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SUPPORTING VISION 2020: THE RIGHT TO SIGHT

VISION 2020: THE CATARACT CHALLENGE

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Cataract Blindness

The World Health Report published in 1998¹ estimated that there were 19.34 million people who are bilaterally blind (less than 3/60 in the better eye) from age-related cataract. This represented 43% of all blindness. The number of blind people in the world and the proportion due to cataract is increasing due to:

- **population growth:**
6,000 million people now in the world, will increase to around 8,000 million in 2020
- **increasing longevity:**
true for less economically developed countries as well as the industrialised world.

The result of these two factors means that the population aged over 60 years will double during the next 20 years from approximately 400 million now, to around 800

million in 2020. This increase in the elderly population will result in a greater number of people with visual loss and blindness from cataract who will need eye services.

The incidence of new cases of cataract blindness is unknown. Minassian and Mehra estimated that for India alone 3.8 million people become blind from cataract each year.² Globally the incidence figure is probably at least 5 million. A figure of 1000 new blind people from cataract per million population per year is used for planning purposes in developing countries.

'Operable' Cataract Eyes

The term 'operable' cataract is used to define a cataract where the patient and the surgeon agree to proceed with cataract surgery. The indication for cataract surgery depends on various factors, including the expectations of the patient and the likely



Bilateral cataract in a relatively young woman

Photo: Murray McGavin

visual result of the procedure. As the results of cataract surgery improve, the degree of visual loss at which surgery is indicated becomes less, and, therefore, the number of 'operable' cataract eyes increases.

It is estimated that globally there are approximately 100 million eyes with cataract causing a visual acuity less than 6/60, and this figure is likely to be 3-4 times more for cataract causing an acuity of less than 6/18. These estimates are projected to double in the next 20 years if service delivery does not improve (Fig. 1).

Cataract Surgical Rate

In order to reduce the backlog of cataract blindness and 'operable' cataract it is necessary to operate each year on at least as many eyes as develop cataract (Fig. 2). The number of cataract operations performed per year, per million population is called the Cataract Surgical Rate (CSR). The CSR for the six WHO/IAPB regions in 1997 are estimated in Table 1.

Economically well-developed countries

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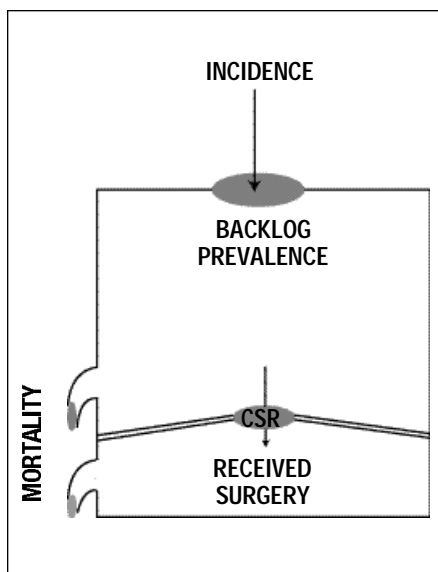


Fig. 2 : Schematic Representation of Cataract

Asia, in order to deal with cataract causing an acuity less than 6/60, it is necessary to do at least 3000 operations per million population per year and perhaps more. In Africa, and other parts of the world where there is a lower percentage of elderly people in the population, a realistic target for the next 5-10 years is around 2000 operations/million population /year.

It is possible to achieve these rates if good quality cataract surgery is performed at a reasonable cost, close to where people live. Models for this type of cataract service have now been developed in several developing countries, most notably in India.

References

- 1 The World Health Report: Life in the 21st Century – A Vision for All. World Health Organization, Geneva, 1998. Page 47.
- 2 Minassian DC, Mehra V. 3.8 million blinded by cataract each year. *Br J Ophthalmol* 1990; **74**: 341-43.

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Hypermature cataract

Photo: David Yorston

Table 1: Cataract Surgery Statistics – Estimates for 1997*

WHO / IAPB Region	Population (millions)	Number of Cataract Ops. (millions)	C S R (ops./mill./yr)
Africa	600	0.2	300
range		(0.125–0.250)	(200–400)
Americas	800	2.15	2700
North	300	1.65	5500
Rest	500	0.5	1000
range	(0.25–0.75)	(500–1500)	
Eastern Med	475	0.5	1000
range		(0.25–0.75)	(500–1500)
Europe	870	2.1	2400
Western	385	1.5	4000
range		(1.2–1.9)	(3000–5000)
Russia	150	0.25	1500
range		(0.15–0.3)	(1000–2000)
Rest	335	0.35	1000
range		(0.17–0.5)	(500–1500)
S.E. Asia	1460	3.5	2400
India	960	3.0	3100
Rest	500	0.5	1000
range		(0.25–0.75)	(500–1500)
W. Pacific	1635	1.1	670
Australia & Japan	150	0.6	4000
range		(0.45–0.75)	(3000–5000)
China	1245	0.35	280
range		(0.125–0.6)	(100–400)
Rest	240	0.25	1000
range		(0.125–0.4)	(500–1500)
TOTAL	5840	9.55	1635

*author's estimates

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