



LONDON
SCHOOL of
HYGIENE
& TROPICAL
MEDICINE



International
Centre for Evidence
in Disability

DISABILITY & EYE HEALTH GROUP

International Centre for Evidence in Disability

International Centre for Eye Health

To prevent impairments and to improve the health of persons with disabilities worldwide through working in partnership to achieve excellence in research, teaching and knowledge translation

Report

Jan-June 2017

CONTENTS

VISUAL IMPAIRMENT & EYE HEALTH

➤ RESEARCH PROJECTS	3
➤ PhD PROJECTS	4-5
➤ MSc PUBLIC HEALTH FOR EYE CARE	6
➤ SHORT COURSE IN EYE HEALTH	10
➤ OPEN EDUCATION IN EYE HEALTH	11
➤ ELECTRONIC DIGITAL COMMUNICATION	12
➤ COMMUNITY EYE HEALTH JOURNAL	14
➤ VISION 2020 LINKS PROGRAMME	17
➤ VISION 2020 WORKSHOPS	19
➤ COMMONWEALTH EYE HEALTH CONSORTIUM	21
➤ PEEK	22
➤ PROGRAMMES in INDIA	23
➤ EYE HEALTH PUBLICATIONS	24-27

HEARING IMPAIRMENT & EAR HEALTH

➤ RESEARCH & PhD PROJECTS	28
➤ SHORT COURSES in HEARING HEALTH	29
➤ COMMUNITY HEARING HEALTH JOURNAL	31

PHYSICAL IMPAIRMENT & HEALTH

➤ RESEARCH & PhD PROJECTS	33
---------------------------	----

GENERAL DISABILITY & HEALTH

➤ DISABILITY COURSES	33
➤ RESEARCH PROJECTS	34
➤ RESEARCH PhDs	35
➤ DISABILITY & HEALTH PUBLICATIONS	36

EYE HEALTH RESEARCH PROJECTS

<u>Donor</u>	<u>Title/Purpose</u>
Wellcome Trust	Controlling blinding trachoma: intervention and pathophysiology studies for scarring disease in Ethiopia and Tanzania. Senior Research Fellowship to Matthew Burton.
Wellcome Trust	Stronger-SAFE: Understanding transmission and optimising interventions for an enhanced SAFE strategy for trachoma elimination. Wellcome Collaborative Award, PI Matthew Burton
"The Trust"	Peek Retina: Develop, Validate and Test Effectiveness and Cost effectiveness for detection of Diabetic Retinopathy among Diabetics in resource constrained settings Post-doctoral Fellowship: Dr Raghu Anchala
Sightsavers	Sri Lanka national blindness, visual impairment and disability survey
"The Trust"	ROP in India
"The Trust"	Diabetic Retinopathy in India
BCPB	Validating the use of smartphones for the diagnosis of eye diseases in Nakuru, Kenya
IGA	The five-year Incidence and Progression of Glaucoma in Nakuru, Kenya and the validation of a glaucoma screening tool
BCPB	Research Mentorship Award
BCPB	Investigation of the need for low vision services among children who have undergone surgery for bilateral cataract in Bangladesh and Tanzania
Vision Impact Institute	Spectacle wearing amongst Children in randomized trial
L'Occitane	Improving the efficiency and effectiveness of school eye health programs, Bangladesh
NHSE	Cochrane Eyes & Vision Review Group
VFAN	Evaluation of the Impact of Primary Eye Care
USAID	Evaluation of the effectiveness of a novel mobile phone health education intervention on spectacle wear among children: a cluster randomized trial in India

EYE HEALTH RESEARCH PhDs

Wellcome Trust	Clinical trials for the surgical treatment of trichiasis in Ethiopia PhD Esmael Habtamu Ali (awarded March 2017)
MRC	The incidence and progression of posterior segment eye disease in Nakuru County, Kenya PhD Andrew Bastawrous (awarded Sept 2017)
BCPB / SiB	Can counselling intervention using modified motivational interviewing improve uptake of treatment in glaucoma patients in Northern Nigeria? PhD Mohammad Abdull (awarded Sept 2017)
Wellcome Trust	Pathophysiology of scarring trachoma PhD Athumani Ramadhani
CBM / SiB	A Randomized Controlled Trial Comparing Selective Laser Trabeculoplasty and Timolol for Treatment of Glaucoma in Tanzania PhD Heiko Philippin
"The Trust"	To determine if Peek improves diagnostic accuracy and treatment decisions by mid-level eye care workers in a Kenyan district eye clinic setting PhD Hillary Rono
Wellcome Trust	Studies of the pathophysiology and management of corneal necrosis in severe microbial keratitis PhD Jaya Chidambaram
SiB	Improving efficiency and effectiveness of school health programs for uncorrected refractive errors PhD Priya Morjaria
"The Trust"	Diabetic Retinopathy in Kenya: Uptake of Retinal Examination in patients with Diabetes Mellitus study PhD Nyawira Mwangi
"The Trust"	Integrating eye care into primary health care PhD Ada Aghaji
"The Trust"	Validity of a new screening tool, assessment of risk factors and the effect of congenital cataract surgery on visual outcomes and nystagmus in Tanzania PhD Furahini Mndeme
"The Trust"	A Study of Barriers to Accessibility in Diabetic Eye Care Services in the Health Care Institutions of the Western Province of Sri Lanka PhD Prabhath Piyasena
"The Trust"	Enablers, barriers and costs to scaling up services for the detection and treatment of sight threatening retinopathy of prematurity in the government sector in India.

Disability and Eye Health Group, LSHTM: Report Jan- June 2017

	PhD Rajan Shukla
"The Trust"	Assessment and management of visual perceptual problems in children with cerebral palsy in Cross River State, Nigeria PhD Roseline Duke
"The Trust"	Microbial Keratitis in Uganda PhD Simon Arunga
BCPB	Ophthalmic surgery incubator training units in Sub-Saharan Africa: up-skilling ophthalmic surgeons for high quality and high volume cataract and glaucoma surgery PhD William Dean

SiB = Standard Chartered Bank's Seeing is believing

"The Trust" = The Queen Elizabeth Diamond Jubilee Trust

MSc PUBLIC HEALTH FOR EYE CARE

Scholarships:

- Commonwealth Shared Scholarship Scheme
- British Council for Prevention of Blindness
- Commonwealth Eye Health Consortium
- International Students House
- Lt. Col Kirkpatrick Scholarship
- Chevening
- Hooper Scholarship

Key staff:

- Covadonga Bascaran (Programme Director)
- Romulo Fabunan (ICEH Student and Alumni Engagement Officer)
- Allen Foster (Lead on Education Activities)

Content and purpose:

The aim of the programme is to equip health professionals with the knowledge and skills to reduce blindness and visual disability by:

- developing a public health oriented approach to eye health
- facilitating personal development
- enabling individuals to contribute more fully to their societies' eye health
- promoting a local, national and international network of health professionals, to improve vision and prevent blindness in the world.

By the end of the 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 research 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 into health systems.
- discuss the importance of disability in the global context, appraise the epidemiology of visual and other impairments leading to disability and the impact of disability on people's lives.

MSc Students in Public Health Eye Care – 2016/17



Top row (left to right): Shalinder Sabherwal (India), Ian McCormick (Ireland), Enowntai Ayokotang (Cameroon), Mohammad Shalaby (Egypt), M Scott Hickman (USA), Robert Ewusi-Wilson (Ghana), Egide Gisagara (Rwanda) and Kehinde Oladigbolu (Nigeria).

Front row (left to right): Lindsey Dowsen (LSHTM Courses Manager), Axelle Rigaudy (Switzerland), Edmund Mushumbusi (Tanzania), Charles Koduah (Ghana), Lila Puri (Nepal), Romulo Fabunan (ICEH Students & Alumni Engagement Officer), Simileoluwa Agbeleye (Nigeria) and Cova Bascaran (MSc Programme Director)

MSc Students in Public Health Eye Care – 2016/17

Thirteen students from 11 different countries are enrolled in the Masters course 2016/17.

Name

Edmund Mushumbusi
Kehinde Oladigbolu
Robert Ewusi-Wilson
Enowntai Ayuotang
Mohammed Shalaby
Egide Gisagara
Simileoluwa Agbeleye
Lila Puri

Country/ Profession

Tanzania / Ophthalmologist
Nigeria / Ophthalmologist
Ghana / Optometrist
Cameroon / Optometrist
Egypt / Eye Care Manager
Rwanda / Ophthalmologist
Nigeria / Ophthalmologist
Nepal / Ophthalmologist

Disability and Eye Health Group, LSHTM: Report Jan- June 2017

Charles Koduah	Ghana / Optometrist
Scott Hickman	USA / Ophthalmologist
Axelle Rigaudy	UK / General doctor
Ian McCormick	UK / Optometrist
Shalinder Sabherwal	India / Ophthalmologist

In the second term students took modules which covered:

- Ocular infections
- Childhood eye disease
- Non-communicable eye diseases
- Planning for eye care
- Disability and health

MSc Research Projects 2016/17

Students undertook their dissertation projects in June / July 2017:

Name	Country	Project Titles	Supervisor
Edmund Mushumbusi	Tanzania Ophthalmologist	Review of total population based surveys of blindness and visual impairment to assess the proportion of blindness and visual impairment in over 50 year olds	Allen Foster / Islay Mactaggart
Kehinde Oladigbolu	Nigeria Ophthalmologist	Visual outcome following post capsule rupture during cataract surgery – a case control study	John Buchan
Enowntai Ayukotang	Cameroon Optometrist	Low vision service needs for children who have undergone bilateral cataract surgery in Bangladesh and Nepal	Priya Morjaria / Sarah Polack
Mohammed Shalaby	Egypt Manager	Determinants of success in public health oriented hierarchical service delivery eye care programs: a case of an Egyptian NGO	Nick Astbury
Egide Gisagara	Rwanda Ophthalmologist	Burden and situation analysis of glaucoma services in Rwanda	Jennifer Yip
Simileoluwa Agbeleye	Nigeria Ophthalmologist	Primary open angle glaucoma care in Osun state, Nigeria: socioeconomics and adherence to treatment	Cova Bascaran

Disability and Eye Health Group, LSHTM: Report Jan- June 2017

Lila Puri	Nepal Ophthalmologist	Microbial Keratitis in South East Nepal: determinants of poor outcome and strategies for improvement	Matthew Burton
Charles Koduah	Ghana Optometrist	Eye Health needs among school teachers in the Brong Ahafo region, Ghana: a forgotten group in school eye health programs	Clare Gilbert
Scott Hickman	US Ophthalmologist	Study of Synchronous Surgical Teleophthalmology and Cataract Surgical Training in Nepal	Daksha Patel
Axelle Rigaudy	UK General doctor	Situational analysis of tertiary paediatric ophthalmology institutions part of the VISION 2020 LINKS	Cova Bascaran / Marcia Zondervan
Ian McCormick	UK Optometrist	A mixed methods review of spectacle compliance and its determinants in a school vision screening pilot in Botswana	Priya Morjaria
Shalinder Sabherwal	India Ophthalmologist	Assessment of ROP in India	Allen Foster

SHORT COURSE IN INTERNATIONAL EYE HEALTH

Key staff:

- Allen Foster (Director of Education)
- Andrew Bastawrous (Lecturer)
- Clare Gilbert (Co-Director of ICEH)
- Romulo Fabunan (ICEH Student and Alumni Engagement Officer)

Participants:

Twenty students from North America, Europe, Africa, Asia, Middle East and the UK attended the new International Eye Health short course.

Date:

July 3th – 7th 2017.

Content and Purpose:

The purpose of the course is to familiarise participants with the:

- Principles of Planning
- Universal Eye Care
- Magnitude and Causes of Visual Impairment
- Strategies to control the main causes of visual loss
- Utilisation of PEEK technology in eye care.

2018 Plans

The course will be repeated July 2018

OPEN EDUCATION IN EYE HEALTH

Donors:

- Sightsavers
- Seeing is Believing
- The Queen Elizabeth Diamond Jubilee Trust

Key staff:

- Daksha Patel (Lecturer)
- Sally Parsley (Information Manager)
- Astrid Leck (Creative Commons Coordinator)
- Rom Fabunan (OER Project Administrator)

Purpose

To develop, publish and promote ICEH/ICED open online educational courses:

- To improve access to educational resources for eye health workers globally, with emphasis on low- and middle-income settings;
- To support the learning of eye health workers across the world on public health eye care;
- To engage and support ophthalmic educators to introduce principles of public health for eye care within their clinical curriculum;
- To advocate for the development of an open education framework within LSHTM and with partners.

To develop and publish Open Online Educational Courses as:

- Massive open online courses (MOOC) in partnership with FutureLearn;
- Open study courses in eye care on LSHTM Moodle and with partners.

Achievements:

- Developed and published a 5 week MOOC on **"Eliminating Trachoma"** for the FutureLearn platform.
- Adapted the **"Global Blindness: Planning and Managing Eye Care Services"** to a LSHTM OpenStudy course;
- Developed, piloted and launched 2 courses in **Ophthalmic Epidemiology:** (Basic principles and Application to eye disease) as LSHTM accredited open study courses.
- Established a partner **"learning hub"** to support South African and Kenyan partners to adapt and localise content for the Planning and Managing eye care course.
- Launched a **webinar series** for eye care educators on using Open education to support their practice;
- Obtained approval for **OE research** based on analytics and follow up data.
- Promoted the ICEH OE programme at **10th IAPB General Assembly** through 2 presentation, 2 posters and one workshop;

ELECTRONIC DIGITAL COMMUNICATION

Donors:

- CBM
- Sightsavers
- Tijssen Foundation

Key staff:

- Daksha Patel (Lecturer)
- Sally Parsley (Information Manager)
- Rom Fabunan (OER Project Administrator)

Purpose

To develop publish and promote in digital electronic format ICEH/ICED publications and resources:

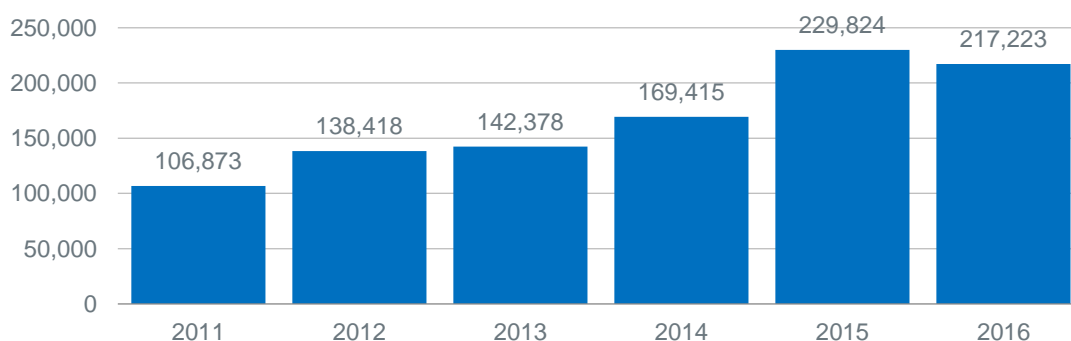
- (a) to improve access to educational materials for eye health workers globally, with emphasis on low- and middle-income settings;
- (b) to support the learning of eye health workers across the world on public health eye care.

Activities:

- Publish the Online Community Eye Health Journal;
- Publish Community Eye Health Update CD;
- Publish the ICEH and ICED websites.

Publish the Community Eye Health Journal (CEHJ) online

CEHJ website users 2011- 2016



Achievements Jan – June 2017:

- International issues 96 – 98 and French issue 17 published on the [CEHJ website](#) and promoted online through email, social media and indexing in major health and international development online platforms

Disability and Eye Health Group, LSHTM: Report Jan- June 2017

- 54 images added to the [CEH Flickr Photostream](#) which has 2,053 photos free to re-use and share for teaching and learning
- 1 poster "**Common and important ocular surface conditions**" published.

CEHJ web analytics Jan – June 2017:

- There were 97,035 visits by 80,699 visitors (-6% on previous 6 months);
- Visitors from 217 countries and territories viewed 158,609 pages;
- There were 5,724 CEHJ email subscribers (+12% on Dec 2016); 53% from Sub Saharan Africa
- 1,609 [Twitter](#) followers (+10%)
- The CEH Flickr Photostream is currently receiving ~934 views per day.

Publish Community Eye Health Update CD

15,000 copies of **CEH Update 10 CD** published and distributed with issue 97 of the CEHJ to eye health workers in Sub-Saharan Africa.

Publish the ICEH and ICED websites

Achievements 2017:

- The [ICEH](#) and [ICED](#) websites were kept up-to-date
- The ICED email newsletter was sent out regularly
- 3 new reports published on the ICED website.

COMMUNITY EYE HEALTH JOURNAL

International English Edition

Purpose:

ICEH is committed to improving eye health workers' knowledge and practice through the provision of information services, the development and dissemination of educational materials, and building sustainable partnerships.

Donors:

- CBM
- Conrad Hilton Foundation
- Fred Hollows Foundation
- ITI Task Force for Global Health
- Orbis
- Sightsavers

Key staff:

- Elmien Wolvaardt Ellison (Editor)
- Anita Shah (Editorial Assistant)
- Astrid Leck (Online Edition)
- Lance Bellers (Design)
- Nick Astbury (Advisor)
- Allen Foster (Advisor)

Achievements

Two issues of the Community Eye Health Journal have been published :

- Issue No 97 *Continued Professional Development*
- Issue No 98 *School Eye Health*



Continuing professional development (CPD)

Why should we continue to learn?
The world is changing and medical practice with it. Society expects healthcare workers not only to have knowledge and skills but to be competent, professional and up to date through life-long learning.
CPD and CPD
Continuing medical education (CME) and continuing professional development (CPD) are additional ways of learning. Both are based on the idea of providing knowledge and skills that are up to date with the latest medical advances. However, CPD goes beyond the provision of knowledge and skills. It also includes the development of attitudes and values that are essential for the practice of medicine. CPD is a process that involves the acquisition, maintenance and enhancement of knowledge, skills and attitudes that are essential for the practice of medicine. CPD is a process that involves the acquisition, maintenance and enhancement of knowledge, skills and attitudes that are essential for the practice of medicine.



School eye health

What is comprehensive school eye health?
Education has the potential to change individuals' lives and fuel social transformations. There is a strong link between children's health, including their visual health, and the quality of their learning and achievement at school. This, in turn, affects children's future quality of life and economic productivity. School eye health programmes provide a unique opportunity to deliver comprehensive eye health services to school-going children.
Key messages
• In the World Health Organization's (WHO) 2014 report on the global burden of blindness, school eye health was identified as a key area for action. This is because school eye health programmes provide a unique opportunity to deliver comprehensive eye health services to school-going children.
• School eye health programmes can play a key role in the prevention and control of blindness and vision impairment. They can also play a key role in the promotion of eye health and the development of a culture of eye care in schools.

Distribution

Between 14,000 to 17,000 copies of each issue were distributed to all in low- and middle-income countries and to all who have subscribed.

CEHJ – CD

Copies of the CEHJ Update CD 10 have been posted in 2017 with Issue 97. The CD contains recent and back issues of the English and French editions plus other Open Access resources as published by ICEH or recommended in the CEHJ.

CEHJ Online

- English issues 93-95 and French issue 16 have been published online;
- A professional agency has been identified to develop the CEHJ app. We are now seeking additional funding to go ahead with the project;
- Analytics summary (August 2016);
- 14,517 monthly users; we are currently looking at improving the site;
- 5,000 email subscribers (+230 since April 2016); 54% from Sub Saharan Africa.

Plans for July – Dec 2017

- *Issue No 99 Retinopathy of Prematurity (ROP)*
- *Issue No 100 Anniversary issue (30 years and 100 issues)*

CEHJ French Edition: Revue de Santé Oculaire Communautaire

Donors:

- CBM
- Light for the World, Austria
- Orbis

Key staff:

- Paddy Ricard (Bilingual Editorial Consultant)
- Anita Shah (Editorial Assistant)
- Advisers

Distribution

The French edition is sent out to over 5,400 readers in 55 countries. Ninety-five per cent of our readers reside in Francophone African countries.

Jan–July 2017: Postoperative care Vol 14 No18



This 24-page issue, based on Issue 94 of the English edition, highlights that postoperative care is essential to good outcomes.

Its practical articles offer suggestions for improving postoperative care (notably after cataract, paediatric cataract and glaucoma surgery), covering many aspects, from patient involvement to the prevention of operative complications. The issue also contains its regular CPD quiz, picture quiz, and equipment 'how-to' (on caring for a lensmeter).

Plans for Aug–Dec 2017:

Publication of Vol 14 No19: Everyone matters.

This issue will offer suggestions to tackle inequalities in eye health.

VISION 2020 LINKS PROGRAMME

Donors

- Beatrice Laing Trust
- CBM
- Club Jules Gonin
- CQ Vision
- Eyebag Foundation
- BCPB
- Health Partnership Scheme (DFID/THET)
- Scottish Government
- Queen Elizabeth Diamond Jubilee Trust – (CEHC)

Key staff

- Marcia Zondervan (Programme Manager)
- Claire Walker (Funding Advisor)
- Nick Astbury (Ophthalmology Advisor)
- Denise Mabey (Volunteer Ophthalmology Advisor)
- Didi Fabian (Volunteer Research Advisor)

Purpose

To improve the quality and quantity of eye care training and services, with an emphasis on Africa, through the development of long-term partnerships between eye care departments / institutions in Africa and the UK.

Achievements

- **Thirty LINKS partnerships in 17 countries** supported by the LINKS Programme to help them achieve their objectives for eye care services, focusing on priority training needs of the African partner.
- **The Leadership and Educator Development project** (funded by DFID/THET Health Partnership Scheme) is finalised with excellent results in the 12 participating LINKS. Cascaded learning – workshops reached over 1,000 participants and there were 115 **Quality Improvement Projects (QIPs)** in areas such as enhancing patient safety and awareness. Another application is being prepared for five countries to develop this project with mid-level personnel, addressing their training needs for medical leadership.
- **The Diabetic Retinopathy Network** (DR-NET, part of the CEHC funded by the Queen Elizabeth Diamond Jubilee Trust) continues to support the partnerships to screen and treat Diabetic Retinopathy and to expand DR services in 8 countries.
- **The Retinoblastoma Network** (Rb-Net, part of the CEHC) has 8 LINK partners across 4 countries - Uganda, Tanzania, Kenya, Malawi - providing expert advice from UK Rb partners and LVP, India to help address the issue of early detection and treatment of retinoblastoma in Africa (Indonesia also joined with its own funding).

Disability and Eye Health Group, LSHTM: Report Jan-June 2017

- The VISION 2020 LINKS Programme **published six articles in Eye News** in 2017.
- **Presentations and talks** at the RCOphth Congress in Liverpool in May.
- The VISION 2020 Links Programme acts as a consultant/adviser to other organisations wishing to set up similar programmes.
 - RANZCO has done so for DR services.
 - The USA has moved forward with an MoU to establish a parallel LINKS Programme.

Plans for Jan – July 2018

- Continue to manage and support the **30 VISION 2020 LINKS** partnerships
- Continue to manage and support the **Networks** currently underway:
 - Leadership,
 - Diabetic Retinopathy
 - Retinoblastoma
 - Research mentorship
- **Articles in Eye News**
- **Seek additional funding** to continue running the VISION 2020 LINKS Programme in 2018 and beyond.

VISION 2020 WORKSHOPS (Jan – June 2017)

Donors

- IAPB
- ORBIS
- CBM
- Sightsavers
- Eye Samaritans International
- Ophthalmic Aid to Eastern Europe (OAEE)
- Medicor

Key staff

- Robin Heber-Percy (Programme Manager)

Workshops

Region/Country	Topic
Europe	
Sofia, Bulgaria	DR course at the Black Sea Ophthalmic Society meeting
Iasi, Romania	ROP workshop
South East Asia	
Dili, East Timor	RAAB dissemination workshop
Africa	
Lome, Togo	Regional Training of Advocacy Advisors
Nairobi, Kenya	Advocacy Advisor training review and strategic planning
Nairobi, Kenya	Regional Planning and review meeting
Western Pacific	
Shanxi, China	1 st China eye health conference
Lami, Fiji	PacEYES – Pacific Regional Eye Care Conference

Highlights

In Europe the programme is focussing its efforts on two regional priorities, Diabetic Retinopathy (DR) and Retinopathy of Prematurity (ROP).

IAPB has secured funding for a two-year programme of support to the Romanian Ministry of Health to strengthen their national ROP programme. This programme began in October 2015 and during this reporting period the first regional ROP workshop was held bringing together teams of nurses, neonatologists and ophthalmologists from level 2 and level 3 neonatal intensive care units (NICUs) from the NE region of Romania.

The IAPB regional Chair, in partnership with the International Diabetes Federation – Europe Section, ran a session on DR at the Black Sea Ophthalmic Society regional meeting. This partnership is new but IAPB hopes to build on it to help identify ways to support the prevention and treatment of DR in parts of Europe.

In South East Asia the workshop programme concentrates its efforts in working with Ministries of Health to improve their national eye health planning. During this period one workshop was held for East Timor to develop the national plan using the recently released RAAB data to guide the planning.

For the Africa region, the strategic effort is aimed at strengthening human resources for eye health (HReH). This programme has been training up advocacy advisers from countries across the region who are then supported to develop their own national HReH advocacy plans to bring about the goal of having eye health cadres integrated into national human resources for health (HRH) plans and budgets. In January, the third training was delivered for three new advisors from Togo, Benin and Ethiopia. In May, there was a review meeting for the Advocacy for HReH strategy bringing together advisors, Directors of HRH, INGOs, National Eye Care Coordinators (NECs) and other stakeholders to review success to date and to look at how the strategy can be improved in the next period. It was found that excellent progress had been made with nine national HRH plans including eye health cadres and four countries actively implementing these plans. Following the May review the strategy has been strengthened and in 2018 the next advisor training is planned for Directors of HRH and NECs from 3-5 countries.

In the **Western Pacific** the programme supported PacEYES, a regional NGO to arrange their regional eye care conference. In a region of scattered islands with low population, it is rare that there is an opportunity to come together and listen to new developments and approaches, meet their peers, networks and form collaborations. It is hoped that this conference will continue to be held once every two years.

The National Institute of Hospital Administration (NIHA), MoH, **China** supported a China eye health conference. This was notable in that there were speakers from across the globe; it was an outward looking conference promoting partnerships, links and the sharing of research findings and new practices/innovations.

COMMONWEALTH EYE HEALTH CONSORTIUM

Achievements 2017 (Jan-June)

MSc in Public Health for Eye Care, LSHTM and MPH in Community Eye Health, University of Cape Town

At LSHTM three 2014-15, and two 2015-16 MSc PHEC scholars graduated. One 2015-16, and two 2016-17 MSc PHEC scholars completed their fieldwork, submitted their dissertations, and returned home.

Seven 2017-18 MSc PHEC scholars will enrol at LSHTM in the 2017 Autumn Term. At UCT, one 2015 MPH CEH scholar graduated.

One 2015 MPH CEH scholar, and three 2016 MSc CEH scholars completed their academic courses and are currently writing their dissertations.

Five 2016 MPH CEH scholars enrolled at UCT for the 2017 Spring Term.

Postgraduate Diploma in Community Eye Health, University of Cape Town

Five PGDip scholars completed courses 1, 2 & 3 and work towards the final course.

Open Education for Eye Health (Previously Open Educational Resources)

The Massive Open Online Course (MOOC) in **Eliminating Trachoma** ran for a second time from 17th April to 21st May 2017, with 1,170 participants. **Ophthalmic Epidemiology (Basic Principles and Application to Eye Diseases)** are currently live on LSHTM Open Study. <http://open.lshtm.ac.uk>

Clinical Fellowships

67 people completed clinical fellowships (25 long-term, 42 short-term);

26 (20 LT, 6 ST) are currently ongoing; and

40 (24 LT, 16 ST) have been awarded for 2017 and 2018.

The awards cover vitreo-retina, glaucoma, paediatrics and oculo-plastics.

Clinical Mentorship Programme

The Clinical Mentorship Programme is being set up for overseas ophthalmologists who have completed the 12-month subspecialty clinical fellowships. Around 15 mentoring partnerships are currently being established, with further planned.

Capacity Building

Work is progressing towards the goal of promoting the creation of fellowship programmes to run in Africa for African ophthalmologists.

Diabetic Retinopathy Network (DR-NET)

Five mutual training visits with DR-NET LINKS teams have taken place this year in Lusaka, Kingston, Fife, Lilongwe, and Kampala.

Caribbean DR-NET

A Diabetic Retinopathy Network has been established in the Caribbean and two visits to the region were undertaken

Retinoblastoma and Retinopathy of Prematurity Networks

Rb-NET and ROP-NET have both been established and planning is underway for these.

Research Fellowships

Seven PhD and two post-doctoral research fellows are undertaking fieldwork and studies in their home countries.

Peek (Portable Eye Examination Kit)

Achievements 2017 (Jan-June)

The **Peek Acuity app** enables users to conduct visual acuity screening more rapidly and with superior repeatability than traditional physical charts. The app is now being used in over 100 countries. Plans for translation have commenced.

Peek School Screening in Kenya which utilises the Peek Acuity app, started in June; by July, over 100,000 children had been screened. School Screening in **Botswana** commenced in July, and by August the first phase of the Botswana Peek School Screening programme was complete with almost 13,000 children screened across 50 schools and 1,000 children receiving treatment. Peek Acuity has been used throughout the School Screening programmes in Kenya and Botswana by linking it to the Peek Pathway system. The pilot in Botswana has supported a government led nationwide Peek School Eye Health programme. A trial of Peek School Screening was commenced in Hyderabad, **India**.

Each Peek Pathway is configured to the local programme, working in partnership with local service providers so that it fits into their health systems. In this way volunteer community health workers, teachers, primary care providers and NGOs on the ground are linked with secondary and tertiary clinicians and government agencies. This single workflow uses combined data for screening, referral, triage, treatment and follow-up.

Peek Retina was launched in April 2017 with shipment to 1,500 users in 72 countries. All revenue is being reinvested in improving the hardware, developing a non-mydratic version and creating a supporting app.

Peek was awarded best social impact start-up in Europe by Google and McKinsey and the Peek Acuity app was nominated as best social impact app on the Google Play Store

The new website is now live at www.peakvision.org.

Plans for 2017 (July – Dec)

1. Refinements of Peek Retina, the smartphone adapter for retinal imaging
2. Continue school screening programmes in Kenya (target 300,000 children total)
3. Complete the trial of School Screening in India
4. Pilot algorithm for primary eye care to be used with the Peek Community Screening Programme
5. Validation of Peek Retina for utility within a DR Service
6. Commence development of low-cost Retinopathy of Prematurity (ROP) camera
7. Develop RAAB database (funding dependent)

PROGRAMMES IN INDIA

The Queen Elizabeth Diamond Jubilee Trust (The Trust) is supporting two large scale programmes in India, the aims of which are to reduce avoidable visual loss from diabetic retinopathy and retinopathy of prematurity (ROP) in the government health system. As support to both programmes will end in 2019, another aim is that initiatives for control are sustainable and scalable because of advocacy for policy change.

Diabetes is increasing dramatically in India, due largely to changing life styles, and diabetic retinopathy is likely to become an increasingly important cause of visual impairment and blindness, particularly amongst the economically active age group.

More preterm infants are now surviving as services for sick and preterm infants have been developed across India over the last decade, and as a consequence more infants born preterm are becoming blind from ROP.

Both the DR and ROP programmes are embedded within the Government of India's health system, and multi-sector and multi-disciplinary National Task Forces have been developed for both conditions to guide decisions during the period of Trust support as well as after funding ends.

Strategies for control of both conditions were agreed at National Summit meetings, in 2013 and 2014.

The approaches adopted are to use the expertise already in India for the prevention, detection and treatment of both conditions to strengthen government services for people with diabetes and preterm infants through mentoring and capacity building.

Model programmes for the detection and screening of diabetic retinopathy, which are integrated into the Government of India's national programme for non-communicable diseases, are now in place in 10 States across India.

The programme for ROP is being implemented in Special Newborn Care Units in 5 States.

Technical Expert Groups have been formed by the task Forces for both conditions which are addressing advocacy and communication; national guidelines; monitoring and evaluation; competency based training and a programme committee which has oversight of progress.

State Ministries of Health are supporting both programmes and several have expressed a willingness to scale up services for retinopathy of prematurity and diabetic retinopathy.

EYE HEALTH PUBLICATIONS: 2017

January - June

Bastawrous, A. ; Mathenge, W. ; Peto, T. ; Shah, N. ; Wing, K. ; Rono, H. ; Weiss, H.A. ; Macleod, D. ; Foster, A. ; Burton, M. ; Kuper, H.

Six-Year Incidence and Progression of Age-Related Macular Degeneration in Kenya: Nakuru Eye Disease Cohort Study.

JAMA Ophthalmol (2017) 135(6):631-638; DOI:

10.1001/jamaophthalmol.2017.1109; PMID: 28494075 Open Access

Bastawrous, A. ; Mathenge, W. ; Wing, K. ; Bastawrous, M. ; Rono, H. ; Weiss, H.A. ; Macleod, D. ; Foster, A. ; Peto, T. ; Blows, P. ; Burton, M. ; Kuper, H.

The incidence of diabetes mellitus and diabetic retinopathy in a population-based cohort study of people age 50 years and over in Nakuru, Kenya.

BMC Endocr Disord (2017) 17(1):19; DOI: 10.1186/s12902-017-0170-x; PMID: 28335755 Open Access

Buchan, J.C.; Dean, W.H.; Foster, A.; Burton, M.J.

What are the priorities for improving cataract surgical outcomes in Africa? Results of a Delphi exercise.

Int Ophthalmol (2017) ; DOI: 10.1007/s10792-017-0599-y; PMID:

28634930 Open Access

Butcher R, Houghton J, Derrick T, Ramadhani A, Herrera B, Last AR, Massae PA, Burton MJ, Holland MJ, Roberts CH.

Reduced-cost Chlamydia trachomatis specific multiplex real-time PCR diagnostic assay evaluated for ocular swabs and use by trachoma research programmes.

J Microbiol Methods. 2017, 139:95-102

J.D.Chidambaram, N.V.Prajna, N.Larke, D.Macleod, P.Srikanthi, S.Lanjewar, M.Shah, P.Lalitha, S.Elakkiya, M.J.Burton

In vivo confocal microscopy appearance of Fusarium and Aspergillus species in fungal keratitis

British Journal of Ophthalmology, 2017, 101(8):1119-1123

J.D.Chidambaram, S.Kannambath, S.Palepu, M.Shah, P.Lalitha, S.Elakkiya, J.Bauer, N.V.Prajna, M.J.Holland, M.J.Burton

Persistence of Innate Immune Pathways In Late Stage Human Bacterial And Fungal Keratitis: Results From A Comparative Transcriptome Analysis

Frontiers in Cellular and Infection Microbiology, 2017, 7:193

T.Derrick, A.Ramadhani, K.Mtengai, P.Massae, M.J.Burton and M.J.Holland
miRNAs that associate with conjunctival inflammation and ocular Chlamydia trachomatis infection do not predict progressive disease.*Pathogens and Disease, 2017, 72(2):ftx016*

S.Gichuhi, J.Kabiru, Alain M'Bongo Zindamoyen, H.Rono, E.Ollando, J.Wachira, R.Munene, T.Onyuma, M.S.Sagoo, D.Macleod, H.A.Weiss and M.J.Burton
Delay along the care-seeking journey of patients with ocular surface squamous neoplasia in Kenya.
BMC Health Services Research, 2017, 17(1):485

E.Habtamu, T.Wondie, S.Aweke, Z.Tadesse, M.Zerihun, B.Gashaw, G.S.Wondimagegn, H.D.Mengistie, S. N.Rajak, K.Callahan, H.A.Weiss, and M.J.Burton
Predictors of Trichomatous Trichiasis Surgery Outcome
Ophthalmology, 2017, 114(8):1143-1155

E.Habtamu, T.Wondie, S.Aweke, Z.Tadesse, M.Zerihun, B.Melak, B.Gashaw, K.Callahan, P.M.Emerson, R.L.Bailey, D.C.W.Mabey, S.N.Rajak, H.Kuper, S.Polack, D.Macleod, H.A.Weiss and M.J.Burton
Impact of trichiasis surgery on daily living: A longitudinal study in Ethiopia
Wellcome Open Research, 2017

J.Hadfield, SR Harris, MJ Burton et al
Comprehensive global genome dynamics of Chlamydia trachomatis show ancient diversification followed by contemporary mixing and recent lineage expansion
Genome Research, 2017, 27:1120-1129

J.Hoffman and M.J.Burton
Ocular Surface Disease: Assessment and Diagnosis
Journal of Community Eye Health, 2016; 29(95):41-43

Kyari F., Gilbert C., Blanchet K. and Wormald W.
Improving services for glaucoma care in Nigeria: implications for policy and programmes to achieve universal health coverage.
Br J Ophthalmol May 2017;101(5):543-547

Kyari F, Gilbert C; Nigeria National Blindness and Visual Impairment Study Group.

Agreement in Measurement of Optic Cup-to-Disc Ratio with Stereo Biomicroscope Funduscopy and Digital Image Analysis: Results from the Nigeria National Blindness and Visual Impairment Survey.

Ophthalmic Epidemiol. 2017 Feb;24(1):57-62

P.A.Mathewson, G.P.Williams, S.L.Watson, J.Hodson, A.J.Bron, S.Rauz and The OSIDSS Study Group*

Defining Ocular Surface Disease Activity and Damage Indices by an International Delphi Consultation

The Ocular Surface, 2017, 15(1): 97-111

Muhammad N, Adamu MD, Caleb M, Maishanu NM, Jabo AM, Rabiu MM, Covadonga Bascaran C, Isiyaku S, Foster A.

Changing patterns of cataract services in North- West Nigeria: 2005–2016.

PLoS ONE 12(8): 2017: e0183421. <https://doi.org/10.1371/journal.pone.0183421>

Priya Morjaria; Andrew Bastawrous; GVS Murthy; Jennifer Evans; Clare Gilbert.

Effectiveness of a novel mobile health education intervention on spectacle wear among children in India: study protocol for a cluster randomized trial.

Trials April 2017 18:168. DOI 10.1186/s13063-017-1888-5

Priya Morjaria, Jenifer Evans, Kaushik Murali, Clare Gilbert.

Spectacle Wear Among Children in a School-Based Program for Ready-Made vs Custom-Made Spectacles in India: A Randomized Clinical Trial.

JAMA Ophthalmol June 2017 doi: 10.1001/jamaophthalmol.2017.0641

A.Ramadhani, T.Derrick, D.Macleod, P.Massae, T.Mtuy, D.Jeffries, C.h.Roberts, R.L.Bailey, D.W.C.Mabey, M.J.Holland, M.J.Burton

Immunofibrogenic Gene Expression Patterns in Tanzanian Children with Ocular Chlamydia trachomatis Infection, Active Trachoma and Scarring: Baseline Results of a Four-Year Longitudinal Study

Frontiers in Cellular and Infection Microbiology, 2017, 7:406

Ramke J., Palagyi A., Jordan V., Petkovic J., Gilbert CE.

Using the STROBE statement to assess reporting in blindness prevalence surveys in low and middle income countries.

PLoS One. 2017 May 8;12(5):e0176178

Ramke J, Palagyi A, Petkovic J, Gilbert C.

Reporting of inequalities in blindness in low- and middle-income countries: a review of cross-sectional surveys.

Clin Exp Ophthalmol. 2017 Jun 8. doi: 10.1111/ceo.13001

Ramke J, Zwi AB, Lee AC., Blignault I, Gilbert C.

Inequality in cataract blindness and services: moving beyond unidimensional analyses of social position.

Br J Ophthalmol. 2017 Apr;101(4):395-400

Ramke,J; Kuper H; Limburg, H; Kinloch, J; Zhu, W; Lansingh V.C.;Congdon N; Foster A; Gilbert CE.

Avoidable Waste in Ophthalmic Epidemiology: A Review of Blindness Prevalence Surveys in Low and Middle Income Countries 2000-2014.

Ophthalmic Epidemiol, 2017; :1-8

Ramke, J.; Gilbert, C.E.; Lee, A.C.; Ackland, P.; Limburg, H.; Foster, A.

Effective cataract surgical coverage: An indicator for measuring quality-of-care in the context of Universal Health Coverage.

PLoS One, 2017; 12(3): e0172342

Vinekar A. Mangalesh, S. Jayadev, C. Gilbert, C. Dogra, M. Shetty, B.

Impact of expansion of telemedicine screening for retinopathy of prematurity in India.

Indian J Ophthalmol, May 2017; 65(5):390-395

RESEARCH & PhD PROJECTS IN HEARING IMPAIRMENT

<u>Donor</u>	<u>Title/Purpose</u>
World Wide Hearing	Impact of hearing impairment and provision of hearing aids on poverty, activities and quality of life in Guatemala City PhD Mark Spreckley
CBM	Hearing impairment in low and middle income countries PhD Tess Bright

SHORT COURSES IN PUBLIC HEALTH PLANNING FOR HEARING IMPAIRMENT

Donors:

- CBM
- CHEF/PIRS
- Better Hearing Philippines
- Michael Chowen

Staff:

- Andrew Smith (Honorary Professor)
- Daksha Patel (Course Director)
- Joanna Jeremy (Hearing Health Administrator)

Jan-Jun 2017

Harare, Zimbabwe 27-31 March 2017

The course was held for the first time in Harare in collaboration with the University of Zimbabwe.

The course represents a change in location for the course covering Southern Africa which has previously been held in Cape Town.



The course was well organised by our partners and well attended with 19 participants from a range of hearing or public health related professions.

Nairobi, Kenya 5-9 June 2017

The course was held for the fourth time in Nairobi in collaboration with the University of Nairobi.

There were 13 participants from Kenya, Ethiopia and Nigeria. The course was well organised and ran smoothly and efficiently.



World Hearing Day – 3 March

1. Event at the House of Lords

The International Centre for Evidence in Disability co-hosted along with Deaf Kidz International, the Hearing Conservation Council and the Royal College of Physicians an event at the House of Lords to mark World Hearing Day.

The event was held on Wednesday 1 March, and chaired by The Lord Bruce of Bennachie. There were speeches from each of the co-hosts and chair, as well as a reception for networking, advocacy and information sharing.



Attendees included representatives of a number of ear and hearing health organisations including Sound Seekers, Mercy Ships, Ear Foundation, Cupris Health and Action on Hearing Loss.

Also present were political representatives including members of the House of Lords, the Malawi High Commission, Tom Watson Deputy Leader of the Labour Party and Lord Bates Minister of State for International Development.

2. World Hearing Day at LSHTM

On World Hearing Day itself the ICED Hearing Group at LSHTM did the following to mark World Hearing Day:



- Launch of the new ICED Hearing Group website
<http://disabilitycentre.lshtm.ac.uk/key-publications/hearing-group/>
- Dedicated the ICED March 2017 newsletter to hearing
- Set up a stand in our cafeteria area to promote World Hearing Day, our work in ear and hearing health and demonstrated hearing screening apps on tablets

Plans for July – Dec 2017

The PHPHI course is scheduled to take place in the following locations during July to December 2017:

- Manila, Philippines– 6-10 November 2017
- Hyderabad, India – 13-17 November 2017
- Islamabad, Pakistan – 18-22 December 2017

In addition, a 5-day course on Public Health Training will take place in Lusaka, Zambia 23-27 October 2017, and a half-day workshop on Public Health Planning For Hearing Impairment at the Conference of the Coalition of Global Hearing Health in Miami, USA on 12 October 2017.

COMMUNITY EAR & HEARING HEALTH JOURNAL

Purpose:

The aim of CEHH is to promote ear and hearing health in low and middle-income countries by facilitating continuing education for all levels of health worker. It provides a forum for the exchange of ideas, experience and information to encourage improvements in the delivery of ear and hearing health care and rehabilitation.

Donor:

- CBM

Staff:

- Paddy Ricard (Editor)
- Joanna Jeremy (Administrative assistant)
- Lance Bellers (Design)
- Romulo Fabunan (webpage management)

Editorial Committee:

- **Chair: Diego Santana-Hernandez** (ENT surgeon, CBM Advisor on ear and hearing care)
- **Valerie E Newton** (retired audiologist, University of Manchester)
- **Tony Sirimanna** (audiologist, GOSH; trained ENT surgeon)
- **Ian Mackenzie** (ENT surgeon, Liverpool School of Hygiene and Tropical Medicine)
- **Andrew Smith** (Honorary Professor, ICED, LSHTM)
- **Regional advisor:** Jose M Acuin (ENT, Philippines)

Overview of the journal

- 12 pages once a year
- 3,443 readers in 181 countries (50% in Africa)
- 1 topic per issue, aimed at primary/secondary level in LMIC
- Single webpage grouping downloadable PDFs of all issues:
<http://disabilitycentre.lshtm.ac.uk/key-publications/cehh-journal/>

Jan-July 2017:

- Preparation of Vol 14 issue 18, a 12-page issue on '**Ear and hearing health in schools**'. This issue aims to give ear and hearing care workers and health planners the tools to engage with mainstream school staff to improve the ear and hearing health of schoolchildren in the community. All articles have been commissioned, written and edited.
- With this issue, we continue to increase our pool of writers: 3 new authors (two of whom in LMIC) are contributing for the first time to CEHH (37 authors based in 22 countries since 2012).

Disability and Eye Health Group, LSHTM: Report Jan-June 2017

- Content of the forthcoming issue is as follows:
 - Schools are a key location to implement public health interventions for ear & hearing health (Andrew Smith and Diego Santana)
 - What teachers need to know about the impact of ear disease and hearing loss on learning (Wendy McCracken)
 - What teachers can do in the classroom to improve pupils' ear and hearing health (Sian Tesno and Nassozi Kiyaga)
 - Communicating with pupils' parents about ear and hearing health (Patricia Castellanos)

Objectives for Jul-Dec 2017

- Publication and distribution of issue 14 of CEHH, 'Ear and hearing health in schools'.

PHYSICAL IMPAIRMENT RESEARCH PROJECTS & PhDs

<u>Donor</u>	<u>Title/Purpose</u>
ICRC	Impact of physical rehabilitation in Myanmar
CBM/THET/ Beit Trust/ Miracle Feet	Evidence to improve clubfoot services in Africa with Zimbabwe as a case study PhD Tracey Smythe

DISABILITY & HEALTH COURSES

An MSc study unit is offered at LSHTM on “**Global Disability and Health**” in February-March each year. This year, there were 21 students enrolled. ICED members give lectures on disability in 6 MSc modules or courses offered at LSHTM. ICED supported approximately 10 MSc summer projects during this academic year.

DISABILITY AND HEALTH RESEARCH PROJECTS

<u>Donor</u>	<u>Title/Purpose</u>
CBM	An assessment of the uptake of health & rehabilitative services among people with disabilities in Malawi
CBM	Access to health among people with disabilities: a review
CBM	Adolescents with disabilities: an exploratory study
Help Age International	Inclusion of older people with disabilities in Humanitarian crises
Wellcome/DFID	Social and Economic Impact of Congenital Zika Syndrome
Wellcome/DFID	Development of a Parent-Support Programme for Congenital Zika Syndrome
Newton/MRC	Access to healthcare among children with disabilities
3ie	Impact evaluation of the disability allowance in the Maldives

DISABILITY AND HEALTH RESEARCH PhDs

CBM	Participatory monitoring and evaluation for community based rehabilitation PhD Joerg Weber (completed June 2017)
CBM	Improving the evidence base on disability PhD Islay MacTaggart
CBM	Evaluation of a parent training programme for children with cerebral palsy in Ghana PhD Maria Zuurmond
Wellcome	Development of a parent training tool for children with Congenital Zika Syndrome DrPH Anthony Duttine
DFAT	People with Disabilities in Social Protection in Vietnam and Nepal PhD Morgon Banks
CBM	Access to health among people with disabilities PhD Goli Hashemi
HelpAge	Inclusion of older people with disabilities in Humanitarian crises DrPH Phil Sheppard
	Inclusion of people with disabilities in health insurance DrPH Tim O'Fallon
	Impact evaluation of a Village Loan Savings Scheme PhD David Musendo
Wateraid	Menstrual hygiene management among young women with disabilities in Nepal PhD Jane Wilbur

DISABILITY PUBLICATIONS: January June 2017

January – June

[Inclusive Health and the path to Universal Health Coverage](#)

Hashemi, G., Kuper, H., Wickendend, M. (2017) Disability and the Global South, Vol.4, No. 1, 1088-1111

[Prevalence and causes of hearing impairment in Fundong Health District, North-West Cameroon](#)

Ferrite, S., Mactaggart, I., Kuper, H., Oye, J. and Polack, S. (2017), Trop Med Int Health, 22: 485–492. doi:10.1111/tmi.12840

[The incidence of diabetes mellitus and diabetic retinopathy in a population-based cohort study of people age 50 years and over in Nakuru, Kenya](#)

Bastawrous, A., Mathenge, W., Wing, K., Bastawrous, M., Rono, H., Weiss, H. A., ... Kuper, H. (2017). BMC Endocrine Disorders, 17, 19. <http://doi.org/10.1186/s12902-017-0170-x>

[Survey of ENT services in sub-Saharan Africa: little progress between 2009 and 2015.](#)

Mulwafu, W., Ensink, R., Kuper, H., & Fagan, J. (2017). Global Health Action, 10(1), 1289736. <http://doi.org/10.1080/16549716.2017.1289736>

[Six-Year Incidence and Progression of Age-Related Macular Degeneration in Kenya Nakuru Eye Disease Cohort Study.](#)

Bastawrous A, Mathenge W, Peto T, Shah N, Wing K, Rono H, Weiss HA, Macleod D, Foster A, Burton M, Kuper H. JAMA Ophthalmol. 2017;135(6):631–638. doi:10.1001/jamaophthalmol.2017.1109

[Community Action Research in Disability \(CARD\) An inclusive research programme in Uganda.](#)

Hartley, Sally et al. Disability, CBR & Inclusive Development, [S.I.], v. 28, n. 1, p. 5-92, may. 2017. ISSN 2211-5242.

[Childhood disability in Turkana, Kenya: Understanding how carers cope in a complex humanitarian setting.](#)

Zuurmond, M., Nyapera, V., Mwenda, V., Kisia, J., Rono, H., & Palmer, J. (2016). African Journal of Disability, 5(1), 277. <http://doi.org/10.4102/ajod.v5i1.277>

[Development of indicators for monitoring Community-Based Rehabilitation.](#)

Mason C, Weber J, Atasoy S, Sabariego C, Cieza A (2017) PLoS ONE 12(6): e0178418. <https://doi.org/10.1371/journal.pone.0178418>

[A systematic review of strategies to increase access to health services among children in low and middle income countries.](#)

Bright, T., Felix, L., Kuper, H., & Polack, S. (2017). BMC Health Services Research, 17, 252. <http://doi.org/10.1186/s12913-017-2180-9>

[Birth prevalence of congenital talipes equinovarus in low- and middle-income countries: a systematic review and meta-analysis.](#)

Smythe T, Kuper H, Macleod D, Foster A, Lavy C. Trop Med Int Health. 2017 Mar;22(3):269-285. doi: 10.1111/tmi.12833.