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How Can Blind Children Be Helped?

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There are an estimated 1.5 million blind childrenworld-wide. Table1 documents where they live and Table 2 gives the major anatomical causes. The years of blindness resulting from these diseases represent a major social and economic burden on communities, as well as individuals.

This issue specifically asks the question 'How can blind children be helped?' It concentrates on what can be done to help the child with significant visual loss, rather than what can be done to prevent blindness in children, which has been discussed in previous issues (see Issues 5, 8, 11, 22).

Dr Rahi discusses how to examine a child who is reported to have visual problems in order to assess the level of visual function, the cause of visual loss and the prognosis for future vision. The examination is often difficult to perform, but it is important that time is taken, if necessary over several examinations, to determine accurately visual function, aetiology and prognosis.

Surveys from around the world have demonstrated that a significant proportion of children in blind schools or special education have conditions which may be improved by surgery, specifically cataract and some cases of corneal scarring. Identification of these children, followed by surgery in the hands of an experienced ophthalmologist and follow-up to manage errors and amblyopia, is an important part of any prevention of blindness programme. Dr Vijay, in her article, gives information on the management of surgically remediable causes of childhood blindness. The role of IOLs in the management of paediatric cataract in developing countries is an important area for evaluation.

Work from West and East Africa and South America is reported in the very practical article by Lynne Ager which shows that approximately half of all children in blind schools can be helped to read normal print (and therefore avoid the need of Braille), if they are carefully refracted and supplied with the appropriate spectacles and magnifiers. This results in better educational opportunities and improved integration. A number of low vision programmes in Africa and Asia for children in blind schools and special education have now been implemented, with encouraging results.

Blind schools are good places to start such programmes as studies show that 5–10% of children can benefit by surgery and 10–15% can have improved vision with spectacles alone.

To conclude, blindness in children is important because of the numbers affected and the years of resulting disability. As

Visually impaired children, some with albinism, in Kenya

Photo: Clare Gilbert

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well as preventive measures to avoid blindness in children, there is much that can be done surgically and optically to improve the vision of a significant proportion of children with visual loss (Table 3). It is proposed that a minimal requirement for the developing world is 1 unit specialising in 'visual loss in children' for every 10 million population. Such a unit requires an experienced ophthalmologist and optometrist who are willing to work as a team with educationalists to provide services and long term follow-up.

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Table 1: Magnitude of Blindness in Children

Region	No. children million	No. blind	Prev. /1,000	Total % blind children
Africa	253	330,000	1.2	24
India	340	270,000	0.8	20
Rest of Asia	264	220,000	0.8	16
China	336	200,000	0.6	12
Middle East	238	190,000	0.8	14
Latin America	167	100,000	0.6	8
Western Economies	168	50,000	0.3	4
Eastern Europe	77	40,000	0.5	2
Total	**1,843**	**1,400,000**	**0.71**	**100%**

Table 2: Causes of Blindness in Children

Site	No. blind	%	Conditions
Retina	400,000	29	Retinal dystrophies and ROP*
Cornea	300,000	21	VAD, measles, ON and TEM*
Globe	200,000	14	Microphthalmos, coloboma
Lens	130,000	9	Cataract and aphakia
Other	130,000	9	Cortical blindness, amblyopia
Optic Nerve	120,000	9	Optic atrophy / hypoplasia
Glaucoma	70,000	5	Bupthalmos or glaucoma
Uvea	50,000	4	Aniridia and uveitis
Total	**1,400,000**	**100%**	

*ROP: Retinopathy of Prematurity
VAD: Vitamin A Deficiency
ON: Ophthalmia Neonatorum
TEM: Traditional Eye Medicines

Table 3: Avoidable Causes of Childhood Blindness by Region

Region	Corneal Scar	Cataract	ROP	Total
Africa	100,000	30,000	<500	130,000
India	90,000	30,000	<500	120,000
Rest of Asia	60,000	30,000	2,000	92,000
Middle East	25,000	10,000	<1,000	35,000
China	15,000	35,000	<1,000	50,000
Latin America	10,000	10,000	25,000	45,000
Eastern Europe	<1,000	10,000	5,000	16,000
Western Economies	<1,000	5,000	6,000	12,000
Total (approximates)	**300,000**	**160,000**	**40,000**	**500,000**

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