double compared with 2015 and 2016; 19% of deaths occured for those who lived far from hospital (>40 km).
**Conclusion** 2017 had fewer hospitalisation cases and is the year with the highest lethality rate. Gastrointestinal infection and malaria were the main causes of hospitalisation. The rate of lethality from diarrhoea and septicaemia has increased significantly and with worse outcome in those living far from Bissau.

## PO 8573 RESEARCH, MENTORSHIP AND SUSTAINABLE DEVELOPMENT: IS RETIREMENT AGE A HURDLE TO RESEARCH SUSTAINABILITY IN AFRICA?

[1]Esther Ngadaya*, [14]Andrew Kitua, [3]Barbara Castelnuovo, [2]Blandina T Mmbaga, [6]Leonard Mboera, [4]Bruce Kirenga, [5]Getnet Yimer, [7]Maowia Mukhtar, [8]Steve Wandiga, [13]Addo Kwassi, [9]Rudovick Kazwala, [10]Bassirou Bonfoh, [12]Pontiano Kaleebu, [1]Yunus Mgaya, [11]Godfrey S Mfinanga. *[1]National Institute for Medical Research, Muhimbili Research Centre, Dar es Salaam, Tanzanina; [2]Kilimanjaro Christian Research Institute; [3]Infectious Diseases Institute, Mulago Hospital, Kampala, Uganda; [4]Makerere University Lung Institute, Kampala, Uganda; [5]Addis Ababa University, Ethiopia; [6]Southern African Centre for Infectious Disease Surveillance, Morogoro, Tanzania; [7]Institute of Endemic Diseases, University of Khartoum, Sudan; [8]Kenya Medical Research Centre, Nairobi, Kenya; [9]Sokoine University of Agriculture, Morogoro, Tanzania; [10]Centre Suisse de Recherches Scientifiques, Abidjan, Cote d'Ivoire; [11]National Institute for Medical research, Muhimbili Research Centre, Dar es Salam, Tanzania; [12]Uganda Virus Research Institute, Entebbe, Uganda; [13]Noguchi Memorial Institute for Medical Research, Accra, Ghana; [14]USAID/EPT-2 PandR project, Kampala, Uganda*

10.1136/bmjgh-2019-EDC.147

**Background** Retirement age in most of sub-Saharan Africa is between 55 and 60 years, even in academic and research institutions. There is no mechanism to retain even the few most experienced and outstanding among them. There is evidence that institutions retaining experienced researchers access better large research grants.
**Methods** We conducted literature review and shared views and experiences among peer research scientists
**Results** Most African scientists obtain their first degrees aged 25–30 years. Economic needs compounded with work experience requirements for PhD studies delay their research career development such that most PhD graduates are 40–50 years of age. However, unlike in the developed world where the majority acquire their PhDs in their late 20's or early 30's, there is no mechanism to retain them longer at work to maximise their contributions to scientific developments. Instead, African scientists are forced to retire young at 60 years of age. On the contrary, developed countries scientists graduate earlier, work longer and have retention mechanisms even after retirement. African countries do not consider retaining even the few who have demonstrated outstanding performance. Consequently, outstanding research scientists retire at the time when they are needed most. They seek and get jobs abroad or in externally owned projects (brain drain). Their decade or so of work, generates more resources abroad, depriving Africa of resource generating capacity. Secondly, retiring at the height of their performance is economically counterproductive. Thirdly, this affects negatively the career development of young scientists for lack of experienced supervisors and mentors.
**Conclusion** Africa must rethink the retirement age of its research scientists and create incentives to retain outstanding research scientists who reach retirement age. This is urgently needed to stop brain drain, contribute to economic development, and accelerate ongoing efforts to build sustainable research capacity and mentorship programmes in Africa.

## PO 8574 LESSONS FROM ENGAGING AND TRAINING PRIVATE AND FAITH-BASED HEALTH FACILITIES FOR THE USE OF MALARIA RAPID DIAGNOSTIC TESTS IN CAMEROON

[1,2,3]Palmer Masumbe Netongo*, [1,3,5]Irénée Domkam, [1,3]Séverin D Kamdem, [1,3]Franklin Maloba, [1,2]Akindeh Nji, [1,3]Eric Tchoupe, [3]Amel Bidias, [3]Becky Namboh, [3,6]Sylvie Kwedi-Nolna, [2,3]Barbara Athogo-Tiedeu, [4]Russell Dacombe, [2,3]Wilfred Mbacham. *[1]Molecular Diagnosis Research Group, Biotechnology Centre-University of Yaounde I (BTC-UY-I), Cameroon; [2]Department of Biochemistry, Faculty of Science, University of Yaounde I (UY1), Cameroon; [3]Initiative to Strengthen Health Research Capacity in Africa (ISHReCA), Biotechnology Centre-University of Yaounde I (BTC-UY-I); [4]Liverpool School of Tropical Medicine, UK; [5]Centre International de recherche et de Référence 'Chantal Biya' (CIRCB); [6]5Faculty of Medecine and Biomedical Sciences University of Yaounde I, Cameroon*

10.1136/bmjgh-2019-EDC.148

**Background** Bespoke community engagement is critical for success of any intervention. Lessons learned from engaging and training private and faith-based health facility professionals (grouped as informal health professionals [IHPs]) in Cameroon could streamline training and community engagement activities of networks like ALERRT and PANDORA. With the aim of establishing a system for monitoring malaria RDT accuracy in Cameroon, and supported by a WHO/TDR Impact grant, we tested the hypothesis that training IHPs to use follow-up visits and telephone/online support will improve their ability to perform RDT by 80%. This will also improve access to accurate malaria diagnosis and treatment in the communities served by the IHPs.
**Methods** We conducted a baseline survey to map target informal health facilities (GPS location, staffing, training on RDT) and challenges through focus group discussions and group questionnaires. We then organised rotation classroom for a three-day enhanced training on early diagnosis and prompt, effective treatment of malaria.
**Results** We found that though informal health facilities constitute approximately 30% of the country's health system capacity, IHPs were seldom included in regional RDTs training by the National Malaria Control Programme. Also, some IHPs had limited training to deliver health care services and were not registered with the Ministry of Health. Started as common initiative groups, IHFs constitute major access points for health care within communities and could be major players for community engagement within Cameroon as a sizeable population relies on them for accessible care.
**Conclusion** Our method is a feasible and cost-effective health worker-based approach for training and community engagement, which can help ALERRT to anticipate community preparedness for outbreaks in Cameroon and beyond.

## PO 8575 EVOLUTION OF MALARIA MORBIDITY IN TWO VILLAGES IN KOROGWE, TANZANIA

[1]John Lusingu, [1]Daniel Minja, [2]Thor Theander. *[1]National Institute for Medical Research; [2]University of Copenhagen, Denmark*

10.1136/bmjgh-2019-EDC.149

**Background** The malaria burden has decreased significantly in recent years in sub-Saharan Africa due to targeted interventions aimed at parasites and vectors. However, studies have

shown that a limited number of infective bites makes individuals in malaria-endemic regions more susceptible to subsequent malaria infection as they grow older due to waning or lost immunity. This study investigated the evolution of malaria morbidity for 14 years in Korogwe, Tanzania since 2003.

**Methods** A longitudinal study was carried out in Korogwe over 14 years, from January 2003 to December 2017 whereby community health workers (CHWs) passively monitored malaria episodes at a village health post. They evaluated febrile episodes and collected blood smears from all residents of the community who presented with fever. The blood smears were processed and read at the Korogwe field station by two independent microscopists. Artemisinin combination therapy (ACT) and malaria rapid diagnostic tests were introduced in the community in 2007. Uncomplicated malaria cases were treated with sulphadoxine-pyrimethamine (SP) from 2003 to 2006, then with artemether-lumefantrine (ALu) from 2007.

**Results** A total of 20,841 attendances were documented by CHWs between 2003 and 2017. Malaria parasitaemia was documented in 5043 consultations [24.1% (95% confidence interval (CI): 23.6% to 24.8%)]. Interestingly, malaria episodes declined markedly from 38.12% to 10.42% between 2003 and 2017. The highest reduction was documented in 2010 (at 3.1%) but thereafter, there was an increase in malaria in 2015 to 32.2% which decreased to 10.42% in 2017. Use of long-lasting insecticide-treated nets (LLINs) was associated with reduction of malaria episodes by 34% (95% CI: 26% to 42%).

**Conclusion** Prompt diagnosis at village level, use of ACT and LLINs has contributed to the reduced number of malaria episodes in Korogwe. However, the malaria resurgences raised concerns about malaria elimination in these communities.

## PO 8576 EFFECT OF IVERMECTIN TREATMENT ON THE FREQUENCY OF SEIZURES IN PERSONS WITH ONCHOCERCIASIS-ASSOCIATED EPILEPSY: PRELIMINARY RESULTS OF A RANDOMISED CLINICAL TRIAL

[1]Mandro Ndahura*, [2]Deby Mukendi, [3]Françoise Nyisi, [4]Deogracias Rossy, [5]Joseph Siewe, [3]Germain Abhafule, [5]Swabra Nakato, [6]Patrick Suykerbuyk, [7]Joseph Siewe, [7]An Hotterbeekx, [7]Robert Colebunders, [7]Sonia Menon. *[1]Ministry of Health of Ituri Province, Democratic Republic of the Congo; [2]University of Kinshasa, Democratic Republic of the Congo; [3]Centre de Recherche en Maladies Tropiclales de l'Ituri/Hopital de Rethy, Democratic Republic of the Congo; [4]Programme National de Maladies Tropicales Négligées/Ituri Sud, Democratic Republic of the Congo; [5]Global Health Institute, University of Antwerp, Belgium; [6]Fondation Damien, Brussels, Belgium; [7]Global Health Institute, University of Antwerp, Belgium*

10.1136/bmjgh-2019-EDC.150

**Background** Many studies reported an association between epilepsy and onchocerciasis. Moreover, anecdotal evidence suggests that ivermectin may reduce seizure frequency in persons with onchocerciasis-associated epilepsy (PWOAE). Therefore, we performed a randomised clinical trial among ivermectin-naïve persons with epilepsy in onchocerciasis-endemic villages in the Ituri province, Democratic Republic of the Congo.

**Methods** PWOAE were randomised in an arm receiving immediate (arm A) or delayed (4 months later) ivermectin treatment (arm B). All participants were receiving anti-epileptic drugs. Inclusion criteria were: age >5 years, signed informed consent, normal neurological development until onset of epilepsy between 5–18 years of age, seizure frequency of ≥2 seizures/month, presence of microfilaria in skin snip and/or antibodies against the Ov16 antigen. Primary study outcome: seizure freedom at month 4; secondary outcome: >50% reduction in seizure frequency at month 4 compared to reported seizure frequency at randomisation. The proposed sample size was 110 PWOAE.

**Results** 93 PWOAE, 57 males and 36 females, (mean age 22), were enrolled between October and November 2017. On March 2018, 90 (97%) participant completed their 4$^{th}$-month evaluation. One serious adverse event was observed during the trial (Steven Johnson reaction caused by phenobarbital). Considering all participants there was no significant difference in outcome between the 2 arms. However, considering participants with presence of microfilariae at enrollment, at month 4, 26/39 (66.6%) in arm A and 20/44 (45.5%) in arm B were seizure free (p=0.05) and a 50% reduction of the number of seizures was observed in 9/39 (23.1% ) in arm A and 7/43 (16.3%) in arm B. (p=0.4).

**Conclusion** Ivermectin may have an added value in reducing the frequency of seizures in PWOAE treated with anti-epileptic drugs. However, a larger study is needed to confirm this.

## PO 8578 THE ROLE OF CLINICAL RESEARCH IN EDUCATING THE HEALTH WORKFORCE IN GUINEA-BISSAU

Isaquel B Silva. *Bandim Health Project, Bissau, Guinea-Bissau*

10.1136/bmjgh-2019-EDC.151

**Background** The World Health Organisation estimates a global deficit of approximately 4.3 million health workers, particularly doctors, nurses and midwives. Guinea-Bissau is among the 36 countries that suffer from a critical need for human resources (less than 23 health professionals per 10.000 inhabitants). The present research investigates the impact of clinical trials on health worker's capacity and training.

**Methods** This is a qualitative study. I interviewed health professionals who assisted in clinical trials during the past five years and obtained assistance to attend health-related courses. The interviews collected data about the professional's technical capacity, clinical practices, work conditions, their qualification for their work and socio-economic variables. Additionally, documents about clinical trials conducted in Guinea-Bissau through North-South cooperation, were analysed.

**Results** Interviews were held with 35 health professionals (21 female, 14 male) who participated in clinical trials with the Bandim Health Project (Guinea-Bissau) as research assistants and who received subsidies to realise undergraduate or graduate degrees. Among those interviewed, 28 (80%) received support to realise an undergraduate degree in nursing, 4 (11%) a laboratory course, and 3 (9%) a postgraduate course. Twenty-four (24; 69%) stated that they experienced significant improvements in their working conditions within the institutions where they worked after their clinical trials; 7 (20%) declared that they have progressed in their career after being placed in a health center or a hospital; 29 (83%) stated that the participation in clinical trials significantly strengthened their technical capacity and had a positive impact on their careers.

**Conclusion** I observed a positive impact of the involvement in clinical research on the development of health professionals' capacity. However, the quantity of clinical research in Guinea-Bissau is insufficient to train all health practitioners in this area.