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SUPPORTING VISION 2020: THE RIGHT TO SIGHT

## Childhood Cataract: Magnitude, Management, Economics and Impact

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### What is the Magnitude of Childhood Cataract?

The prevalence of blindness among children in different regions varies from 0.2/1000 children to over 1.5/1000 children with a global figure estimated at 0.7/1000. This means that there are an estimated 1.4 million blind children worldwide.<sup>1</sup>

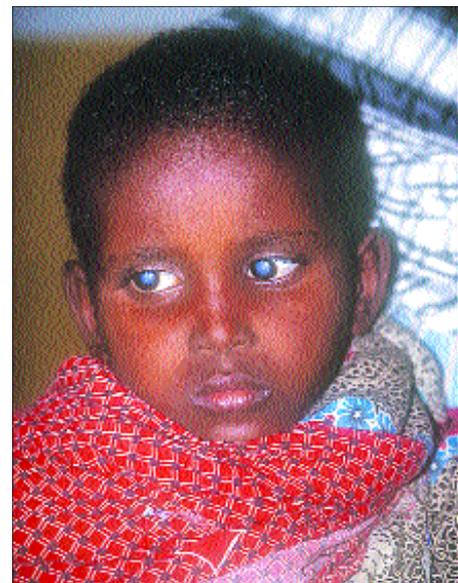
The proportion of blindness in children due to cataract varies considerably between regions from 10%-30% with a global average estimated at 14%, giving 190,000

children blind from cataract.<sup>2</sup> While the magnitude of childhood cataracts varies from place to place, it is a priority within all blindness control programmes for children.

Children who are blind have to overcome a lifetime of emotional, social and economic difficulties which affect the child, the family and society.<sup>3</sup> Loss of vision in children influences their education, employment and social life. The numbers blind with cataract do not reflect the years of disability and lost quality of life. Childhood blindness is second only to adult cataract as a cause of blind-person years. Approximately 70 million blind-person years are caused by childhood blindness of which about 10 million blind-person years (14%) is due to childhood cataract. Timely recognition and intervention can eliminate blind-years due to childhood cataract, as the condition is treatable.

### What is the Cost of Childhood Cataract?

Childhood blindness is estimated to lead to a loss in earning capacity of US\$6,000–27,000 million.<sup>4</sup> By extrapolation, assuming



*Timely treatment can restore this young East African boy's sight*

*Photo: David Yorston*

a global growth rate of 3%, the economic loss over 10 years for childhood cataract would be in the order of US\$1,000–6,000 million. Estimates in India<sup>5</sup>, assuming a blind child has on average 33 years of blindness, and that 14% of childhood blindness is due to cataracts, calculate a lifetime loss of earning capacity of US\$3,500 million to

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#### **COCHRANE EYES AND VISION GROUP**

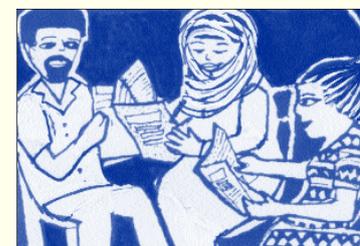
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The Right to Sight



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childhood cataract. The cost of a cataract intervention in India is of the order of US\$100–200, depending on facilities. The cost of treating the 40,000 blind children from cataract in India would be US\$4–8 million.

### What should be done about Childhood Cataract?

#### Case finding

Case finding is of prime importance for the management of cataract in children. Obviously, children with cataract do not present themselves and it takes careful observation by the caregivers or trained health staff to notice lens opacities. In this issue, Mohammad Muhit's article 'Childhood Cataract: Home to Hospital' proposes an approach to finding out about and overcoming the barriers to detecting and treating cataract in children.

#### Surgical management

Management is complicated by the fact that paediatric cataract surgery is technically more difficult and requires frequent post-operative follow up. It is very unwise to equate a childhood cataract to a smaller replica of an adult cataract. Questions related to the management of childhood cataracts include the timing of surgery, type of surgery, personnel doing the surgery and place where the surgery will be done. Good visual outcome depends on doing surgery as early as possible within the period of onset of visually disabling cataract. It is recommended that lensectomy combined with posterior capsulectomy with anterior vitrectomy be carried out by paediatric-orientated ophthalmologists with the necessary skills and commitment to supervise the child's visual development.<sup>2</sup>

Surgery for childhood cataract should be carried out in specialist centres appropriately staffed and resourced with facilities such as paediatric anaesthetic equipment and good supportive services for refraction and low vision services. The inflammatory response is more pronounced post-operatively, and posterior capsule opacification is routine. David Yorston's article in this issue

discusses in more detail the surgical management of childhood cataract. This issue's contribution from the Cochrane Eyes and Vision Group discusses the evidence-base for the treatment of childhood cataract and concludes that more work in this area is needed.

#### Post-operative management

Correction of aphakia by spectacles, contact lenses or intra-ocular lenses to focus the image for vision development is very important in the post-operative management of childhood cataracts. Petra Verweyen's article provides useful guidelines for measuring vision in children, while Mohammad Muhit's article stresses the importance of the partnership between the family and the medical team in ensuring long-term follow-up.

There is a need to look at the impact of treating childhood cataracts and relate it not just to visual acuity but also to scholastic achievements and development.

#### Conclusion

The global ophthalmic community has been convinced of the need for prioritising childhood blindness. The technical knowledge is available. Resources are required, in particular trained paediatric ophthalmologists working in well-equipped tertiary centres as part of a comprehensive child eye care programme. This is the strategy of VISION 2020 which now needs to be implemented.

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