



THE UNIVERSITY OF NEW SOUTH WALES

EYE CARE DELIVERY IN POST-TSUNAMI SRI LANKA USING INTERNATIONAL OUTREACH



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INTRODUCTION

The 2004 tsunami focused unprecedented international aid and resources on Sri Lanka. The response included an ICEE disaster-relief eye care project in the North and Eastern provinces which enabled many local people to access eye care for the first time.

METHODS

The programme was run by ICEE and funded by The City of London Tsunami appeal, Optometry Giving Sight, Bausch & Lomb, Institute for Eye Research, Australian Medical Aid Foundation, Australian optometrists and the general public.

Eye care clinics were set up in tsunami camps, community halls and schools. A local NGO, the Centre for Health Care, provided on-the-ground support.

Nine teams of visiting volunteer Australian optometrists conducted refraction and ocular health examinations for over 20,000 people during 2005. Spectacles and/or referrals were provided on indication.

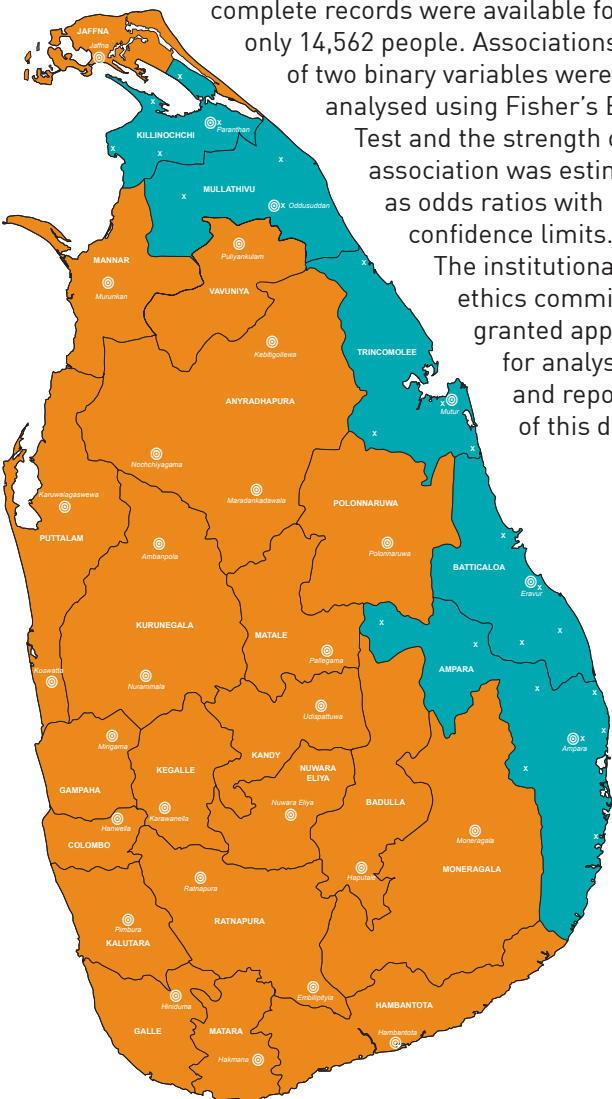
Table 1: Details of regions visited including estimated population¹ and number of local eye care providers²⁻³.

Province	Population†	Ophthalmologists	Other formally trained eyecare personnel
Ampara	618,000	1	0
Batticaloa	549,000	2	0
Trincomalee	388,000	1	0
Mulaitivu	141,000	1 visiting (2 days per month only)‡	0
Kilinochchi	145,000	1 visiting (2 days per month only)‡	0
Total	1,841,000	4 full-time 1 visiting	0

†2005 estimate
‡ same visiting practitioner to both provinces

Although 20,090 people were examined, complete records were available for only 14,562 people. Associations of two binary variables were analysed using Fisher's Exact Test and the strength of association was estimated as odds ratios with confidence limits.

The institutional ethics committee granted approval for analysis and reporting of this data.



RESULTS

The ratio of males to females who presented was 1:1 overall, although the age distribution was different between genders.

Figure 1: Age distribution of genders

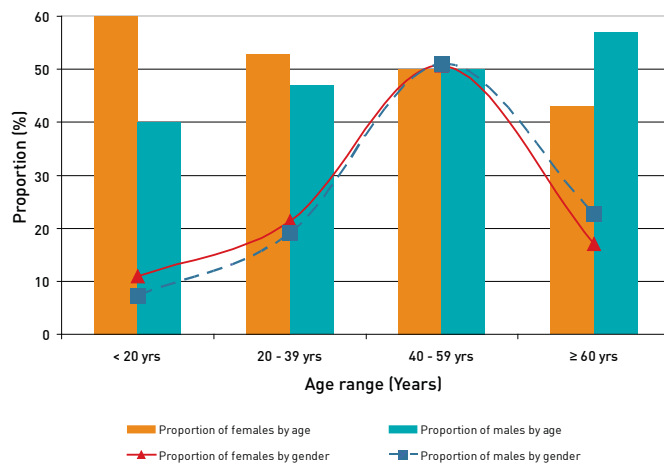
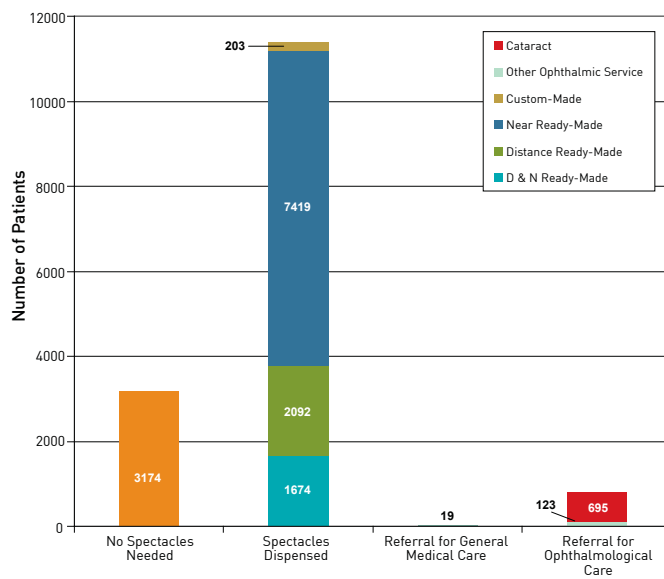


Figure 2: Eye care service outcomes



A total of 3,281 (23%) patients were determined to have significant non-refractive eye conditions causing vision impairment. Cataract was the leading non-refractive eye condition observed (Figure 3).

Figure 3: Distribution of eye and/or vision problems

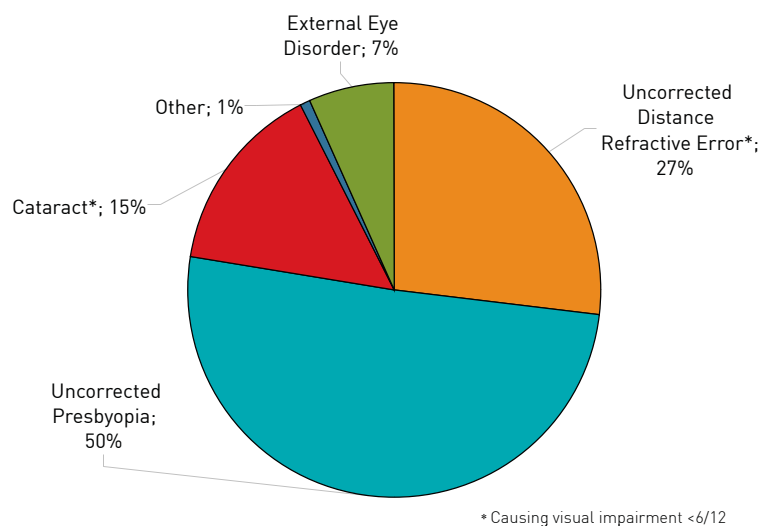


Table 2: Statistical analysis of factors associated with previous access to eye care

Factors	Category	Previous eye exam	No previous eye exam	p-Values*	OR†	95% CI for OR	
						Lower	Upper
Gender	Female	22%	78%	0.335	1	1	1.1
	Male	21%	79%				
Age group	<40 years	25%	75%	<0.001	1	1.3	1.2
	≥40 years	20%	80%				
Spectacles dispensed	No	26%	74%	<0.001	1	1.4	1.3
	Yes	21%	79%				
External eye problem	No	19%	81%	<0.001	1	0.2	0.1
	Yes	58%	42%				
Diabetes	No	21%	79%	<0.001	1	0.5	0.4
	Yes	37%	63%				
Glaucoma	No	21%	79%	0.013	1	0.6	0.4
	Yes	31%	69%				
Visually significant cataract (VA <6/12)	No	21%	79%	0.866	1	0.9	1.1
	Yes	21%	79%				

* Fisher's exact test
† Odds Ratio: the odds of never having a previous eye exam in the given category compared to the reference category (OR=1)

As can be seen in Table 1, people older than 40 years were less likely to have previously had an eye examination (but 10.6 times more likely to require spectacles).



CONCLUSION

- Refractive error was the primary cause of vision impairment for the majority of people who presented for an eye examination.
- The high proportion of people who had never previously had an eye examination, particularly those with significant uncorrected refractive error, provides evidence for the acute need for further development and support of community-level eye care services in the regions visited.

ACKNOWLEDGEMENT

This information was previously presented as a poster at the 8th Annual General Assembly of the International Agency for the Prevention of Blindness (IAPB), Buenos Aires, Argentina, August 2008

REFERENCES

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