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SUPPORTING VISION 2020: THE RIGHT TO SIGHT

IMPORTANCE OF MONITORING CATARACT SURGICAL OUTCOMES

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Introduction

Visual loss from cataract represents an estimated 50% or more of the global burden of blindness. Time tested, safe and effective technologies are available that could restore near normal vision to a large majority of those affected. Despite this, the magnitude of the global burden of blindness from unoperated cataract continues to increase. The fact that nearly 20 million persons are currently blind from cataract is a reflection of the lack of access to surgical services for a majority of these persons, even though the knowledge and skills required for applying the technology exist. For this reason intervention against cataract blindness has received priority attention in Vision 2020: The Right to Sight. In this context, the monitoring of the outcome of cataract services in general, and cataract surgery in particular, has become imperative.

Settings for Monitoring Outcomes

By its sheer magnitude, unoperated cataract has public health dimensions. As such, efforts at intervention need to be planned and applied in a public health mode. However, the intervention is clinical – surgical extraction of the cataractous lens and the correction of the resulting aphakia through various means. Monitoring the outcome of cataract surgery must, necessarily, apply to both of these interventions.

For too long, emphasis has been placed on the quantity of surgical operations performed, rather than the outcome of such surgery, as an indicator of the performance of cataract surgical services. Fortunately, this is changing, with greater emphasis being placed on using the outcome of surgery as an indicator, in addition to the numbers of surgeries performed.

It needs to be stressed that the objective of performing cataract surgery is not merely to restore visual function at the 'organ level'. More importantly, it is intended to restore functioning and independence at the 'person level'. In other words, the goal is to achieve restoration of visual function, as measured by visual acuity, contrast sensitivity and other parameters, on the one hand and, functional vision, as judged by such measures as activities of daily living (ADL), on the other. Monitoring outcomes could, therefore, be applied in a clinical setting, where the visual outcome of cataract surgery (post-operative visual acuity) is primarily measured. In addition, studies based on ADL, patient well being, quality of life and patient satisfaction may be instituted as a

Professor Baasanhuu reading the Journal of Community Eye Health, while travelling between Ulaanbaatar and Darhan, Mongolia

Photo: Gordon J Johnson

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routine or, more commonly, on randomly selected post-operative patient groups.

Clinical Audit

The clinical monitoring of post-operative visual outcome falls within the realm of clinical audit. It should be considered mandatory (an absolute requirement), in any setting where cataract surgery is performed, that records are kept, among other clinical details, of the pre-operative and post-operative visual acuity of both eyes of the patient. Such recordings, carried out at appropriate post-operative timings, including a record of presenting and best corrected visual acuity, would provide invaluable information.

In the first instance, it would indicate the number of patients who have had their vision restored to a level that takes them out of the blindness category (using the WHO ICD categorisations or other nationally agreed standard). This could be designated as the **Blindness Reduction Rate** – an important indicator for monitoring Vision 2020 implementation, in the context of presently set targets. Such a measure would help in indicating the contribution made towards the true reduction in blindness from cataract:

- **Numerator**: Number of persons whose vision has been 'restored' (no longer categorised as blind)
- **Denominator**: Total number of cataract blind persons operated on.

However, this will not indicate the levels of visual outcome, other than the 'blind' or 'non- blind' categorisations.

Secondly, if the audit is carried out in respect of a specific operating surgeon, the analysis of the results would indicate the quality of pre-operative, intra-operative and post-operative care given by the surgeon in question. Moreover, when such data are analysed periodically, this would serve two purposes:

- A measure of the trend in achievement of successful visual outcomes
- An indicator of areas of performance that require improvement through continuing professional development.

Precise desirable levels of post-operative visual outcomes may be difficult to define. There is some evidence that better quality of outcomes serves as an incentive for patients to seek surgical treatment. In any event, given the importance of acceptable levels of visual outcome, the World Health Organization has suggested the following levels of visual outcomes against which results could be assessed.[1]

Though not a direct indicator of the quality of visual outcome, the proportion of patients in whom an intraocular lens was implanted can sometimes be used as an indicator of the trend towards better visual rehabilitation in cataract surgery.

Measurement of Visual Outcomes in a Population Setting

These measures are obtained through population based studies of outcome and could be combined with measures of unmet need, coverage of services, identification of barriers, as well as quality of life and patient satisfaction studies.

These studies serve useful epidemiological and programme purposes. However, as the subjects examined are accumulated over a number of years, such studies do not generally have a direct application in identifying the skill enhancement needs of the operating surgeon.

Conclusion

The need for measuring outcomes, preferably over a wider spectrum than the mere visual outcome, is a critical element in measuring and tracking our achievements towards the goal of eliminating avoidable blindness by 2020. Reliance simply on the numbers of cataract operations performed would result in a state of undesired complacency.

Reference

1 WHO Informal consultation on analysis of blindness prevention outcomes. Geneva. World Health Organization. WHO/PBL/98/68.

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	Post-operative visual acuity	Available correction	Best correction
Good	6/6–6/18	>80%	>90%
Borderline	<6/18–6/60	<15%	<5%
Poor	<6/60	<5%	<5%