

## Evaluation of Cataract Surgical Coverage and Barriers to Uptake of Cataract Surgery in Birnin Gwari Local Government Area of Kaduna State

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**Introduction:** Age- related cataract is the commonest form of blindness in persons aged 50 years and above.<sup>1</sup> In Nigeria, the prevalence of cataract blindness is 1.8%, it is the leading cause of blindness accounting for 45.3%.<sup>2</sup> Developing countries have a higher age- adjusted prevalence of cataract and it occurs earlier.<sup>3</sup> The study area, a rural area in the Northwest Zone (NWZ) of Nigeria, has a high prevalence of blindness of 4.8 % in persons aged 40 years and above.<sup>2</sup> Currently, surgery is the definitive treatment of blindness from cataract, as no other method has been shown to be effective.<sup>4</sup>

All people should enjoy access to the best quality health care without risk of impoverishment. This aspect is key to the Global Action Plan. BirninGwari has benefited in the past from free eye camps sponsored by a non-governmental organization (NGO) and these services stopped since withdrawal of the NGO support.

It is important to determine how much the cataract surgical needs have been met and what barriers may have hindered accessing these services and proffer suggestions in view of improving the Cataract Surgical Coverage (CSC). This survey aims to evaluate the cataract surgical coverage (CSC) and barriers to uptake of cataract surgery among people aged 50 years of age in BirninGwari local government area (L.G.A). The result of the survey will serve as baseline data for effective planning of services in the L.G.A.

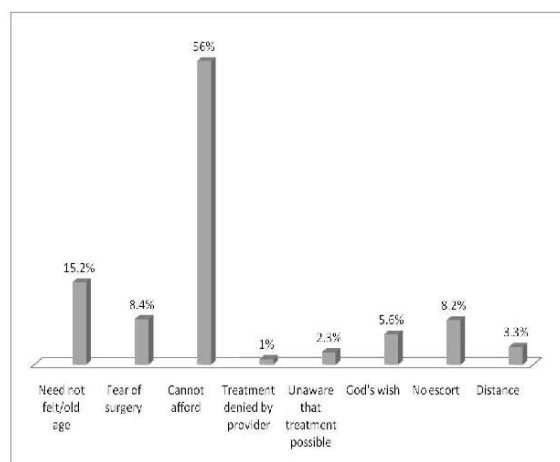
**Methods:** A cross-sectional sample of subjects aged 50 years and older was selected in the study area by a two stage random sampling technique within a study population of 18,376. The sample size calculation, number of clusters, and selection of the clusters were determined using the RAAB5 software. In the second stage, a total of 1550 persons in 31 clusters of 50 each were enumerated in a door to door survey using the Compact Segment Sampling method. Presenting visual acuity (VA), VA with pin hole and lens examination were assessed on all subjects. Further ocular examination was limited to subjects with VA less than 6/18 with a view to determine the causes of visual impairment in these individuals. Data on Demographic information, VA, lens examination, main causes of Presenting VA less than 6/18, and details about cataract operation were collected using RAAB questionnaire. Interviews were held to identify barriers to uptake of cataract surgical services. Data analysis was done using the RAAB software package.

**Results:** A total of 1278 subjects were examined out of 1550 eligible subjects. Cataract was identified as the major cause (43.1%) of blindness. Glaucoma was the second commonest cause of blindness (16.9%). Other principal causes of blindness included corneal scars (13.8%), posterior segment disease/CNS (7.7%), Trachoma (6.2%), and surgical complications (6.2%). The CSC at VA <3/60 was 24.1% and 41.6% for eyes and person, respectively (Table 1). Cataract surgical outcome was good in 59.3% of subjects with available correction. The greatest barrier to uptake of cataract surgery (Figure 1) was inability to afford the cost of cataract surgery (56%).

**Conclusion:** The CSC is low in BirninGwari L.G.A. Most of the subjects cited 'cost' as the major barrier and among those that had cataract surgeries, most were performed during eye camps. Since affordability is a major barrier, there is a need of reducing the cost of surgery in the local hospital,

**Table 1.** Cataract Surgical coverage (eyes)

Category	Condition	VA < 3/60			VA<6/60			VA < 6/18		
		male	female	Total	male	female	total	male	Female	Total
<b>b</b>	No. of operable cataract eyes	54	72	126	60	94	154	144	192	336
<b>a</b>	No. of (pseudo) Aphakia	22	18	40	49	30	79	80	65	145
	CSC (eyes)/% $\frac{a}{a+b} \times 100$	28.9	20.0	24.1	44.9	24.2	33.9	35.7	25.3	30.1



**Figure 1:** Barriers to cataract surgery in blind subjects

4. Asbell PA, Dualan I, Mindel J, Brocks D, Ahmad M, Epstein S. Age-related Cataract. *Lancet* 2005; 365 (9459): 599-609
5. Global Action Plan 2014- 2019. The International Agency for the Prevention of Blindness; 2012

as well as, recruitment and training of more human resource, in order to increase the CSC.

## References

1. Fiona LM, Mohamad AS, Zuraida M, Mohd AH, EliasH, Tassha HA *et al.* Estimates of Visual Impairment and its causes from the National Eye Survey in Malaysia. *PLoS One* 2018; 13 (6): e0198799
2. Abdull MM, Sivasubramaniam S, Murthy GV, Gilbert C, Abubakar T, Ezelum C, *et al.* Causes of Blindness and Visual Impairment in Nigeria: The Nigeria National Blindness and Visual Impairment Survey. *Invest Ophthalmol Vis Sci* 2009;50: 4114-4120
3. Peter A, Serge R, Rupert B. World Blindness and Visual Impairment: despite many successes, the problem is growing. *Community Eye Health Journal* 2017; 30 (100): 72-73