

Causes of low vision and blindness in rural Indonesia

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AIM: To determine the prevalence rates and major contributing causes of low vision and blindness in adults in a rural setting in Indonesia. METHODS: A population based prevalence survey of adults 21 years or older (n=989) was conducted in five rural villages and one provincial town in Sumatra, Indonesia. One stage household cluster sampling procedure was employed where 100 households were randomly selected from each village or town. Bilateral low vision was defined as habitual VA

(measured using tumbling "E" logMAR charts) in the better eye worse than 6/18 and 3/60 or better, based on the WHO criteria. Bilateral blindness was defined as habitual VA worse than 3/60 in the better eye. The anterior segment and lens of subjects with low vision or blindness (both unilateral and bilateral) (n=66) were examined using a portable slit lamp and fundus examination was performed using indirect ophthalmoscopy. RESULTS: The overall age adjusted (adjusted to the 1990 Indonesia census population) prevalence rate of bilateral low vision was 5.8% (95% confidence interval (CI) 4.2 to 7.4) and bilateral blindness was 2.2% (95% CI 1.1 to 3.2). The rates of low vision and blindness increased with age. The major contributing causes for bilateral

low vision were cataract (61.3%), uncorrected refractive error (12.9%), and amblyopia (12.9%), and the major cause of bilateral blindness was cataract (62.5%). The major causes of unilateral low vision were cataract (48.0%) and uncorrected refractive error (12.0%), and major causes of unilateral blindness were amblyopia (50.0%) and trauma (50.0%). CONCLUSIONS: The rates of habitual low vision and blindness in provincial Sumatra, Indonesia, are similar to other developing rural countries in Asia. Blindness is largely preventable, as the major contributing causes (cataract and uncorrected refractive error) are amenable to treatment.

Reprinted courtesy of:

Br J Ophthalmol 2003; **87**: 1075–78.

Prevalence and causes of blindness and visual impairment in Bangladeshi adults: results of the National Blindness and Low Vision Survey of Bangladesh

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AIM: To determine the age, sex, and cause specific prevalences of blindness and visual impairment in adults 30 years of age and older in Bangladesh. METHODS: A nationally representative sample of 12 782 adults 30 years of age and older was selected based on multistage, cluster random sampling with probability proportional to size procedures. The breakdown of the cluster sites was proportional to the rural/urban distribu-

tion of the national population. The examination protocol consisted of an interview, visual acuity (VA) testing, autorefraction, and optic disc examination on all subjects. Corrected VA retesting, cataract grading, and a dilated fundal examination were performed on all visually impaired subjects. The definitions of blindness (<3/60) and low vision (<6/12 to >or=3/60) were based on the presenting visual acuity in the better eye. The World Health Organization/Prevention of Blindness proforma and its classification system for identifying the main cause of low vision and blindness for each examined subject was used. RESULTS: In total, 11 624 eligible subjects were examined (90.9% response rate) across the 154 cluster sites. A total of 162 people were bilaterally blind (1.53% age standardised prevalence) while a further 1608 subjects (13.8%) had low vision (<6/12 VA) binocularly. Visual acuity was >6/12 in the "better eye" in the remaining

9854 subjects (84.8%); however, 748 of these people had low vision in the fellow eye. The main causes of low vision were cataract (74.2%), refractive error (18.7%), and macular degeneration (1.9%). Cataract was the predominant cause (79.6%) of bilateral blindness followed by uncorrected aphakia (6.2%) and macular degeneration (3.1%). CONCLUSIONS: There are an estimated 650 000 blind adults (95% CI 552 175 to 740 736) aged 30 and over in Bangladesh, the large majority of whom are suffering from operable cataract. This survey indicates the need for the development and implementation of a national plan for the delivery of effective eye care services, aimed principally at resolving the large cataract backlog and the inordinate burden of refractive error.

Reprinted courtesy of:

Br J Ophthalmol 2003; **87**: 820–28.

Causes of severe visual impairment and blindness in children in schools for the blind in Ethiopia

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AIMS: To determine the causes of severe visual impairment and blindness in children in schools for the blind in Ethiopia, to aid in planning for the prevention and management of avoidable causes. METHODS: Children attending three schools for the

blind in Ethiopia were examined during April and May 2001 using the standard WHO/PBL eye examination record for children with blindness and low vision protocol. Data were analysed for those children aged less than 16 years using the EPI-INFO-6 programme. RESULTS: Among 360 pupils examined, 312 (96.7%) were aged <16 years. Of these children, 295 (94.5%) were blind or severely visually impaired. The major anatomical site of visual loss was cornea/phthisis (62.4%), followed by optic nerve lesions (9.8%), cataract/aphakia (9.2%), and lesions of the uvea (8.8%). The

major aetiology was childhood factors (49.8%). The aetiology was unknown in 45.1% of cases. 68% of cases were considered to be potentially avoidable. CONCLUSIONS: Vitamin A deficiency and measles were the major causes of severe visual impairment/blindness in children in schools for the blind in Ethiopia. The majority of causes acquired during childhood could be avoided through provision of basic primary healthcare services.

Reprinted courtesy of:

Br J Ophthalmol 2003; **87**: 526–30.

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Acknowledgements should be made to the author(s) and to *Community Eye Health*.