



**INTERNATIONAL  
CENTRE FOR  
EYE HEALTH**

# Introduction

The International Centre for Eye Health (ICEH) was established to address the need of developing countries for expertise in blindness prevention. The ICEH is unique worldwide in its three key activities:

- **Research** into the main blinding eye diseases and their treatment
- **Training** of eye health workers from low-income countries
- **Information and education** for eye health workers worldwide.

There are 37 million blind people worldwide. What is particularly disturbing about this figure is that 75% of all blindness is either easily preventable or sight can be restored successfully with cost-effective treatments. The problem is reaching the people who most need it. In Africa, where blindness is five to ten times more common than in the UK, there is, on average, only one eye specialist per million people, compared with 15 in the UK. The ICEH, through its three key activities, aims to empower eye health workers to deliver high quality eye care to people living in the poorest and most remote rural communities in the world in order to eliminate unnecessary blindness.

Through the achievements of the ICEH over many years, millions of people now have access to quality eye care. But there remains much more to be done.



The ICEH is a World Health Organization Collaborating Centre for Prevention of Blindness. It is led by Professor Allen Foster, an internationally respected leader in the field of blindness prevention, has

a staff of 27 and an annual turnover in the region of £2m. Professor Foster and his senior staff help shape eye care policy throughout the developing world in their advisory roles to several large international non-governmental organisations (NGOs) and partnership with the World Health Organization (WHO).

**Front cover picture**  
Eye testing in the community near Peshawar, Pakistan  
Picture: Pak Sang Lee

**Main picture right** Afghan woman suffering from bilateral cataract

**Top right** A child leading his blind father in West Africa, where this is a typical sight

**Bottom right** Mother and child attending a community eye clinic in Kenya. The child had successful surgery for congenital cataract.



ICEH

**‘Through the achievements of the ICEH over many years, millions of people now have access to quality eye care’**



CBM International



David Yonston



### Academic excellence

The ICEH is based at the London School of Hygiene and Tropical Medicine. Part of the University of London, the LSHTM is a world-renowned postgraduate medical school. Its mission is to contribute to the improvement of health worldwide through the pursuit of excellence in research, postgraduate teaching and advanced training in international public health and tropical medicine. The LSHTM has been providing advanced training for leaders in public health worldwide for over 100 years.



### VISION 2020:

#### The Right to Sight

VISION 2020: The Right to Sight is a joint Global Initiative established by the World Health Organization (WHO) and the International Agency for Prevention of Blindness (IAPB), to eliminate avoidable blindness worldwide by 2020. It unites all the major international agencies working in the field of blindness and focuses their activities where they will be most effective. All of ICEH's research, training, and information provision is directed towards eliminating avoidable blindness. ICEH, in collaboration with its partners, is leading the research programme underpinning VISION 2020.

# Building skills and capacity

Through its research, training and information provision, the ICEH works in partnership with eye health workers worldwide to build skills and capacity and to establish effective, sustainable eye care programmes.

Murray McGavin



Pak Sang Lee



## Research

The research of ICEH is focussed on childhood blindness, cataract and trachoma. These are the priorities for the VISION 2020 Initiative. The research results inform the design and implementation of eye care programmes in regions where little, if any, reliable information would otherwise be available. The results are disseminated through publication in peer-reviewed journals and presentations at international meetings, enabling eye health workers worldwide to learn from them.

**‘The research of ICEH is focussed on childhood blindness, cataract and trachoma’**

## Training

The training courses offered by ICEH attract highly motivated eye care professionals including ophthalmologists (eye surgeons), eye nurses and programme managers from all over the world. Many past students hold prominent and influential positions in health ministries, hospitals, universities and NGOs in developing countries. Many others work at the front line, delivering eye care to the poorest rural communities. Some maintain strong research links with ICEH and work on collaborative projects. ICEH trains its students as specialists in Community Eye Health, so as to devise and implement blindness prevention programmes that make a difference in their own countries.

**‘Many past students hold prominent and influential positions’**



## Information provision

The ICEH provides practical resources to educate and inform eye health workers, making them more effective at reducing blindness in their communities. Through the International Resource Centre (IRC), the ICEH supports many thousands of eye health workers who would otherwise not have access to any information or teaching materials.

# How ICEH research and training work together

Case Study: The Gambia

In 1985, Dr Hannah Faal, an ophthalmologist and head of the eye unit at the main hospital in The Gambia, undertook a course in Community Eye Health at ICEH. On her return to The Gambia, equipped with the necessary skills and knowledge, Dr Faal worked with ICEH staff to survey the magnitude and causes of blindness throughout the country. It showed that 7000 people per million population were blind and that two-thirds of these had cataract and 20% had trachoma. Armed with this knowledge, and with support from Sight Savers International, Dr Faal established the National Eye Care Programme (NECP) and started working to reduce blindness. A second survey ten years later showed that blindness nationally was reduced by 40% due to the success of the eye care programme. Dr Faal initiated the training of Ophthalmic Assistants to carry out cataract operations, a practical solution to the severe shortage of ophthalmologists.

The NECP team also set out to tackle trachoma. After cataract, trachoma is the next most common cause of blindness, with an estimated 150m people infected worldwide and 6m blind. Through the collaborative work of the ICEH and NECP, this disease is almost eliminated in The Gambia.

Besides being an inspirational driving force in The Gambia, Dr Faal has had a major impact on the development of eye care policies throughout West Africa and as President of IAPB is a co-founder of the VISION 2020 Global Initiative. Much of what has been learnt about effectively tackling blindness in The Gambia is now being applied in other developing countries.

The success achieved in The Gambia shows how long-term partnerships between ICEH and local eye health workers, with financial backing from international NGOs and governments, makes a real difference to people's lives.



Fabienne Fossasz/Sight Savers International



Pak Sang Lee



Sight Savers International

Above Children in The Gambia receiving treatment to prevent trachoma

Far left Dr Faal (far right) and colleagues discussing prevention of blindness

Left Dr Faal receiving the Order of the Republic of The Gambia from the President, the highest accolade in the country



Mohammad Muht (3)



Anthony Solomon

Worldwide, 1.4m children are blind. ICEH is working in Bangladesh, one of the world's poorest countries, to identify and treat children who are blind. There are approximately 40,000 blind children in Bangladesh and almost two thirds of this blindness is avoidable. However, many children are hidden away because of family misconceptions and fear. ICEH has identified the specific barriers to uptake of eye care services – for example, many people believe that children born blind are always incurable. ICEH is planning a further major programme of research to find blind children, treat those who can be treated, and provide education scholarships and rehabilitation for those who cannot. Through long-term partnership with local eye care providers, community groups and schools, this project aims to change people's attitudes to blindness as well as restoring sight to blind children.

**Above left A Bangladeshi child wearing adult spectacles**

**Above right A child's vision being assessed during the ICEH National Childhood Blindness Study in Bangladesh**



**'There are approximately 40,000 blind children in Bangladesh and almost two thirds of this blindness is avoidable'**

**Above A young child receiving azithromycin**



Victoria Francis

**'Blindness from trachoma is preventable if the cycle of infection can be broken'**

Trachoma is common amongst poor communities in hot, dry areas of the world, where water supplies and access to sanitation are inadequate. It is spread by flies and by person-to-person contact. Repeated re-infection over many years eventually causes the eyelid to turn inwards so that the eyelashes scratch the surface of the eye, causing blindness from corneal scarring. Worldwide, 10m people need eyelid surgery to prevent scarring. Blindness from trachoma is preventable if the cycle of infection can be broken. Antibiotics kill the bacterium responsible for the infection. Traditionally, tetracycline ointment has been used, but it is not easy to administer and requires treatment over long periods.

Recently, ICEH researchers working in Tanzania, with support from the Wellcome Trust/Burroughs Wellcome Fund, the International Trachoma Initiative, and the Medical Research Council, have shown that just one dose of the antibiotic azithromycin can be amazingly effective. Two years after the dose was given, all but one person in a community of nearly 1000 people were free of infection.

This study provides dramatic new evidence of the power of azithromycin to combat trachoma. The data will help trachoma programme managers design better antibiotic distribution schemes. As a result, many millions more people will be spared unnecessary blindness.

Retinopathy of prematurity (ROP), a condition that affects premature babies cared for in neonatal intensive care units, causes up to 60% of blindness in children in 'middle income' countries in Latin America, Asia and the former socialist economies. ROP starts shortly after birth and can progress to total blindness over a few weeks. Once blind, sight cannot be restored. In the developed world, ROP is now largely prevented through meticulous standards of neonatal care and monitoring. Early screening of premature babies by an ophthalmologist is essential to ensure that ROP is detected and treated immediately. A study in Rio de Janeiro, Brazil, supported by CBM International, is screening for ROP in premature babies. The risk factors for ROP, and the cost-effectiveness of a screening and treatment programme, are being investigated. This study is particularly important as the findings will be applicable in other countries where ROP is a problem, and will lead to prevention of blindness in babies throughout the world.

# Training



Pak Sang Lee



ICEH



Victoria Francis

The ICEH runs courses in London and overseas. The 'flagship' course offered by the ICEH at the LSHTM is its Masters degree in Community Eye Health. This MSc equips health professionals with the knowledge and skills to reduce blindness and visual disability in their communities. Traditional medical training concentrates on treating individual patients, but does not provide the skills to address community-wide problems. That is the purpose of training in Community Eye Health.

The MSc students are already qualified as doctors, nurses, optometrists or programme managers. They come from all over the world, including Africa, the Indian sub-continent, Latin America and Asia. Students' costs are provided by a range of sources, including the UK Government, their own governments, and through fundraising from Foundations, Companies and Trusts. However, every year some promising students have to be turned away because the funding simply cannot be found.

**'The MSc equips health professionals with the knowledge and skills to reduce blindness and visual disability in their communities'**

**Above Dr David Yorston teaching ICEH MSc students**

**Above right Kuldeep Dole and team studying Vitamin A deficiency in Pune, India, during his MSc at ICEH in 2002-2003**



**Personal View  
Dr B R Shamanna  
Hyderabad, India**

"After qualifying as a doctor, I went on to study community medicine. I then worked in the world's largest eye hospital, Aravind, in South India and subsequently the L V Prasad Eye Institute in Hyderabad. This experience inspired me to follow a career in community eye health, so I undertook the MSc in Community Eye Health at ICEH in London in 1998. On returning to India, I decided to develop similar courses here so that more eye health workers can gain essential skills. I now head the International Centre for Advancement of Rural Eye Care (known as ICARE for short!) at L V Prasad. In partnership with ICEH, I have established a six-month Diploma course and so far 34 students from Nepal, Sri Lanka, Ethiopia, Bangladesh, Namibia and India have trained here".

Few individuals can attend a one-year Masters degree course in London. For this reason, ICEH takes a number of other approaches to training. In London, ICEH offers a range of full- or part-time units and modules on different topics within the MSc programme, ranging in length from three days to 14 weeks. Abroad, Masters and Diploma courses have been established at centres in Pakistan and India, of the same high quality as in London. The ICEH wants to do more of this, and is currently planning programmes with partners in South Africa and Tanzania.

In a typical year, ICEH also runs 25 one-week courses and workshops in Africa, Asia, Latin America and Europe. The workshops use the expertise of ICEH's local partners as course leaders and speakers. Participants are trained to lead prevention of blindness planning, in line with VISION 2020, in their own countries.

ICEH also aims to meet the need for human resource development for VISION 2020 through its Links Programme. This programme works mainly with hospitals in Africa to identify their training needs and match them with the most suitable UK eye unit. Each Link continues over five years or more, to build the capacity of the partner hospital to prevent and treat blindness.

**Above ICEH graduate, David ole Sokooi, presenting awards to Community Health Motivators after a trachoma training workshop, Kenya**



**Personal View  
Joseph Banzi  
Community Co-ordinator  
Moshi, Tanzania**

"The workshop marked the start of Vision 2020 planning activities in Tanzania from the national level to the regional. It called people together from the eye care field and those working in other planning sectors – all with a common goal. It made participants realize the needs of their regions and what they can do to bring about the elimination of blindness.

It was a good opportunity for me to meet and hear from people such as Professor Allen Foster, who is the most experienced teacher I have ever met. His teaching attracted the attention of all participants and he shared all his experiences in Africa as well as in other parts of the world. The workshop inspired me greatly and has driven me to set plans and priorities for the future."

# Information provision

Sue Stevens



Left Henry Macha, eye surgeon at Marangu Hospital in Tanzania, shares *Community Eye Health* with colleagues

The International Resource Centre (IRC) educates community eye health workers in developing countries by developing and disseminating practical, up-to-date information. The IRC is the only organisation of its kind worldwide. Its main activities are:

- production and dissemination of the *Community Eye Health Journal*
- preparation and distribution of teaching materials
- development of a network of Resource Centres in developing countries

The IRC also 'trains the trainers', as it equips eye health workers with items such as publications, videos, CD-ROMs and slide sets to enable them to educate others in the community. A recent major achievement has been the establishment of Regional Resource Centres in six countries – India, Pakistan, Nigeria, Tanzania, South Africa and Colombia – which continue to be supported by the IRC. The IRC is also seeking to further develop computer-based training packages both on the internet and as CD-ROMs.

**'The IRC is the only organisation of its kind worldwide'**

## Community Eye Health Journal (CEHJ)

The CEHJ provides practical ideas for eye health workers in order to improve the standards of care they provide. Published quarterly, it is available free of charge to eye health workers in developing countries and is sent to 15,000 individuals in 175 countries. Funding is always needed to cover costs, and to enable translations into other languages. Currently, French and Chinese editions are available.

In a reader survey, six out of ten respondents said that the Journal is the only up-to-date source of eye health information to which they have regular access. The same proportion reported direct changes to their practice, knowledge or attitudes as a result of reading the Journal.



## Personal View

### Community eye health doctor, Bangladesh

"I was hostile to the traditional healers but the article 'Traditional Healers in the prevention of blindness' changed me and now I believe they can be a positive force in the prevention of blindness."

# Acknowledgements and contacts

Clare Gilbert



Left Pupils at a school for blind children in Thailand



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## Contacting ICEH

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ICEH



Right Eye testing in Afghanistan



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