

Developing international research capacity for VISION 2020

The International Eye Research Network (IERN)

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Gilbert
on behalf of the IERN

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Background

More than 85% of the world's six billion population live in low- and middle-income countries

Scientists from developing countries are seriously under-represented in various areas of health research*

There is a need to develop and support research capacity in a more diverse range of centres around the world, particularly from lower income settings**

Capacity building in developing countries is essential to improve health research and reduce health inequity**

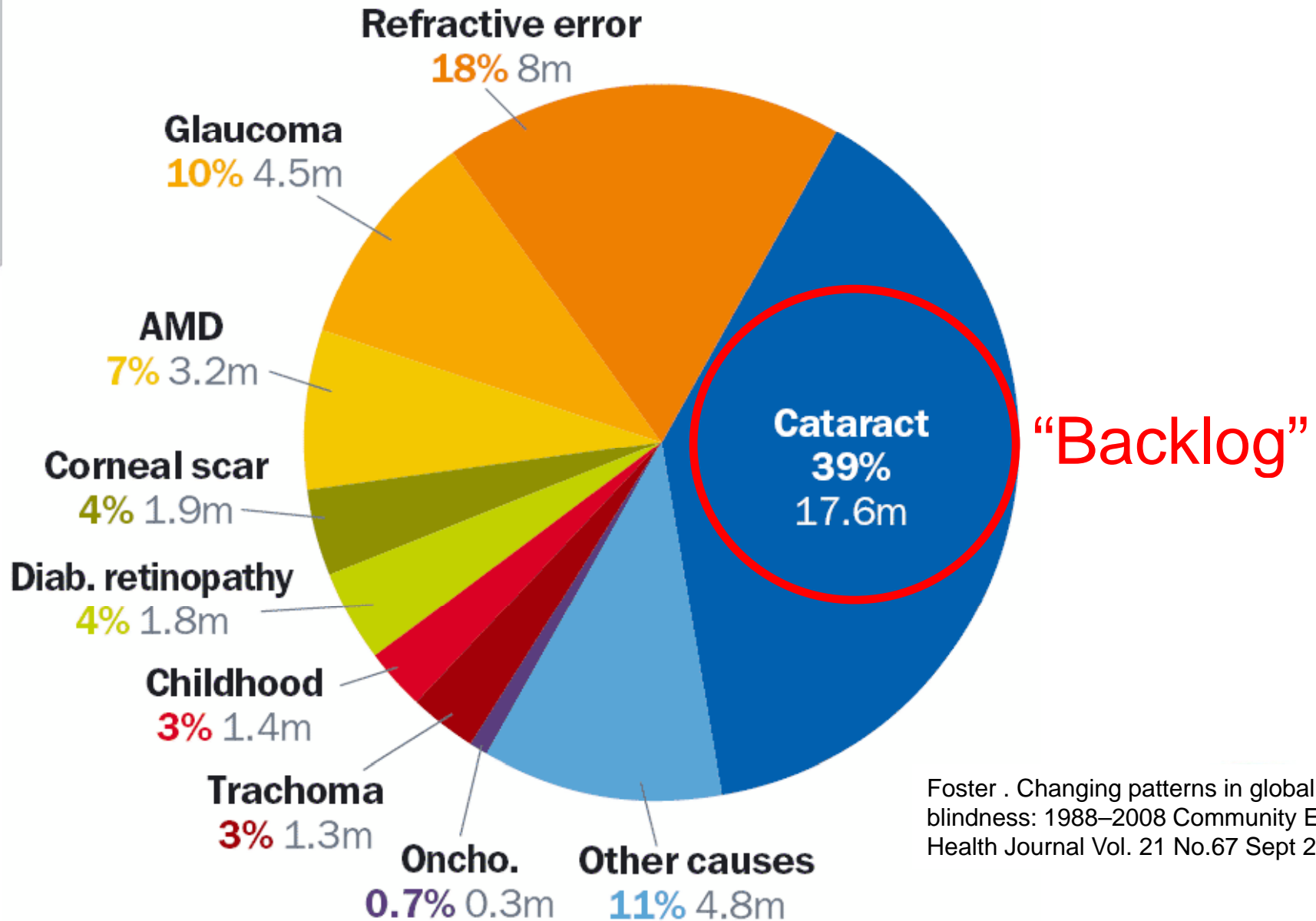


*Horton R. Medical journals: evidence of bias against the diseases of poverty. *Lancet* 2003;361: 712-3.

**Lansang MA, Dennis R. Building capacity in health research in the developing world. *Bull World Health Organ* 2004;82: 764-70.



Major causes of blindness



Foster . Changing patterns in global blindness: 1988–2008 Community Eye Health Journal Vol. 21 No.67 Sept 2008

Cataract surgery

For cataract surgical service planning purposes what is considered an 'operable' cataract has become less clear:

Modern advances
in surgery and
better outcomes

+

Increasing
expectation and
visual needs of
patients

=

Increasing willingness
of surgeons to perform
cataract surgery

Visual acuity is still the main determinant of 'operable' cataract

Lowering the visual threshold
at which to perform surgery

=

Dramatic increase on the volume of
cataract surgery required



The cataract case mix study

WHO suggests a global volume of cataract surgery > 30 million per year by the year 2020 to control cataract blindness

But what if the majority are being operated at 6/12 ??

➔ Aim: Establish the different visual thresholds used for cataract surgery globally



The International Eye Research Network (IERN)

A network of ophthalmologists across the world able and willing to conduct research into prevention of blindness to support VISION 2020.

Focused on where the avoidable blindness burden lies.



Recruitment to IERN

- Alumni of MSc at LSHTM
- Contacts of ICEH/IAPB
- Adverts in JCEH
- Word of mouth

on a part-time basis over two years (15,150 (Overseas) or 20,000 (UK)). For more information: contact Deon Minnie at The International Centre for Eye Health, 11 St Andrews Place, London N1W 2AP. Tel: +44 (0)20 7599 4646. Email: dminnie@lshtm.ac.uk or h.lindfield@lshtm.ac.uk. Website: www.lshtm.ac.uk/courses. JCEH

Cape Town, South Africa
Diploma in Community Health

July 2010. National VISION 2020 district VISION 2020 managers who wish to receive management of district programmes. Course fee: R10,000 (approx. £1,000) on campus, then 34 weeks the student is back in their health district, and a final report. Closing date: 30 June 2009.

R35,000 (US \$3,500). Training expenses for 12 weeks: R24,000 (US \$2,400), from Cape Town. Application: Contact Deon Minnie at dminnie@lshtm.ac.uk

Centre for Community Health (KCCO), Tanzania
Led by KCCO in collaboration with LSHTM. Venue: KCCO, P.O. Box 1700, Dar es Salaam. For more information: contact Deon Minnie at dminnie@lshtm.ac.uk or contact Genes

programmes.

Management for VISION 2020 programme managers, 16–27 November 2009
Target audience: Programme managers and key decision makers of VISION 2020 planning areas.

The cataract surgery case mix study: establishing the preoperative visual acuity of cataract patients worldwide

The International Centre for Eye Health (ICEH) is asking ophthalmologists from all over the world to become part of a research network.

In the network's first study, we would like to detail the variation in preoperative vision of patients undergoing cataract surgery in different countries. This information is essential when planning effective VISION 2020 programmes to eliminate cataract blindness.

We will be asking network members to record preoperative visual acuity on 100 consecutive patients undergoing cataract surgery. The study is anticipated to start in 2009.

Anyone who takes part in the study will be acknowledged in the resulting publication.

If you or your institution would like some more information on how to get involved please contact either:

Dr Shaheen Shah
shaheen.shah@lshtm.ac.uk
or Dr Robert Lindfield
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Cataract case mix study: first prospective study for the IERN

Aim:

1. Describe the variation in the proportion $<6/60$ preoperatively
2. Determine proportion having first eye surgery
3. Explore variations by country Human Development Index



Data Collection

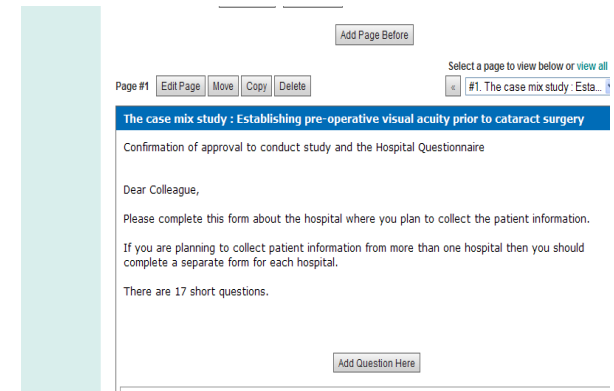
Two stages:

– Hospital questionnaire:

- Completed online
- Resources available in hospital
- Ethical approval

– Patient questionnaire

- Basic demographic information
- 100 consecutive patients undergoing cataract surgery
- 100 consecutive patients age, gender, VA, first/second eye, literacy



The screenshot shows a web-based questionnaire form. At the top, there is a navigation bar with buttons for 'Add Page Before', 'Page #1', 'Edit Page', 'Move', 'Copy', 'Delete', and 'Select a page to view below or view all'. Below this, the title of the form is 'The case mix study : Establishing pre-operative visual acuity prior to cataract surgery'. The main content of the form includes a confirmation of approval to conduct the study and the Hospital Questionnaire, followed by a greeting 'Dear Colleague,' and instructions to complete the form about the hospital where patient information will be collected. It also mentions that there are 17 short questions and provides an 'Add Question Here' button at the bottom.

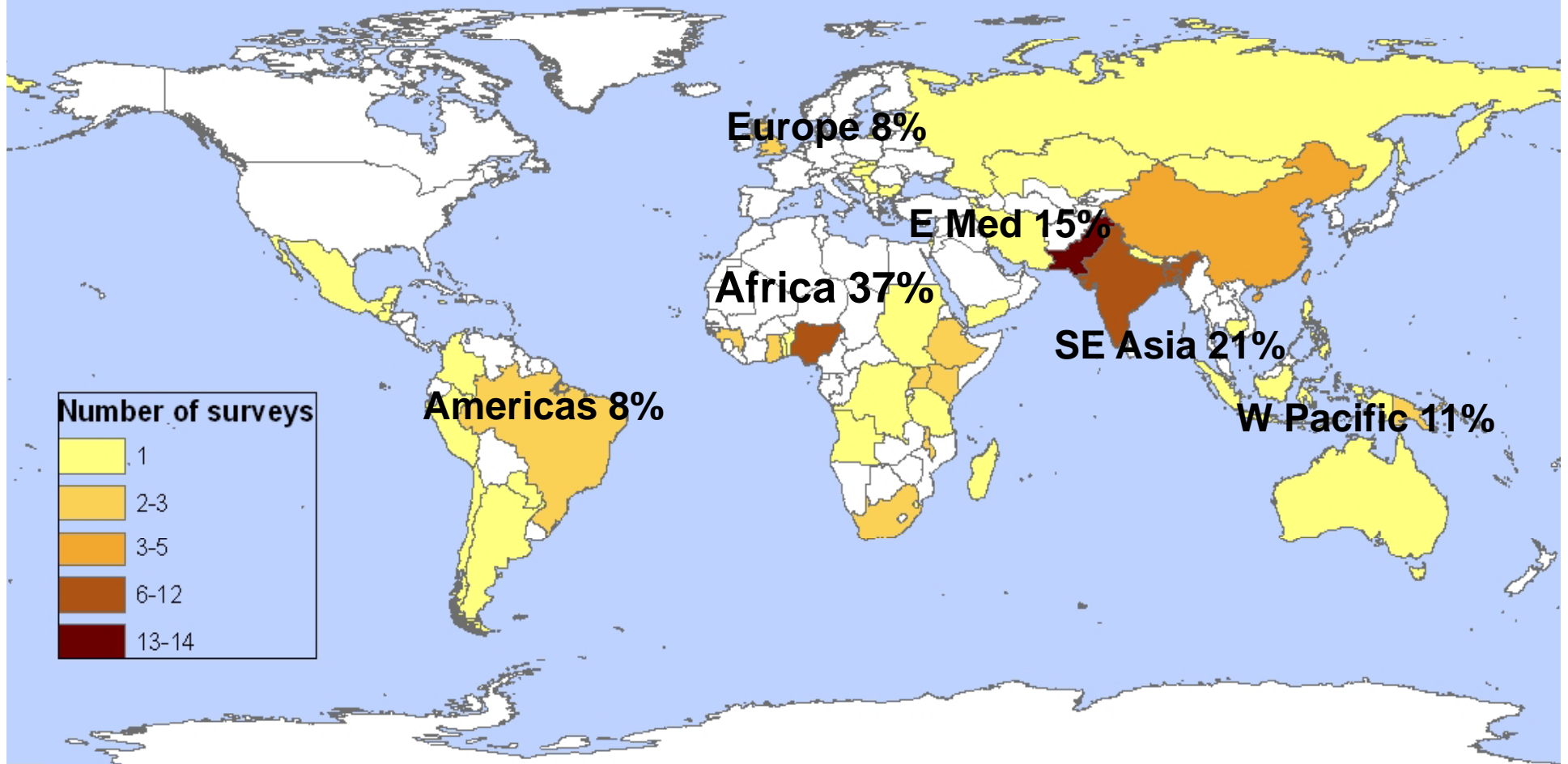


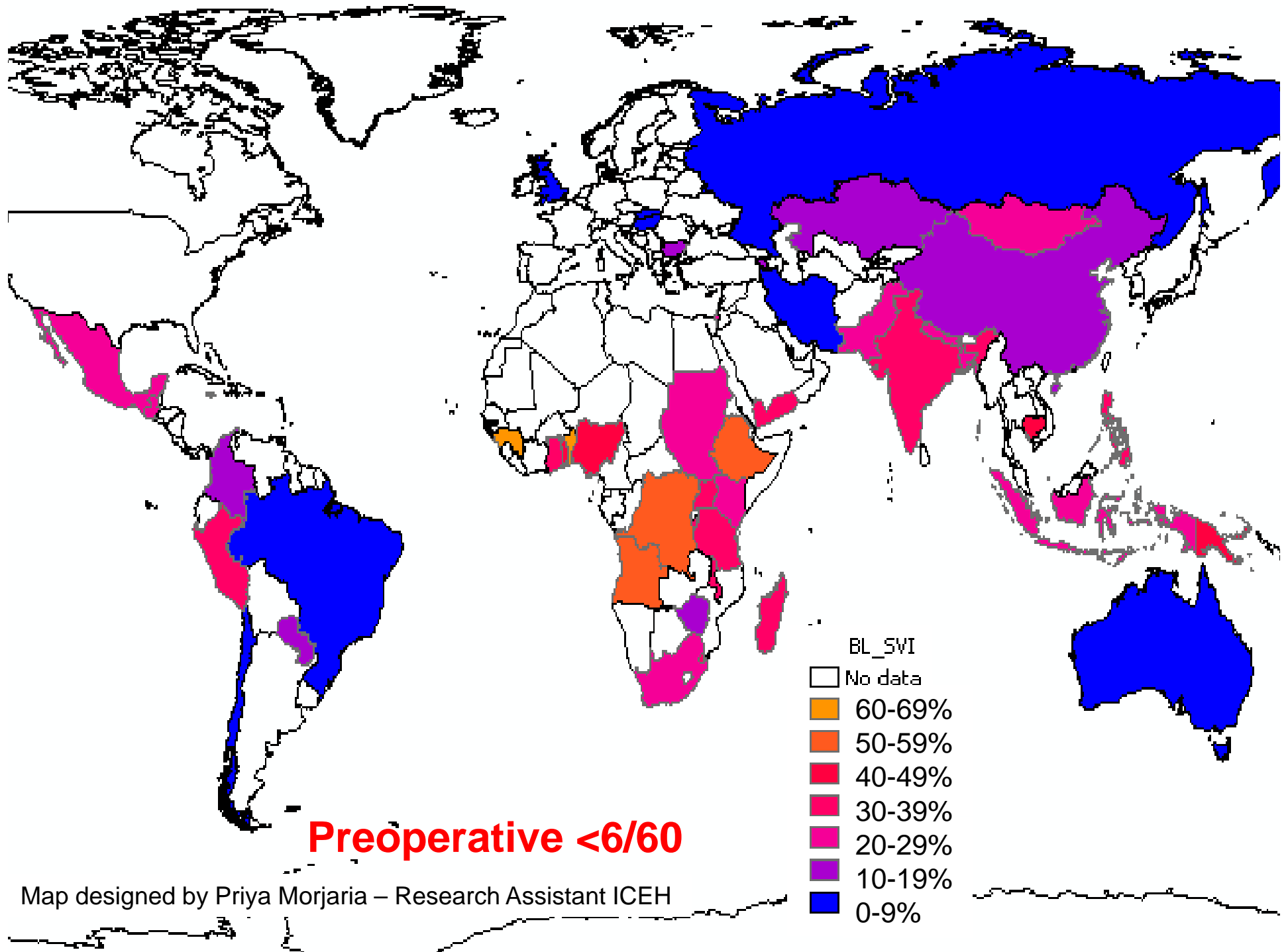
Results

- 154 eye hospitals completed the hospital questionnaire.
- 111 (72.1%) returned patient questionnaire
- Data provided on 11,048 patients in 51 countries in all WHO regions
- **84.7% of the hospitals were in middle/low income countries**
- Just over half (54.2%) were non governmental hospitals.
- 60.6% of centres had a working B scan ultrasound machine
- Median number cataract surgeries (per year): 1,700 (IQR 800, 4000)



Origin of cataract data for case mix study





Preoperative <6/60

Map designed by Priya Morjaria – Research Assistant ICEH

Preoperative visual acuity in individuals undergoing cataract surgery (better eye)

Human Dev Index [UN]	BI/SVI	%	MVI	%	Near Normal	%	Normal vision	%	Total	%
High	31	6	105	21	147	30	207	42	490	100
Middle	153	13	298	26	364	31	350	30	1,165	100
Middle-low	2481	31	2,669	33	1709	21	1234	15	8,093	100
Low	462	44	296	28	165	16	131	12	1,054	100
Total	3127	29	3,368	31	2385	22	1,922	18	10,802	100

6% of surgeries in high income countries were on patients bilaterally SVI/blind (<6/60) compared with 44% in low income countries (p<0.001).



Surgical Eye

3/4 having their first eye operated.

Proportion of first eye surgery increased with increasing country deprivation:

**66.2% in high income
80.8% in low income, $p < 0.001$.**



		n=	% <6/60
Gender	Male	3945	73
	Female	3980	72
Age	<50	948	77
	50-59	1266	75
	60-69	2716	73
	70+	2995	69
Literacy	Yes	2982	58
	No	4943	84
First Eye	No	1735	64
	Yes	6190	75
Volume	<1000	2,556	84
	1000- <3000	2,483	69
	3000+	2,886	66
HDI	High	125	25
	Middle	590	50
	Middle-low	6,270	76
	Low	940	88
Total		7,925	72

Conclusions

- The majority of respondents were from low and middle-low income countries.
- Demonstration of a strong interest and willingness to collaborate in research
- Feedback of analysis on individual hospital's data well received by network members
- Internet can be used to develop and support a research network that, at low cost, can provide a timely and accurate 'global snapshot' of activity.
- Information can be used to plan cataract surgical activity for VISION 2020 programmes – e.g. refining the local cataract surgical rate



Next Steps

“An International Situational Analysis of Glaucoma Services and Management”

If you want to get involved then please
contact:

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