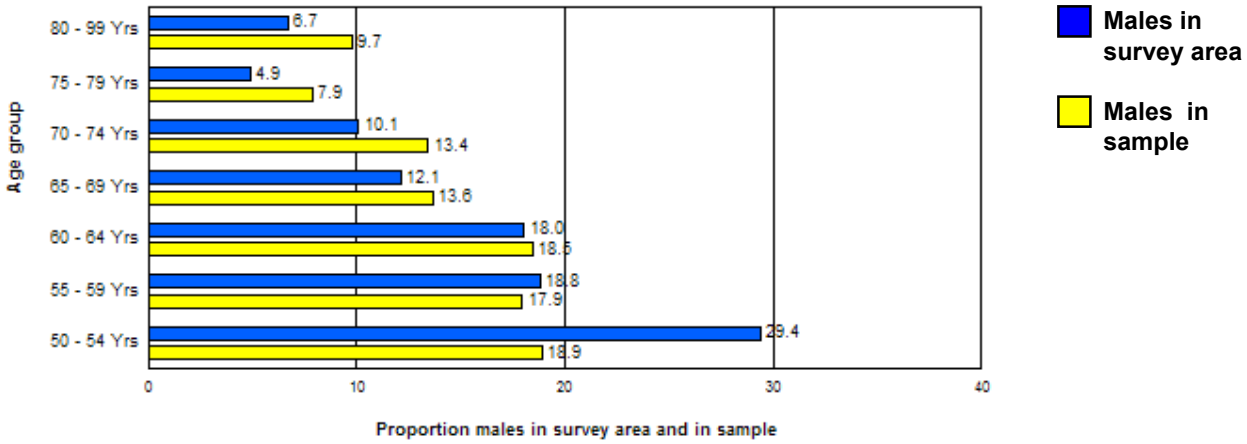
2a. Age and sex composition of population in sample

	Male		Female		Total	
Age groups	n	%	n	%	n	%
50 - 54 Yrs	184	18.9%	346	24.5%	530	22.2%
55 - 59 Yrs	175	17.9%	318	22.5%	493	20.6%
60 - 64 Yrs	180	18.5%	227	16.0%	407	17.0%
65 - 69 Yrs	133	13.6%	175	12.4%	308	12.9%
70 - 74 Yrs	131	13.4%	155	11.0%	286	12.0%
75 - 79 Yrs	77	7.9%	93	6.6%	170	7.1%
80 - 99 Yrs	95	9.7%	101	7.1%	196	8.2%
Total	**975**	**100.0%**	**1,415**	**100.0%**	**2,390**	**100.0%**

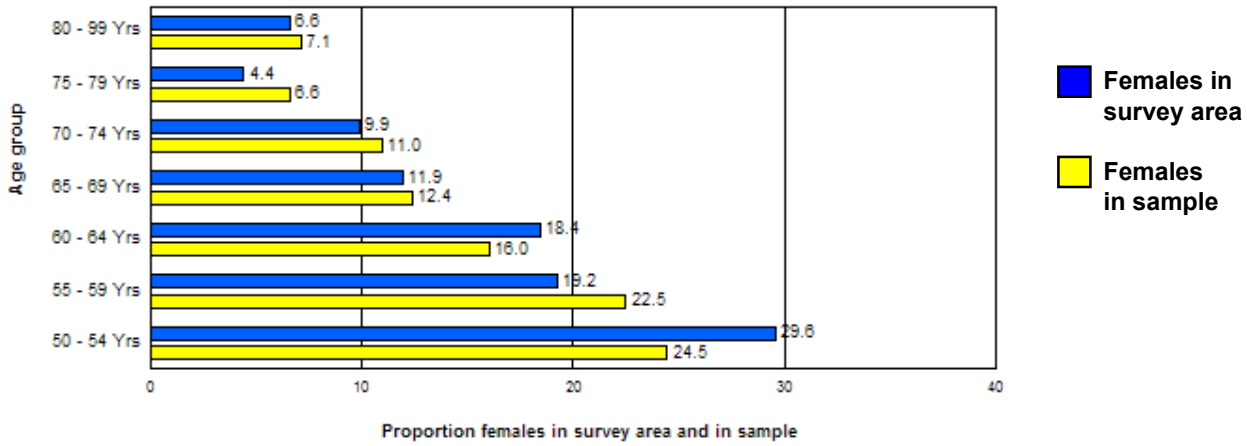
2b. Age and sex composition of population in entire survey area

	Male		Female		Total	
Age groups	n	%	n	%	n	%
50 - 54 Yrs	13,081	29.4%	11,118	29.6%	24,199	29.5%
55 - 59 Yrs	8,382	18.8%	7,228	19.2%	15,610	19.0%
60 - 64 Yrs	8,031	18.0%	6,918	18.4%	14,949	18.2%
65 - 69 Yrs	5,401	12.1%	4,475	11.9%	9,876	12.0%
70 - 74 Yrs	4,489	10.1%	3,717	9.9%	8,206	10.0%
75 - 79 Yrs	2,174	4.9%	1,652	4.4%	3,826	4.7%
80 - 99 Yrs	2,980	6.7%	2,478	6.6%	5,458	6.6%
Total	**44,538**	**100.0%**	**37,586**	**100.0%**	**82,124**	**100.0%**

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



3b. Proportion of females in total survey area and in sample



4. Adjusted results for all causes of blindness, SVI and VI

Estimated cases in people 50+ in survey area	Male n	Male %	Male CI95%	Female n	Female %	Female CI95%	Total n	Total %	Total CI95%
Blindness - VA<3/60 in better eye, best corrected or pinhole (WHO definition)									
Bilateral blind	584	1.31	±0.80	1,111	2.96	±1.42	1,694	2.06	±1.00
Blind eyes	3,490	3.92	±1.07	4,378	5.82	±1.46	7,868	4.79	±1.11
Blindness - VA<3/60 in better eye, with available correction									
Bilateral blind	615	1.38	±0.85	1,141	3.04	±1.43	1,756	2.14	±1.01
Blind eyes	3,609	4.05	±1.10	4,471	5.95	±1.47	8,080	4.92	±1.13
Severe Visual Impairment (SVI) - VA<6/60 - 3/60 in better eye with available correction									
Bilateral SVI	354	0.80	±0.65	372	0.99	±0.53	726	0.88	±0.41
SVI eyes	1,379	1.55	±0.73	1,217	1.62	±0.74	2,595	1.58	±0.54
Visual Impairment (VI) - VA<6/18 - 6/60 in better eye with available correction									
Bilateral VI	2,625	5.89	±1.70	2,086	5.55	±1.38	4,711	5.74	±1.11
VI eyes	7,400	8.31	±1.90	5,439	7.24	±1.35	12,839	7.82	±1.19

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

Estimated cases in people 50+ in survey area	Male n	Male %	Female n	Female %	Total n	Total %
Blindness - VA<3/60 in better eye, with available correction						
Bilateral blind	615	1.38	1,141	3.04	1,756	2.14
Blind eyes	3,609	4.05	4,471	5.95	8,080	4.92
VA<6/60 in better eye with available correction						
Bilateral <6/60	969	2.18	1,513	4.03	2,482	3.02
Eyes <6/60	4,988	5.60	5,688	7.57	10,676	6.50
VA<6/18 in better eye with available correction						
Bilateral <6/18	3,594	8.07	3,599	9.57	7,193	8.76
Eyes <6/18	12,387	13.91	11,127	14.80	23,515	14.32

6. Adjusted results for cataract and Blindness, SVI and VI with best correction or pinhole

	Male n	Male %	Male CI95%	Female n	Female %	Female CI95%	Total n	Total %	Total CI95%
Cataract and VA<3/60 in better eye with best correction or pinhole									
Bilateral cataract	253	0.57	±0.67	836	2.22	±1.24	1,089	1.33	±0.85
Unilateral cataract	1,529	3.43	±1.37	2,468	6.57	±1.25	3,998	4.87	±1.03
Cataract eyes	2,036	2.29	±1.03	4,140	5.51	±1.32	6,176	3.76	±1.05
Cataract and SVI in better eye with best correction or pinhole									
Bilateral cataract	109	0.25	±0.34	195	0.52	±0.30	305	0.37	±0.21
Unilateral cataract	235	0.53	±0.50	293	0.78	±0.65	528	0.64	±0.42
Cataract eyes	454	0.51	±0.41	615	0.82	±0.45	1,069	0.65	±0.32
Cataract and VI in better eye with best correction or pinhole									
Bilateral cataract	894	2.01	±1.00	1,135	3.02	±0.82	2,029	2.47	±0.65
Unilateral cataract	1,074	2.41	±1.22	544	1.45	±0.98	1,617	1.97	±0.79
Cataract eyes	2,693	3.02	±1.22	2,364	3.15	±1.03	5,057	3.08	±0.82

NB. This table lists people and eyes with cataract and different levels of visual impairment.
However, the primary cause of the visual impairment could be other than cataract

7. Adjusted results for cataract and VA<3/60, VA<6/60 and VA<6/18 with best correction or pinhole

	Male n	Male %	Female n	Female %	Total n	Total %
Cataract and VA<3/60 in better eye with best correction or pinhole						
Bilateral cataract	253	0.57	836	2.22	1,089	1.33
Unilateral cataract	1,529	3.43	2,468	6.57	3,998	4.87
Cataract eyes	2,036	2.29	4,140	5.51	6,176	3.76
Cataract and VA<6/60 in better eye with best correction or pinhole						
Bilateral cataract	363	0.81	1,031	2.74	1,394	1.70
Unilateral cataract	1,764	3.96	2,761	7.35	4,525	5.51
Cataract eyes	2,490	2.80	4,755	6.33	7,245	4.41
Cataract and VA<6/18 in better eye with best correction or pinhole						
Bilateral cataract	1,257	2.82	2,166	5.76	3,423	4.17
Unilateral cataract	2,838	6.37	3,305	8.79	6,143	7.48
Cataract eyes	5,183	5.82	7,120	9.47	12,302	7.49

NB. This table lists people and eyes with cataract and different levels of visual impairment.
However, the primary cause of the visual impairment could be other than cataract

8. Adjusted results for aphakia and pseudophakia

	Male			Female			Total		
	n	%	CI95%	n	%	CI95%	n	%	CI95%
Bilateral (pseudo)aphakia	826	1.85	±1.08	336	0.89	±0.53	1,162	1.41	±0.65
Unilateral (pseudo)aphakia	1,254	2.81	±1.18	1,244	3.31	±1.10	2,498	3.04	±0.89
(pseudo)aphakic eyes	2,906	3.26	±1.29	1,916	2.55	±0.70	4,822	2.94	±0.78

9. Adjusted results for cataract surgical coverage

Cataract Surgical Coverage (eyes)

	Males	Females	Total
VA <3/60	58.8	31.6	43.8
VA <6/60	53.9	28.7	40.0
VA <6/18	35.9	21.2	28.2

Cataract Surgical Coverage (persons)

	Males	Females	Total
VA <3/60	85.8	59.5	71.7
VA <6/60	81.9	54.8	67.5
VA <6/18	59.5	37.8	48.0

SAMPLE RESULTS - NOT ADJUSTED FOR AGE AND SEX

Date and time of report: 4/5/2010

This report is for the survey area: JAMALPUR

Year and month when survey was conducted: 2010- 1 until 2010- 2

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. Confidence intervals for prevalence of various conditions can be

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

	Total eligible		Examined		Not available		Refused		Not capable		Coverage
	n	%	n	%	n	%	n	%	n	%	
Males	1,341	44.0%	1,298	43.6%	37	74.0%	0		6	600.0%	96.8%
Females	1,709	56.0%	1,680	56.4%	13	26.0%	0		16		98.3%
Total	3,050		2,978	97.6%	50	1.6%	0	0.0%	22	0.7%	97.6%

1a. Average age of sample population, by examination status and by sex

	Examined	Not available	Not capable	Total
Males	62.0	63.3	76.5	62.1
Females	58.2	63.9	71.8	58.4
Total	59.9	63.4	73.0	60.0

2. Prevalence of blindness, severe visual impairment (SVI) and visual impairment (VI) - all

	Male		Female		Total	
Level of visual acuity	n	%	n	%	n	%
Blindness - VA<3/60 in the better eye, with best correction or pinhole (WHO definition)						
All bilateral blindness	17	1.31	32	1.90	49	1.65
All blind eyes	110	4.24	152	4.52	262	4.40
Blindness - VA<3/60 in the better eye, with available correction (presenting VA)						
All bilateral blindness	20	1.54	37	2.20	57	1.91
All blind eyes	120	4.62	166	4.94	286	4.80
Severe Visual Impairment (SVI) - VA<6/60 - 3/60 in the better eye, with available correction						
All bilateral SVI	19	1.46	19	1.13	38	1.28
All SVI eyes	68	2.62	64	1.90	132	2.22
Visual Impairment (VI) - VA<6/18 - 6/60 in the better eye, with available correction						
All bilateral VI	128	9.86	107	6.37	235	7.89
All VI eyes	325	12.52	294	8.75	619	10.39

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

	Male		Female		Total	
Level of visual acuity	n	%	n	%	n	%
Blindness - VA<3/60 in the better eye, with available correction (presenting VA)						
All bilateral blindness	20	1.54	37	2.20	57	1.91
All blind eyes	120	4.62	166	4.94	286	4.80
VA<6/60 in the better eye, with available correction (presenting VA)						
All bilateral cases	39	3.00	56	3.33	95	3.19
All eyes	188	7.24	230	6.85	418	7.02
VA<6/18 in the better eye, with available correction (presenting VA)						
All bilateral cases	167	12.87	163	9.70	330	11.08
All eyes	513	19.76	524	15.60	1,037	17.41

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

	Male		Female		Total	
	n	%	n	%	n	%
Refractive error	3	15.0%	2	5.4%	5	8.8%
Cataract, untreated	6	30.0%	24	64.9%	30	52.6%
Aphakia, uncorrected	0	0.0%	2	5.4%	2	3.5%
Total curable	**9**	**45.0%**	**28**	**75.7%**	**37**	**64.9%**
Surgical complications	0	0.0%	1	2.7%	1	1.8%
Trachoma	0	0.0%	0	0.0%	0	0.0%
Phthysis	1	5.0%	0	0.0%	1	1.8%
Other corneal scar	2	10.0%	1	2.7%	3	5.3%
Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
Total preventable	**3**	**15.0%**	**2**	**5.4%**	**5**	**8.8%**
Total avoidable	**12**	**60.0%**	**30**	**81.1%**	**42**	**73.7%**
Glaucoma	1	5.0%	2	5.4%	3	5.3%
Diabetic retinopathy	0	0.0%	0	0.0%	0	0.0%
Potentially preventable*	**1**	**5.0%**	**2**	**5.4%**	**3**	**5.3%**
Globe abnormality	0	0.0%	0	0.0%	0	0.0%
ARMD	1	5.0%	0	0.0%	1	1.8%
Other post. segment / CNS	6	30.0%	5	13.5%	11	19.3%
Total posterior segment	**8**	**40.0%**	**7**	**18.9%**	**15**	**26.3%**
	20	**100.0%**	**37**	**100.0%**	**57**	**100.0%**

* Because an accurate diagnosis of glaucoma and diabetic retinopathy can be difficult with the limited facilities used in a Rapid Assessment, these potentially or partially preventable causes are listed separately.

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

	Male		Female		Total	
	n	%	n	%	n	%
Refractive error	7	5.8%	7	4.2%	14	4.9%
Cataract, untreated	51	42.5%	100	60.2%	151	52.8%
Aphakia, uncorrected	2	1.7%	3	1.8%	5	1.7%
Total curable	**60**	**50.0%**	**110**	**66.3%**	**170**	**59.4%**
Surgical complications	1	0.8%	1	0.6%	2	0.7%
Trachoma	0	0.0%	0	0.0%	0	0.0%
Phthysis	7	5.8%	13	7.8%	20	7.0%
Other corneal scar	15	12.5%	13	7.8%	28	9.8%
Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
Total preventable	**23**	**19.2%**	**27**	**16.3%**	**50**	**17.5%**
Total avoidable	**83**	**69.2%**	**137**	**82.5%**	**220**	**76.9%**
Glaucoma	3	2.5%	5	3.0%	8	2.8%
Diabetic retinopathy	0	0.0%	0	0.0%	0	0.0%
Potentially preventable*	**3**	**2.5%**	**5**	**3.0%**	**8**	**2.8%**
Globe abnormality	0	0.0%	1	0.6%	1	0.3%
ARMD	2	1.7%	1	0.6%	3	1.0%
Other post. segment / CNS	32	26.7%	22	13.3%	54	18.9%
Total posterior segment	**37**	**30.8%**	**29**	**17.5%**	**66**	**23.1%**
	120	**100.0%**	**166**	**100.0%**	**286**	**100.0%**

* Because an accurate diagnosis of glaucoma and diabetic retinopathy can be difficult with the limited facilities used in a Rapid Assessment, these potentially or partially preventable causes are listed separately.

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

	Male		Female		Total	
	n	%	n	%	n	%
Refractive error	9	47.4%	16	84.2%	25	65.8%
Cataract, untreated	6	31.6%	1	5.3%	7	18.4%
Aphakia, uncorrected	0	0.0%	0	0.0%	0	0.0%
Total curable	**15**	**78.9%**	**17**	**89.5%**	**32**	**84.2%**
Surgical complications	0	0.0%	0	0.0%	0	0.0%
Trachoma	0	0.0%	0	0.0%	0	0.0%
Phthysis	0	0.0%	0	0.0%	0	0.0%
Other corneal scar	1	5.3%	0	0.0%	1	2.6%
Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
Total preventable	**1**	**5.3%**	**0**	**0.0%**	**1**	**2.6%**
Total avoidable	**16**	**84.2%**	**17**	**89.5%**	**33**	**86.8%**
Glaucoma	0	0.0%	0	0.0%	0	0.0%
Diabetic retinopathy	0	0.0%	0	0.0%	0	0.0%
Potentially preventable*	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**
Globe abnormality	0	0.0%	0	0.0%	0	0.0%
ARMD	0	0.0%	0	0.0%	0	0.0%
Other post. segment / CNS	3	15.8%	2	10.5%	5	13.2%
Total posterior segment	**3**	**15.8%**	**2**	**10.5%**	**5**	**13.2%**
	19	**100.0%**	**19**	**100.0%**	**38**	**100.0%**

* Because an accurate diagnosis of glaucoma and diabetic retinopathy can be difficult with the limited facilities used in a Rapid Assessment, these potentially or partially preventable causes are listed separately.

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

	Male		Female		Total	
	n	%	n	%	n	%
Refractive error	39	57.4%	48	75.0%	87	65.9%
Cataract, untreated	16	23.5%	12	18.8%	28	21.2%
Aphakia, uncorrected	1	1.5%	0	0.0%	1	0.8%
Total curable	**56**	**82.4%**	**60**	**93.8%**	**116**	**87.9%**
Surgical complications	0	0.0%	0	0.0%	0	0.0%
Trachoma	0	0.0%	0	0.0%	0	0.0%
Phthysis	0	0.0%	0	0.0%	0	0.0%
Other corneal scar	2	2.9%	0	0.0%	2	1.5%
Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
Total preventable	**2**	**2.9%**	**0**	**0.0%**	**2**	**1.5%**
Total avoidable	**58**	**85.3%**	**60**	**93.8%**	**118**	**89.4%**
Glaucoma	0	0.0%	0	0.0%	0	0.0%
Diabetic retinopathy	1	1.5%	0	0.0%	1	0.8%
Potentially preventable*	**1**	**1.5%**	**0**	**0.0%**	**1**	**0.8%**
Globe abnormality	0	0.0%	0	0.0%	0	0.0%
ARMD	0	0.0%	0	0.0%	0	0.0%
Other post. segment / CNS	9	13.2%	4	6.3%	13	9.8%
Total posterior segment	**10**	**14.7%**	**4**	**6.3%**	**14**	**10.6%**
	68	**100.0%**	**64**	**100.0%**	**132**	**100.0%**

* Because an accurate diagnosis of glaucoma and diabetic retinopathy can be difficult with the limited facilities used in a Rapid Assessment, these potentially or partially preventable causes are listed separately.

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

	Male		Female		Total	
	n	%	n	%	n	%
Refractive error	102	79.7%	86	80.4%	188	80.0%
Cataract, untreated	18	14.1%	19	17.8%	37	15.7%
Aphakia, uncorrected	1	0.8%	0	0.0%	1	0.4%
Total curable	**121**	**94.5%**	**105**	**98.1%**	**226**	**96.2%**
Surgical complications	0	0.0%	0	0.0%	0	0.0%
Trachoma	0	0.0%	0	0.0%	0	0.0%
Phthysis	0	0.0%	0	0.0%	0	0.0%
Other corneal scar	0	0.0%	0	0.0%	0	0.0%
Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
Total preventable	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**
Total avoidable	**121**	**94.5%**	**105**	**98.1%**	**226**	**96.2%**
Glaucoma	0	0.0%	0	0.0%	0	0.0%
Diabetic retinopathy	1	0.8%	0	0.0%	1	0.4%
Potentially preventable*	**1**	**0.8%**	**0**	**0.0%**	**1**	**0.4%**
Globe abnormality	0	0.0%	0	0.0%	0	0.0%
ARMD	3	2.3%	0	0.0%	3	1.3%
Other post. segment / CNS	3	2.3%	2	1.9%	5	2.1%
Total posterior segment	**7**	**5.5%**	**2**	**1.9%**	**9**	**3.8%**
	128	**100.0%**	**107**	**100.0%**	**235**	**100.0%**

* Because an accurate diagnosis of glaucoma and diabetic retinopathy can be difficult with the limited facilities used in a Rapid Assessment, these potentially or partially preventable causes are listed separately.

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

	Male		Female		Total	
	n	%	n	%	n	%
Refractive error	261	80.3%	248	84.4%	509	82.2%
Cataract, untreated	41	12.6%	35	11.9%	76	12.3%
Aphakia, uncorrected	2	0.6%	0	0.0%	2	0.3%
Total curable	**304**	**93.5%**	**283**	**96.3%**	**587**	**94.8%**
Surgical complications	0	0.0%	0	0.0%	0	0.0%
Trachoma	0	0.0%	0	0.0%	0	0.0%
Phthysis	0	0.0%	0	0.0%	0	0.0%
Other corneal scar	3	0.9%	2	0.7%	5	0.8%
Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
Total preventable	**3**	**0.9%**	**2**	**0.7%**	**5**	**0.8%**
Total avoidable	**307**	**94.5%**	**285**	**96.9%**	**592**	**95.6%**
Glaucoma	0	0.0%	0	0.0%	0	0.0%
Diabetic retinopathy	1	0.3%	0	0.0%	1	0.2%
Potentially preventable*	**1**	**0.3%**	**0**	**0.0%**	**1**	**0.2%**
Globe abnormality	0	0.0%	0	0.0%	0	0.0%
ARMD	7	2.2%	0	0.0%	7	1.1%
Other post. segment / CNS	10	3.1%	9	3.1%	19	3.1%
Total posterior segment	**18**	**5.5%**	**9**	**3.1%**	**27**	**4.4%**
	325	**100.0%**	**294**	**100.0%**	**619**	**100.0%**

* Because an accurate diagnosis of glaucoma and diabetic retinopathy can be difficult with the limited facilities used in a Rapid Assessment, these potentially or partially preventable causes are listed separately.

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

	Male		Female		Total	
Level of visual acuity	n	%	n	%	n	%
Cataract blindness with VA<3/60 with best correction or pinhole						
Bilateral cataract blind	6	0.46	19	1.13	25	0.84
Unilateral cataract blind	39	3.00	60	3.57	99	3.32
Cataract blind eyes	51	1.96	98	2.92	149	2.50
Cataract with VA<6/60 with best correction or pinhole						
Bilateral cataract	10	0.77	20	1.19	30	1.01
Cataract eyes	65	2.50	111	3.30	176	2.96
Cataract with VA<6/18 with best correction or pinhole						
Bilateral cataract	28	2.16	38	2.26	66	2.22
Cataract eyes	109	4.20	149	4.43	258	4.33

NB. This table lists people and eyes with cataract and different levels of visual impairment. However, the primary cause of the visual impairment could be other than cataract

11. Sample prevalence of (pseudo)aphakia

	Male		Female		Total	
	n	%	n	%	n	%
Bilateral (pseudo)aphakia	21	1.62	21	1.25	42	1.41
Unilateral (pseudo)aphakia	27	2.08	53	3.15	80	2.69
(Pseudo)aphakic eyes	69	2.66	95	2.83	164	2.75

12. Cataract Surgical Coverage

Cataract Surgical Coverage (eyes) - percentage

	Male	Female	Total
VA < 3/60	57.5	49.2	52.4
VA < 6/60	51.5	46.1	48.2
VA < 6/18	38.8	38.9	38.9

Cataract Surgical Coverage (persons) - percentage

	Male	Female	Total
VA < 3/60	86.0	72.9	77.9
VA < 6/60	80.4	73.0	76.0
VA < 6/18	62.2	60.4	61.2

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

	Male		Female		Total	
	n	%	n	%	n	%
First eyes	48	69.6	74	77.9	122	74.4
Second eyes	21	30.4	21	22.1	42	25.6

14. Low Vision: people with VA<6/18 in the better eye with best correction.
not due to refractive error, cataract or uncorrected aphakia

	Male		Female		Total	
Age group	n	%	n	%	n	%
50 to 54 yrs	1	0.4	3	0.5	4	0.4
55 to 59 yrs	0	0.0	1	0.3	1	0.1
60 to 64 yrs	3	1.2	1	0.4	4	0.8
65 to 69 yrs	1	0.6	1	0.6	2	0.6
70 to 74 yrs	3	1.9	1	1.0	4	1.6
75 to 79 yrs	1	1.2	0	0.0	1	0.8
80 + yrs	6	7.3	2	4.1	8	6.1
Total	**15**	**1.2**	**9**	**0.5**	**24**	**0.8**

15. Comparison responders versus non-responders

	Non-responders		Responders	
	n	%	n	%
Not blind	127	88.2%	5,506	92.4%
Blind due to cataract	14	9.7%	149	2.5%
Blind due to other causes	2	1.4%	137	2.3%
Operated for	1	0.7%	164	2.8%
Total	144	100.0%	5,956	100.0%

INDICATORS BY SEX AND BY AGE GROUP - NOT ADJUSTED FOR AGE AND SEX

Date and time of report: 4/5/2010

This report is for the survey area JAMALPUR

Year and month when survey was conducted: 2010- 1 until 2010- 2

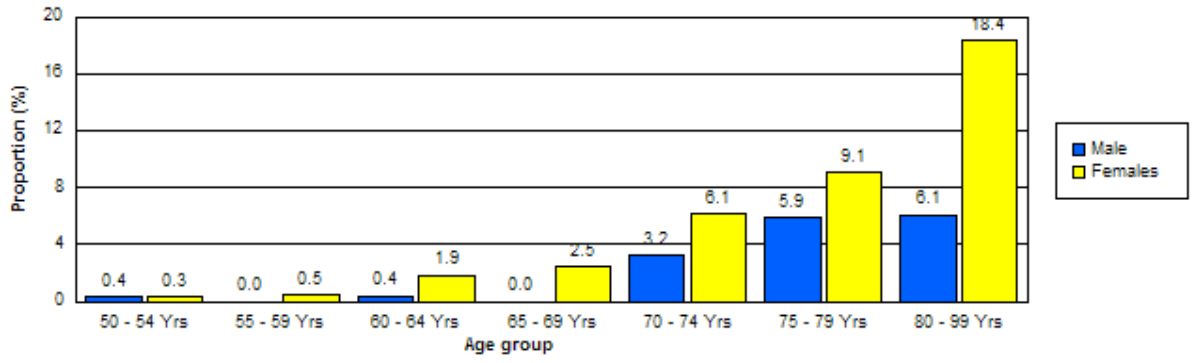
The sample size of the Rapid Assessment is sufficient to provide an acceptable accuracy of the overall prevalence of bilateral cataract blindness (VA <3/60). The accuracy of prevalence estimates for any subgroup is far less and caution should be taken in the interpretation of these data. Confidence intervals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

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	266	20.5	666	39.6	932	31.3
	307	23.7	392	23.3	699	23.5
	243	18.7	270	16.1	513	17.2
	160	12.3	161	9.6	321	10.8
	155	11.9	98	5.8	253	8.5
	85	6.5	44	2.6	129	4.3
	82	6.3	49	2.9	131	4.4
All ages	**1,298**	**100.0%**	**1,680**	**100.0%**	**2,978**	**100.0%**

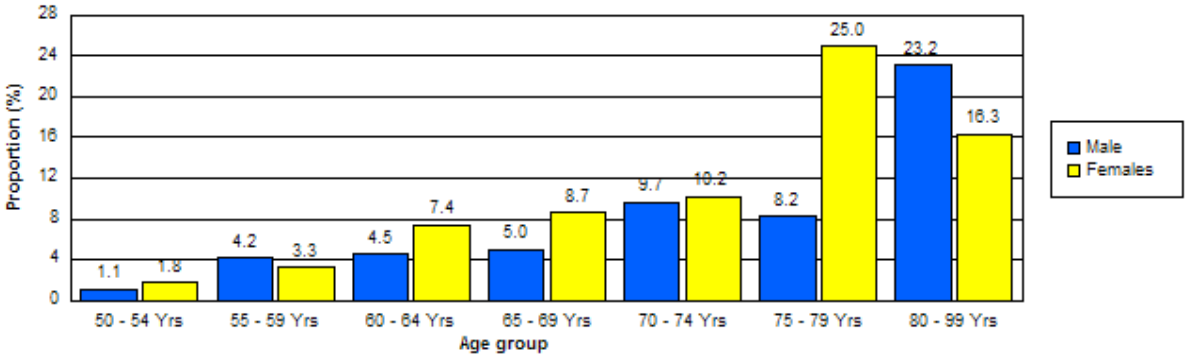
2. Prevalence of people with bilateral blindness - VA <3/60 in better eye with best correction (WHO definition of

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	1	0.4	2	0.3	3	0.3
	0	0.0	2	0.5	2	0.3
	1	0.4	5	1.9	6	1.2
	0	0.0	4	2.5	4	1.2
	5	3.2	6	6.1	11	4.3
	5	5.9	4	9.1	9	7.0
	5	6.1	9	18.4	14	10.7
All ages	**17**	**1.3**	**32**	**1.9**	**49**	**1.6**



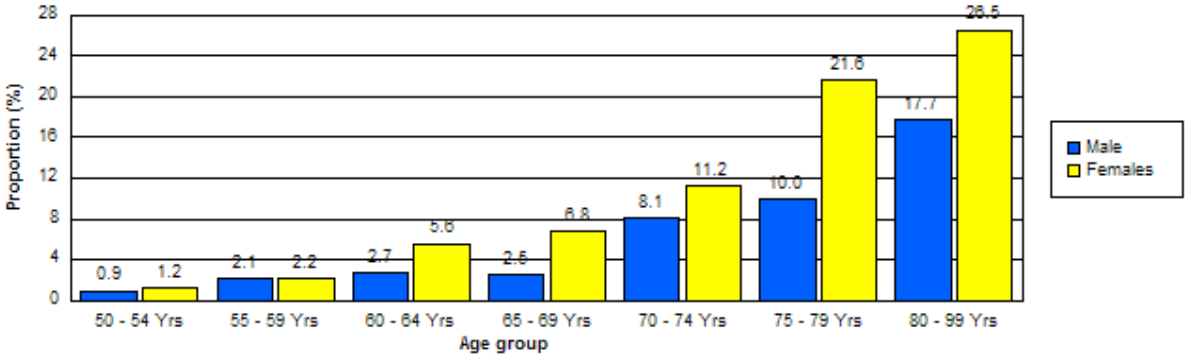
3. Prevalence of people with unilateral blindness - VA <3/60 with best correction (WHO definition of blindness)

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	3	1.1	12	1.8	15	1.6
	13	4.2	13	3.3	26	3.7
	11	4.5	20	7.4	31	6.0
	8	5.0	14	8.7	22	6.9
	15	9.7	10	10.2	25	9.9
	7	8.2	11	25.0	18	14.0
	19	23.2	8	16.3	27	20.6
All ages	**76**	**5.9**	**88**	**5.2**	**164**	**5.5**



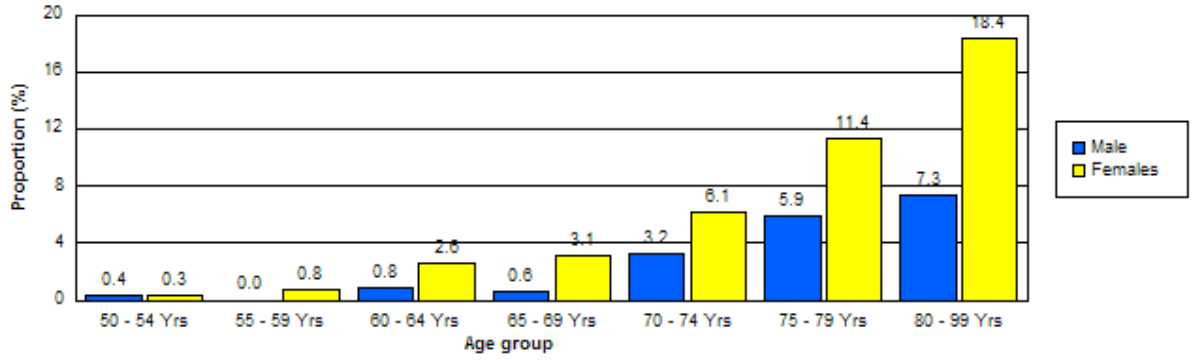
4. Prevalence of blind eyes - VA <3/60 with best correction (WHO definition of blindness)

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	5	0.9	16	1.2	21	1.1
	13	2.1	17	2.2	30	2.1
	13	2.7	30	5.6	43	4.2
	8	2.5	22	6.8	30	4.7
	25	8.1	22	11.2	47	9.3
	17	10.0	19	21.6	36	14.0
	29	17.7	26	26.5	55	21.0
All ages	**110**	**4.2**	**152**	**4.5**	**262**	**4.4**



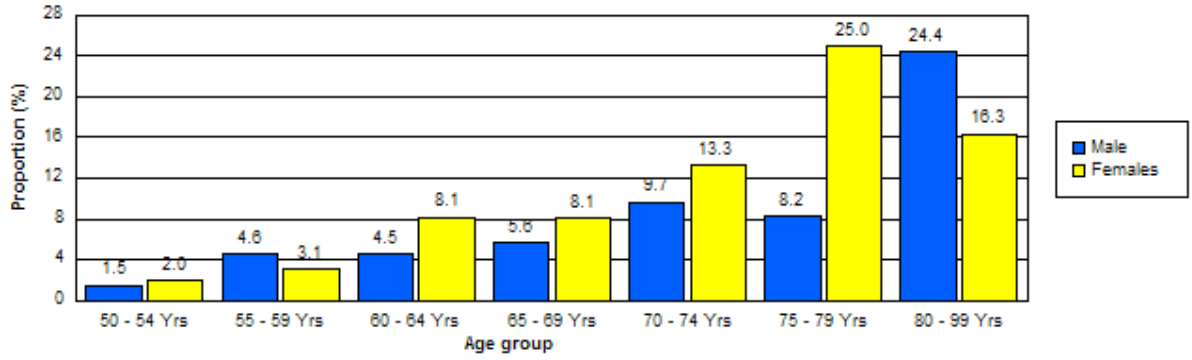
5. Prevalence of people with bilateral blindness - VA <3/60 in better eye with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	1	0.4	2	0.3	3	0.3
	0	0.0	3	0.8	3	0.4
	2	0.8	7	2.6	9	1.8
	1	0.6	5	3.1	6	1.9
	5	3.2	6	6.1	11	4.3
	5	5.9	5	11.4	10	7.8
	6	7.3	9	18.4	15	11.5
All ages	**20**	**1.5**	**37**	**2.2**	**57**	**1.9**



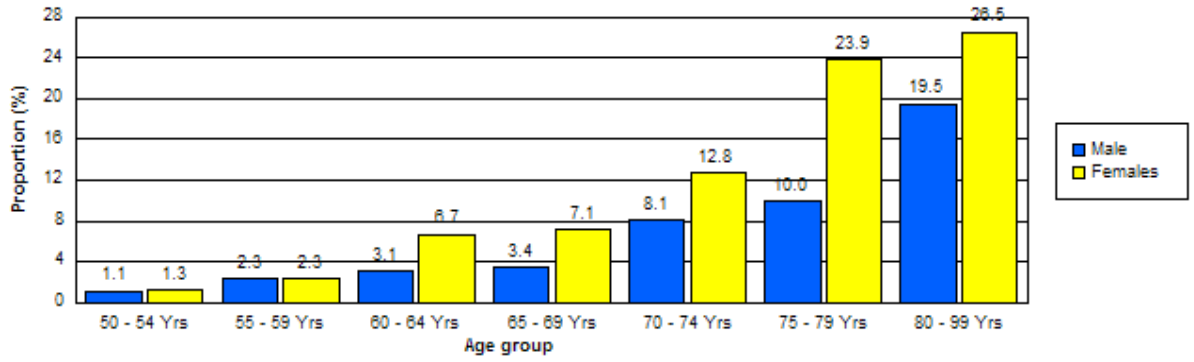
6. Prevalence of people with unilateral blindness - VA <3/60 with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	4	1.5	13	2.0	17	1.8
	14	4.6	12	3.1	26	3.7
	11	4.5	22	8.1	33	6.4
	9	5.6	13	8.1	22	6.9
	15	9.7	13	13.3	28	11.1
	7	8.2	11	25.0	18	14.0
	20	24.4	8	16.3	28	21.4
All ages	**80**	**6.2**	**92**	**5.5**	**172**	**5.8**



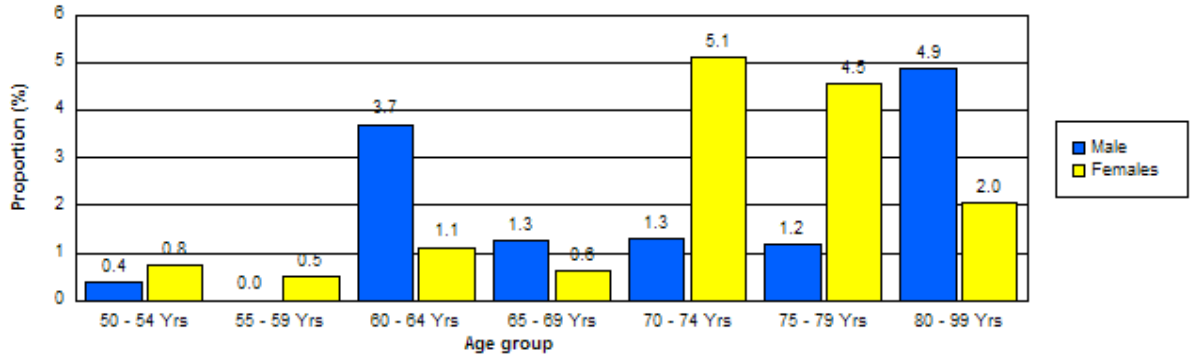
7. Prevalence of blind eyes - VA <3/60 with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	6	1.1	17	1.3	23	1.2
	14	2.3	18	2.3	32	2.3
	15	3.1	36	6.7	51	5.0
	11	3.4	23	7.1	34	5.3
	25	8.1	25	12.8	50	9.9
	17	10.0	21	23.9	38	14.7
	32	19.5	26	26.5	58	22.1
All ages	**120**	**4.6**	**166**	**4.9**	**286**	**4.8**



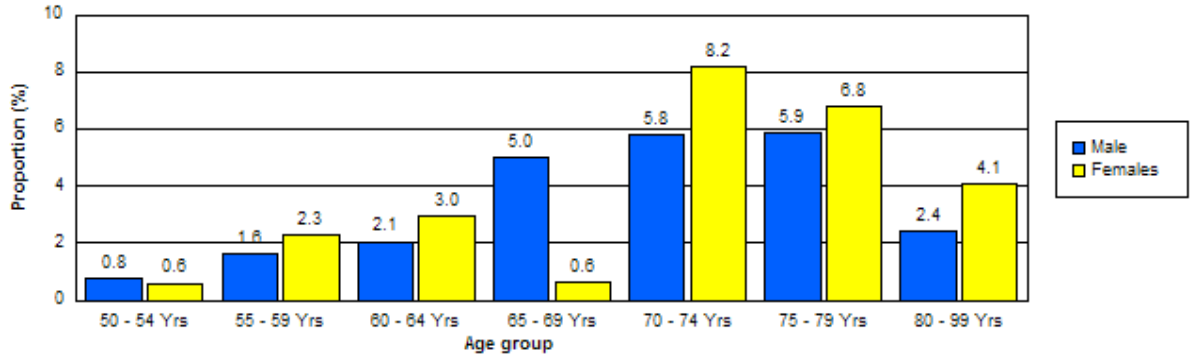
8. Prevalence of people with bilateral severe visual impairment - VA <6/60-3/60 in better eye with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	1	0.4	5	0.8	6	0.6
	0	0.0	2	0.5	2	0.3
	9	3.7	3	1.1	12	2.3
	2	1.3	1	0.6	3	0.9
	2	1.3	5	5.1	7	2.8
	1	1.2	2	4.5	3	2.3
	4	4.9	1	2.0	5	3.8
All ages	**19**	**1.5**	**19**	**1.1**	**38**	**1.3**



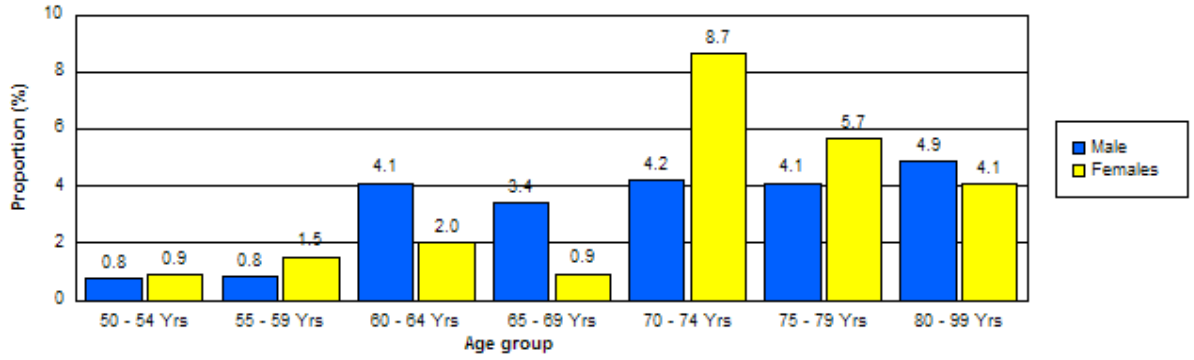
9. Prevalence of people with unilateral severe visual impairment - VA <6/60-3/60 with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	2	0.8	4	0.6	6	0.6
	5	1.6	9	2.3	14	2.0
	5	2.1	8	3.0	13	2.5
	8	5.0	1	0.6	9	2.8
	9	5.8	8	8.2	17	6.7
	5	5.9	3	6.8	8	6.2
	2	2.4	2	4.1	4	3.1
All ages	**36**	**2.8**	**35**	**2.1**	**71**	**2.4**



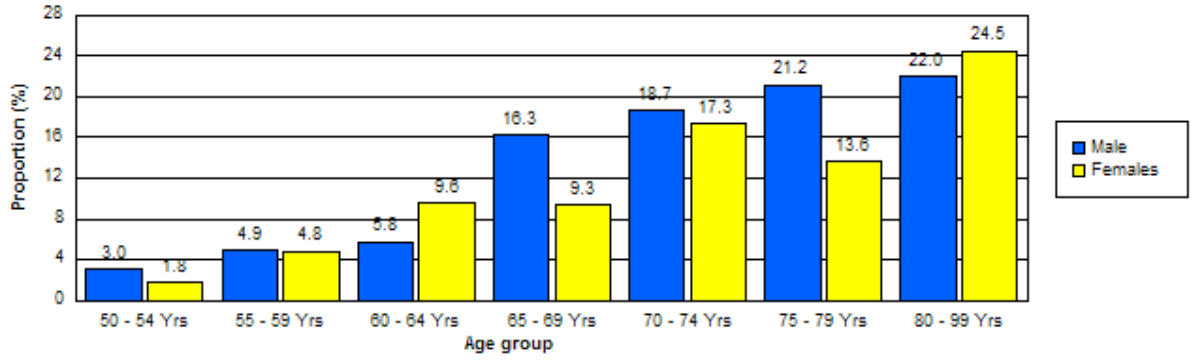
10. Prevalence of SVI eyes - VA VA<6/60-3/60 with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	4	0.8	12	0.9	16	0.9
	5	0.8	12	1.5	17	1.2
	20	4.1	11	2.0	31	3.0
	11	3.4	3	0.9	14	2.2
	13	4.2	17	8.7	30	5.9
	7	4.1	5	5.7	12	4.7
	8	4.9	4	4.1	12	4.6
All ages	**68**	**2.6**	**64**	**1.9**	**132**	**2.2**



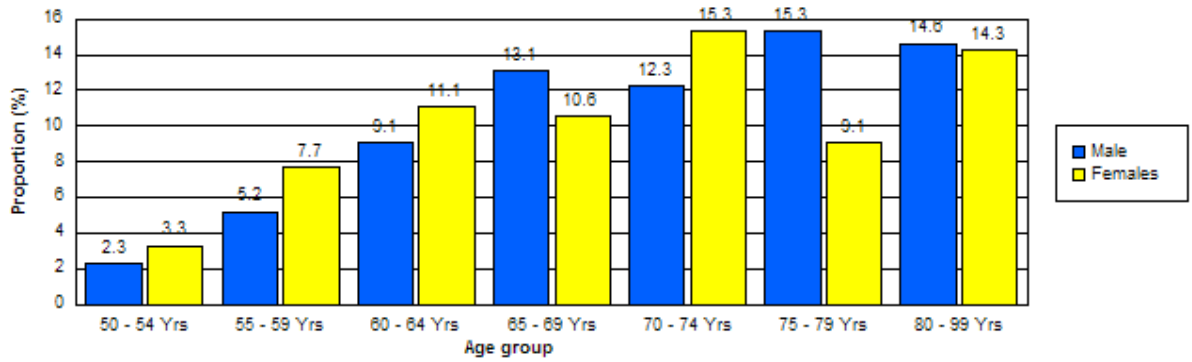
11. Prevalence of people with bilateral visual impairment - VA <6/18-6/60 in better eye with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	8	3.0	12	1.8	20	2.1
	15	4.9	19	4.8	34	4.9
	14	5.8	26	9.6	40	7.8
	26	16.3	15	9.3	41	12.8
	29	18.7	17	17.3	46	18.2
	18	21.2	6	13.6	24	18.6
	18	22.0	12	24.5	30	22.9
All ages	**128**	**9.9**	**107**	**6.4**	**235**	**7.9**



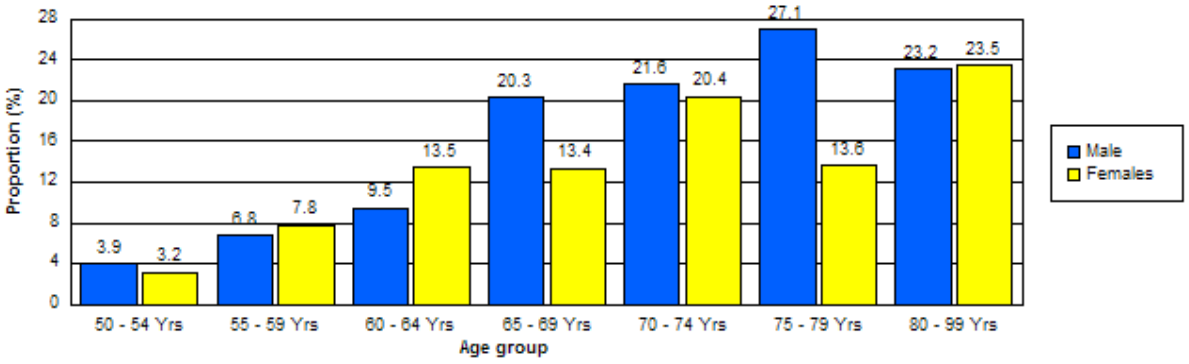
12. Prevalence of people with unilateral visual impairment - VA <6/18-6/60 with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	6	2.3	22	3.3	28	3.0
	16	5.2	30	7.7	46	6.6
	22	9.1	30	11.1	52	10.1
	21	13.1	17	10.6	38	11.8
	19	12.3	15	15.3	34	13.4
	13	15.3	4	9.1	17	13.2
	12	14.6	7	14.3	19	14.5
All ages	**109**	**8.4**	**125**	**7.4**	**234**	**7.9**



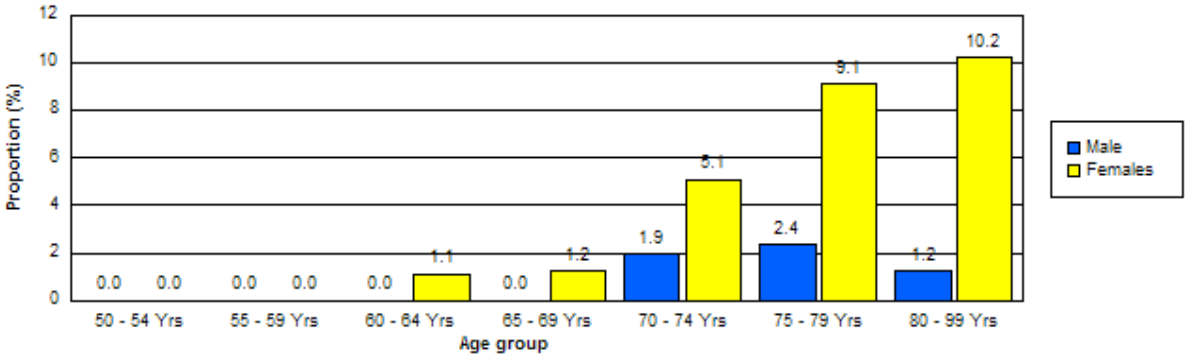
13. Prevalence of VI eyes - VA <6/18-6/60 with available correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	21	3.9	42	3.2	63	3.4
	42	6.8	61	7.8	103	7.4
	46	9.5	73	13.5	119	11.6
	65	20.3	43	13.4	108	16.8
	67	21.6	40	20.4	107	21.1
	46	27.1	12	13.6	58	22.5
	38	23.2	23	23.5	61	23.3
All ages	**325**	**12.5**	**294**	**8.8**	**619**	**10.4**



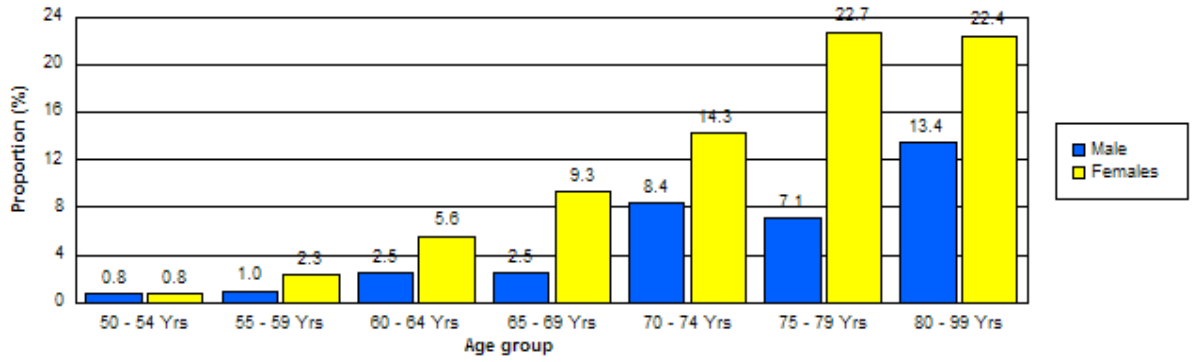
14. Prevalence of people bilateral blind due to cataract - VA <3/60 in better eye with best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	0	0.0
	0	0.0	3	1.1	3	0.6
	0	0.0	2	1.2	2	0.6
	3	1.9	5	5.1	8	3.2
	2	2.4	4	9.1	6	4.7
	1	1.2	5	10.2	6	4.6
All ages	**6**	**0.5**	**19**	**1.1**	**25**	**0.8**



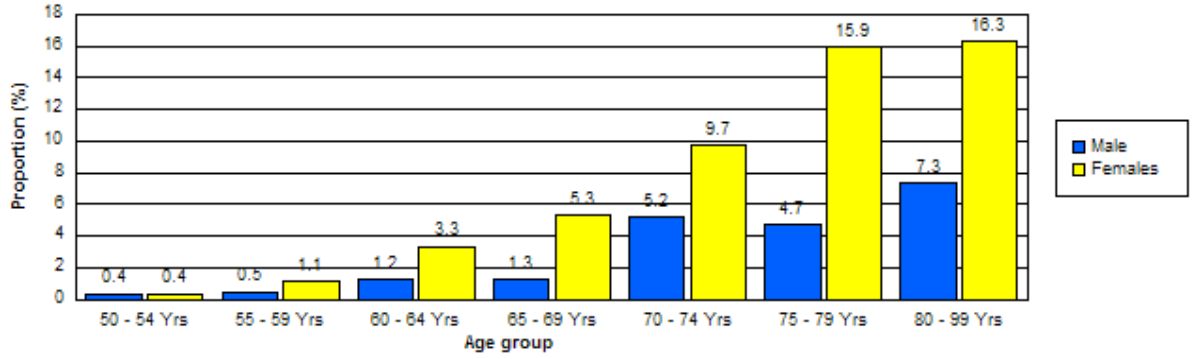
15. Prevalence of people unilateral blind due to cataract - VA <3/60 with best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	2	0.8	5	0.8	7	0.8
	3	1.0	9	2.3	12	1.7
	6	2.5	15	5.6	21	4.1
	4	2.5	15	9.3	19	5.9
	13	8.4	14	14.3	27	10.7
	6	7.1	10	22.7	16	12.4
	11	13.4	11	22.4	22	16.8
All ages	**45**	**3.5**	**79**	**4.7**	**124**	**4.2**



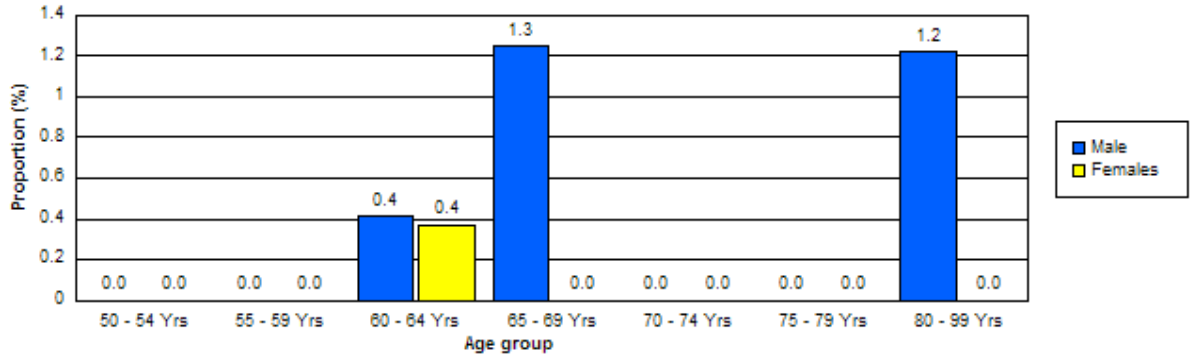
16. Prevalence of cataract blind eyes - VA <3/60 with best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	2	0.4	5	0.4	7	0.4
	3	0.5	9	1.1	12	0.9
	6	1.2	18	3.3	24	2.3
	4	1.3	17	5.3	21	3.3
	16	5.2	19	9.7	35	6.9
	8	4.7	14	15.9	22	8.5
	12	7.3	16	16.3	28	10.7
All ages	**51**	**2.0**	**98**	**2.9**	**149**	**2.5**



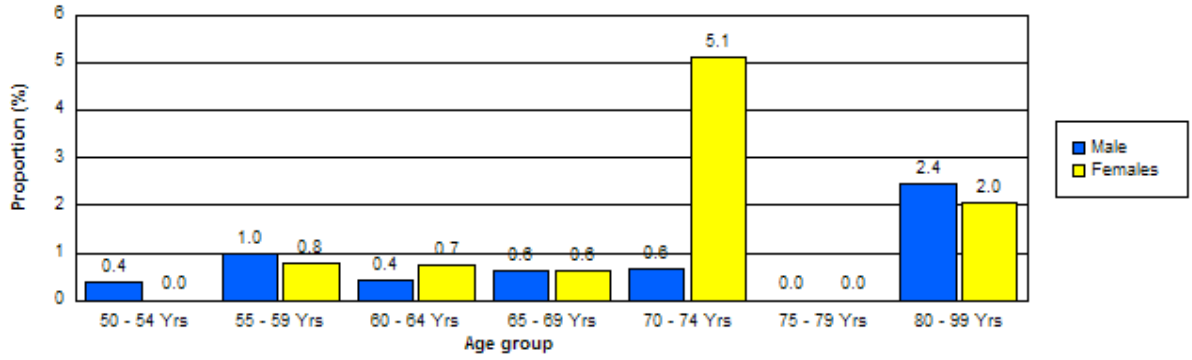
17. Prevalence of people with bilateral severe visual impairment due to cataract - VA <6/60-3/60 - best eye, best correctio

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	0	0.0
	1	0.4	1	0.4	2	0.4
	2	1.3	0	0.0	2	0.6
	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	0	0.0
	1	1.2	0	0.0	1	0.8
All ages	**4**	**0.3**	**1**	**0.1**	**5**	**0.2**



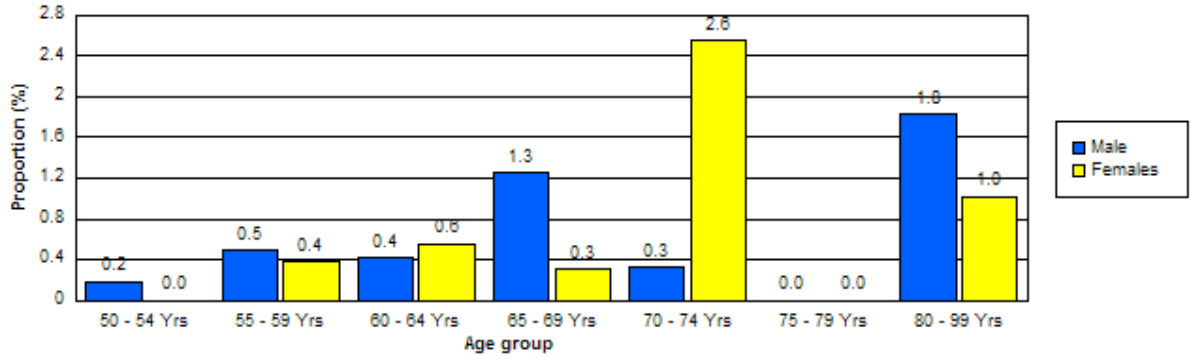
18. Prevalence of people with unilateral severe visual impairment due to cataract - VA <3/60-3/60 with best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	1	0.4	0	0.0	1	0.1
	3	1.0	3	0.8	6	0.9
	1	0.4	2	0.7	3	0.6
	1	0.6	1	0.6	2	0.6
	1	0.6	5	5.1	6	2.4
	0	0.0	0	0.0	0	0.0
	2	2.4	1	2.0	3	2.3
All ages	**9**	**0.7**	**12**	**0.7**	**21**	**0.7**



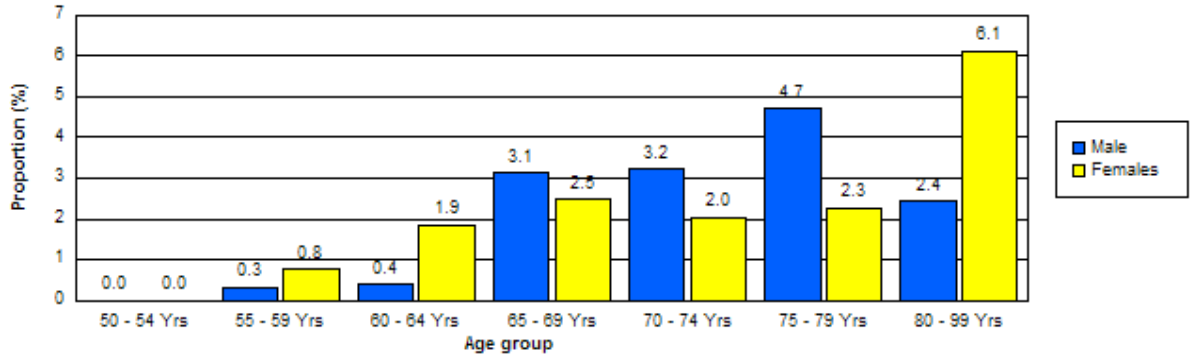
19. Prevalence of cataract SVI eyes - VA VA<6/60-3/60 with best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	1	0.2	0	0.0	1	0.1
	3	0.5	3	0.4	6	0.4
	2	0.4	3	0.6	5	0.5
	4	1.3	1	0.3	5	0.8
	1	0.3	5	2.6	6	1.2
	0	0.0	0	0.0	0	0.0
	3	1.8	1	1.0	4	1.5
All ages	**14**	**0.5**	**13**	**0.4**	**27**	**0.5**



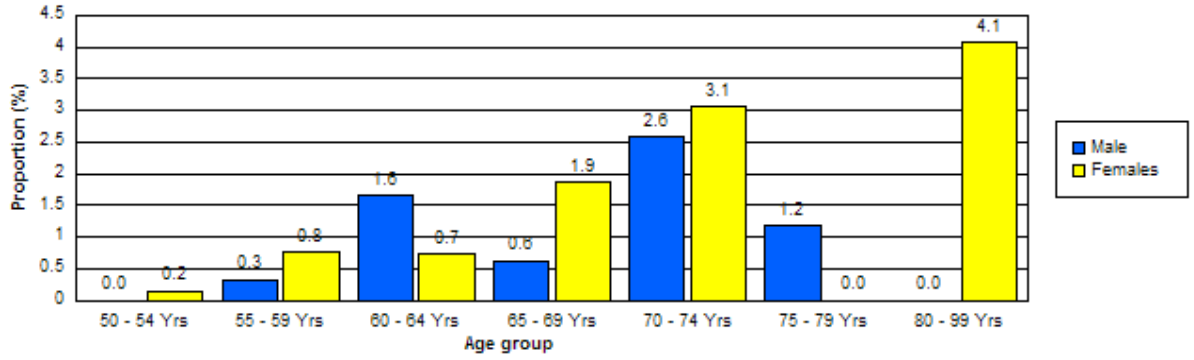
20. Prevalence of people with bilateral visual impairment due to cataract - VA <6/18-6/60 - best eye, best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	0	0.0	0	0.0	0	0.0
	1	0.3	3	0.8	4	0.6
	1	0.4	5	1.9	6	1.2
	5	3.1	4	2.5	9	2.8
	5	3.2	2	2.0	7	2.8
	4	4.7	1	2.3	5	3.9
	2	2.4	3	6.1	5	3.8
All ages	**18**	**1.4**	**18**	**1.1**	**36**	**1.2**



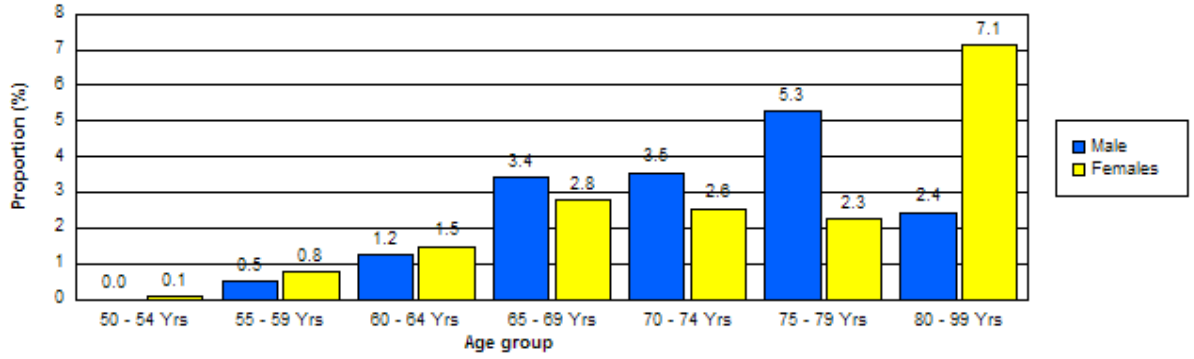
21. Prevalence of people with unilateral visual impairment due to cataract - VA <6/18-6/60 with best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	0	0.0	1	0.2	1	0.1
	1	0.3	3	0.8	4	0.6
	4	1.6	2	0.7	6	1.2
	1	0.6	3	1.9	4	1.2
	4	2.6	3	3.1	7	2.8
	1	1.2	0	0.0	1	0.8
	0	0.0	2	4.1	2	1.5
All ages	**11**	**0.8**	**14**	**0.8**	**25**	**0.8**



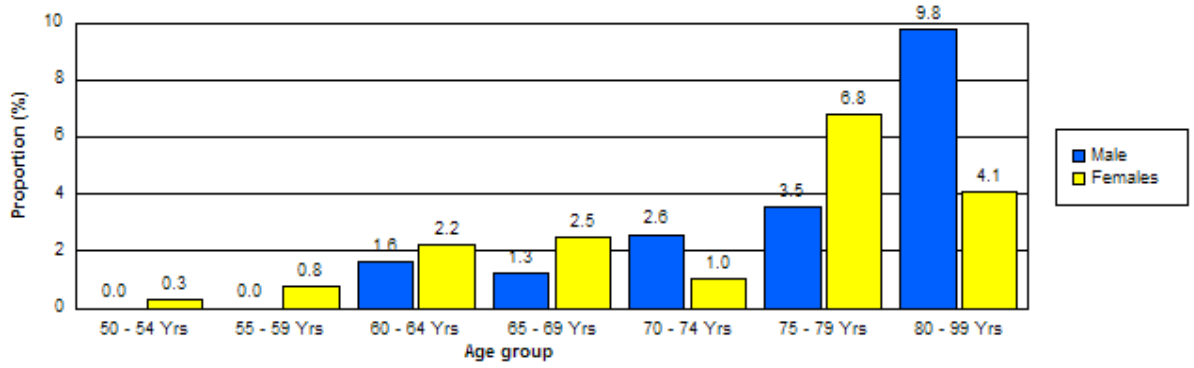
22. Prevalence of cataract VI eyes - VA <6/18-6/60 with best correction

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	0	0.0	1	0.1	1	0.1
	3	0.5	6	0.8	9	0.6
	6	1.2	8	1.5	14	1.4
	11	3.4	9	2.8	20	3.1
	11	3.5	5	2.6	16	3.2
	9	5.3	2	2.3	11	4.3
	4	2.4	7	7.1	11	4.2
All ages	**44**	**1.7**	**38**	**1.1**	**82**	**1.4**



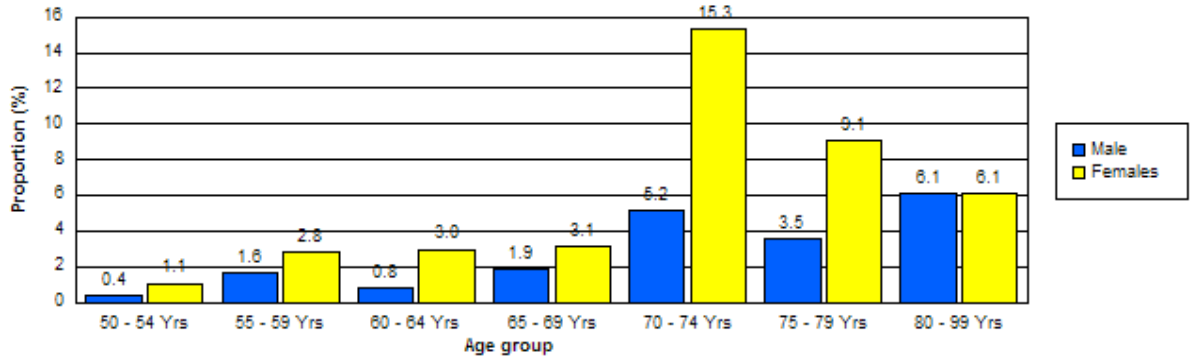
23. Prevalence of people with bilateral (pseudo)aphakia

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	0	0.0	2	0.3	2	0.2
	0	0.0	3	0.8	3	0.4
	4	1.6	6	2.2	10	1.9
	2	1.3	4	2.5	6	1.9
	4	2.6	1	1.0	5	2.0
	3	3.5	3	6.8	6	4.7
	8	9.8	2	4.1	10	7.6
All ages	**21**	**1.6**	**21**	**1.3**	**42**	**1.4**



24. Prevalence of people with unilateral (pseudo)aphakia

Agegroup	Male		Female		Total	
	n	%	n	%	n	%
	1	0.4	7	1.1	8	0.9
	5	1.6	11	2.8	16	2.3
	2	0.8	8	3.0	10	1.9
	3	1.9	5	3.1	8	2.5
	8	5.2	15	15.3	23	9.1
	3	3.5	4	9.1	7	5.4
	5	6.1	3	6.1	8	6.1
All ages	**27**	**2.1**	**53**	**3.2**	**80**	**2.7**



VISUAL OUTCOME AFTER CATARACT SURGERY (LONG-TERM OUTCOME)

1. Visual outcome after cataract surgery
2. Causes of poor visual outcome after cataract surgery
3. Data on cataract surgical services in survey area
4. Patient satisfaction after cataract surgery

Date and time of the report: 4/5/2010

This report is for the survey area JAMALPUR

Year and month when survey was completed: 2010- 1 until 2010- 2

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%,

1. Visual acuity of operated eyes in sample with available correction (PVA)

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	97	76.4%	12	32.4%	0	0.0%	109	66.5%
Cannot see 6/18, can see 6/60	21	16.5%	10	27.0%	0	0.0%	31	18.9%
Cannot see 6/60	9	7.1%	15	40.5%	0	0.0%	24	14.6%
Total	**127**	**100.0%**	**37**	**100.0%**	**0**	**100.0%**	**164**	**100.0%**

2. Visual acuity of operated eyes in sample with best correction (BCVA)

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	114	89.8%	18	48.6%	0	0.0%	132	80.5%
Cannot see 6/18, can see 6/60	9	7.1%	11	29.7%	0	0.0%	20	12.2%
Cannot see 6/60	4	3.1%	8	21.6%	0	0.0%	12	7.3%
Total	**127**	**100.0%**	**37**	**100.0%**	**0**	**100.0%**	**164**	**100.0%**

3. Visual acuity with available correction in eyes operated less than 5 years ago

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	80	76.2%	0	0.0%	0	0.0%	80	75.5%
Cannot see 6/18, can see 6/60	17	16.2%	0	0.0%	0	0.0%	17	16.0%
Cannot see 6/60	8	7.6%	1	100.0%	0	0.0%	9	8.5%
Total	**105**	**100.0%**	**1**	**100.0%**	**0**	**100.0%**	**106**	**100.0%**

4. Visual acuity with best correction in eyes operated less than 5 years ago

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	94	89.5%	0	0.0%	0	0.0%	94	88.7%
Cannot see 6/18, can see 6/60	7	6.7%	0	0.0%	0	0.0%	7	6.6%
Cannot see 6/60	4	3.8%	1	100.0%	0	0.0%	5	4.7%
Total	**105**	**100.0%**	**1**	**100.0%**	**0**	**100.0%**	**106**	**100.0%**

5. Visual acuity with available correction in eyes operated 5 or more years ago

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	17	77.3%	12	33.3%	0	0.0%	29	50.0%
Cannot see 6/18, can see 6/60	4	18.2%	10	27.8%	0	0.0%	14	24.1%
Cannot see 6/60	1	4.5%	14	38.9%	0	0.0%	15	25.9%
Total	**22**	**100.0%**	**36**	**100.0%**	**0**	**100.0%**	**58**	**100.0%**

6. Visual acuity with best correction in eyes operated 5 or more years ago

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	20	90.9%	18	50.0%	0	0.0%	38	65.5%
Cannot see 6/18, can see 6/60	2	9.1%	11	30.6%	0	0.0%	13	22.4%
Cannot see 6/60	0	0.0%	7	19.4%	0	0.0%	7	12.1%
Total	**22**	**100.0%**	**36**	**100.0%**	**0**	**100.0%**	**58**	**100.0%**

7. Age at time of surgery & type of surgery in males

Age group	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
45 to 49	0	0.0%	1	4.5%	0	0.0%	1	1.4%
50 to 54	2	4.3%	2	9.1%	0	0.0%	4	5.8%
55 to 59	10	21.3%	4	18.2%	0	0.0%	14	20.3%
60 to 64	7	14.9%	8	36.4%	0	0.0%	15	21.7%
65 to 69	6	12.8%	3	13.6%	0	0.0%	9	13.0%
70 to 74	11	23.4%	2	9.1%	0	0.0%	13	18.8%
75 to 79	8	17.0%	2	9.1%	0	0.0%	10	14.5%
80 and older	3	6.4%	0	0.0%	0	0.0%	3	4.3%
Total	**47**	**100.0%**	**22**	**100.0%**	**0**	**100.0%**	**69**	**100.0%**

8. Age at time of surgery & type of surgery in females

Age group	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
30 to 39	0	0.0%	1	6.7%	0	0.0%	1	1.1%
40 to 44	1	1.3%	0	0.0%	0	0.0%	1	1.1%
45 to 49	5	6.3%	1	6.7%	0	0.0%	6	6.3%
50 to 54	15	18.8%	1	6.7%	0	0.0%	16	16.8%
55 to 59	18	22.5%	3	20.0%	0	0.0%	21	22.1%
60 to 64	18	22.5%	4	26.7%	0	0.0%	22	23.2%
65 to 69	14	17.5%	5	33.3%	0	0.0%	19	20.0%
70 to 74	5	6.3%	0	0.0%	0	0.0%	5	5.3%
75 to 79	2	2.5%	0	0.0%	0	0.0%	2	2.1%
80 and older	2	2.5%	0	0.0%	0	0.0%	2	2.1%
Total	**80**	**100.0%**	**15**	**100.0%**	**0**	**100.0%**	**95**	**100.0%**

9. Place of surgery by sex

	Males n	Males %	Females n	Females %	Total n	Total %
Government hospital	14	20.3%	17	17.9%	31	18.9%
Voluntary/Charitable hospital	4	5.8%	5	5.3%	9	5.5%
Private hospital	29	42.0%	46	48.4%	75	45.7%
Eye camp/Improvised setting	22	31.9%	27	28.4%	49	29.9%
Total	**69**	**100.0%**	**95**	**100.0%**	**164**	**100.0%**

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

Top: with IOL Bottom: without IOL	Govt. Hosp. eyes	 %	Vol. Hosp. eyes	 %	Pvt. Hosp. eyes	 %	Eye camp eyes	 %	Traditional eyes	 %
Can see 6/18	17	70.8%	6	85.7%	58	82.9%	16	61.5%	0	
Cannot see 6/18, can see 6/60	6	25.0%	1	14.3%	8	11.4%	6	23.1%	0	
Cannot see 6/60	1	4.2%	0	0.0%	4	5.7%	4	15.4%	0	
Total	**24**	**100.0%**	**7**	**100.0%**	**70**	**100.0%**	**26**	**100.0%**	**0**	**100.0%**
Can see 6/18	0	0.0%	0	0.0%	3	60.0%	9	39.1%	0	
Cannot see 6/18, can see 6/60	3	42.9%	1	50.0%	0	0.0%	6	26.1%	0	
Cannot see 6/60	4	57.1%	1	50.0%	2	40.0%	8	34.8%	0	
Total	**7**	**100.0%**	**2**	**100.0%**	**5**	**100.0%**	**23**	**100.0%**	**0**	**100.0%**

11. Use of spectacles by sex

	Males n	 %	Females n	 %	Total n	 %
Without glasses	39	56.5%	66	69.5%	105	64.0%
With glasses	30	43.5%	29	30.5%	59	36.0%
Total	**69**	**100.0%**	**95**	**100.0%**	**164**	**100.0%**

12. Are you satisfied with results of cataract surgery?

	Males n	 %	Females n	 %	Total n	 %
Very satisfied	46	66.7%	70	73.7%	116	70.7%
Partially satisfied	17	24.6%	20	21.1%	37	22.6%
Indifferent	2	2.9%	0	0.0%	2	1.2%
very dissatisfied	4	5.8%	5	5.3%	9	5.5%
Total	**69**	**100.0%**	**95**	**100.0%**	**164**	**100.0%**

13. Post-op presenting VA and satisfaction with results of surgery

Top: with IOL Bottom: without IOL	Very satisfied eyes	 %	Part. satisfied eyes	 %	Indifferent eyes	 %	Part. unsat. eyes	 %	Very unsat. eyes	 %
Can see 6/18	95	91.3%	2	11.1%	0		0		0	0.0%
Cannot see 6/18, can see 6/60	8	7.7%	12	66.7%	0		0		1	20.0%
Cannot see 6/60	1	1.0%	4	22.2%	0		0		4	80.0%
Total	**104**	**100.0%**	**18**	**100.0%**	**0**	**100.0%**	**0**	**100.0%**	**5**	**100.0%**
Can see 6/18	9	75.0%	3	15.8%	0	0.0%	0		0	0.0%
Cannot see 6/18, can see 6/60	2	16.7%	8	42.1%	0	0.0%	0		0	0.0%
Cannot see 6/60	1	8.3%	8	42.1%	2	100.0%	0		4	100.0%
Total	**12**	**100.0%**	**19**	**100.0%**	**2**	**100.0%**	**0**	**100.0%**	**4**	**100.0%**

14. Post-op presenting VA and causes of poor outcome in eyes operated less than 3 years ago

Top: with IOL Bottom: without IOL	Selection eyes	 %	Surgery eyes	 %	Spectacles eyes	 %	Sequelae eyes	 %	No relation eyes	 %
Can see 6/18	0	0.0%	0	0.0%	0	0.0%	0	0.0%	73	97.3%
Cannot see 6/18, can see 6/60	1	50.0%	0	0.0%	10	71.4%	1	100.0%	2	2.7%
Cannot see 6/60	1	50.0%	2	100.0%	4	28.6%	0	0.0%	0	0.0%
Total	**2**	**100.0%**	**2**	**100.0%**	**14**	**100.0%**	**1**	**100.0%**	**75**	**100.0%**
Cannot see 6/60	1	100.0%	0		0		0		0	
Total	**1**	**100.0%**	**0**	**100.0%**	**0**	**100.0%**	**0**	**100.0%**	**0**	**100.0%**

15. Post-op presenting VA and causes of poor outcome in eyes operated 3 or more years ago

Top: with IOL Bottom: without IOL	Selection eyes	 %	Surgery eyes	 %	Spectacles eyes	 %	Sequelae eyes	 %	No relation eyes	 %
Can see 6/18	0	0.0%	0	0.0%	0	0.0%	0		24	100.0%
Cannot see 6/18, can see 6/60	2	100.0%	0	0.0%	5	83.3%	0		0	0.0%
Cannot see 6/60	0	0.0%	1	100.0%	1	16.7%	0		0	0.0%
Total	**2**	**100.0%**	**1**	**100.0%**	**6**	**100.0%**	**0**	**100.0%**	**24**	**100.0%**
Can see 6/18	0	0.0%	0	0.0%	0	0.0%	0		12	85.7%
Cannot see 6/18, can see 6/60	4	40.0%	0	0.0%	5	45.5%	0		1	7.1%
Cannot see 6/60	6	60.0%	1	100.0%	6	54.5%	0		1	7.1%
Total	**10**	**100.0%**	**1**	**100.0%**	**11**	**100.0%**	**0**	**100.0%**	**14**	**100.0%**

16. Proportion and type of surgery

	Males n	 %	Females n	 %	Total n	 %
With IOL	47	68.1%	80	84.2%	127	77.4%
Without IOL	22	31.9%	15	15.8%	37	22.6%
Total	**69**	**100.0%**	**95**	**100.0%**	**164**	**100.0%**

VISUAL OUTCOME AFTER CATARACT SURGERY (LONG-TERM OUTCOME)

1. Visual outcome after cataract surgery
2. Causes of poor visual outcome after cataract surgery
3. Data on cataract surgical services in survey area
4. Patient satisfaction after cataract surgery

Date and time of the report: 4/5/2010

This report is for the survey area JAMALPUR

Year and month when survey was completed: 2010- 1 until 2010- 2

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%,

1. Visual acuity of operated eyes in sample with available correction (PVA)

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	97	76.4%	12	32.4%	0	0.0%	109	66.5%
Cannot see 6/18, can see 6/60	21	16.5%	10	27.0%	0	0.0%	31	18.9%
Cannot see 6/60	9	7.1%	15	40.5%	0	0.0%	24	14.6%
Total	**127**	**100.0%**	**37**	**100.0%**	**0**	**100.0%**	**164**	**100.0%**

2. Visual acuity of operated eyes in sample with best correction (BCVA)

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	114	89.8%	18	48.6%	0	0.0%	132	80.5%
Cannot see 6/18, can see 6/60	9	7.1%	11	29.7%	0	0.0%	20	12.2%
Cannot see 6/60	4	3.1%	8	21.6%	0	0.0%	12	7.3%
Total	**127**	**100.0%**	**37**	**100.0%**	**0**	**100.0%**	**164**	**100.0%**

3. Visual acuity with available correction in eyes operated less than 5 years ago

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	80	76.2%	0	0.0%	0	0.0%	80	75.5%
Cannot see 6/18, can see 6/60	17	16.2%	0	0.0%	0	0.0%	17	16.0%
Cannot see 6/60	8	7.6%	1	100.0%	0	0.0%	9	8.5%
Total	**105**	**100.0%**	**1**	**100.0%**	**0**	**100.0%**	**106**	**100.0%**

4. Visual acuity with best correction in eyes operated less than 5 years ago

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	94	89.5%	0	0.0%	0	0.0%	94	88.7%
Cannot see 6/18, can see 6/60	7	6.7%	0	0.0%	0	0.0%	7	6.6%
Cannot see 6/60	4	3.8%	1	100.0%	0	0.0%	5	4.7%
Total	**105**	**100.0%**	**1**	**100.0%**	**0**	**100.0%**	**106**	**100.0%**

5. Visual acuity with available correction in eyes operated 5 or more years ago

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	17	77.3%	12	33.3%	0	0.0%	29	50.0%
Cannot see 6/18, can see 6/60	4	18.2%	10	27.8%	0	0.0%	14	24.1%
Cannot see 6/60	1	4.5%	14	38.9%	0	0.0%	15	25.9%
Total	**22**	**100.0%**	**36**	**100.0%**	**0**	**100.0%**	**58**	**100.0%**

6. Visual acuity with best correction in eyes operated 5 or more years ago

Category of visual acuity	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
Can see 6/18	20	90.9%	18	50.0%	0	0.0%	38	65.5%
Cannot see 6/18, can see 6/60	2	9.1%	11	30.6%	0	0.0%	13	22.4%
Cannot see 6/60	0	0.0%	7	19.4%	0	0.0%	7	12.1%
Total	**22**	**100.0%**	**36**	**100.0%**	**0**	**100.0%**	**58**	**100.0%**

7. Age at time of surgery & type of surgery in males

Age group	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
45 to 49	0	0.0%	1	4.5%	0	0.0%	1	1.4%
50 to 54	2	4.3%	2	9.1%	0	0.0%	4	5.8%
55 to 59	10	21.3%	4	18.2%	0	0.0%	14	20.3%
60 to 64	7	14.9%	8	36.4%	0	0.0%	15	21.7%
65 to 69	6	12.8%	3	13.6%	0	0.0%	9	13.0%
70 to 74	11	23.4%	2	9.1%	0	0.0%	13	18.8%
75 to 79	8	17.0%	2	9.1%	0	0.0%	10	14.5%
80 and older	3	6.4%	0	0.0%	0	0.0%	3	4.3%
Total	**47**	**100.0%**	**22**	**100.0%**	**0**	**100.0%**	**69**	**100.0%**

8. Age at time of surgery & type of surgery in females

Age group	IOLs eyes	IOLs %	Non-IOLs eyes	Non-IOLs %	Couching eyes	Couching %	Total eyes	Total %
30 to 39	0	0.0%	1	6.7%	0	0.0%	1	1.1%
40 to 44	1	1.3%	0	0.0%	0	0.0%	1	1.1%
45 to 49	5	6.3%	1	6.7%	0	0.0%	6	6.3%
50 to 54	15	18.8%	1	6.7%	0	0.0%	16	16.8%
55 to 59	18	22.5%	3	20.0%	0	0.0%	21	22.1%
60 to 64	18	22.5%	4	26.7%	0	0.0%	22	23.2%
65 to 69	14	17.5%	5	33.3%	0	0.0%	19	20.0%
70 to 74	5	6.3%	0	0.0%	0	0.0%	5	5.3%
75 to 79	2	2.5%	0	0.0%	0	0.0%	2	2.1%
80 and older	2	2.5%	0	0.0%	0	0.0%	2	2.1%
Total	**80**	**100.0%**	**15**	**100.0%**	**0**	**100.0%**	**95**	**100.0%**

9. Place of surgery by sex

	Males n	Males %	Females n	Females %	Total n	Total %
Government hospital	14	20.3%	17	17.9%	31	18.9%
Voluntary/Charitable hospital	4	5.8%	5	5.3%	9	5.5%
Private hospital	29	42.0%	46	48.4%	75	45.7%
Eye camp/Improvised setting	22	31.9%	27	28.4%	49	29.9%
Total	**69**	**100.0%**	**95**	**100.0%**	**164**	**100.0%**

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

Top: with IOL Bottom: without IOL	Govt. Hosp. eyes	%	Vol. Hosp. eyes	%	Pvt. Hosp. eyes	%	Eye camp eyes	%	Traditional eyes	%
Can see 6/18	17	70.8%	6	85.7%	58	82.9%	16	61.5%	0	
Cannot see 6/18, can see 6/60	6	25.0%	1	14.3%	8	11.4%	6	23.1%	0	
Cannot see 6/60	1	4.2%	0	0.0%	4	5.7%	4	15.4%	0	
Total	**24**	**100.0%**	**7**	**100.0%**	**70**	**100.0%**	**26**	**100.0%**	**0**	**100.0%**
Can see 6/18	0	0.0%	0	0.0%	3	60.0%	9	39.1%	0	
Cannot see 6/18, can see 6/60	3	42.9%	1	50.0%	0	0.0%	6	26.1%	0	
Cannot see 6/60	4	57.1%	1	50.0%	2	40.0%	8	34.8%	0	
Total	**7**	**100.0%**	**2**	**100.0%**	**5**	**100.0%**	**23**	**100.0%**	**0**	**100.0%**

11. Use of spectacles by sex

	Males		Females		Total	
	n	%	n	%	n	%
Without glasses	39	56.5%	66	69.5%	105	64.0%
With glasses	30	43.5%	29	30.5%	59	36.0%
Total	**69**	**100.0%**	**95**	**100.0%**	**164**	**100.0%**

12. Are you satisfied with results of cataract surgery?

	Males		Females		Total	
	n	%	n	%	n	%
Very satisfied	46	66.7%	70	73.7%	116	70.7%
Partially satisfied	17	24.6%	20	21.1%	37	22.6%
Indifferent	2	2.9%	0	0.0%	2	1.2%
very dissatisfied	4	5.8%	5	5.3%	9	5.5%
Total	**69**	**100.0%**	**95**	**100.0%**	**164**	**100.0%**

13. Post-op presenting VA and satisfaction with results of surgery

Top: with IOL Bottom: without IOL	Very satisfied eyes	%	Part. satisfied eyes	%	Indifferent eyes	%	Part. unsat. eyes	%	Very unsat. eyes	%
Can see 6/18	95	91.3%	2	11.1%	0		0		0	0.0%
Cannot see 6/18, can see 6/60	8	7.7%	12	66.7%	0		0		1	20.0%
Cannot see 6/60	1	1.0%	4	22.2%	0		0		4	80.0%
Total	**104**	**100.0%**	**18**	**100.0%**	**0**	**100.0%**	**0**	**100.0%**	**5**	**100.0%**
Can see 6/18	9	75.0%	3	15.8%	0	0.0%	0		0	0.0%
Cannot see 6/18, can see 6/60	2	16.7%	8	42.1%	0	0.0%	0		0	0.0%
Cannot see 6/60	1	8.3%	8	42.1%	2	100.0%	0		4	100.0%
Total	**12**	**100.0%**	**19**	**100.0%**	**2**	**100.0%**	**0**	**100.0%**	**4**	**100.0%**

14. Post-op presenting VA and causes of poor outcome in eyes operated less than 3 years ago

Top: with IOL Bottom: without IOL	Selection eyes	 %	Surgery eyes	 %	Spectacles eyes	 %	Sequelae eyes	 %	No relation eyes	 %
Can see 6/18	0	0.0%	0	0.0%	0	0.0%	0	0.0%	73	97.3%
Cannot see 6/18, can see 6/60	1	50.0%	0	0.0%	10	71.4%	1	100.0%	2	2.7%
Cannot see 6/60	1	50.0%	2	100.0%	4	28.6%	0	0.0%	0	0.0%
Total	**2**	**100.0%**	**2**	**100.0%**	**14**	**100.0%**	**1**	**100.0%**	**75**	**100.0%**
Cannot see 6/60	1	100.0%	0		0		0		0	
Total	**1**	**100.0%**	**0**	**100.0%**	**0**	**100.0%**	**0**	**100.0%**	**0**	**100.0%**

15. Post-op presenting VA and causes of poor outcome in eyes operated 3 or more years ago

Top: with IOL Bottom: without IOL	Selection eyes	 %	Surgery eyes	 %	Spectacles eyes	 %	Sequelae eyes	 %	No relation eyes	 %
Can see 6/18	0	0.0%	0	0.0%	0	0.0%	0		24	100.0%
Cannot see 6/18, can see 6/60	2	100.0%	0	0.0%	5	83.3%	0		0	0.0%
Cannot see 6/60	0	0.0%	1	100.0%	1	16.7%	0		0	0.0%
Total	**2**	**100.0%**	**1**	**100.0%**	**6**	**100.0%**	**0**	**100.0%**	**24**	**100.0%**
Can see 6/18	0	0.0%	0	0.0%	0	0.0%	0		12	85.7%
Cannot see 6/18, can see 6/60	4	40.0%	0	0.0%	5	45.5%	0		1	7.1%
Cannot see 6/60	6	60.0%	1	100.0%	6	54.5%	0		1	7.1%
Total	**10**	**100.0%**	**1**	**100.0%**	**11**	**100.0%**	**0**	**100.0%**	**14**	**100.0%**

16. Proportion and type of surgery

	Males n	 %	Females n	 %	Total n	 %
With IOL	47	68.1%	80	84.2%	127	77.4%
Without IOL	22	31.9%	15	15.8%	37	22.6%
Total	**69**	**100.0%**	**95**	**100.0%**	**164**	**100.0%**

SAMPLING ERROR (CLUSTER SAMPLING) & DESIGN EFFECT

Date and time of the report: 4/5/2010

This report is for the survey area JAMALPUR

Year and month when survey was completed: 2010- 1 until 2010- 2

To assess the accuracy of the estimate of the prevalence of a condition in the RAAB survey, the sampling error for the prevalence estimate of that condition in cluster sampling (SEcrs) is calculated, using the formula's provided by:
Bennett S, Woods T, Liyanage WM, Smith DL.A simplified general method for cluster-sample surveys of health in developing countries. World Health Stat Q. 1991;44(3):98-106. The design effect (DEFF) is calculated by SEcrs^2 / SEsrs^2.

The table below shows the number of cases and the prevalence (sample prev.) of various conditions in the sample population, and the corresponding 95% confidence interval (CI 95%).
When the age and sex composition of the sample differs from that in the entire survey area, the actual prevalence may differ from that calculated in the sample. Run the report 'Age & sex adjusted results' to calculate the prevalence for and estimated number of people with the condition in the entire survey area. To calculate the prevalence interval at 95% confidence, take the age & sex adjusted prevalence from that report and subtract and add the Var. 95% to find the 95% lower confidence level and the 95% higher confidence level, respectively. Use the Var. 90% and the Var. 80% to calculate the prevalence intervals at 90% and 80% confidence. Var. 95% = 1.96 * SEcrs; Var. 90% = 1.65 * SEcrs; Var. 80% = 1.28 * SEcrs

Bilateral blind, best corrected			**Cluster sampling**					
	Cases in sample	**Sample prev.**	**CI 95%**	**Var. 95%**	**Var. 90%**	**Var. 80%**	**DEFF**	**SEcrs**
Male	17	1.31	0.53 - 2.09	0.78	0.66	0.51	1.60	0.40
Female	32	1.90	1.04 - 2.77	0.87	0.73	0.57	1.76	0.44
Total	**49**	**1.65**	**1.01 - 2.28**	**0.63**	**0.53**	**0.41**	**1.92**	**0.32**

Blind eyes, best corrected			**Cluster sampling**					
	Cases in sample	**Sample prev.**	**CI 95%**	**Var. 95%**	**Var. 90%**	**Var. 80%**	**DEFF**	**SEcrs**
Male	110	4.24	3.17 - 5.31	1.07	0.90	0.70	0.96	0.55
Female	152	4.52	3.44 - 5.61	1.09	0.91	0.71	1.20	0.55
Total	**262**	**4.40**	**3.58 - 5.22**	**0.82**	**0.69**	**0.54**	**1.24**	**0.42**

Bilateral SVI, best corrected			**Cluster sampling**					
	Cases in sample	**Sample prev.**	**CI 95%**	**Var. 95%**	**Var. 90%**	**Var. 80%**	**DEFF**	**SEcrs**
Male	10	0.77	0.20 - 1.34	0.57	0.48	0.37	1.42	0.29
Female	3	0.18	-0.02 - 0.38	0.20	0.17	0.13	0.98	0.10
Total	**13**	**0.44**	**0.17 - 0.70**	**0.27**	**0.22**	**0.17**	**1.27**	**0.14**

SVI eyes, best corrected			**Cluster sampling**					
	Cases in sample	**Sample prev.**	**CI 95%**	**Var. 95%**	**Var. 90%**	**Var. 80%**	**DEFF**	**SEcrs**
Male	28	1.04	0.39 - 1.69	0.65	0.54	0.42	1.37	0.33
Female	18	0.54	0.31 - 0.77	0.23	0.19	0.15	0.43	0.12
Total	**46**	**0.76**	**0.45 - 1.07**	**0.31**	**0.26**	**0.20**	**0.99**	**0.16**

Bilateral VI, best corrected			**Cluster sampling**					
	Cases in sample	**Sample prev.**	**CI 95%**	**Var. 95%**	**Var. 90%**	**Var. 80%**	**DEFF**	**SEcrs**
Male	35	2.70	1.83 - 3.56	0.86	0.72	0.56	0.96	0.44
Female	42	2.50	1.70 - 3.30	0.80	0.67	0.52	1.15	0.41
Total	**77**	**2.59**	**1.94 - 3.23**	**0.64**	**0.54**	**0.42**	**1.27**	**0.33**

VI eyes, best corrected			**Cluster sampling**					
	Cases in sample	**Sample prev.**	**CI 95%**	**Var. 95%**	**Var. 90%**	**Var. 80%**	**DEFF**	**SEcrs**
Male	98	3.74	2.73 - 4.74	1.01	0.85	0.66	0.95	0.51
Female	102	3.01	2.21 - 3.80	0.80	0.67	0.52	0.95	0.41
Total	**198**	**3.32**	**2.63 - 4.02**	**0.69**	**0.58**	**0.45**	**1.16**	**0.35**

Bilateral blind, available correction			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	20	1.54	0.69 - 2.39	0.85	0.72	0.56	1.62	0.44
Female	37	2.20	1.29 - 3.11	0.91	0.76	0.59	1.68	0.46
Total	**57**	**1.91**	**1.22 - 2.61**	**0.69**	**0.58**	**0.45**	**1.98**	**0.35**

Blind eyes, available correction			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	120	4.62	3.49 - 5.76	1.13	0.95	0.74	0.98	0.58
Female	166	4.94	3.84 - 6.04	1.10	0.92	0.72	1.12	0.56
Total	**286**	**4.80**	**3.92 - 5.69**	**0.88**	**0.74**	**0.58**	**1.32**	**0.45**

Bilateral SVI, available correction			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	19	1.46	0.81 - 2.12	0.66	0.55	0.43	1.01	0.33
Female	19	1.13	0.58 - 1.68	0.55	0.46	0.36	1.17	0.28
Total	**38**	**1.28**	**0.82 - 1.73**	**0.45**	**0.38**	**0.29**	**1.25**	**0.23**

SVI eyes, available correction			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	68	2.62	1.81 - 3.43	0.81	0.68	0.53	0.88	0.42
Female	64	1.90	1.27 - 2.54	0.64	0.53	0.42	0.95	0.32
Total	**132**	**2.22**	**1.70 - 2.73**	**0.51**	**0.43**	**0.34**	**0.95**	**0.26**

Bilateral VI, available correction			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	128	9.86	8.27 - 11.45	1.59	1.34	1.04	0.96	0.81
Female	107	6.37	4.94 - 7.79	1.43	1.20	0.93	1.49	0.73
Total	**235**	**7.89**	**6.75 - 9.03**	**1.14**	**0.96**	**0.75**	**1.39**	**0.58**

VI eyes, available correction			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	326	12.52	10.93 - 14.11	1.59	1.34	1.04	0.78	0.81
Female	294	8.75	7.36 - 10.14	1.39	1.16	0.91	1.05	0.71
Total	**620**	**10.39**	**9.24 - 11.55**	**1.15**	**0.97**	**0.75**	**1.11**	**0.59**

Bilateral cataract blind			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	6	0.46	0.05 - 0.88	0.41	0.35	0.27	1.26	0.21
Female	19	1.13	0.53 - 1.73	0.60	0.50	0.39	1.39	0.30
Total	**25**	**0.84**	**0.46 - 1.22**	**0.38**	**0.32**	**0.25**	**1.34**	**0.19**

Unilateral cataract blind			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	39	3.00	2.00 - 4.01	1.00	0.84	0.66	1.17	0.51
Female	60	3.57	2.69 - 4.45	0.88	0.74	0.57	0.98	0.45
Total	**99**	**3.32**	**2.67 - 3.98**	**0.66**	**0.55**	**0.43**	**1.05**	**0.34**

Eyes cataract blind			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	52	1.96	1.24 - 2.68	0.72	0.60	0.47	0.91	0.37
Female	98	2.92	2.10 - 3.73	0.81	0.68	0.53	1.02	0.41
Total	**150**	**2.50**	**1.95 - 3.05**	**0.55**	**0.46**	**0.36**	**0.97**	**0.28**

Bilateral cataract SVI			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	1	0.08	-0.07 - 0.23	0.15	0.13	0.10	1.00	0.08
Female	0	0.00	0.00 - 0.00	0.00	0.00	0.00	0.00	0.00
Total	**1**	**0.03**	**-0.03 - 0.10**	**0.07**	**0.06**	**0.04**	**1.00**	**0.03**

Unilateral cataract SVI			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	12	0.92	0.34 - 1.51	0.59	0.49	0.38	1.27	0.30
Female	13	0.77	0.39 - 1.15	0.38	0.32	0.25	0.82	0.19
Total	**25**	**0.84**	**0.48 - 1.19**	**0.35**	**0.30**	**0.23**	**1.17**	**0.18**

Eyes cataract SVI			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	14	0.54	0.22 - 0.86	0.32	0.27	0.21	0.65	0.16
Female	14	0.39	0.20 - 0.58	0.19	0.16	0.12	0.41	0.10
Total	**28**	**0.45**	**0.27 - 0.64**	**0.18**	**0.15**	**0.12**	**0.58**	**0.09**

Bilateral cataract VI			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	15	1.16	0.49 - 1.82	0.67	0.56	0.44	1.32	0.34
Female	6	0.36	0.08 - 0.63	0.27	0.23	0.18	0.92	0.14
Total	**21**	**0.71**	**0.34 - 1.07**	**0.36**	**0.30**	**0.24**	**1.45**	**0.18**

Unilateral cataract VI			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	14	1.08	0.59 - 1.57	0.49	0.41	0.32	0.77	0.25
Female	26	1.55	0.91 - 2.18	0.63	0.53	0.41	1.15	0.32
Total	**40**	**1.34**	**0.90 - 1.78**	**0.44**	**0.37**	**0.29**	**1.13**	**0.22**

Eyes cataract VI			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	44	1.69	0.96 - 2.43	0.73	0.61	0.48	1.09	0.37
Female	38	1.13	0.67 - 1.59	0.46	0.38	0.30	0.82	0.23
Total	**82**	**1.38**	**0.90 - 1.85**	**0.47**	**0.40**	**0.31**	**1.28**	**0.24**

Bilateral (pseudo)aphakia			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	21	1.62	0.79 - 2.45	0.83	0.70	0.54	1.46	0.42
Female	21	1.25	0.63 - 1.87	0.62	0.52	0.41	1.38	0.32
Total	**42**	**1.41**	**0.88 - 1.94**	**0.53**	**0.44**	**0.34**	**1.55**	**0.27**

Unilateral (pseudo)aphakia			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	27	2.08	1.35 - 2.81	0.73	0.61	0.47	0.88	0.37
Female	53	3.15	2.32 - 3.99	0.84	0.70	0.55	1.00	0.43
Total	**80**	**2.69**	**2.11 - 3.27**	**0.58**	**0.49**	**0.38**	**1.00**	**0.30**

Eyes (pseudo)aphakia			Cluster sampling					
	Cases in sample	Sample prev.	CI 95%	Var. 95%	Var. 90%	Var. 80%	DEFF	SEcrs
Male	70	2.66	1.84 - 3.47	0.82	0.69	0.53	0.87	0.42
Female	96	2.83	2.08 - 3.58	0.75	0.63	0.49	0.89	0.38
Total	**164**	**2.75**	**2.21 - 3.29**	**0.54**	**0.45**	**0.35**	**0.84**	**0.28**

RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS
AGE AND SEX ADJUSTED

Date and time of the report: 4/5/2010

This report is for the survey area JAMALPUR

Year and month when survey was completed: 2010- 1 until 2010- 2

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,

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

Male	136,919	55.0%
Female	112,251	45.0%
Total	**249,170**	**100.0%**

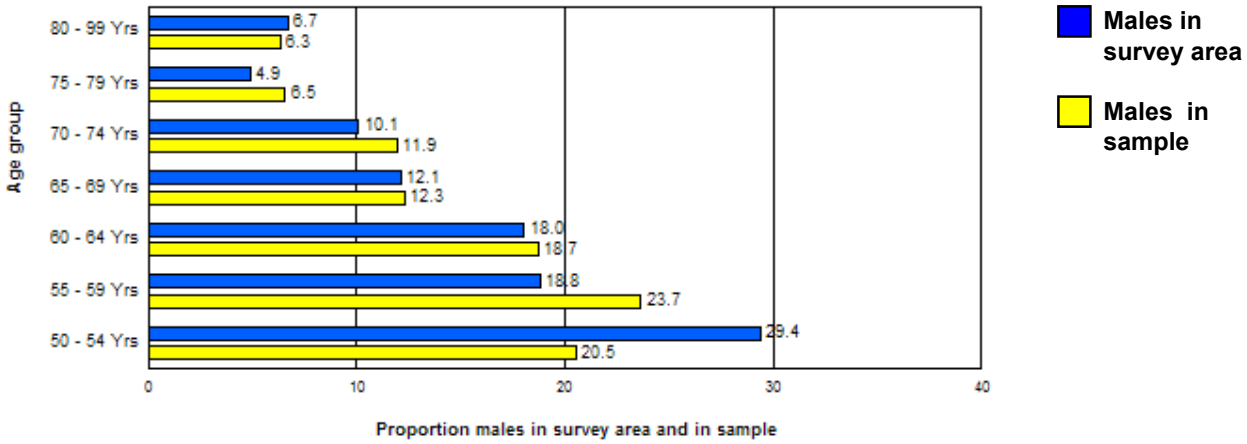
2a. Age and sex composition of population in sample

	Male		Female		Total	
Age groups	n	%	n	%	n	%
50 - 54 Yrs	266	20.5%	666	39.6%	932	31.3%
55 - 59 Yrs	307	23.7%	392	23.3%	699	23.5%
60 - 64 Yrs	243	18.7%	270	16.1%	513	17.2%
65 - 69 Yrs	160	12.3%	161	9.6%	321	10.8%
70 - 74 Yrs	155	11.9%	98	5.8%	253	8.5%
75 - 79 Yrs	85	6.5%	44	2.6%	129	4.3%
80 - 99 Yrs	82	6.3%	49	2.9%	131	4.4%
Total	**1,298**	**100.0%**	**1,680**	**100.0%**	**2,978**	**100.0%**

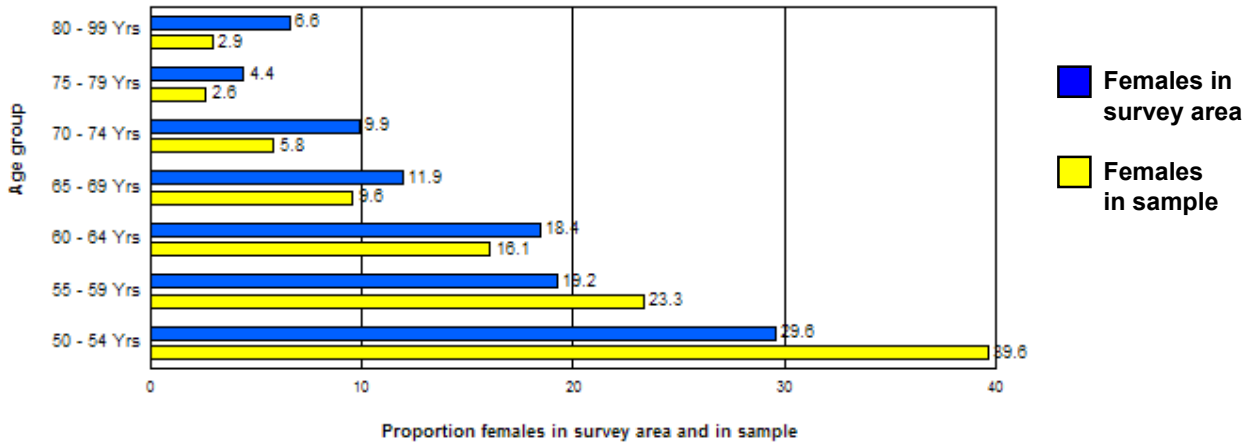
2b. Age and sex composition of population in entire survey area

	Male		Female		Total	
Age groups	n	%	n	%	n	%
50 - 54 Yrs	40,213	29.4%	33,202	29.6%	73,415	29.5%
55 - 59 Yrs	25,767	18.8%	21,587	19.2%	47,354	19.0%
60 - 64 Yrs	24,688	18.0%	20,662	18.4%	45,350	18.2%
65 - 69 Yrs	16,603	12.1%	13,363	11.9%	29,966	12.0%
70 - 74 Yrs	13,800	10.1%	11,102	9.9%	24,902	10.0%
75 - 79 Yrs	6,684	4.9%	4,934	4.4%	11,618	4.7%
80 - 99 Yrs	9,164	6.7%	7,401	6.6%	16,565	6.6%
Total	**136,919**	**100.0%**	**112,251**	**100.0%**	**249,170**	**100.0%**

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



3b. Proportion of females in total survey area and in sample



4. Adjusted results for all causes of blindness, SVI and VI

Estimated cases in people 50+ in survey area	Male n	Male %	Male CI95%	Female n	Female %	Female CI95%	Total n	Total %	Total CI95%
Blindness - VA<3/60 in better eye, best corrected or pinhole (WHO definition)									
Bilateral blind	1,650	1.21	±0.78	3,412	3.04	±0.87	5,062	2.03	±0.63
Blind eyes	10,801	3.94	±1.07	14,406	6.42	±1.09	25,207	5.06	±0.82
Blindness - VA<3/60 in better eye, with available correction									
Bilateral blind	1,967	1.44	±0.85	3,815	3.40	±0.91	5,782	2.32	±0.69
Blind eyes	11,886	4.34	±1.13	15,617	6.96	±1.10	27,503	5.52	±0.88
Severe Visual Impairment (SVI) - VA<6/60 - 3/60 in better eye with available correction									
Bilateral SVI	1,977	1.44	±0.66	1,614	1.44	±0.55	3,591	1.44	±0.45
SVI eyes	6,800	2.48	±0.81	5,441	2.42	±0.64	12,240	2.46	±0.51
Visual Impairment (VI) - VA<6/18 - 6/60 in better eye with available correction									
Bilateral VI	12,598	9.20	±1.59	9,290	8.28	±1.43	21,888	8.78	±1.14
VI eyes	31,947	11.67	±1.59	23,959	10.67	±1.39	55,907	11.22	±1.15

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

Estimated cases in people 50+ in survey area	Male n	Male %	Female n	Female %	Total n	Total %
Blindness - VA<3/60 in better eye, with available correction						
Bilateral blind	1,967	1.44	3,815	3.40	5,782	2.32
Blind eyes	11,886	4.34	15,617	6.96	27,503	5.52
VA<6/60 in better eye with available correction						
Bilateral <6/60	3,944	2.88	5,429	4.84	9,373	3.76
Eyes <6/60	18,686	6.82	21,057	9.38	39,743	7.98
VA<6/18 in better eye with available correction						
Bilateral <6/18	16,542	12.08	14,719	13.11	31,261	12.55
Eyes <6/18	50,633	18.49	45,017	20.05	95,650	19.19

6. Adjusted results for cataract and Blindness, SVI and VI with best correction or pinhole

	Male n	Male %	Male CI95%	Female n	Female %	Female CI95%	Total n	Total %	Total CI95%
Cataract and VA<3/60 in better eye with best correction or pinhole									
Bilateral cataract	536	0.39	±0.41	2,166	1.93	±0.60	2,702	1.08	±0.38
Unilateral cataract	4,437	3.24	±1.00	7,507	6.69	±0.88	11,944	4.79	±0.66
Cataract eyes	5,510	2.01	±0.72	11,838	5.27	±0.81	17,348	3.48	±0.55
Cataract and SVI in better eye with best correction or pinhole									
Bilateral cataract	421	0.31	±0.15	77	0.07	±0.00	497	0.20	±0.07
Unilateral cataract	921	0.67	±0.59	1,119	1.00	±0.38	2,040	0.82	±0.35
Cataract eyes	1,446	0.53	±0.32	1,195	0.53	±0.19	2,641	0.53	±0.18
Cataract and VI in better eye with best correction or pinhole									
Bilateral cataract	1,688	1.23	±0.67	1,672	1.49	±0.27	3,359	1.35	±0.36
Unilateral cataract	1,029	0.75	±0.49	1,259	1.12	±0.63	2,288	0.92	±0.44
Cataract eyes	4,137	1.51	±0.73	3,587	1.60	±0.46	7,724	1.55	±0.47

NB. This table lists people and eyes with cataract and different levels of visual impairment.
However, the primary cause of the visual impairment could be other than cataract

7. Adjusted results for cataract and VA<3/60, VA<6/60 and VA<6/18 with best correction or pinhole

	Male n	Male %	Female n	Female %	Total n	Total %
Cataract and VA<3/60 in better eye with best correction or pinhole						
Bilateral cataract	536	0.39	2,166	1.93	2,702	1.08
Unilateral cataract	4,437	3.24	7,507	6.69	11,944	4.79
Cataract eyes	5,510	2.01	11,838	5.27	17,348	3.48
Cataract and VA<6/60 in better eye with best correction or pinhole						
Bilateral cataract	957	0.70	2,242	2.00	3,199	1.28
Unilateral cataract	5,358	3.91	8,625	7.68	13,984	5.61
Cataract eyes	6,955	2.54	13,033	5.81	19,988	4.01
Cataract and VA<6/18 in better eye with best correction or pinhole						
Bilateral cataract	2,645	1.93	3,914	3.49	6,559	2.63
Unilateral cataract	6,387	4.66	9,884	8.81	16,271	6.53
Cataract eyes	11,092	4.05	16,621	7.40	27,713	5.56

NB. This table lists people and eyes with cataract and different levels of visual impairment.
However, the primary cause of the visual impairment could be other than cataract

8. Adjusted results for aphakia and pseudophakia

	Male			Female			Total		
	n	%	CI95%	n	%	CI95%	n	%	CI95%
Bilateral (pseudo)aphakia	2,100	1.53	±0.83	1,808	1.61	±0.62	3,908	1.57	±0.53
Unilateral (pseudo)aphakia	2,592	1.89	±0.73	4,583	4.08	±0.84	7,175	2.88	±0.58
(pseudo)aphakic eyes	6,792	2.48	±0.82	8,199	3.65	±0.75	14,991	3.01	±0.54

9. Adjusted results for cataract surgical coverage

Cataract Surgical Coverage (eyes)

	Males	Females	Total
VA <3/60	55.2	40.9	46.4
VA <6/60	49.4	38.6	42.9
VA <6/18	38.0	33.0	35.1

Cataract Surgical Coverage (persons)

	Males	Females	Total
VA <3/60	87.0	68.7	75.5
VA <6/60	80.7	69.2	73.9
VA <6/18	62.9	58.0	60.1

TRAINING REPORT

RAPID ASSESSMENT FOR AVOIDABLE BLINDNESS IN NARAIL AND JAMALPUR DISTRICTS OF BANGLADESH
A TRAINING REPORT

SURVEY SUPPORTED BY: FRED HOLLOWS FOUNDATION, BANGLADESH

SURVEY CO-ORDINATED AND IMPLEMENTED BY: CHILD SIGHT FOUNDATION, DHAKA BANGLADESH

TECHNICAL SUPPORT: CERTIFIED RAAB TRAINER DR. B.R. SHAMANNA – PRASHASA HEALTH CONSULTANTS, HYDERABAD, ANDHRA PRADESH, INDIA

The training for the RAAB survey was delivered at the premises of Child Sight Foundation, Dhaka, Bangladesh between 14 and 17 December 2009. The request for this survey was made by the Fred Hollows Foundation, Bangladesh to CSF, Dhaka.

Dr. Zakia Wadud, a very eminent ophthalmologist who co-ordinated the landmark initial RAAB survey for Satkhira district in Bangladesh, which is a benchmark for many RAAB survey done over the last 3 years, was the survey co-ordinator for these sets of surveys as well.

A decision to train 4 teams with back up ophthalmologists was made and hence full contingent of 6 teams made up of 6 ophthalmologists, 6 senior paramedics, 2 supervisors, 2 data entry operators and CSF office administrator was undertaken in the same sitting.

The following tasks were accomplished before the training was delivered:

- Discussion about sampling frame that included units like upaziila and villages in the rural parts of the 2 districts and pourasava and wards in the urban areas of the 2 districts.
- Requisite permission and procedure for ethical approval from the concerned authorities.
- Planning for advocacy and publicity for RAAB in the 2 districts using both print and audio-visual media.
- Securing the funding for the field work and training inputs.
- All staff identified and to be present for the training.
- The survey equipment and supplies were procured as well as the portable slit lamps for eye examination.
- Logistical arrangements for the survey were also undertaken in terms of locating the coordinating office and the transportation of the survey teams.

On the first day of the training program (14/12/2009) the morning and afternoon session was spent on the following aspects.

- The purpose of RAAB survey and the expected deliverables.
- How is RAAB useful in district level planning and monitoring eye programs?
- Roles and responsibilities of the staff involved in the training program including logistics (how long, when, where) of the RAAB survey.
- Sample Size was calculated for both Narail and Jamalpur and that was 2,420 (49 clusters) and 3016 (61 clusters) respectively. The details of how they were calculated are given in annexure 1 & 2.

On the second day (15/12/2009) the tasks accomplished included:

- Selection of clusters from the sampling frame of the 2 areas using the automated software program. The lists of clusters are given in Annexure 3 and Annexure 4 for both the areas respectively.
- Detailed over view of the RAAB Form in and all sections and questions and answers on the RAAB form
- Practice of Visual Acuity Testing in the class room among the 6 teams.
- Preparation for Inter Observer Variation exercise and filling of forms.

On the third day after an early start due to the National day celebrations at outskirts of Dhaka we reached the location of the Katrasin Eye Hospital, Uthuli, Shibalay at Manikganj for the standardization exercise for the inter-observer variation and agreement analysis. This was carried out among 40 willing beneficiaries who were examined consecutively by the six identified teams with one team made as the gold standard. The data entry operators who were trained on day 1 & 2 were now allowed to enter the IOV data and the agreement analyzed and discussed. The subsequent part of the day was spent on preparing for the pilot RAAB survey in the same catchment area of the clinic.

On 17/12/2009, a pilot RAAB survey was undertaken by all the 4 teams in Shashinara village in Shibalay, Manikganj and 50 beneficiaries above 50 years of age were examined with each team doing 12-13 examinations. Segmentation and random selection after drawing an area map with local community support and input was also undertaken.
On conclusion of the pilot survey the double data entry of Pilot RAAB forms was done and validation and consistency checks were demonstrated and the results shared and discussed. The data entry and reports were analyzed after returning back to Dhaka.

The training concluded with the certification of the team fit for undertaking the RAAB survey.

Subsequently, due to the unavailability of the slitlamp handles at the time of the training, the ophthalmologists spent a day examining patients with portable slitlamps before leaving for the actual fieldwork. They were supervised by the coordinator and agreement between the different examiners was ensured.

Annexure 1 CALCULATE SAMPLE SIZE 14-December-2009 14:43

Parameters		Simple Random Sampling		
Population size	104,870	Confidence	Sample size	Select
Expected frequency	4.00%	80%	697	
Worst acceptable	3.00%	90%	1,143	
Non-compliance	10%	95%	1,616	<---

Cluster sampling with confidence 95% and interval 3.00% - 5.00%

Cluster size	Design effect	Sample size	No. of clusters
40	1.4	2,263	57
50	1.5	2,425	49
60	1.6	2,586	44

Parameters		**Simple Random Sampling**		
Population size	278,152	Confidence	Sample size	Select
Expected frequency	4.00%	80%	863	
Worst acceptable	3.10%	90%	1,419	
Non-compliance	10%	95%	2,010	<---

Cluster sampling with confidence 95% and interval 3.10% - 4.90%

Cluster size	Design effect	Sample size	No. of clusters
40	1.4	2,815	71
50	1.5	3,016	61
60	1.6	3,217	54

SELECTED CLUSTERS IN SURVEY AREA

Date and time of the report: 15/12/2009

This report is for the survey area

Cluster No.	Code	Name of population unit	Population
1	N0002	Ward No-2	3.021
2	N0016	Hachla	1,367
3	N0021	Urasi	232
4	N0032	Nalamara	1,788
5	N0043	Bishnupur	3,116
6	N0063	Chanchari	1,778
7	N0073	Sumerukhola	657
8	N0085	Naraganti	1,495
9	N0105	Kanduri	1,077
10	N0126	Tona	2,032
11	N0138	Tapaswidanga	316
12	N0151	Khoraria	8,115
13	N0156	Jamrildanga	4,496
14	N0168	Amtala	1,190
15	N0181	Baka	1,482
16	N0198	Dighalia	4,973
17	N0203	Lutia Narsinghapur	2,132
18	N0208	Char Ghona para	524
19	N0218	Par Lankar Char	1,307
20	N0232	Khanair	1,357
21	N0248	Dhopadaha	1,467
22	N0268	Dhalaitala	1,267
23	N0284	Kamargram	942
24	N0299	Dahar Para	2,770
25	N0315	Kachubaria	759
26	N0333	Char Kalna	1,185
27	N0348	Kundasi	2,659
28	N0364	Char Balidia	1,453
29	N0382	Noapara	1,972
30	N0400	Samuk Khola	1,431
31	N0405	Azampur	186
32	N0424	Par Shalnagar	1,268
33	N0432	Ward No-03	6,929
34	N0435	Ward No-06	5,335
35	N0439	Auria	2,641
36	N0455	Saratala	1,129
37	N0474	Hogladanga	2,149
38	N0495	Mira Para	1,080
39	N0507	Mirzapur	6,646
40	N0518	Badhal	1,093
41	N0536	Rathdanga	3,639
42	N0559	Komkhali	3,344
43	N0566	Goailbari	1,146
44	N0578	Hossainpur	1,318
45	N0599	Banshbhita	993
46	N0622	Dhonda	1,319
47	N0637	Maliat	976
48	N0648	Gobra	3,284
49	N0660	Betenga	528

SELECTED CLUSTERS IN SURVEY AREA

luster No. Code Name of population unit Population

Date and time of the report: 15/12/2009

This report is for the survey area

Cluster No.	Code	Name of population unit	Population
1	J0007	Zula Para	641
2	J0039	Paschim Char Kauria	955
3	J0081	Kumarikanda	303
4	J0123	Purba Kalkihara	1,183
5	J0161	Dakshin Kushalnagar	2,058
6	J0199	Ward no: 03	4,598
7	J0210	Kalakanda	3,080
8	J0233	Moulvir Char	2,884
9	J0260	Char Magurihat	4,058
10	J0290	Dangdhara	2,246
11	J0329	Char Utmarchar	2,231
12	J0353	Matherghat	1,577
13	J0373	Ward no: 04	5,838
14	J0386	Dhantala	789
15	J0401	Benuar Char	8,511
16	J0427	Nadi Para	685
17	J0449	Kachhimer Char	1,990
18	J0462	Kachihara	2,816
19	J0485	Noar Para	1,137
20	J0500	Muksimla	1,712
21	J0522	Ward No-01	13,240
22	J0526	Ward No-05	9,944
23	J0530	Ward No-09	13,498
24	J0533	Ward No-12	10,813
25	J0556	Chhota Gajiar Para	684
26	J0592	Chak Para	1,657
27	J0636	Maddhyapara	1,572
28	J0669	Sonakata	1,966
29	J0679	Chanda Para	1,031
30	J0737	Khal Para	450
31	J0761	Londaha	343
32	J0782	Mirik Pur	893
33	J0804	Sahabajpur	10,755
34	J0810	Khalishakuri	2,267
35	J0827	Shitalkursa	3,733
36	J0860	Lohora	893
37	J0885	Tulshir Char	1,041
38	J0888	Ward no 01	6,904
39	J0900	Gazaria	4,722
40	J0923	Dakshin Sukhnagari	3,028
41	J0936	Pakrul	1,594
42	J0949	Jorekhali	2,728
43	J0975	Bara Bhangbari	2,153
44	J0995	Bhatian	9,805
45	J1019	Ward No-07	3,741
46	J1040	Bakai	2,382
47	J1061	Hamla	1,491
48	J1087	Teli Para	2,609
49	J1116	Paschimpara	2,255
50	J1139	Pacha Bahala	3,060
51	J1163	Adbaria	2,580
52	J1184	Badarouha	2,346
53	J1203	Ward No- 01	8,144
54	J1209	Ward No-07	4,179
55	J1230	Thal Ulla	5,014
56	J1257	Char Balia	2,632
57	J1282	Char Hatbari	1,883
58	J1314	Karagram	3,354
59	J1339	Nalsanda	2,364
60	J1360	Mali Para	7,322
61	J1378	Adra	6,014

District: Narail

Upazilla	Union/Pourasava	Cluster No	Code	Unit name	Population	Segment
Kalia	Kalia Pourasava	1	N0002	Ward No-02	3,021	8
	Babra Hachla Union	2	N0016	Hachla	1,367	3
	Babra Hachla Union	3	N0021	Urasi	232	1
	Bauisena Union	4	N0032	Nalamara	1,788	4
	Hamidpur Union	5	N0043	Bishnupur	3,116	8
	Chanchari Union	6	N0063	Chanchari	1,778	4
	Chanchari Union	7	N0073	Sumerukhola	657	2
	Joynagar Union	8	N0085	Naraganti	1,495	4
	Kalabaria Union	9	N0105	Kanduri	1,077	3
	Khasial Union	10	N0126	Tona	2,032	5
	Mauli Union	11	N0138	Tapaswidanga	316	1
	Peruli Union	12	N0151	Khoraria	8,115	20
	Peruli Union	13	N0156	Jamrildanga	4,496	11
	Purulia Union	14	N0168	Amtala	1,190	3
	Salamabad Union	15	N0181	Baka	1,482	4
Lohagara	Dighalia Union	16	N0198	Dighalia	4,973	13
	Dighalia Union	17	N0203	Lutia Narsinghapur	2,132	6
	Itna Union	18	N0208	Char Ghona para	524	1
	Itna Union	19	N0218	Par Lankar Char	1,307	3
	Joypur Union	20	N0232	Khanair	1,357	3
	Kashipur Union	21	N0248	Dhopadaha	1,467	4
	Kotakul Union	22	N0268	Dhalaitala	1,276	3
	Lahuria Union	23	N0284	Kamargram	942	2
	Lahuria Union	24	N0299	Dahar Para	2,770	7
	Lakshmipasha Union	25	N0315	Kachubaria	759	2
	Lohagara Union	26	N0333	Char Kalna	1,185	3
	Malikpur Union	27	N0348	Kundasi	2,659	7
	Naldi Union	28	N0364	Char Balidia	1,453	4
	Naldi Union	29	N0382	Noapara	1,972	5
	Noagram Union	30	N0400	Samuk Khola	1,431	4
	Shalnagar Union	31	N0405	Azampur	186	1
	Shalnagar Union	32	N0424	Par Shalnagar	1,268	3
Narail Sadar	Narail Pourasava	33	N0432	Ward No-03	6,929	17
	Narail Pourasava	34	N0435	Ward No-06	5,335	13
	Auria Union	35	N0439	Auria	2,641	7
	Auria Union	36	N0455	Saratala	1,129	3
	Banshgram Union	37	N0474	Hogladanga	2,149	5
	Bhadrabila Union	38	N0495	Mira Para	1,080	3
	Bichhali Union	39	N0507	Mirzapur	6,646	17

	Chandibarpur Union	40	N0518	Badhal	1,093	3
	Chandibarpur Union	41	N0536	Rathdanga	3,639	9
	Habakhali Union	42	N0559	Komkhali	3,344	8
	Kalora Union	43	N0566	Goailbari	1,146	3
	Maij Para Union	44	N0578	Hossainpur	1,318	3
	Mulia Union	45	N0599	Banshbhita	993	2
	Sahabad Union	46	N0622	Dhonda	1,319	3
	Shaikhati Union	47	N0637	Maliat	976	2
	Singasolpur Union	48	N0648	Gobra	3,284	8
	Tularampur Union	49	N0660	Betenga	528	1

District: Jamalpur

Upazilla	*Union/Pourasava*	*Cluster No*	*Code*	*Unit name*	*Population*	*Segment*
Bakshiganj	Bagar Char Union	1	J0007	Zula Para	641	2
	Bakshiganj Union	2	J0039	Paschim Char Kauria	955	2
	Battajore Union	3	J0081	Kumarikanda	303	1
	Merur Char Union	4	J0123	Purba Kalkihara	1,183	3
	Nilakshmia Union	5	J0161	Dakshin Kushalnagar	2,058	5
Dewanganj	Dewanganj Pourasava	6	J0199	Ward no: 03	4,598	11
	Bahadurabad Union	7	J0210	Kalakanda	3,080	8
	Char Aomkhaoa Union	8	J0233	Moulvir Char	2,884	7
	Chikajani Union	9	J0260	Char Magurihat	4,058	10
	Dangdhara Union	10	J0290	Dangdhara	2,246	6
	Dewanganj Union	11	J0329	Char Utmarchar	2,231	6
	Par Ramrampur Union	12	J0353	Matherghat	1,577	4
Islampur	Islampur Pourasava	13	J0373	Ward no: 04	5,838	15
	Belgachha Union	14	J0386	Dhantala	789	2
	Char Putimari Union	15	J0401	Benuar Char	8,511	21
	Chinadulli Union	16	J0427	Nadi Para	685	2
	Goaler Char Union	17	J0449	Kachhimer Char	1,990	5
	Islampur Union	18	J0462	Kachihara	2,816	7
	Noarpara Union	19	J0485	Noar Para	1,137	3
	Patharsi Union	20	J0500	Muksimla	1,712	4
Jamalpur	Jamalpur Pourasava	21	J0522	Ward No-01	13,240	33
	Jamalpur Pourasava	22	J0526	Ward No-05	9,944	25
	Jamalpur Pourasava	23	J0530	Ward No-09	13,498	34
	Jamalpur Pourasava	24	J0533	Ward No-12	10,813	27
	Ghoradhap Union	25	J0556	Chhota Gajiar Para	684	2
	Digpaith Union	26	J0592	Chak Para	1,657	4
	Itail Union	27	J0636	Maddhyapara	1,572	4
	Kendua Union	28	J0669	Sonakata	1,966	5
	Lakshmir Char Union	29	J0679	Chanda Para	1,031	3
	Narundi Union	30	J0737	Khal Para	450	1
	Ranagachha Union	31	J0761	Londaha	343	1
	Rashidpur Union	32	J0782	Mirik Pur	893	2
	Sahabajpur Union	33	J0804	Sahabajpur	10,755	27
	Sharifpur Union	34	J0810	Khalishakuri	2,267	6
	Sharifpur Union	35	J0827	Shitalkursa	3,733	9
	Titpalla Union	36	J0860	Lohora	893	2
	Tulsir Char Union	37	J0885	Tulshir Char	1,041	3
Madarganj	Madarganj Pourasava	38	J0888	Ward no 01	6,904	17
	Adarbhita Union	39	J0900	Gazaria	4,722	12
	Balijuri Union	40	J0923	Dakshin Sukhnagari	3,028	8

	Char Pakerdaha Union	41	J0936	Pakrul	1,594	4
	Gunaritala Union	42	J0949	Jorekhali	2,728	7
	Karaichara Union	43	J0975	Bara Bhangbari	2,153	5
	Sidhuli Union	44	J0995	Bhatian	9,805	25
Melandaha	Melandaha Pourasava	45	J1019	Ward No-07	3,741	9
	Char Banipakuri Union	46	J1040	Bakai	2,382	6
	Durmut Union	47	J1061	Hamla	1,491	4
	Fulkocha Union	48	J1087	Teli Para	2,609	7
	Jhaugara Union	49	J1116	Paschimpara	2,255	6
	Kulia Union	50	J1139	Pacha Bahala	3,060	8
	Mahmudpur Union	51	J1163	Adbaria	2,580	6
	Nangla Union	52	J1184	Badarouha	2,346	6
Sarishabari	Sarishabari Pourasava	53	J1203	Ward No- 01	8,144	20
	Sarishabari Pourasava	54	J1209	Ward No-07	4,179	10
	Aona Union	55	J1230	Thal Ulla	5,014	13
	Doail Union	56	J1257	Char Balia	2,632	7
	Doail Union	57	J1282	Char Hatbari	1,883	5
	Mahadan Union	58	J1314	Karagram	3,354	8
	Pingna Union	59	J1339	Nalsanda	2,364	6
	Pogaldigha Union	60	J1360	Mali Para	7,322	18
	Satpoa Union	61	J1378	Adra	6,014	15

WORK SCHEDULE

WORK SCHEDULE FOR NARAIL DISTRICT

Upazilla	*Survey Team*	*Team-1*	*Team-2*	*Cluster Informer*
Lohagara	20.01.10	**Dighalia** ***(16)*** Union: Dighalia Union **Segment: 13**	**Dighalia** ***(16)*** Union: Dighalia Union **Segment: 13**	**18.01.10**
	21.01.10	**Lutia Narsinghapur** ***(17)*** Union: Dighalia Union **Segment: 6**	**Char Ghona Para** ***(18)*** Union: Itna Union **Segment: 1**	**19.01.10**
	23.01.10	**Par Lankar Char** ***(19)*** Union: Tulampur Union **Segment: 3**	**Khanair** ***(20)*** Union: Joypur Union **Segment: 3**	**20.01.10**
	24.01.10	**Dhopadaha** ***(21)*** Union: Kashipur Union **Segment: 4**	**Dhalaitala** ***(22)*** Union: Kotakul Union **Segment: 3**	**21.01.10**
	25.01.10	**Kamargram** ***(23)*** Union: Lahria Union **Segment: 2**	**Dhar Para** ***(24)*** Union: Laharia Union **Segment: 7**	**23.01.10**
	26.01.10	**Kachubaria** ***(25)*** Union: Lakshmipasa Union **Segment: 2**	**Char Kalna** ***(26)*** Union: Lohagara Union **Segment: 3**	**24.01.10**
	27.01.10	**Kundasi** ***(27)*** Union: Malikpur Union **Segment: 7**	**Char Balidia** ***(28)*** Union: Naldi Union **Segment: 4**	**25.01.10**
	28.01.10	**Noapara** ***(29)*** Union: Naldi Union **Segment: 5**	**Samuk Khola** ***(30)*** Union: Noagram Union **Segment: 4**	**26.01.10**
	30.01.10	**Azampur** ***(31)*** Union: Shalnagar Union **Segment: 1**	**Par Shalnagar** ***(32)*** Union: Shalnagar Union **Segment: 3**	**27.01.10**

WORK SCHEDULE FOR NARAIL DISTRICT

Upazilla	*Survey Team*	*Team-1*	*Team-2*	*Cluster Informer*
Kalia	31.01.10	**Ward no: 2** ***(01)*** Union: Kalia Pourasava **Segment: 8**	**Hachla** ***(02)*** Union: Babra Hachla Union **Segment: 3**	**28.01.10**
	01.02.10	**Urasi** ***(03)*** Union: Babra Hachla Union **Segment: 1**	**Nalamara** ***(04)*** Union: Bauisena Union **Segment: 4**	**30.01.10**
	02.02.10	**Bishnupur** ***(05)*** Union: Hamidpur Union **Segment: 8**	**Kanduri** ***(09)*** Union: Kalalbaria Union **Segment: 3**	**31.01.10**
	03.02.10	**Tona** ***(10)*** Union: Khasial Union **Segment: 5**	**Naraganti** ***(08)*** Union: Joynagar Union **Segment: 4**	**01.02.10**
	04.02.10	**Sumerukhola** ***(07)*** Union: Chanchari Union **Segment: 2**	**Chanchari** ***(06)*** Union: Chanchari Union **Segment: 4**	**02.02.10**
	08.02.10	**Tapaswidanga** ***(11)*** Union: Mauli Union **Segment: 1**	**Khoraria** ***(12)*** Union: Peruli Union **Segment: 20**	**06.02.10**
	09.02.10	**Jamrildanga** ***(13)*** Union: Peruli Union **Segment: 11**	**Amtala** ***(14)*** Union: Purulia Union **Segment: 3**	**07.02.10**
Kalia/Narail Sadar	10.02.10	**Baka** ***(15)*** Union: Salamabad Union **Segment: 4**	**Ward no: 03** ***(33)*** Union: Narail Pourasava **Segment: 17**	**08.02.10**
Narail Sadar	11.02.10	**Ward no: 06** ***(34)*** Union: Narail Pourasava **Segment: 13**	**Auria** ***(35)*** Union: Auria Union **Segment: 7**	**09.02.10**

Break from 05.02.10 to 07.02.10. Survey again starts on 08.02.10

WORK SCHEDULE FOR NARAIL DISTRICT

Upazilla	*Survey Team*	*Team-1*	*Team-2*	*Cluster Informer*
Narail Sadar	13.02.10	**Saratala** *(36)* Union: Auria Union **Segment: 3**	**Hogladanga** *(37)* Union: Banshgram Union **Segment: 5**	**10.02.10**
	14.02.10	**Mira Para** *(38)* Union: Banshgram Union **Segment: 3**	**Mirzapur** *(39)* Union: Bichhali Union **Segment: 17**	**11.02.10**
	15.02.10	**Badhal** *(40)* Union: Chandibarpur Union **Segment: 3**	**Rathdanga** *(41)* Union: Chandibarpur Union **Segment: 9**	**13.02.10**
	16.02.10	**Komkhali** *(42)* Union: Habakhali Union **Segment: 8**	**Goailbari** *(43)* Union: Kalora Union **Segment: 3**	**14.02.10**
	17.02.10	**Hossainpur** *(44)* Union: Maij Para Union **Segment: 3**	**Banshbhita** *(45)* Union: Mulia Union **Segment: 2**	**15.02.10**
	18.02.10	**Dhonda** *(46)* Union: Shahabad Union **Segment: 3**	**Maliat** *(47)* Union: Shaikhati Union **Segment: 2**	**16.02.10**
	20.02.11	**Gobra** *(48)* Union: Singasolpur Union **Segment: 8**	**Betenga** *(49)* Union: Tulampur Union **Segment: 1**	**17.02.10**

WORK SCHEDULE FOR JAMALPUR DISTRICT

Upazilla	*Survey Team*	*Team-1*	*Team-2*	*Cluster Informer*
Melandaha	20.01.10	**Hamla** *(47)* Union: Durmut Union **Segment: 4**	**Hamla** *(47)* Union: Durmut Union **Segment: 4**	**18.01.10**
	21.01.10	**Teli Para** *(48)* Union: Fulkocha Union **Segment: 7**	**Paschimpara** *(49)* Union: Jhaugara Union **Segment: 6**	**19.01.10**
	23.01.10	**Pacha Bahala** *(50)* Union: Kulia Union **Segment: 8**	**Adbaria** *(51)* Union: Mahmudpur Union **Segment: 6**	**20.01.10**
	24.01.10	**Badarouha** *(52)* Union: Nangla Union **Segment: 6**	**Bakai** *(46)* Union: Char Banipakuri Union **Segment: 6**	**21.01.10**
Melandaha/Islampur	25.01.10	**Word no: 07** *(45)* Union: Melandaha Pourasava **Segment: 9**	**Ward no: 4** *(13)* Union: Islampur Pourasava **Segment: 15**	**23.01.10**
Islampur	26.01.10	**Dhantala** *(14)* Union: Belgachha Union **Segment: 2**	**Benuar Char** *(15)* Union: Char Putimari Union **Segment: 21**	**24.01.10**
	27.01.10	**Nadi Para** *(16)* Union: Chinadulli Union **Segment: 2**	**Kachhimer Char** *(17)* Union: Goaler Union **Segment: 5**	**25.01.10**
	28.01.10	**Kachihara** *(18)* Union: Islampur Union **Segment: 7**	**Noar Para** *(19)* Union: Noarpara Union **Segment: 3**	**26.01.10**
Islampur/Bakshiganj	30.01.10	**Muksimla** *(20)* Union: Patharsi Union **Segment: 4**	**Zula Para** *(01)* Union: Bagar Char Union **Segment: 2**	**27.01.10**

WORK SCHEDULE FOR JAMALPUR DISTRICT

Upazilla	*Survey Team*	*Team-1*	*Team-2*	*Cluster Informer*
Bakshiganj	31.01.10	**Paschim Char Kauria** *(02)* Union: Bakshiganj Union **Segment: 2**	**Kumarikanda** *(03)* Union: Battajore Union **Segment: 1**	**28.01.10**
	01.02.10	**Purba Kalkihara** *(04)* Union: Merur Char Union **Segment: 3**	**Dakshin Kushalnagar** *(05)* Union: Nilakshmia Union **Segment: 5**	**30.01.10**
Dewanganj	02.02.10	**Word no: 3** *(06)* Union: Dewanganj Pourasava **Segment: 11**	**Kalakanda** *(07)* Union: Bahadurabad Union **Segment: 8**	**31.01.10**
	03.02.10	**Moulvir Char** *(08)* Union: Char Aomkhaoa Union **Segment: 7**	**Char Utmarchar** *(11)* Union: Dewanganj Union **Segment: 6**	**01.02.10**
	04.02.10	**Char Magurihat** *(09)* Union: Chikajani Union **Segment: 10**	**Dangdhara** *(10)* Union: Dangdhara Union **Segment: 6**	**02.02.10**
Dewanganj/Sarishabari	08.02.10	**Matherghat** *(12)* Union: Par Ramrampur Union **Segment: 4**	**Ward no: 01** *(53)* Union: Sarishabari Pourasava **Segment: 20**	**06.02.10**
Sarishabari	09.02.10	**Ward no: 07** *(54)* Union: Sarishabari Union **Segment: 10**	**Thal Ulla** *(55)* Union: Aona Union **Segment: 13**	**07.02.10**
	10.02.10	**Char Balia** *(56)* Union: Doail Union **Segment: 7**	**Char Hatbari** *(57)* Union: Doail Union **Segment: 5**	**08.02.10**
	11.02.10	**Karagram** *(58)* Union: Mahadan Union **Segment: 8**	**Nalsanda** *(59)* Union: Pingna Union **Segment: 6**	**09.02.10**

Break from 05.02.10 to 07.02.10. Survey again starts on 08.02.10.

WORK SCHEDULE FOR JAMALPUR DISTRICT

Upazilla	*Survey Team*	*Team-1*	*Team-2*	*Cluster Informer*
Sarishabari	13.02.10	**Mali Para** *(60)* Union: Pogaldigha Union **Segment: 18**	**Adra** *(61)* Union: Satpoa Union **Segment: 15**	**10.02.10**
Madarganj	14.02.10	**Ward no: 01** *(38)* Union: Madarganj	**Gazaria** *(39)* Union:	**11.02.10**

		Pourasava **Segment: 17**	Adarbhita Union **Segment: 12**	
	15.02.10	**Dakshin Sukhnagari** ***(40)*** Union: Balijuri Union **Segment: 8**	**Pakrul** ***(41)*** Union: Char Pakerdaha Union **Segment: 4**	**13.02.10**
	16.02.10	**Jorekhali** ***(42)*** Union: Gunaritala Union **Segment: 7**	**Bara Bhangbari** ***(43)*** Union: Karaichara Union **Segment: 5**	**14.02.10**
Madarganj/Jamalpur Sadar	17.02.10	**Bhatian** ***(44)*** Union: Sidhuli Union **Segment: 25**	**Ward no: 01** ***(21)*** Union: Jamalpur Pourasava **Segment: 33**	**15.02.10**
Jamalpur Sadar	18.02.10	**Ward no: 05** ***(22)*** Union: Jamalpur Pourasava **Segment: 25**	**Ward no: 09** ***(23)*** Union: Jamalpur Pourasava **Segment: 34**	**16.02.10**
	20.02.10	**Ward no: 12** ***(24)*** Union: Jamalpur Pourasava **Segment: 27**	**Chhota Gajiar Para** ***(25)*** Union: Ghoradhap Union **Segment: 2**	**17.02.10**
	21.02.10	**Chak Para** ***(26)*** Union: Digpaith Union **Segment: 4**	**Maddhyapara** ***(27)*** Union: Itail Union **Segment: 4**	**18.02.10**
	22.02.10	**Sonakata** ***(28)*** Union: Kendua Union **Segment: 5**	**Chanda Para** ***(29)*** Union: Lakshmir Char Union **Segment: 3**	**20.02.10**

WORK SCHEDULE FOR JAMALPUR DISTRICT

Upazilla	***Survey Team***	***Team-1***	***Team-2***	***Cluster Informer***
Jamalpur Sadar	23.02.10	**Khal Para** ***(30)*** Union: Narundi Union **Segment: 1**	**Londaha** ***(31)*** Union: Ranagachha Union **Segment: 1**	**21.02.10**
	24.02.10	**Mirik Pur** ***(32)*** Union: Rashidpur Union **Segment: 2**	**Sahabajpur** ***(33)*** Union: Sahabajpur Union **Segment: 98**	**22.02.10**
	25.02.10	**Khalishakuri** ***(34)*** Union: Sharifpur Union **Segment: 6**	**Shitalkursa** ***(35)*** Union: Sharifpur Union **Segment: 9**	**23.02.10**
	27.02.10	**Lohora** ***(36)*** Union: Titpalla Union **Segment: 2**	**Tulshir Char** ***(37)*** Union: Tulshir Char Union **Segment: 3**	**24.02.10**

IRB APPROVAL

Research, Evaluation, Advocacy and Development (READ) Centre
Child Sight Foundation

Monday, 29 March 2010

Dr Zakia Wadud
Child Sight Foundation
House no. 208 (3rd Floor), Lane no. 12 (Lake Road)
New DOHS, Mohakhali, Dhaka-1206

Ethics Reference No: RI-2010-L-02

Project Title: Rapid Assessment of Avoidable Blindness

Thank you for submitting your application which was considered at the READ-CSF Institutional Review Board meeting on the 17th day of March, 2010 at READ office Dhaka, Bangladesh. The following documents/statements were reviewed:

1. Application Form for IRB for Ethical Approval signed by PI on date 15-12-2009
2. Head of the Department's Permissions
3. Nature and degree of the risk or harm to the participants
4. Consent Form

The READ-CSF Institutional Review Board approves this study from an ethical point of view. This approval is given for two years. If the research is not commenced within one year of approval date, it must be re-submitted to READ-CSF IRB for Ethical Approval. READ-CSF IRB must be informed immediately after commencement of the study.

You must inform READ-CSF IRB when the research has been completed. If you are unable to complete your research within the two years validation period, you will be required to write to READ-CSF IRB to request an extension or you will need to re-apply.

Any serious adverse events or significant change which occurs in connection with this study and/or which may alter its ethical consideration must be reported immediately to the READ-CSF IRB with an application for Ethical Amendment.

The approval is given with the understanding that:

a. ethical guidelines are to be followed carefully
b. READ-CSF IRB holds the right to visit the project sites and makes random independent contact with the participants for review the ethical commitments
c. receive a six-monthly progress report of the project.

Yours sincerely

Dr A Z M Iftikhar Hussain
Member-Secretary
READ-CSF IRB