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For a relatively small cost, we can eventually impact on many thousands of individuals where help is most needed.

It gives me great pleasure to introduce this Annual Review which marks another successful year for the British Council for Prevention of Blindness and its work. Throughout the year we have continued our mission to promote blindness prevention by supporting high quality research, education and mentorship programmes.

Childhood blindness must rank amongst the most devastating conditions imaginable. It impacts not only the affected child but also parents, siblings, other family members, carers and those involved in support services. In some parts of the world the support available may be minimal or absent, the diagnosis of the cause of the blindness may be delayed, and conditions may go untreated until it is too late. This is especially true in low and lower-middle income countries. It is for this reason that BCPB decided to support a project in East Africa designed to teach health workers how to screen children for visual impairment and eye abnormalities in infancy as part of the routine health examinations in the community. The outcomes of the study will be monitored and if, as hoped, the results show improved early diagnosis and treatment, the model can be extended to other countries in need of similar programmes.

As a charity we believe that, with limited funds at our disposal, it is through education, research and mentorship programmes that we can have the greatest impact on the prevention of blindness. As in the example above, knowledge gained in this way can be cascaded through many health professionals to benefit large and needy populations in developing countries throughout the world. For a relatively small cost, we can eventually impact on many thousands of individuals where help is most needed. I hope that you will agree with me that the reports described in this review are testament to the efficacy of this philosophy.

At BCPB we are privileged to have the services of a small but highly dedicated team of staff and trustees whose support has been unwavering over the years. Our Charity Manager, Diana Bramson and Fundraiser, Emma McGuigan continue to provide BCPB with an efficient and excellent service. This year saw the appointment of three new trustees Patrick Franklin, Patrick Igulot and Elmien Wolvaardt each of whom is able to add their unique talents to the Board, and I am grateful to them for agreeing to serve.

A report by the Vision Loss Expert Group published in the Lancet in 2017 estimated that there were 36 million blind people in the world with a further 217 million people with severe or moderate visual impairment. This is the size of the challenge that the world faces. We believe that BCPB has a unique role in meeting this challenge and I invite you to read this Annual Review and be inspired by the stories of the outcomes of our work.

Paul Hunter FRCP, FRCS, FRCOphth
BCPB and VISION 2020: The Right To Sight

VISION 2020: The Right to Sight is the global initiative for the elimination of avoidable blindness - a joint programme of the World Health Organization and the International Agency for the Prevention of Blindness, set up to intensify and accelerate prevention of blindness activities. The initiative has subsequently been complemented and built upon by a series of additional plans and been reinforced by four World Health Assembly resolutions. "Universal Eye Health: A global action plan 2014 – 2019" (GAP) aims to reduce prevalence of avoidable visual impairment by 25% by 2019 - a more realistic global target for what can be achieved by the end of this decade, rather than the original target of global elimination by 2020. Some individual countries may achieve, or be close to, elimination by 2020.

The long-term goal of both GAP and VISION 2020 remain the same – to rid the world of avoidable blindness and visual impairment. It is a shocking fact that in the 21st Century there are still some 285m visually impaired and blind persons and that 80% of these cases could have been prevented or treated.

BCPB is committed to playing our part in eliminating avoidable and treatable blindness by funding:

- Practical research into the causes of blindness, more effective treatments, and preventive methods
- The training of eye care professionals from the developing world to enable them to implement blindness prevention programmes in their home countries.

VISION 2020
THE RIGHT TO SIGHT

Eye screening at a school in Ghana
The British Council for Prevention of Blindness is a small niche charity, that funds innovative research and training to prevent blindness in children and adults in low and lower middle-income countries.

Our pioneering projects empower local professionals and communities to undertake preventative sight saving programmes. The results are changing thousands of lives for the better, relieving communities of the burden that blindness places upon them, reducing poverty, and boosting economic growth.

We focus almost entirely on long-term interventions relevant to the poorest communities. We believe that the most effective use of resources in order to have the greatest impact is through the support of the few, who will transfer their knowledge and skills in blindness prevention through educating health care workers and influencing governments who are then in the position to pass on the benefits to the many - the so-called 'cascade effect'.

**Our Aims:**

1. To enhance our work as a niche player in blindness prevention by funding training and medical research.
2. To raise our profile
3. To improve income generation for further grant-making.

**Blindness:**

- Blindness affects over 36 million people globally
- Three quarters of this blindness is avoidable
- 89% of the blind people in the world live in poor countries
- With adequate funding and research, most blind people in the world could have their visual impairment treated or prevented
- Interventions to prevent blindness are amongst the most cost-effective - a blind person requires care and rehabilitation and cannot usually work, so saving sight makes economic sense as well as transforming lives
- Training one person to be a leader, trainer and advocate creates a cascade effect when they pass on their knowledge and skills to others who can go on to build eye care programmes in developing countries, to save the sight of many people and promote the development of new knowledge to help treat eye conditions.

We believe that no-one, anywhere in the world, should lose their sight if this can be prevented.
Our key achievements:

- Making ground-breaking discoveries leading directly to a breakthrough in the eye medication Ivermectin. This is now widely used in Africa to prevent ‘river blindness’ (onchocerciasis) – a condition that once blinded millions of people.

- Supporting the development of an eye health care training module to be delivered within the World Health Organization’s Integrated Management of Childhood Illness programme. The Tanzania Ministry of Health have now agreed that this training can be delivered to over 800 frontline child health care workers, thereby detecting eye problems early and avoiding childhood blindness.

- Validating the use of smartphones for the diagnosis of eye diseases in Kenya by research-based social enterprise Peek Vision, leading to the sight of thousands of people in the region being saved. Peek technology is now being used throughout Africa and Asia for millions of people who do not live near eye health facilities or cannot access treatment.

- Supporting over 160 eye care professionals from the world’s poorest countries to train and undertake research, developing their expertise in planning and managing blindness prevention programmes, as well as leadership and advocacy skills.

- Each of these new eye care leaders will save the sight of up to 40,000 people in the course of their career, and will on average train a further 200 people to save sight.

- Forty years of funding innovative research leading to greater understanding and better treatment of diseases including glaucoma, age related macular degeneration, trachoma, and childhood cataract.

- Over 150 scientific papers have been published in the last nine years as a result of BCPB funded research.

We thank everyone who has supported us throughout the year enabling us to continue to save and restore the sight of thousands of people across the developing world. BCPB receives no government funding and all of our work is funded through voluntary gifts including legacies.
## Research and Training Projects Currently Funded

<table>
<thead>
<tr>
<th>Project</th>
<th>Full cost of project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor Barrie Jones Fellowship – Dr William Dean, International Centre for Eye Health: Ophthalmic surgery incubator training units in Sub-Saharan Africa: up-skilling ophthalmic surgeons for high quality and high volume cataract and glaucoma surgery.</td>
<td>£199,961</td>
</tr>
<tr>
<td>Research project - Dr Ian Murdoch, Institute of Ophthalmology: Determination of the optimal treatment and management strategy for glaucoma control in Tanzania, Sub-Saharan Africa: an integrated clinical and health economics modelling perspective.</td>
<td>£59,950</td>
</tr>
<tr>
<td>Research project – Professor Nathan Congdon, Queen’s University Belfast: PRISSM (Perfecting Refraction in India with Superior Service Models): A cluster-randomized controlled trial of three models of school-based spectacle service delivery in India.</td>
<td>£59,847.13</td>
</tr>
<tr>
<td>Boulter Fellowships, International Centre for Eye Health: Part funding for three eye care professionals from developing countries to undertake MSc in Public Health for Eye Care.</td>
<td>£19,689 per student Total £59,067</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>£378,825.13</strong></td>
</tr>
</tbody>
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Most of these projects are funded across more than one Financial Year.
Advisory Panel

Dr David Yorston  
Chairman  
MB ChB  
Consultant Ophthalmologist  
Gartnavel General Hospital Glasgow

Dr Nicholas Beare  
MA MB ChB FRCOphth MD  
Consultant Ophthalmologist and  
Senior Lecturer St Paul’s Eye Unit  
Royal Liverpool University Hospital

Mr Richard Bowman  
MA MD FRCOphth  
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Fellowship Director Great Ormond  
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Teaching Hospitals NHS Trust and  
Assistant Professor International  
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of Hygiene and Tropical Medicine

Professor Nathan Congdon  
MD MPH  
Ulverscroft Chair of Global Eye Health  
Queen’s University Belfast

Professor John Dart  
MA DM FRCs FRCOphth  
Consultant Ophthalmologist  
Moorfields Eye Hospital London

Professor Gus Gazzard  
MBChir MA MD FRCOphth  
Consultant Ophthalmic Surgeon  
Moorfields Eye Hospital NHS  
Foundation Trust London and  
Professor of Ophthalmology Institute  
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Dr Christine A Kiire  
MA MRCP DM FRCOphth  
Consultant Ophthalmologist Oxford  
Eye Hospital John Radcliffe Hospital  
Oxford University Hospitals  
NHS Foundation Trust

Dr Daksha Patel  
MD MMed (Ophth) MSc FHEA  
Assistant Professor in International  
Eye Health and E-learning Director  
International Centre for Eye  
Health London School of Hygiene  
& Tropical Medicine

Dr Andrew Pyott  
BSc MB ChB FRCS FRCOphthal  
Consultant Ophthalmologist  
Raigmore Hospital, Inverness

Professor Tunde Peto  
MD MHealthEd PhD  
Professor of Clinical Ophthalmology  
Queen’s University Belfast
Our 2018/19 impact at a glance

BCPB’s support of emerging eye health professionals has led to high-achieving leaders in the field of blindness prevention, with our first ever Sir John Wilson Fellow Professor Ciku Mathenge from Rwanda this year receiving the International Humanitarian of the Year Award from Surgical Eye Expeditions.

We have part-funded three students from Uganda, Nigeria and Rwanda with Boulter Fellowships to enable them to attend the 2018/19 Master’s Degree course on Public Health for Eye Care at The International Centre for Eye Health in London. The course has enabled them to learn new skills and gain additional knowledge to work in eye health in their home countries.

A former BCPB Boulter Fellow has provided evidence showing that low uptake of Vitamin A supplementation is directly linked to the prevalence of childhood corneal blindness in Nigeria.

The results from a study we supported have significantly impacted current treatment protocols for microbial keratitis in Malawi.

BCPB seed-funded the Peek Vision project testing a smartphone app to screen for eye problems. By the end of 2018 over a quarter of a million children and adults were screened for eye health problems and referred for further treatment as part of programmes run by Peek Vision and its partners. In addition, the Government of Botswana’s national comprehensive school eye health programme will begin national roll-out using Peek systems in 2019, a world first.

The purchase of a hand-held camera as part of a project funded by BCPB has enabled a team to access remote areas of need via helicopter, bringing a Diabetic Eye Screening Programme to the whole population of Swaziland.

The equipment and training BCPB provided continue to be of relevance in preventing blindness and improving quality of life for many Nigerians who would have otherwise gone blind.
A BPCB-supported project has trained thirty-five senior trainees in glaucoma surgery and forty-nine junior trainees in cataract surgery from 21 countries in Africa using simulated surgery, away from patients.

Through our research mentorship award, one of the mentees is now able to smoothly supervise post-graduate student research and is independently cascading the mentorship training. This in turn will improve the quality of research in Africa providing evidence that will impact blindness prevention projects.

Our support of a project in Tanzania enabled the development of a training curriculum to detect eye problems in children aged between 3 months and five years. Over 800 frontline primary health care workers have now been trained through the World Health Organization’s Integrated Management of Childhood Illness programme. We also supported the development of seven educational videos enabling health care workers to detect eye problems in Tanzanian children under the age of five.

The results of a study which formed a past Boulter Fellow’s dissertation will provide an insight on how best to develop and test strategies to overcome the inequalities in uptake of cataract surgery in Sokoto, Nigeria.

Our support of a project in India will ensure that over 10,000 children in 120 schools will be screened for uncorrected refractive errors, ensuring that children will receive spectacles if they need them.

Our four Boulter Fellows from Kenya, India and Nigeria who studied on the MSc course in 2017/18 will now go on to save the sight of an estimated 30,000 people. Since completing the course they estimate that they will train a further 47 eye health professionals over a year, who will then go on to save the sight of an estimated 14,250 people.
Professor Nathan Congdon: India

Perfecting Refraction in India with Superior Service Models (PRISSM): A cluster-randomized controlled trial of three models of school-based spectacle service delivery in India.

Professor Nathan Congdon, of Queen’s University Belfast, reports on his first year of research.

Children’s vision is especially important, as children who cannot see are deprived of the benefits of a good education, and the resulting limitation in opportunities lasts a lifetime. India has more children than any country in the world, and the leading cause of poor vision there, as worldwide, is “refractive error” - the simple lack of a pair of low-cost, high-quality glasses.

Many programmes in India and elsewhere are trying to solve this problem, but all face the particular challenge of trying to navigate between two less-than-ideal options. Some glasses programmes check vision, measure children for glasses (“refraction”) and provide the glasses all at school (“School Model”). The strength of this approach is that most children at school needing glasses will get them. However, this model is very hard to scale up widely, because glasses sales are not permitted in many schools, so the money to sustain the programme is not available and there are rarely enough refractionists (experts in glasses measurement) to cover all schools in an area.

Other programmes provide vision screening at schools, but refer children failing screening to nearby facilities for refraction and distribution/sale of glasses (“Referral Model”). This model’s strengths are the decreased demands on refractionists and easier glasses sales. However, often most referred children don’t come to hospital, depriving the majority of necessary glasses.
Our team has done a careful review of the published literature, and come to the conclusion that involving teachers in vision screening and family counselling significantly increases glasses use. At 120 schools in India, involving over 10,000 children, our PRISSM (Perfecting Refraction in India with Superior Service Models) study will examine an Improved Referral Model, with strong teacher involvement, trying to combine lower costs of the ‘Referral Model’ and high uptake of the ‘School Model’. We believe our study can prove the effectiveness of this new model, which combines the strengths of previous approaches while eliminating their weaknesses. If our PRISSM study is successful, it will validate a powerful tool to improve vision and educational opportunities for children in India and world-wide.

If our PRISSM study is successful, it will validate a powerful tool to improve vision and educational opportunities for children in India and world-wide.

The project has:

- designed and tested protocols and forms
- held meetings to brief and train partners
- received ethical approval from participating hospitals in India and at the co-ordinating centre, Queen’s University Belfast
- contracts have been signed and funds put into place: the amount of groundwork necessary to kick off a study of this magnitude cannot be under-estimated!

A particular strength of PRISSM is that it is based on a national children’s vision screening programme called REACH (Refractive Error Among Children), run by Orbis International in India. This will allow us to put into practice immediately the lessons learned from our study into an existing, large-scale programme.
Global Child Eye Health Project: Developing and pilot testing an eye module for inclusion in the UNICEF/WHO child health programme in Tanzania.

Dr Malik reports: On one of my first visits to Tanzania I met Ashura and her child Shadrack at the Muhimbili hospital in Dar es Salaam. Ashura explained that she knew soon after Shadrack was born that there was something wrong with his eyes. They looked large, were watery and he hardly opened them. When she visited the local child health clinic she told the child health care workers about her son’s eye problems. However they did not know what to do or how to examine his eyes, so did nothing. This sequence was repeated another four times over a period of three months. Not knowing how to examine Shadrack, the child health care workers either ignored his mother’s questions or gave her antibiotic eye drops. Finally, she decided she would seek help herself and made her way to the hospital. It was there that he was diagnosed with congenital glaucoma - a rare eye disease which leads to increased pressure in the eye - untreated, it can lead to blindness. Shadrack was fortunate enough to be able to access treatment just in time, and is now making good progress.

For every one blind child in a high income country there are ten times more in low income countries, such as Tanzania. Three quarters of these children have treatable or preventable conditions, but there is a lack of local skilled eye care professionals to provide preventative measures and to detect and treat eye problems. Children frequently present too late for effective treatment to take place leading to avoidable visual loss and blindness. Mothers and children do regularly access primary level child health clinics in order to receive vaccinations, health advice and education. However, health care workers are not taught about eye problems in children. In fact child health systems and programmes, including the UNICEF/WHO Integrated Management of Childhood Illness (IMCI) do not include eye care in their primary level services for young children.

“Dr Aeesha Malik: Tanzania

This has the potential to give mothers and children access to basic eye care services in over one hundred low income countries.”
The funding from BCPB has allowed us to develop and pilot test an eye care training module which can be included in the WHO/UNICEF IMCI programme. We have been working closely with the Ministry of Health (MoH) in Tanzania to develop this module and then test it in Bahi, a rural central area in Tanzania. We have developed an eye care training module, self-assessment, training videos and a poster. We distributed arc lights, an innovative new low-cost device which can check the reflex of babies and children to all the health care workers allowing them to detect important, treatable eye diseases in children such as cataract and retinoblastoma.

The results from our work have shown a significant improvement in the knowledge and skills of child health care workers who found the training easy to understand and relevant and were able to apply it in their daily practice, including checking the red reflex with an arc light.

Feedback from health care workers we have trained overwhelmingly said they would like videos to show some of the examinations and cases that were being taught in the eye module. This led us to set up a film studio in the eye clinic in Muhimbili national hospital in Dar Es Salaam and, after overcoming many challenges, seven educational videos have been produced as part of the training module.

The Ministry of Health were delighted with our eye module work and have now included it into all IMCI training nationally. We are now planning to build on this work by evaluating the programme in Tanzania to provide evidence for scale-up in the global IMCI programme. This has the potential to give mothers and children access to basic eye care services in over one hundred low income countries.
Following BCPB’s part-funding in 2012 of a smartphone–based ophthalmic testing system which can perform comprehensive eye examinations, Peek Vision has gone from strength to strength, launching as an independent organisation in 2016.

Since then work has focused on refining and testing its technology in preparation for wider rollout in the coming years. Working with partners including international disability NGO CBM and the Governments of Botswana and Kenya, one of the 30-strong team’s main activities has been testing the use of the technology in school vision screening. Childhood visual impairment is a major public health concern affecting 19 million children worldwide and Peek’s technology aims to improve the efficiency of existing health services to create a major impact.

The Peek school eye health system is an integrated smartphone screening system which includes the Peek Acuity vision check app, a simulation tool showing a visual comparison of the child’s sight to clear vision, which can be printed on a postcard for parents and carers to remind them that their child needs treatment, and text message reminders to parents in the local language. In a landmark study for Peek, published in The Lancet Global Health in 2018 and featured on the BBC, the Peek school eye health system more than doubled the proportion of children attending follow-up appointments compared to conventional eye health screening. The study, led by the International Centre for Eye Health at the London School of Hygiene & Tropical Medicine, was carried out in partnership with the Kenyan Ministry of Health among more than 20,000 children in fifty schools in Trans Nzoia County, Kenya.

The Peek team in Kenya went on to screen 200,000 children in Trans Nzoia County where they are based, with 4,000 being referred for further treatment. Over a quarter of a million children and adults have been screened for eye health problems and referred for further treatment as part of programmes run by Peek with its partners. The Government of Botswana’s national comprehensive school eye health programme will begin national rollout using Peek systems in 2019, a world first.
Microbial keratitis in Malawi: A Microbiological Pilot Study

The problem: Microbial keratitis is an infection of the cornea (the transparent front part of the eye) that may lead to ulcers, scarring and blindness. This in turn may lead to a loss of independence and an increased incidence of injury. People of working age may lose employment and this can be devastating for families and communities, particularly in low and middle-income countries. Improving outcomes in microbial keratitis depends on rapidly identifying the micro-organism (bacteria, virus, fungus or protozoan) causing the infection and targeting treatment towards this. One of the barriers has been the difficulty in collecting samples from the cornea which until now has depended on the use of a sterile blade or needle to scrape the infected area of the cornea requiring specialist equipment. It can be very difficult to pick up the micro-organisms on the blade or needle for the laboratory to correctly identify what is causing the infection.

Our solution: A group at the University of Liverpool recently developed an easy to perform method to obtain corneal samples called a ‘corneal impression membrane (CIM)’, a specifically adapted small piece of filter paper placed onto the infected area of the cornea for 2-3 seconds. We have demonstrated that this method is better at isolating and identifying the micro-organism causing the infection in a UK population. As the corneal impression membrane does not require skills or equipment, it lends itself to being used in low resource settings such as Malawi. Microbial keratitis in Malawi is a significant cause of blindness but very little is known about the spectrum of micro-organisms causing the infection as there is currently no way in which corneal samples can be obtained.

Progress: Participant recruitment and sample processing is now complete. Corneal impression membranes were collected from 71 microbial keratitis patients in Malawi. The corneal ulcers seen in Malawi were typically larger on initial presentation than what is usually seen in the UK and were associated with a high numbers of corneal perforations. Trauma was a relatively frequent cause of ulceration and 36.6% of participants had used traditional medicine prior to presentation. The corneal impression membrane identified a likely causative micro-organism in 80.3% of cases. This is significantly higher than in the UK. Gram-positive bacteria were the most frequently isolated organisms. Interestingly there was only one case of Pseudomonas aeruginosa, which probably reflects the non-wearing of contact lenses. There were no cases of fungal keratitis which is significant because patients are often treated for a presumed fungal infection.

The results from this study have significantly impacted current treatment protocols for microbial keratitis in Malawi.

The results from this study have significantly impacted current treatment protocols for microbial keratitis in Malawi. To improve our understanding, we plan to collect samples using the corneal impression membranes from the unaffected as well as affected eyes of patients with microbial keratitis in Malawi. Comparison of the eyes will provide important evidence on the pathogenicity of the micro-organisms.
Determination of the optimal strategy for glaucomas in Tanzania, Sub-Saharan Africa: an integrated clinical and health economics model.

Blindness due to glaucoma in Sub-Saharan Africa is amongst the highest recorded levels globally. Many factors account for this including lack of knowledge by the population, lack of eye care resources and personnel, and the high risk ethnic groups involved.

This project is now nearing completion. As outlined previously we are developing a population-based model for Tanzania looking at the cost-effectiveness of a range of strategies designed to reduce the burden of disease due to glaucomas. A detailed literature review has been undertaken and published, and a consensus meeting has been held to obtain the experience and views of health professionals involved in eye care in Tanzania.

Our project has interviewed 129 patients attending a major glaucoma clinic in Tanzania asking them about the impact on them and their lifestyle of the disease and the therapy. One of the most striking findings is the high proportion of monthly wage which has to be spent on therapy for glaucoma, which frequently has to be borne by friends and family or charities, as shown in this graph.

We are now putting these findings together with the literature review and consensus meeting of health care workers all into an online health economics model which health planners can use to better understand the impact different approaches to detection and management of glaucoma may have on their respective populations. Once complete this model will be an online resource enabling users from other countries to input their own data and assess optimal strategies for preventing sight loss from the second most common cause of preventable blindness.
Professor Tunde Peto: Swaziland

Professor Peto of Queen’s University Belfast updates us on the impact of her mentorship of Dr Jonathan Pons and his team at Good Shepherd Eye Clinic in Siteki to establish the processes and advocacy for a diabetic retinopathy screening programme in Swaziland.

In Swaziland, currently 60% of those presenting at the eye clinic with diabetic eye disease do so due to sight loss in their second eye, so they are desperate for treatment.

We worked with Dr Pons and his team to build their skills on Diabetic Eye Screening including training and supporting an ophthalmic nurse and an eye screener/ grader/analyser. The new set-up is now being used to its full potential.

The team had an abstract accepted at the European Association for the Study of Diabetic Eye Complications (EASDec) in Belfast, and submitted an abstract to the African conference COECSA held in Ethiopia. The Queen’s Diamond Jubilee Trust’s Diabetic Retinopathy Training Event took place just before the conference and both the mentor and the mentee attended and took the opportunity to learn from other African countries.

Discussions have been held with Dr Pons on the design of future diabetic eye disease-related activities in Swaziland and as a consequence of these, he and his team now spend more time with those patients who require attention, and more patients can be seen as the team can also work independently.

BCPB authorised the purchase of a hand-held camera which has enabled the team to access remote areas of need via helicopter bringing the Diabetic Eye Screening Programme to the whole population of Swaziland.

“BCPB authorised the purchase of a hand-held camera which has enabled the team to access remote areas of need via helicopter bringing the Diabetic Eye Screening Programme to the whole population of Swaziland.”
International Centre for Eye Health research mentorship project: Kenya/Tanzania/Uganda

The project: The mentorship project aimed to build capacity for research relevant to the VISION 2020 goal in the region covered by the College of Ophthalmology of Eastern, Central and Southern Africa (COECSA) by ‘training the trainers’ of ophthalmologists. This took place in three eye care training institutions in Kenya, Tanzania and Uganda. The learning has been cascaded to trainees at the three institutions.

Update and reflections from participants:
From Dr Simon Arunga: I attended the first research mentorship meeting in Tanzania as a novice faculty member who had just been appointed as residency training co-ordinator in my department. The initial meeting gave me confidence on how to smoothly supervise post-graduate student research. My key learning from that meeting was to keep the process in manageable steps. Back to my University, the research process became enjoyable and this rubbed off on some of my residents who went on to do a master’s course at the International Centre for Eye Health in London (ICEH) and are keen on doing PhDs. At the second research mentorship meeting, I was identified as one of the people to cascade the mentorship training. We delivered this with my colleague Dr Stephen Gichuhi from the University of Nairobi at the 5th COECSA scientific congress in Ethiopia. We, the local COECSA faculty, were supported by the faculty from ICEH to deliver this workshop. We are now able to independently deliver this across the ECSA region. We hope to get a funding opportunity to cascade this valuable training.
From Dr Sam Ruvuma:

The research mentorship has positively impacted both me as an individual and the faculty at large. On an individual basis, one of my roles as a lecturer is to supervise students (residents) in their dissertation writings on completion of their MMed course. Following the mentorship it has become easier for me to guide them on writing their dissertations in a more professional manner. It has also improved the quality of their research papers/dissertations and some are now able to be published in journals. As a department the mentorship has helped us to train students to start research writing as early as the first year of their resident training.

From Dr Teddy Kwaga:

I did my first research as a principle investigator with the guidance of my mentors Dr Simon Arunga and Dr Sam Ruvuma. Through the Diabetic Retinopathy Network, I was able to conduct research which seeks to understand the knowledge, attitudes and practices of Diabetic Retinopathy amongst patients and clinicians in South Western Uganda. As the principal investigator, I had the opportunity of learning how to collect data in a meticulous way, and to analyse data. The research mentorship has greatly improved my confidence in conducting research, and enabled me to encourage my residency training peers to carry out research. We currently have a manuscript which we hope to submit to the Eye Journal.
Our Fellowships are fully funded by BCPB and lead to the award of PhDs and MDs. Sir John Wilson Fellowships are awarded to researchers based in low or lower-middle income countries who come to the UK for part of their project, and Barrie Jones Fellowships are awarded to UK based researchers who travel to a developing country to carry out their research.

The aims are:

- to provide top level eye care personnel in low income countries, in order to build knowledge and skills in eye care where they are most needed. Fellows from developing counties are selected partly on their ability and ambition to disseminate knowledge and skills through teaching and training
- to build the knowledge base about how best to prevent blindness in low income countries.
- to foster links between UK institutions and those in developing countries, to facilitate a mutually beneficial transfer of knowledge in eye care.

To achieve these aims BCPB’s Advisory Panel assesses the scientific merit of funding applications, and its recommendations are then put to the Board of Trustees who make funding decisions. The Advisory Panel comprises top UK ophthalmologists and operates with highly developed and robust processes. A list of Advisory Panel members appears on page 9.

BCPB is a member of the Association of Medical Research Charities (AMRC) and complies with its guidelines for best practice.
Update from Barrie Jones Fellow

Dr William Dean: South Africa

The Simulated Ocular Surgery (SOS) Trials: Randomised-controlled trials comparing intense simulation-based surgical education for cataract and glaucoma surgery to conventional training alone in East and Southern Africa.

Dr Dean reports: In order to tackle the backlog of avoidable blindness in sub-Saharan Africa, there is a great need to train many eye surgeons safely, efficiently, effectively, and to an acceptable level of competence. The ways that ophthalmologists learn and teach eye surgery is being revolutionised.

Currently, surgical training is often conducted using the traditional ‘apprentice model’ - on patients. We believe that using this conventional model makes surgical training less efficient and less safe, especially for novice eye surgeons. Training opportunities for novice eye surgeons are sparse at best in many parts of the world and, most importantly, patients come first. The quality, quantity, and safety of this training is not necessarily guaranteed. We need to find ways to train eye surgeons to a safe level before operating on patients.

We are testing the hypothesis that intense modular simulation-based ophthalmic surgical education is superior to conventional training alone for the initial acquisition of competence. We have set up a simulation Surgery Training Unit at the University of Cape Town to offer educationally-underpinned and standardised training.

Over the past two years, with support from the BCPB Barrie Jones Fellowship, we have been conducting two independent trials of intense simulation-based ophthalmic surgical education for training ophthalmologists in the procedures for cataract, and separately for glaucoma - the two leading causes of blindness globally and in sub-Saharan Africa.

Trainee eye surgeons have been randomised to the ‘intervention’ of focused simulation-based surgical training (in addition to, and as an enhancement to, conventional training), or to the ‘control’ group of current conventional training alone. The ‘control’ group participants are receiving the same simulation training, only after a period of one year.
Follow-up assessments will measure whether the trainees have gained in surgical competence (objectively assessed using a specific and validated grading score), their perceived confidence as a surgeon, and in terms of the benefit to their patients (the quality and quantity of surgery performed).

From a total of 24 countries we have trained thirty-five senior trainees in glaucoma surgery, and forty-nine junior trainees in cataract surgery. Positive feedback from participants has included comments on the opportunity to perfect the surgery before operating on patients, and feeling more confident in surgical skills.

Also, five senior trainer consultant ophthalmologists have each spent one week in Cape Town and are now fully trained to conduct a simulation surgical training course. One participant from Uganda who attended a course as a trainer-observer comments:

“To my surprise a first-year resident did a cataract case under my observation and finished it with little help from me. The patient’s vision the next day was very good (6/12) - this is enough to show that that this intense training is extremely important and impactful.”

In addition to this training-the-trainers cascade approach, we have also conducted a training-the-trainers workshop for the ophthalmology consultants at the University of Cape Town.

We assessed one hundred training eye doctors performing cataract or glaucoma surgery using simulation before the training course, and are also assessing them by recording simulation surgical procedures at the end of the course, three months and one year later.

The results of these ground-breaking educational-intervention randomised-controlled trials will provide the raw data and robust evidence testing the utility of simulation-based surgical education for cataract and glaucoma surgery. We aim to publish in a high-impact scientific journal before the end of 2019. The research will also help inform surgical training planning and initiatives for other ophthalmic microsurgical skills and fields.

“The ways that ophthalmologists learn and teach eye surgery is being revolutionised.”
Updates from BCPB’s Sir John Wilson Fellows

Professor Ciku Mathenge: Rwanda

Professor Mathenge was awarded BCPB’s first ever Sir John Wilson Fellowship in 2006 and updates us on her activities, including working on child blindness prevention, over the last year:

Besides her interest in training and skills transfer, she continues to engage in research, and led an exciting project on school vision screening looking at the eye health of 20,000 children in Rwanda. One unique thing about this project was that funding came from a very unusual source, the Philadelphia Eagles football club - a testament to the power of networking. The preliminary findings are already being used to inform school screening guidelines for the Ministry of Health.

She led a TADDS (tool for assessment of diabetes and diabetic retinopathy) project in Rwanda which uses a tool developed by WHO to assess the collaboration between services for diabetes and services for diabetic retinopathy. The findings will help improve how these two branches of care can work better for the benefit of the patients living with diabetes.

Professor Mathenge received the International Humanitarian of the Year Award from Surgical Eye Expeditions, and she delivered the annual David Paton lecture at The Wills Eye Hospital in Philadelphia.

At the Rwanda International Institute of Ophthalmology, which she directs, all four of the trainees enrolled last year have passed their examinations achieving a big step towards her goal of producing the best ophthalmology graduates in the region. This year, six new residents have been admitted including two from neighbouring countries.

Professor Mathenge comments: “Twelve years ago BCPB funded my work in retina and kick-started me on an exciting clinical journey. Work in the retina clinic remains my everyday work. I am excited to be starting a project with Orbis International this year using AI to grade retina images. This would have been beyond my horizon had it not been for the solid foundation in skills and knowledge that the Sir John Wilson Fellowship offered me in this area all those years ago.”
Dr Mohammed Abdull: Nigeria

Detection and effective management of glaucoma in Nigeria

Dr Abdull reports: It is now seven years since I had funding from BCPB to start a glaucoma project to address a real problem in managing patients with glaucoma in Nigeria. The disease is not detected early before the onset of severe visual impairment as awareness is very low or there are no facilities to make early diagnosis. For those who make it to the hospital, the conventional treatment is to either use medications (eye drops), which the majority of our patients cannot afford, or laser treatment, which is usually not available in many facilities, or surgical treatment, which preserves vision but is quite invasive and therefore has very poor acceptance.

Equipment provided by BCPB in the form of digital fundus camera, pachymeter and tonometers are being used to screen patients for early detection of the disease to improve diagnosis and thus get patients to treatment early before onset of irreversible visual loss. We use an adapted form of counselling called motivational interviewing to encourage patients to adhere to the treatment they have been prescribed and to educate them to improve acceptance of surgery where appropriate. To improve our treatment options we have introduced a much less invasive but highly effective laser treatment to reduce eye pressure and thus preserve vision. The laser machine, purchased through the BCPB grant, has made a real difference and saved the sight of hundreds of patients in Nigeria.

One of these grateful Nigerians is 21-year-old engineering undergraduate Adamu, whose father was blind from glaucoma, but after bringing him to our hospital we decided to screen Adamu for glaucoma, as we do all first-degree relatives of our patients. Adamu was found to have very advanced glaucoma damage in his eyes, but luckily without significant visual loss. Through the timely intervention of laser treatment, his sight has been saved. He is very happy and now able to pursue his studies while maintaining regular check-ups to monitor his progress. There are many patients like Adamu in our care, some even younger who would have gone blind if they had not been diagnosed early, counselled and non-invasively treated. The knowledge gained in this project is being shared with many ophthalmologists in Nigeria. And our effort in training others and publicising our results has brought to the fore laser treatment as a viable option to be offered to patients all over Nigeria.

The equipment and training provided by BCPB continue to be of relevance in preventing blindness and improving the quality of life for many Nigerians who would have otherwise gone blind.

“The equipment and training provided by BCPB continue to be of relevance in preventing blindness and improving quality of life for many Nigerians who would have otherwise gone blind.”
BCPB’s Boulter Fellowship programme was set up in 1982 to enable eye care professionals from the developing world to train at the UK’s International Centre for Eye Health in London and achieve the specialist skills needed in their country of origin. The name Boulter refers to one of our most inspiring founders, Mr Eric Boulter, whose background included the American Foundation for Overseas Blind (now The Helen Keller Foundation) and who was later Director General of RNIB. Eric knew what it was like to be blind through his own experience of being without sight since World War II.

Each year, we support the training of a small number of applicants who study for an MSc in Public Health for Eye Care. This course equips them with the skills and knowledge they will need to plan and implement national and regional blindness prevention programmes. The MSc students learn how to effectively develop, manage, monitor and evaluate programmes, become leaders, advocates and trainers in eye health, develop a relevant research agenda, and directly influence eye health policy at government level.

At the end of this programme students should be able to:

- describe the basic epidemiology of the major blinding eye diseases
- design and interpret studies to assess public health eye care needs using appropriate methods
- critically appraise and select appropriate public health intervention for the major blinding eye diseases
- design a comprehensive eye care programme for appropriate preventive and therapeutic measures for a community
- develop the skills necessary for resource mobilisation, management and evaluation of local comprehensive eye care programmes and integration in health systems.

The Master’s degree is awarded by the London School of Hygiene and Tropical Medicine, University of London.

BCPB’s part-funding of students on the MSc course enables them to cascade their skills and knowledge in low and lower-middle income countries leading to additional research and training in blindness prevention, and setting up and strengthening eye care programmes to help individuals and communities in remote areas where they are needed most.
Updates from Boulter Fellows

Dr Adeyemi Adewole 2018-19: Nigeria

Dr Adewole is Senior Registrar in ophthalmology at University College Hospital, Ibadan, and General Secretary of Oyo State Ophthalmological Society.

During the MSc course he has honed his research and proposal development skills and gained the skills necessary for resource mobilisation, management, and evaluation of eye care programmes and integration into the Nigerian health system.

He is working on a project to estimate the prevalence of diabetic retinopathy in Ibadan and assess the willingness of patients to pay for screening at out-patient clinics. The results of the study will be used to make recommendations for hospital service planning across Nigeria and sub-Saharan Africa. The study will be of interest to every eye department and hospital with under-utilised retinal cameras and an under-served population of diabetic patients who need screening but are not accessing it.

His future plans are to share the skills and knowledge acquired on the course with his colleagues, and help with research activities geared towards reducing avoidable visual impairments and promoting visual rehabilitation. He would like to set up an advocacy group to help develop equitable, high quality, sustainable and affordable diabetic screening services in Oyo State, and implement an integrated diabetic screening programme in Ibadan with the support of the Ministry of Health.

Dr Adewole’s Ophthalmology Statistical Survey

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many eye patients do you see every year?</td>
<td>1,800</td>
</tr>
<tr>
<td>How many eye patients would you see over your career in total?</td>
<td>50,000</td>
</tr>
<tr>
<td>Of these, what is the number of patients whose sight will be saved as a result of your work?</td>
<td>20,000</td>
</tr>
<tr>
<td>How many staff would you train over a year?</td>
<td>4</td>
</tr>
<tr>
<td>How many patients would they see?</td>
<td>6000</td>
</tr>
<tr>
<td>Of these, what is the number of patients whose sight will be saved as a result of your work?</td>
<td>3000</td>
</tr>
<tr>
<td>How many staff will you train over your whole career.</td>
<td>100</td>
</tr>
</tbody>
</table>

“The study will be of interest to every eye department and hospital with under-utilised retinal cameras and an under-served population of diabetic patients who need screening but are not accessing it.”
Mr Fiston Kitema 2018-19: Rwanda

Mr Kitema is a clinical instructor at the College of Medicine and Health Sciences at the University of Rwanda, He is also President of Rwanda Ophthalmic Clinical Officers and Cataract Surgeons Society (ROCOCS) and a member of the national Technical Working Group for Eye Health.

Amongst other skills he has learnt on the course are epidemiology and statistics applied to eye diseases (study design and data analysis skills), planning and implementation of eye care programmes, design and implementation of training for eye health cadres, research design and field work for implementation.

“His project involves collecting data for a study looking into factors related to the low uptake of cataract surgical services at district hospitals in Rwanda.”

His project involves collecting data for a study looking into factors related to the low uptake of cataract surgical services at district hospitals in Rwanda. The knowledge will contribute to the better implementation of Rwanda Ministry of Health’s 2018-2024 integrated eye health strategic plan.

On returning to Rwanda he will present the results from his MSc project and their relevance to cataract surgical services, and arrange to publish to relevant journals. He will continue teaching visual impairment and community ophthalmology modules at the University of Rwanda and resume his part-time clinical work at the University eye clinic. Mr Kitema also plans to set up an eye health research group at the University of Rwanda to work in partnership with other institutions to advance research in eye care and evidence in ophthalmology. He will work with the Technical Working Group to implement the eye health strategic plan, and will provide continuous professional development to members of ROCOCS.
Before joining the MSc course, Dr Takuswanya was working as an ophthalmologist at Ruharo Eye Centre, Mbarara.

During the course she has learnt about strategies for partnerships between agencies, organisations and public health management, and improved her knowledge of research design, data collection, critical analysis of available research data, and literature review and report writing, in addition to learning how to use data to develop plans for solving and reducing eye health related problems.

She is collecting data for a research project on the national survey of cataract surgical services in Uganda, looking at how cataract output is monitored at both national and hospital levels. She hopes to use this information to strengthen monitoring of cataract surgeries in Uganda.

Dr Takuswanya plans to continue with clinical ophthalmology and become involved in screening and surgical outreach programmes. She will be writing up her research report and getting it published, and will become involved in training of resident ophthalmologists.

## Dr Moureen Takusewanya 2018-19: Uganda

### Dr Takusewanya’s Ophthalmology Statistical Survey

<table>
<thead>
<tr>
<th>Question</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many eye patients do you see every year?</td>
<td>N/A</td>
</tr>
<tr>
<td>How many eye patients would you see over your career in total?</td>
<td>100,000</td>
</tr>
<tr>
<td>Of these, what is the number of patients whose sight will be saved as a result of your work?</td>
<td>50,000</td>
</tr>
<tr>
<td>How many staff would you train over a year?</td>
<td>1-2</td>
</tr>
<tr>
<td>How many patients would they see?</td>
<td>100,000-200,000</td>
</tr>
<tr>
<td>Of these, what is the number of patients whose sight will be saved as a result of your work?</td>
<td>50,000-100,000</td>
</tr>
<tr>
<td>How many staff will you train over your whole career.</td>
<td>20</td>
</tr>
</tbody>
</table>
Training teachers on vision screening

Updates from Boulter Fellow Alumni:

Dr Selben Penzin, Boulter Fellow 2014-15: Nigeria

Dr Penzin reports on her childhood blindness prevention work in North West Nigeria:

I have been working on a project in the North West Nigeria Child Eye Initiative which aims to ensure that girls and boys have access to quality eye health in the project states of Sokoto, Zamfara and Kaduna. The project has been able to:

- Train teachers to administer simple visual acuity screening to children
- Train community health extension workers to provide eye screening as well as eye health education to parents
- Screen school children for refractive errors and provide spectacles
- Refer children to district hospitals for refraction
- Provide surgery to children with cataract and other blinding eye diseases
- Support the provision of equipment to tertiary health centres for paediatric eye surgeries.

Studying on the MSc course enabled me think more broadly and understand that prevention of childhood blindness involves all key players in a child’s growth and development:

- Parents, being the first care givers are involved in ensuring that their children are taken to the hospitals when referred
- School teachers spend most of a child’s school life with them. The teachers are given the necessary training and basic equipment to provide vision screening in a sustainable pattern. This ensures that the teachers are able to carry out vision screening even when the project ends. The teachers are also able to train their peers to provide vision screening
- Community health extension workers are the primary health care officers at the primary unit of health care delivery for the communities.
Subeesh Kuyyadiyil, Boulter Fellow 2017-18: India

Mr Kuyyadiyil works at Sadguru Netra Chikitsalaya, an eye care hospital in rural Chitrakoot in Madhya Pradesh where, before studying for the MSc, he was working as a project lead.

Since completing the course in 2018 he has presented a paper at the national conference of the All India Ophthalmology Society on the importance of health system research, and contributed to a publication on primary eye care centres in India which has been provisionally accepted by the Indian Journal of Ophthalmology.

He has conducted several major training sessions on community ophthalmology to national and international candidates, organised and taken an active part in an initiative to provide free eye care during Kumbh Mela Hindu pilgrimage, organised 79,000 eye surgeries through outreach camps and primary eye care centres, and led the establishment of two new primary care eye centres.

He describes the course as a totally enriching learning experience as it made his thinking more evidence based and gave the opportunity to explore models of service delivery and programme management. He plans to train and mentor many new people in community based eye care programmes in remote and rural areas.

Dr Chimgee Chuluunkhuu, Boulter Fellow 2009-10: Mongolia

Dr Chuluunkhuu reports on her work on child eye care in Mongolia since she became a Boulter Fellow:

The MSc course was a life-changing event for me. Besides the knowledge and skills I gained during the course which shaped my professional career, I also made many friends whom I meet often and we work together in some fields.

Shortly after the course I was hired by Orbis International, where I work currently. Orbis has been supporting eye care in Mongolia for the last two decades, with more active presence for the last five years. We have implemented a five-year paediatric eye care project in partnership with The National Centre for Maternal and Child Health (NCMCH) in five provinces. The project’s main aims are to establish a school-based vision screening programme, set up a screening and management system for retinopathy of prematurity (ROP), and develop capacity at the NCMCH to deal with the main paediatric eye diseases like cataract and strabismus.

Two years ago I was elected as a President of the Mongolian Ophthalmologists Society. Also I am a member of the Ophthalmology Professional Board at the Ministry of Health – this provides technical support to the Ministry in shaping eye care policies in Mongolia.

The MSc course was a life-changing event for me. Besides the knowledge and skills I gained during the course which shaped my professional career I also made many friends.
Dr Funmilayo Oyediji, Boulter Fellow 2017-18: Nigeria

Dr Oyediji, an ophthalmologist at Jos University Teaching Hospital, tells us:

I am using the skills I learnt on the MSc course to educate others and have organised eye camps in collaboration with the Federal government of Nigeria, the Ophthalmological Society of Nigeria and the Speaker House of Representatives.

I met with the Bauchi State Ministry of Health to discuss the key findings of my project on the evaluation of trachoma trichiasis surgery provision, which have helped to improve the productivity of surgeons in the field.

I have developed a curriculum and am now more involved in training ophthalmic nurses, optometrists, opticians and family physicians, and I attended a retinoblastoma workshop to improve care of children with this childhood tumor.

The joy of cataract surgery is that a patient who walks in blind is practically able to see the next day. Such is the story of an elderly man who came to the eye clinic weeks after surgery and said “Doctor, do you remember me? You operated on my eye, now I can see, so I brought my other relatives so you can check their eyes”. Building trust through provision of good eye care services and surgeries have made our past patients social marketers, hence the continuous influx of patients at the hospital eye clinic. Patients appreciate the time I spend explaining to them about their eye conditions, something I learnt whilst on my Boulter Fellowship course. I ensure that my patients appreciate the reasons for their current mode of treatment and, when the prognosis is not too good, I help them to be better prepared to handle the outcomes.
Dr Rebecca Oenga, Boulter Fellow 2017-18: Kenya

Dr Oenga reports: I provide clinical and surgical services to patients at the Kajiado County Referral Hospital and oversee eye care service provision in Kajiado County which has an estimated population of 1.1 million. We have concluded a five-year trachoma elimination programme and we will be carrying out impact surveys to assess the progress.

Since completing the MSc course, I have streamlined screening for diabetic retinopathy, and I’m working closely with the hospital paediatrician to screen premature babies. I have become a member of the County department of health research committee, and I support the head of ophthalmic services at the national office on specific tasks such as development of the Kenya national strategic plan for eye care, and development of policy guidelines for eye care.

I am co-opted into the County health management team where I have assisted in the development of an annual work plan for the health department, and a performance review of various departments.

Advocacy for eye care is an area where knowledge from the MSc has played a big role as I advocate for financial and human resources in the County. I am collaborating with a Fellow at LSHTM in a study assessing equity of cataract services in Kajiado County, and I hope to ensure we collect quality data and use it to make decisions about eye care both at the hospital and the County.

I would like to share the story of a 52 year old Maasai male patient, KS. He had lost the vision in his left eye in childhood after an injury and presented at the hospital with poor vision in the right eye which was progressive and painless in nature. The Maasai are nomadic pastoralists and move their animals in search of water and pasture and KS now had to depend on others to carry out this role for him. He blames the loss of part of his stock on his inability to see. His family also suffered because without his vision, he could not take his animals to sell at the market. Though he is married, culturally women cannot carry out this role as it is solely a man’s responsibility.

He travelled for a whole day at high cost with his brother to get to our hospital. They stayed in rented accommodation the night before his appointment and his brother stayed there for the second night. On examination KS was found to have a dense cataract in the right eye through which he could only perceive light, and no sight at all in his right eye. I performed small incision cataract surgery on his left eye with the cost being covered by the national hospital insurance fund. The Kajiado County government has been urging the community to register for this insurance scheme. The initiative, dubbed “Mbuzi moja afya bora” meaning “one goat better health”, involves community members selling a goat at a large market and using the proceeds to pay for annual premiums for a family. The day after surgery, the bandage over KS was removed and he was overcome with joy when he could see again.

Despite the fact that he and his brother could afford the exorbitant transport cost to come to the hospital, he still waited until he was blind before seeking help. The additional cost of accommodation and escort can be a deterrent to seeking help and the high poverty level in Kajiado means that for most this cost is a major barrier to accessing services. The experience of KS is an example of where social insurance has benefited a needy member of the community.

“Since completing the MSc course, I have streamlined screening for diabetic retinopathy, and I’m working closely with the hospital paediatrician to screen premature babies.”
Dr Ahmed Bako, Boulter Fellow 2017-18: Nigeria

Dr Bako is now Head of the Ophthalmology Department at Specialist Hospital, Sokoto where he oversees medical and surgical activities at the primary eye care, optometry and ophthalmology units.

Studying on the course has given him skills in epidemiological and operational research, and his MSc dissertation titled ‘What are the components to the cost of cataract surgery at Specialist Hospital Sokoto: How do we reduce the price?’ looked at cost analysis of cataract surgery from the providers’ and patients’ perspectives. This was the first time this type of research was conducted in his setting. The result of the dissertation will serve as guidance to the decision-makers of Sokoto State eye care programme on how best to reduce the cost of cataract surgery.

He is part of a multi-country group of investigators conducting research on monitoring equity of cataract services. This is aimed at identifying the extent to which people who reach eye care services and are diagnosed with operable cataract go on to have surgery and return for post-operative care, and looks at differential uptake of cataract services amongst people from varying social groups. The results of the study will provide an insight on how best to develop and test strategies to overcome the inequalities in uptake of cataract surgery.

He tells us about Mr A, a 72 year-old male peasant farmer, who presented with a two-year history of progressive painless blurring of vision of the left eye. He had lost his right eye vision several years earlier following an injury from a projectile object. Mr A was deeply disturbed about his vision loss and could not go out without a guide. He subsequently had left eye cataract surgery, following which his left eye vision was fully restored. Mr A left the eye clinic a much happier man with restored vision and he no longer needed a guide.

“...The results of the study will provide an insight on how best to develop and test strategies to overcome the inequalities in uptake of cataract surgery.”
Dr Ada Aghaji, Boulter Fellow 2010-11: Nigeria

Dr Aghaji reports on childhood blindness prevention work in Nigeria:

The British Council for Prevention of Blindness kindly awarded me a Boulter Fellowship to undertake an MSc in 2010, and since then my practice of ophthalmology has never been the same again. Supervised by Richard Bowman, our research demonstrated that a significant proportion of blind children have an additional hearing impairment. This stimulated us to start thinking about rubella immunisation which is not currently a component of the routine immunisation in Nigerian children. Currently, I am a member of the National Expert Committee on Rubella in Nigeria with a broad remit – including to plan the logistics for the introduction of the rubella vaccine into Nigeria. In conjunction with the National Centre for Disease Control in Nigeria, we have set up a surveillance system to determine the incidence of rubella in Nigeria.

During my time on the course, I was influenced by BCPB Sir John Wilson Fellow Khumbo Kalua who was using the key informant methodology to determine the prevalence of childhood blindness in Malawi. This stimulated me to undertake a similar project in Nigeria, and we used the key informant methodology to estimate the prevalence of blindness in children in a population of 400,000. Cataract was the commonest cause of blindness in these children and we were able to perform life-changing free cataract surgery on seven children. This has since been published in Ophthalmic Epidemiology.

As a sabbatical researcher at the National Primary Health Care Development Agency, I was fortunate to influence a policy for the adoption of Crede's prophylaxis in all new-borns in Nigeria which has the potential to prevent blinding neonatal conjunctivitis in susceptible new-borns. Recently we were able to provide evidence that shows that the low uptake of Vitamin A supplementation was directly linked to the prevalence of childhood corneal blindness in Nigeria. We have recommended strategies to improve vitamin A supplementation coverage.

Part of our BCPB research highlighted the emergence of cerebral visual impairment (CVI) as an emerging cause of blindness in children in schools for the blind in Nigeria. This suggested that retinopathy of prematurity (ROP) would soon be a cause of childhood blindness in our setting as the remote causes of CVI and ROP are similar. We have set up the first ever ROP screening programme in Enugu and despite initial teething problems, appreciable progress is being made.

My exposure to research and public health for eye care has allowed me to combine my passion for preventing childhood blindness, research and public health to influence my teaching of residents and medical students. Paediatric ophthalmology always has a public health slant to it, now backed by evidence!

My clinical and outreach work continues, and I remain deeply appreciative of the BCPB grant which has been life changing.

Dr Nnenne Uwa Onu, Boulter Fellow 2014-15: Nigeria

Dr Onu tells us that she is now a lecturer at Abia State University where she teaches general and ocular pathology, diagnostic optometry, epidemiology and contact lenses. She also coaches students in clinical proficiency methods, use of ophthalmic equipment and community eye health. In addition, she works clinically in the university eye clinic which doubles as a training/demonstration clinic for optometry students, and is a referral centre for local communities and the university population.

She is also involved in screening school students aged 10 to 15, and hopes to find funding to help with the provision of free spectacles for those students who really need them.
### Income & Expenditure

**Year ended 31st March 2019**

<table>
<thead>
<tr>
<th></th>
<th>Unrestricted Funds 2019</th>
<th>Restricted Funds 2019</th>
<th>Total 2019</th>
<th>Total 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INCOME FROM</strong></td>
<td>£</td>
<td>£</td>
<td>£</td>
<td>£</td>
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<tr>
<td>Legacies and Donations</td>
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<td>66,500</td>
<td>218,799</td>
<td>168,321</td>
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<tr>
<td>Investments</td>
<td>6,657</td>
<td>-</td>
<td>6,657</td>
<td>6,547</td>
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<tr>
<td>Other Income</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>75</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>158,956</td>
<td>66,500</td>
<td>225,456</td>
<td>174,943</td>
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<td><strong>EXPENDITURE ON</strong></td>
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<td></td>
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<tr>
<td>Raising funds</td>
<td>42,941</td>
<td>-</td>
<td>42,941</td>
<td>53,409</td>
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<tr>
<td>Charitable activities</td>
<td>64,490</td>
<td>8,150</td>
<td>72,640</td>
<td>213,314</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>107,431</td>
<td>8,150</td>
<td>115,581</td>
<td>266,723</td>
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<tr>
<td>Unrealised (loss) on investments</td>
<td>2,764</td>
<td>-</td>
<td>2,764</td>
<td>(4,856)</td>
</tr>
<tr>
<td>Net income/(expenditure)</td>
<td>54,289</td>
<td>58,350</td>
<td>112,639</td>
<td>(96,636)</td>
</tr>
<tr>
<td>Transfers between funds</td>
<td>35,829</td>
<td>(35,829)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>NET MOVEMENT IN FUNDS</strong></td>
<td>90,118</td>
<td>22,521</td>
<td>112,639</td>
<td>(96,636)</td>
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<tr>
<td><strong>FUND BALANCES BROUGHT FORWARD</strong></td>
<td>448,148</td>
<td>-</td>
<td>448,148</td>
<td>544,784</td>
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<tr>
<td><strong>FUND BALANCES CARRIED FORWARD</strong></td>
<td>538,266</td>
<td>22,521</td>
<td>560,787</td>
<td>448,148</td>
</tr>
</tbody>
</table>
# Balance Sheet

**Year ended 31st March 2019**

<table>
<thead>
<tr>
<th>Fixed Assets</th>
<th>Group 2019</th>
<th>Group 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangible Assets</td>
<td>£1,649</td>
<td>£1,649</td>
</tr>
<tr>
<td>Investments</td>
<td>£166,932</td>
<td>£184,596</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>£168,581</strong></td>
<td><strong>£186,245</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Assets</th>
<th>Group 2019</th>
<th>Group 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debtors</td>
<td>£52,487</td>
<td>£145,375</td>
</tr>
<tr>
<td>Short term bank deposits</td>
<td>£141,483</td>
<td>£275,116</td>
</tr>
<tr>
<td>Cash at bank and in hand</td>
<td>£247,330</td>
<td>£57,926</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>£441,300</strong></td>
<td><strong>£478,417</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Creditors</th>
<th>Group 2019</th>
<th>Group 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amounts falling due within one year:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Committed grants</td>
<td>£39,847</td>
<td>£169,177</td>
</tr>
<tr>
<td>Accruals</td>
<td>£9,247</td>
<td>£8,640</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>£49,094</strong></td>
<td><strong>£177,817</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Current Assets</th>
<th>Group 2019</th>
<th>Group 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>£392,206</strong></td>
<td><strong>£300,600</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Assets Less Current Liabilities</th>
<th>Group 2019</th>
<th>Group 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>£560,787</strong></td>
<td><strong>£486,845</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Creditors: Amounts Due After One Year</th>
<th>Group 2019</th>
<th>Group 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>£0</strong></td>
<td><strong>£38,697</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Assets</th>
<th>Group 2019</th>
<th>Group 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>£560,787</strong></td>
<td><strong>£448,148</strong></td>
</tr>
</tbody>
</table>

Represented by:

- **Restricted Funds**
  - **General Fund**
  - Boulter Fellowship Award Fund: £190,000 £180,000
  - BCPB Fellowship Award Fund: £200,000 £200,000
  - Fundraising Development Reserve: £21,971 £21,971
  - **Total**: £126,295 £46,177

- **Unrestricted Funds**

Full financial details are available in our Annual Report & Accounts 2019.
Independent Auditors’ Statement to the Trustees of the British Council for Prevention of Blindness

We have examined the summarised financial statements of the British Council for Prevention of Blindness for the year ended 31st March 2019. (Pages 38 and 39.)

This statement is made solely to the Trustees, as a body, in accordance with the terms of our engagement. Our audit work has been undertaken so that we might state to the Trustees those matters we have agreed to state to them in this statement and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Trustees as a body, for our audit work, for this statement, or for the opinions we have formed.

Respective responsibilities of trustees and auditors

The Trustees are responsible for preparing the summarised financial statements in accordance with recommendations of the charities SORP.

Our responsibility is to report to you our opinion on the consistency of the summarised financial statements with the full financial statements and Trustees’ Annual Report. We also read the other financial information contained in the summarised annual report and consider the implications for our report if we become aware of any apparent misstatements or material inconsistencies with the summarised financial statements.

Opinion

In our opinion the summarised financial statements are consistent with the full financial statements and the Trustees’ Annual Report of the British Council for Prevention of Blindness for the year ended 31st March 2019.

Knox Cropper
Registered auditors

Date: 28th June 2019

The Trustees confirm that the financial statements on pages 38 and 39 are taken from the full set of financial statements comprising the Trustees’ Report and Accounts which were approved on 28th June 2019. The summarised financial statements may not contain sufficient information to allow a full understanding of the financial affairs of the British Council for Prevention of Blindness.

For further information the Annual Report and Accounts should be consulted. A copy of this document, upon which the auditors have reported without qualification, has been delivered to the Charity Commission and is available on request from the British Council for Prevention of Blindness, 4 Bloomsbury Square, London WC1A 2RP, and is available on our website - www.bcpb.org

By order of the Trustees.

Date: 28th June 2019
Board of Trustees

The Officers and Trustees of BCPB as at September 2019 are:

**Chairman**
Mr Paul Hunter  
MA FRCP FRCS FRCOphth  
Retired Ophthalmologist  
Past President of Royal College of Ophthalmologists

**Vice-Chairman**
Mr David Hughes  
MB ChB FRCOphth  
Retired Ophthalmologist

**Treasurer**
Mr Afzal Ismail  
BSc (Hons) MSc ACA  
Chief Internal Auditor, Wholesale Banking, Nordea Bank

**Charity Manager**
Miss Diana Bramson

**Fundraising Manager**
Ms Emma McGuigan

**Trustees**
Miss Brenda Billington  
OBE MB ChB DO FRCS FRCOphth  
Retired Ophthalmologist  
Past President of Royal College of Ophthalmologists

Mr Anthony Blackman  
MSc BSc FBDO CL SLD SMC CertAcc PGCert MRSPH  
FlinstCPD  
Dispensing Optician / Director of Training Insight Optical Training / Joint Managing Director  
Micony Apps

Ms Elmien Wolvaardt  
BSc  
Editor, Community Eye Health Journal, International Centre for Eye Health, London

Mr Patrick Franklin  
BSc  
Company Director, Homarus Ltd

Dr Patrick Igulot  
PhD MA BA  
Lecturer (Health & Social Care)  
University of Sunderland in London

Mr Richard Wormald  
MA MB BCh MSc FRCS FCROphth  
Consultant Ophthalmologist Moorfields NHSFT and Honorary Senior Lecturer, Institute of Ophthalmology University College London and London School of Hygiene and Tropical Medicine

Dr David Yorston  
MB ChB FRCOphth  
Consultant Ophthalmologist  
Gartnavel Hospital, Glasgow

**Principal Address**
British Council for Prevention of Blindness  
4 Bloomsbury Square  
London WC1A 2RP

Telephone: 020 7404 7114  
Email: info@bcpb.org  
Website: www.bcpb.org

Registered Charity Number: 270941  
Member of the Association of Medical Research Charities (AMRC)  
Member of the International Agency for the Prevention of Blindness (IAPB)  
Member of the National Association of Voluntary Organisations (NCVO)  
Member of the Small Charities Coalition

**Auditors**
Knox Cropper  
65/68 Leadenhall Street  
London EC3A 2AD

**Bankers**
HSBC Bank Plc  
90 Baker Street  
London W1M 2AX  
CAF/Shawbrook Bank

Lutea House  
Warley Hill Business Park  
The Drive, Great Warley  
Brentwood, Essex CM13 3BE
Supporting BCPB

Our work in preventing blindness cannot take place without the generosity of individuals, trusts and companies.

**CONTACT DETAILS**
Name: __________________________ Email: __________________________
Address & postcode: __________________________

☐ Please tick if you would like BCPB to keep you updated on the work your gift supports.

**SINGLE DONATION**
Online: [www.bcpb.org/donations.html](http://www.bcpb.org/donations.html) (Through JustGiving)

**POSTAL DONATION**
Please complete and send this form to BCPB, 4 Bloomsbury Square, London WC1A 2RP.

Please accept my donation of £ ________________ towards preventing blindness. I enclose my cheque made payable to British Council for Prevention of Blindness.

**REGULAR DONATIONS - BANKERS FORM**
Please complete and send this form to BCPB, 4 Bloomsbury Square, London WC1A 2RP.

To (Bank name): __________________________ Your Bank's address & postcode: __________________________

Please pay: The British Council for Prevention of Blindness, 4 Bloomsbury Square, London WC1A 2RP

Bank sort code: 40 01 06, Account Number: 81168150 the sum of £ ________________

Amount in words: __________________________

Your Bank sort code: __________________________ Your account number: __________________________

Account holders name: __________________________

Start date*: _____________ (At least one month from today's date) and afterwards on the same day each month/quarter/year until further notice. * This cancels all previous orders.

**GIFT AID**
If you are a UK tax payer we could claim Gift Aid on your donation and receive an extra 25p for every £1 you give.

☐ (Please tick) YES I am a UK tax payer and I wish BCPB to claim Gift Aid on all donations I have made over the past four years and all future donations. I understand that if I pay less income tax and/or capital gains tax in the appropriate tax year than the amount of Gift Aid claimed on all my donations, it is my responsibility to pay any difference. You can cancel your declaration at any time, and you must inform us of changes to your name, address or tax status. If you pay Income Tax at the higher or additional rate and want to receive the additional tax relief due to you, you must include all your Gift Aid donations on your Self-Assessment tax return or ask HM Revenue and Customs to adjust your tax code.

Signature: __________________________ Date: __________________________

**MAKING A WILL**
Whether you have already made a Will or are thinking of doing so, please consider making a charitable gift to BCPB.
Please email: fundraiser@bcpb.org for more information.