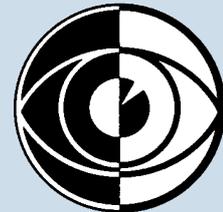


# Community Eye Health

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Supporting VISION 2020: The Right to Sight

## REFRACTIVE ERRORS: MAGNITUDE OF THE NEED

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The results of blindness surveys are usually presented as data on best corrected visual acuity. This is true whether we look at population-based surveys, surveys of outpatients, examinations of children in institutions, or figures from private practice or blindness registrations. We seem to assume that everybody wears their most appropriate spectacles all the time, and so the only visual impairment we are really concerned about is that which remains after the provision of best correction!

Dr Cathy McCarty and her team in the Centre for Eye Research Australia have examined a population-based sample of some 5,000 people in Victoria; the Visual Impairment Project.<sup>1</sup> I was astounded to review this data on the causes of visual impairment.

- The fourth most important cause of blindness by the WHO definition (<3/60) was refractive error; it caused 8% of blindness after age-related macular degeneration

(AMD) 46%, glaucoma 17% and cataract 14%. For these people the appropriate correction would have improved their vision to be better than this category.

- The legal definition of blindness in Australia is vision <6/60. Twenty three per cent of those who functionally were legally blind had this level of visual disability purely because of undercorrected refractive error. This was the second leading cause just behind AMD that was responsible for 27% of blindness at this level.
- The WHO definition of low vision is vision of <6/18. Fully 33% of those with low vision in Australia were due to refractive error.

It is particularly important for us to recognise how people actually function day to day and what level of vision they use for these activities. We should therefore look at the presenting visual acuity when we try to assess the magnitude of visual disability in the community.

In developed countries, and in the urban areas in the developing world as well, the ability to drive a car has almost become the defining criterion for independent living. In Australia, vision of 6/12 or better is required to hold a driver's licence. In over half (53%) of those with less than driving vision,



*Reading again!*

*Photo: Murray McGavin*

undercorrected refractive error was the cause.

These findings are particularly noteworthy in a country such as Australia. Australia has a universal health care system and there is access to free eye care for all residents as well as the subsidised provision of glasses to the poor. Undercorrected refractive error was found more commonly in the elderly; interestingly, in those with underlying ocular disease, and in those who had not had a recent examination. People with higher education were less likely to have undercorrected refractive error. Gender, ethnic background and employment were not found to influence this.

It is astonishing that we could alleviate a quarter of the blindness and half the low vision just by providing an appropriate pair of glasses! To achieve this, we do not need



### VISION 2020'S AIM FOR REFRACTIVE ERRORS AND LOW VISION

Elimination of visual impairment (less than 6/18) and blindness due to refractive errors or other causes of low vision. This aim goes beyond the elimination of blindness and also includes the provision of services for individuals with low vision.

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