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Module2.1

Epidemiology of low vision



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Content

- Definition of Epidemiology
- Global epidemiology
- Global distribution of blindness
- Epidemiological methodologies
- Age blindness burden
- Regional burden of blindness



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Epidemiology

- Epidemiology has been defined as the study of the distribution, determinants and control of diseases in human populations.



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Global epidemiology

- Although analysis of registration data from developed countries with adequate social care facilities provides a basis for comparison, an entirely different approach has to be taken when looking at the incidence and prevalence of visual impairment in the developing world.
- In these cases prevalence has to be established from representative community-based studies, the results of which need to be extrapolated to the population as a whole.



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- world data into eight economic regions and examined the prevalence accordingly.
- In established market economies, including
- western Europe:- the USA, Australia, New Zealand and Japan, the prevalence of blindness is estimated as 0.3%.
- In Latin America:- China and the Middle East it rises to 0.5–0.7%, whereas in Asia and India the proportion rises to almost 1.0%.



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- Most strikingly the prevalence in sub-Saharan Africa is approximately 1.4%.
- The overall global estimate of blindness is 45 million, with a further 135 million individuals classified as having low vision .



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Global distribution of blindness

Table 1.7 The Global Distribution of Blindness^{1,19}

	Estimated no. of blind people (millions)	Regional prevalence of blindness (%)	Regional blindness burden	Major causes by region
Established market economies	2.4	0.3	0.41	AMD 50% Glaucoma 8%
Former socialist block	1.1	0.3	0.41	AMD 84% Glaucoma 7% Cataract 8.3%
Latin and Central America	2.3	0.5	0.72	Cataract 57% Glaucoma 8%
China	6.7	0.6	0.82	Cataract 32% Glaucoma 8%
Middle East	3.6	0.7	0.74	Cataract 45% Trachoma 25%
Asia	5.8	0.8	1.18	Cataract 39% Trachoma 24%
India	8.9	1.0	1.46	Cataract 51% Glaucoma 12%
Sub-Saharan Africa	7.1	1.4	1.93	Cataract 43% Trachoma 19%
Overall	37.9	0.7	1.0	



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- Another striking factor is the relative distribution of blindness according to age across the world.
- Foster & Gilbert²⁰ estimated that, of the 1.5 million blind children worldwide, 1.3 million reside in Asia and Africa, and that 75% of this blindness could have been prevented or is curable.
- The prevalence rate for childhood blindness in Europe and North America (0.03%) contrasts markedly with that in Africa (0.11%).



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Distressingly, between 60% and 80% of children who become blind die within 2 years of having become blind.



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Reference

- Low vision manual by A. Jonathan Jackson james. S wolffson Page no 10 to 16.



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Thank you