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*Cover image: Kenyan girl scouts taking part in an AIDS awareness campaign. One holds a poster showing US President Barack Obama and his wife Michelle, taking an HIV test on a visit to Kisumu, western Kenya. Photo by School researcher Gemma Jones.
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Improving health worldwide: East Africa

Forewords



Dr Tedros Ghebreyesus

Foreign Minister and former Minister of Health, Ethiopia
Alumnus and Honorary Fellow of the School

Our region is developing rapidly, and in particular we are investing in our health, research and science infrastructure with the support of funders and partners globally. The London School of Hygiene & Tropical Medicine is a key partner in this work, and is helping national and local governments, universities and hospitals strengthen their research and capacity, and exchange knowledge and expertise.

I am honoured to be associated with this world-leading institution, and I know from personal experience how dedicated are the School's staff, students and alumni – conducting research and taking practical action that saves lives and improves health in East Africa and worldwide.



Dr Mwele Ntuli Malecela

Director-General, National Institute for Medical Research, Tanzania and an alumnus of the School

The long-running and successful partnership between the National Institute for Medical Research and the School has led to the development of the Mwanza Intervention Trials Unit here in Tanzania that is becoming a world-leading centre for intervention trials in infectious disease and public health.

It is a beacon that is now being followed by others in Africa and globally, and we hope will be sustained for decades to come.

Most of the trials referred to in this publication are **randomised controlled trials**, considered to be the 'gold standard' of research used to test the effectiveness of medical interventions in a population. Study subjects are randomly allocated to receive one or other of the alternative treatments under study before the intervention begins. Randomised controlled trials were devised and developed by Sir Austin Bradford Hill, of the London School of Hygiene & Tropical Medicine, in a 1948 paper on tuberculosis. School researchers have since pioneered their development in tropical medicine, and in low-income settings.

Together we are stronger



Baron Peter Piot is Professor of Global Health and Director of the London School of Hygiene & Tropical Medicine. He was previously Under Secretary-General of the United Nations and founding Executive Director of UNAIDS. He co-discovered the Ebola virus and has published over 500 scientific articles and 16 books on infectious diseases. In 2013, he was awarded the Hideyo Noguchi Africa Prize for Medical Research by the Prime Minister of Japan for his pivotal research on diseases endemic in Africa.

East Africa is at the forefront of many of the world's most serious health challenges. For many decades, the School has been engaged in collaborative research and teaching, supporting the development of institutions across the region.

Today, nearly all our work is conducted with these partners, and our links have been further strengthened by participation in a growing number of international research consortia, and initiatives designed to strengthen the capacity of African institutions to carry out internationally competitive research. These range widely in focus, from infectious diseases including malaria, HIV and tuberculosis, improving the survival and health prospects of mothers and babies, addressing chronic disease and mental health issues, and building resilient and responsive health systems throughout the region.

I believe that most of sub-Saharan Africa is on an upward trajectory. Now is the time to seriously invest in higher education, research and innovation in Africa. With growing economies and plenty of natural resources, the unprecedented spread of communication technology, and above all, a growing and young work force, the continent needs far more highly skilled people, original solutions to its challenges, and a firm place in the global knowledge economy.

Reflecting this, our educational programmes have expanded rapidly in recent years, particularly distance learning and joint programmes such as the East African Diploma in Tropical Medicine and Hygiene and the new Makerere - Uganda Virus Research Institute training programme in infection and immunity.

We look forward to working even more closely with our partners to innovate in the future: together we can overcome the challenges ahead.

Peter Piot

Director, London School of Hygiene & Tropical Medicine

Contents:

Partnerships on HIV and sexually-transmitted infections

Since it emerged in the 1980s, the HIV epidemic has been the major threat to health across sub-Saharan Africa, and is now a chronic disease. Sexually transmitted infections disproportionately affect women in developing countries, often due to the lack of effective health services, and often lead to serious and potentially lethal complications.

Mwanza Intervention Trials Unit

The [Mwanza Intervention Trials Unit](#) is a beacon of good practice in capacity development in Africa. What started out as a research collaboration between the National Institute for Medical Research and the London School of Hygiene & Tropical Medicine

spans two decades, with support from the UK Medical Research Council. It was established in 2009 as a fully-fledged unit focused on clinical trials and interventions linked to sexually transmitted diseases.

Under the directorship of Saidi Kapiga we have seen much fine work done by the unit, and outstanding research. However, capacity development is a long-term process and this partnership is the outcome of decades of mutual trust and collaboration. Looking forward, we see the unit moving into vital new areas such as non-communicable diseases and determinants of health. The Mwanza Intervention Trials Unit is a model that strengthens institutions, nurtures talent and ensures that it is driven by good science.

Mwele Ntuli Malecela, Director General, National Institute for Medical Research, Tanzania



How vaccination prevents cervical cancer

Human papillomavirus (HPV) is the infectious agent that causes cervical cancer, a leading cause of death among women globally. Deborah Watson-Jones and Richard Hayes, with John Changalucha at the National Institute for Medical Research, have been conducting some of the first trials in sub-Saharan Africa of HPV vaccines. Their studies have shown that the vaccines are safe and effective, and that immunity is not compromised by worm infection or malaria. They also found that class-based vaccination was socially

acceptable, cheaper and achieved higher coverage, around 80%, than age-based vaccination.

These findings are being used to develop a national vaccination programme. The team is now exploring how to integrate other adolescent health interventions with HPV vaccination. Colleagues are also working with Nelly Mugo at the University of Nairobi to explore how best to offer vaccines to hard-to-reach groups in Kenya, including slum-dwellers and nomadic pastoralists.



HPV vaccination



Reducing mortality among HIV patients

HIV-infected adults starting antiretroviral therapy often die unnecessarily because of delays in treatment, poor adherence to therapy, and complications associated with undiagnosed cryptococcal meningitis, especially if they are also malnourished. Shabbar Jaffar, Victoria Simms and Lorna Guinness are working with the National Institute for Medical Research in Dar es Salaam on a trial intervention to address these issues. Suzanne Filteau is also working with colleagues at the Institute in Mwanza, providing dietary supplements enriched with lipids, vitamins and minerals to malnourished patients as part of the Nutritional Support for Africans Starting Antiretroviral Therapy (NUSTART) trial.



'SASA!' is a five-year project to stop violence against women and reduce HIV risk in Uganda. It is led by Raising Voices and the Centre for Domestic Violence prevention as part of [the STRIVE consortium](#). This is one example of how School researchers including Charlotte Watts, Cathy Zimmerman and Lori Heise are working with partners across Africa to develop and evaluate community-led interventions that change attitudes and behaviours towards women, and address HIV/AIDS. Photo by Annie Holmes, courtesy STRIVE / Raising Voices

Uganda Virus Research Institute

The [Uganda Virus Research Institute](#) in Entebbe is home to the Medical Research Council / Uganda Virus Research Institute on AIDS, a leading multidisciplinary facility for research across sub-Saharan Africa.

Sexually transmitted infections can increase the risk of HIV transmission. School researchers Heiner Grosskurth, Judith Vandepitte, Helen Weiss and partners from the Medical Research Council / Uganda Virus Research Institute Unit are studying a cohort of 1,000 Ugandan women to investigate these interactions. They have found that there seems to be no protective immunity after infection, and clearance is delayed if patients are HIV infected. The team is now working on a new trial of prophylactic treatment to prevent opportunistic bacterial infections in patients on antiretroviral therapy.

Alison Elliott is leading the Lake Victoria Island Intervention Study on Worms

and Allergy-Related Diseases at the Institute, in partnership with Edridah Tukahebwa and James Kaweesa of the Vector Control Programme, Ministry of Health. This is part of a wider research

programme investigating how infection by helminth worms, and the drugs used to treat them, affect immunity to malaria, HIV and TB in mothers and young children.



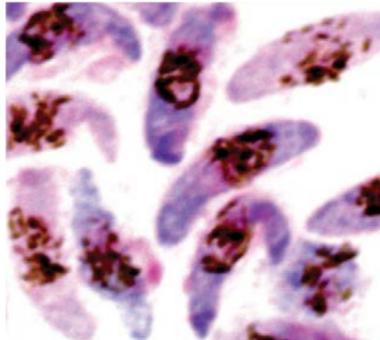
Fieldworkers from MRC Uganda undertaking the general population survey. Photo by Helen Weiss

Malaria: new research and treatments

Great progress is being made in malaria control and eradication in Africa, and while malaria still infects hundreds of millions, deaths have been reduced by one third in the last decade. Since its foundation, the School has had a leading role in malaria research, and today our [Malaria Centre](#) works with partners globally to maintain the momentum towards understanding and eliminating the disease.

Malaria surveillance, monitoring and control

Understanding the demographics and seasonality of malaria in different endemic areas is vital for better targeting of control programmes. The Assessment of the Infectious Reservoir of Malaria project is being conducted by Chris Drakeley and Teun Bousema with partners including Patrick Sawa of the International Centre of Insect Physiology and Ecology in Kenya. The Program for Resistance, Immunology, Surveillance and Modelling of Malaria in Uganda (PRISM), aims to understand transmission between the malaria parasite, mosquito vector and human host. Sarah Staedke is working with Moses Kanya and Harriet Mayanja-Kizza of Makerere University in partnership with the University of California, San Francisco, as part of the International



Plasmodium falciparum, the most common malaria pathogen. Photo by Samana Schwank

Centre of Excellence in Malaria Research. The team is developing new techniques to improve malaria

surveillance, monitoring of patients, communities and schools.

Following the withdrawal of chloroquine and sulphadoxine-pyrimethamine as standard treatments for malaria across East Africa, Cally Roper and colleagues based in Moshi, Tanzania, are carrying out molecular analysis of the malaria parasite *Plasmodium falciparum* to discover whether resistance to these drugs has decreased.

Ruth Ashton is analysing malaria data from 5,000 government and community health facilities across Oromia Region, and is working with the Malaria Consortium, USAID and regional health bureaus to develop and pilot a schools-based surveillance system.



Distributing insecticide-treated bednets. Photo by Valentina Buj

Better bednets

Long-lasting insecticide-treated nets are a front line malaria control tool in sub-Saharan Africa. Lena Lorenz, with Hans Overgaard from Norway, Sarah Moore from Ifakara Health Institute and William Kisinza from the National Institute for Medical Research, is investigating the effective lifespan of three leading bednet brands in ten districts of Tanzania by measuring the 'ABCD' factors: attrition, bioefficacy, coverage and degradation of the net fabric. They are also using new data to develop maps for health surveillance and to monitor insecticide resistance across the country.

Researchers discover new malaria mosquito

School researchers recently discovered a new species of mosquito that transmits malaria in Kenya. It is significant because unlike most known species, it actively feeds in the early evening, when people are not protected by insecticides and bednets.

A team led by Jennifer Stevenson set up indoor and outdoor traps in a village in Kisii, in the western highlands, and conducted DNA analyses of 348 specimens. 40% were found to be of this unidentified species, of which five were carrying malaria parasites and two had fed on humans.

"These mosquitoes are potentially dangerous because they are outdoor-active and early-biting, and evade indoor-based interventions"

Malaria is the leading cause of death in Kenya, with 25 million out of a population of 34 million Kenyans at risk, and the discovery has prompted calls for increased entomological surveillance

and a focus on integrating a wider range of malaria control tools to deal with the threat of outdoor transmission. The research was carried out in collaboration with the Kenya Medical Research Institute under the Malaria Transmission Consortium, funded by the Bill & Melinda Gates Foundation.



The team collected mosquitoes in light traps, and identified the new species using DNA sequencing. Photo by Jennifer Stevenson



Community health worker uses malaria rapid diagnostic test with children in Tororo, Uganda

Artemisinin-based combination therapy

Artemisinin-based combination therapy (ACT) is the first line recommended treatment for malaria. Although it is highly effective, there are concerns over resistance of malaria parasites, and many problems to do with access, safety, targeting and drug quality. [The ACT Consortium](#) is a global research partnership of 25 leading public health and academic institutions. With its secretariat based at the School, the consortium currently supports research in nine countries, including Tanzania and Uganda, providing valuable data on the effectiveness of ACT therapy over time, the cost-effectiveness of delivery strategies, acceptability and safety of drugs, and how to improve their use by prescribers and patients and advise policy makers, governments and donors.

Targeting treatment in Tanzania

The targeting ACT trial is using rapid diagnostic tests to improve the rational use of drugs in 36 primary health care facilities in two districts of Tanzania. Hugh Reyburn is co-ordinating the trial in partnership with the National Institute for Medical Research and Kilimanjaro Christian Medical College, working closely with Tanzania's national malaria control programme.

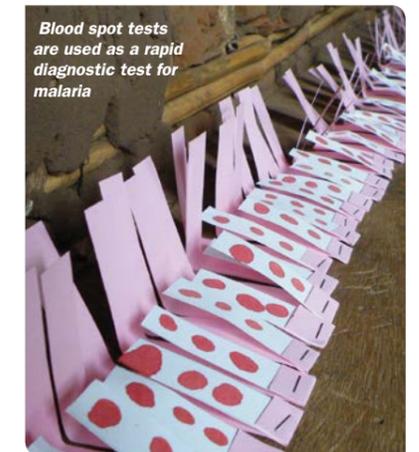
Catherine Goodman, in partnership with the Ifakara Health Institute, leads a large evaluation of the effectiveness and cost-effectiveness of the national introduction of rapid diagnostic tests in health facilities, and of subsidised drugs in the private sector.

Improved care for children with malaria

Sarah Staedke and partners including Moses Kanya of Makerere University are conducting a trial of enhanced health facility-based care in Tororo District, working with Uganda's Ministry of Health. The centres receive training in health centre management, fever case management, patient-centred services, and provision of rapid diagnostic tests. This work builds on the researchers' recent evaluation of home-based management of fever in urban Ugandan children.

Sian Clarke, in partnership with the Ugandan Ministry of Health, leads a team looking at how access to malaria treatment can be improved through community drug distributors in Rukungiri district. They are also evaluating the improvement of targeting malaria

treatment by introducing rapid diagnostic tests in drug shops in Mukono district.



Blood spot tests are used as a rapid diagnostic test for malaria

Innovative approaches to infectious disease

With partners across the region, School researchers are working to understand and control major tropical diseases including leishmaniasis, blinding trachoma and leprosy, which together affect more than one billion people worldwide, mainly in sub-Saharan Africa. This work is proving vital in helping countries plan their intervention strategies and target treatment to areas of greatest need.

Mapping and elimination of blinding trachoma

Blinding trachoma affects more than 21 million people globally, with up to 180 million at risk in the world's poorest countries. The [Global Trachoma Mapping Project](#) is a consortium of ministries of health, NGOs and academic partners worldwide, funded by the UK Department for International Development. School researcher Anthony Solomon, chief scientist for the project, is working in Ethiopia, training teams to examine people for clinical evidence of trachoma and use smart phones to collect data on water, sanitation and hygiene.

Matthew Burton and colleagues recently published the results of two clinical trials on blinding trachoma in Ethiopia, and are now comparing alternative surgical procedures and the effect of a widely available antibiotic, doxycycline, in improving surgical outcomes. They are also working with Athumani Ramadhani and colleagues at Kilimanjaro Christian Medical College in Moshi to investigate development of scarring in trachoma among Masai communities in Tanzania.

Testing for trachoma, courtesy Sightsavers

Helminth worm infection and meningitis

Helminth worms are a major cause of poor health worldwide, especially in Africa. Simon Brooker and colleagues have developed the [Global Atlas of Helminth Infections](#) as an information resource on the distribution of soil-transmitted helminths, schistosomiasis and lymphatic filariasis. In collaboration with the Kenya Medical Research Institute and Liverpool School of Tropical Medicine, the team also runs training courses for government staff and researchers from countries all over Africa on the use of mapping tools for control programmes.

The [African Meningococcal Carriage Consortium](#) is investigating the patterns of meningitis in seven countries across Africa, including Sudan and Ethiopia. It is led by Brian Greenwood and funded by the Wellcome Trust and Bill & Melinda Gates Foundation.

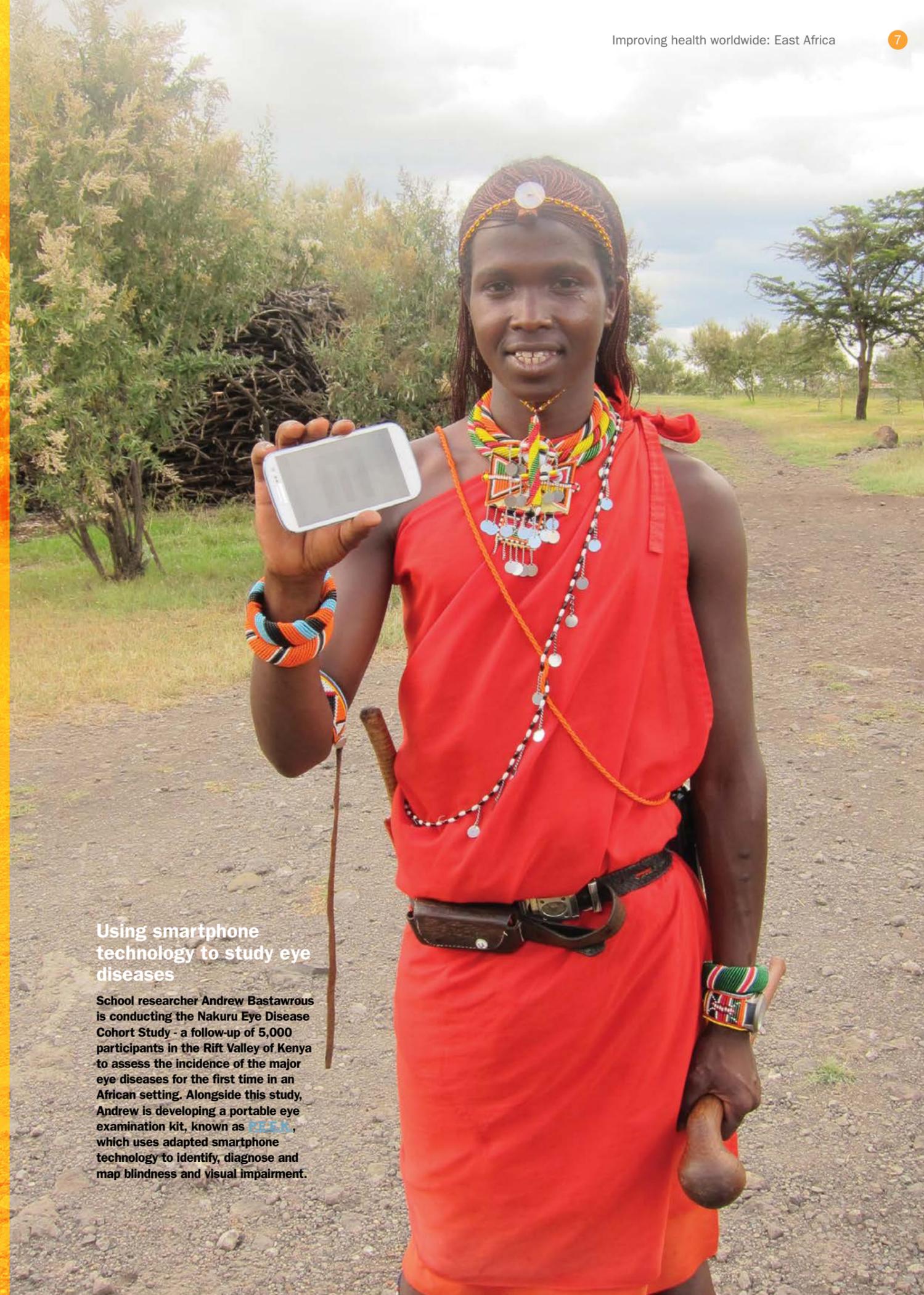
New treatments for leprosy

About 4,000 new leprosy patients are diagnosed in Ethiopia each year, representing a significant disease burden. The School's leprosy group, led by Diana Lockwood, is studying the effects of treatment on leprosy reactions. Working in Addis Ababa, Omer Haroun found that about 20% of treated leprosy patients have neuropathic pain, which is associated with depression and long term morbidity.

Saba Lambert has completed trials on treatment for complications of leprosy, with promising initial results. The team is also reviewing interactions between HIV and leprosy, PhD student Edessa Gobena is working on the immunology of its complications, and Steve Walker has completed valuable work on the wider burden of skin disease in Ethiopia.



Leprosy clinic in Addis Ababa, courtesy Saba Tsefayealert



Using smartphone technology to study eye diseases

School researcher Andrew Bastawrous is conducting the [Nakuru Eye Disease Cohort Study](#) - a follow-up of 5,000 participants in the Rift Valley of Kenya to assess the incidence of the major eye diseases for the first time in an African setting. Alongside this study, Andrew is developing a portable eye examination kit, known as [PEEK](#), which uses adapted smartphone technology to identify, diagnose and map blindness and visual impairment.

Health on the map: selected projects and partnerships

Good Schools preventing violence

Violence against children in schools is common in many countries, but evidence for effective prevention is lacking. In the Good Schools Study, Karen Devries is working with the Institute of Education, Makerere University and Ugandan NGO Raising Voices to evaluate their Good School Toolkit to prevent violence against children.



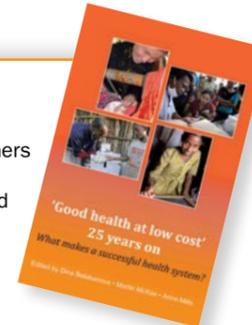
Improving stoves and water filters

School researchers are leading the evaluation of a pilot project that aims to reduce indoor air pollution, improve drinking water quality and cut household costs fuel costs. Thomas Clasen is working with Fidel Ngabo of the Rwanda Ministry of Health and others to assess the impact of improved cooking stoves and water filters in the lowest income populations. The 15 village pilot, if successful, will be rolled out across Rwanda.



Good health at low cost

Why do some low and middle income countries manage to achieve good health outcomes while others fail? *Good health at low cost 25 years on* is an influential book and practical resource kit developed at the School by Anne Mills, Dina Balabanova and Martin McKee, with partners including Miz-Hasab Research Centre in Ethiopia, to help policy makers and practitioners.



Attitudes to contraceptives

Kirstin Mitchell is investigating repeat use of the emergency contraceptive pill as part of research by DKT Ethiopia, a leading supplier, and also researching attitudes towards intra-uterine devices.



Visceral leishmaniasis and HIV

Tansy Edwards, Neal Alexander and partners at the University of Gondar Hospital, Médecins Sans Frontières-Holland and Drugs for Neglected Diseases initiative are conducting a trial of combinations of drugs for the treatment of visceral leishmaniasis in HIV-positive patients in Ethiopia followed by secondary prophylactic treatment. It builds on the Leishmaniasis East Africa Platform, which has over the past decade run successful clinical trials in Sudan, Ethiopia, Kenya and Uganda.



Access to care for drug users

Tim Rhodes and colleagues from the School are working with the Kenyan AIDS NGOs Consortium, International HIV/AIDS Alliance and the Kenyan government, investigating how people who inject drugs experience HIV care and harm reduction, in order to support the development of health care services.



Treating child sickle cell disease

Sharon Cox is working with Julie Makani of Muhimbili National Hospital to trial different formulations of a ready-to-use supplementary food, in combination with different dosages of chloroquine, and testing how these affect vascular function and growth in children with sickle cell disease.



Integration of eye care for children

Many of the blinding eye conditions of childhood have effective treatments for prevention or sight restoration, but these are not effectively integrated into primary health care. Clare Gilbert with Milka Mafwira and colleagues at Sightsavers are evaluating how this service is being improved in Tanzania.



Innovation in health systems

Jo Borghi and partners from the Ifakara Health Institute in Dar es Salaam are evaluating health facility governance structures, and the impact on children's health of innovations such as performance-based pay for health workers and managers, and free insurance cards for poor pregnant women.



Note: The lines and points on the map indicate which countries these projects are working in. They are not meant to be geographically accurate within each country. Headings and numbers in blue circles indicate page references within this publication. The School is involved in many other projects in the region, and this publication represents only a selection. For an updated map of global projects and partnerships visit <http://www.lshtm.ac.uk/aboutus/introducing/map>

Public health: services, systems and challenges

Primary care services in Africa face a growing burden of treatable chronic diseases such as hypertension, diabetes and lung disease. Current health policies and practices are often inappropriate to address this burden, particularly with respect to non-communicable diseases, and accurate data are seldom available. The School is working extensively in this area, and is part of the resilient and responsive health systems (RESYST) international research consortium to promote health equity and reduce poverty by focusing on financing, health workforce, and governance in seven countries including Kenya and Tanzania. This builds on a long collaboration with Ifakara Health Institute and Kemri Wellcome Trust in Kenya in health systems research and health economics.

Improving health services for chronic diseases

Heiner Grosskurth and colleagues are working with partners in Uganda and Tanzania to document current policies, assess the burden of selected chronic diseases in the population and at health facilities, and evaluate the quality of services. The partners are designing an intervention package aiming to improve services which will be evaluated in a trial conducted in six districts of Uganda and Tanzania.

Intervention Research for Mental Health

Mental health is increasingly recognised as a global issue. The School's Centre for [Global Mental Health](#) is working with partners in East Africa to build capacity for intervention research, and create networks of collaboration between researchers, NGOs and government agencies that facilitate the translation of research knowledge into policy and practice.

These networks include the ['PRIME' consortium](#), funded by the UK Department for International Development to generate evidence on the implementation and scaling up of treatment programmes for priority mental

disorders in primary and maternal health care contexts. Vikram Patel, Mary de Silva, Sujit Rathod and colleagues are working with ministries of health in five countries including Ethiopia and Uganda, the Institute of Psychiatry at King's College London and the World Health Organization. For example, Laura Asher is running a Wellcome Trust funded trial of community rehabilitation for people with schizophrenia in Ethiopia.



Road sign in Juba, photo by Egbert Sondorp

Health in humanitarian crises and conflict

It is important to accurately assess the human cost of crises such as natural disasters, armed conflict and famine. Published in 2013, a study by Francesco Checchi and collaborators from Johns Hopkins University used various data on health, nutrition and food security to reveal that the 2010-12 famine in Somalia cost the lives of nearly 5% of the total population of Southern and Central Somalia, including 10% of children under five, making it one of the worst famines in the past 25 years. They estimated that 258,000 people died as a direct result of famine, on top of the 290,000 deaths resulting from the conflict, a mortality rate twice the sub-Saharan average.

In recent years, Egbert Sondorp and colleagues have been working on evidence for humanitarian aid, post-conflict health reconstruction and, more broadly, on health in fragile states including South Sudan. In 2013, the Public Health in Humanitarian Crises Group was established at the School to focus on improving the public health of populations affected by crises through research, consultancy and advice to relief agencies.

Community-based interventions for newborn survival

Maternal and newborn health is an urgent priority in Africa. Joanna Schellenberg and colleagues are working with Fatuma Manzi at Ifakara Health Institute in Tanzania on projects including the Improving Newborn Survival in Southern Tanzania (INSIST) study, a community-based trial of home counselling. A network of over 800 trained local female volunteers are visiting women and families before and after birth to encourage and support healthy practices including clean childbirth, breastfeeding and extra care for low birth-weight babies.

The team is now working with Ifakara, Makerere University, Evaplan and Karolinska Institutet on an EU-funded project to evaluate interventions in communities and health facilities in Tanzania and Uganda to improve health of mothers and newborns.

The School's Centre for [Maternal, Child and Reproductive Health](#) works extensively with many partners in East Africa and globally, including the Gates-funded [IDEAS consortium](#), to integrate, scale up and evaluate maternal and newborn health policy and practice.



INSIST project volunteers in action, courtesy Joanna Schellenberg

ALPHA network: the power of shared data

In recent decades, researchers have developed detailed data sets on various aspects of health in Africa. The network for [Analysis of Longitudinal Population-based HIV data in Africa](#) (ALPHA) aims to maximise the usefulness of data generated in community-based cohort studies in sub-Saharan Africa for national and international agencies involved in designing or monitoring HIV interventions and epidemiological forecasting.

With funding from the Wellcome Trust, the ALPHA network links ten existing HIV cohort studies and runs

analysis workshops to bring diverse data sets into a common format in order to conduct comparative studies and meta-analyses on pooled data sets. ALPHA is co-ordinated from the School by Basia Zaba and Jim Todd, working closely with partners in Kenya, Malawi, South Africa Tanzania, Uganda and Zimbabwe. Advised by colleagues at WHO and UNAIDS, they recently published the first empirical estimates of the contribution of HIV to pregnancy related mortality in sub-Saharan Africa. ALPHA found an estimated 24% of pregnancy-related deaths in sub-Saharan

Africa are attributable to HIV, and that HIV positive pregnant and post-partum women are eight times more likely to die than their HIV negative counterparts.

Earlier work looking at the concluded that in the pooled data set, HIV mortality has halved since antiretroviral therapy has become widely available. Building on this, the network has recently been awarded additional funding from the Bill & Melinda Gates Foundation to investigate patterns of mortality among HIV positive adults in East and Southern Africa.

Educational and capacity-strengthening partnerships

The School's educational programmes in East Africa have expanded rapidly in recent years, and we are working with partners to develop joint educational and research capacity strengthening programmes. Our distance learning MSc and diploma courses now have more than 2,500 students enrolled worldwide, many of whom are health professionals working in Africa.

East African Diploma in Tropical Medicine and Hygiene

In 2011, the School successfully launched the [East African Diploma in Tropical Medicine and Hygiene](#), based in Moshi, Tanzania and Kampala, Uganda, with an initial cohort of 60 students. The course brings together doctors from around the world on a three month experiential course in tropical medicine and global health, using clinical rounds and evidence-based seminars to explore contemporary issues in African healthcare.

This unique programme, based on the School's long-standing diploma

programme and directed by Philip Gothard, is a collaboration with Kilimanjaro Christian Medical College, Makerere University, Johns Hopkins University and the University of Washington, with academic teaching from all five partner institutions.

Students receive hands-on microscopy training, bedside teaching, public health training, and field trips to a selection of specialised care centres throughout the region. It teaches participants about the challenges of caring for patients in areas with limited medical resources and

infrastructure, and the impact of tropical illnesses on the lives of patients, their families and communities.

The course enables participants from East Africa, many with financial assistance, and others from all over the world, to learn together in a collaborative setting, sharing their own unique perspectives, experiences, and cultures. There are plans to extend the programme to other countries in the region.



The first cohort of East African Diploma in Tropical Medicine and Hygiene students gather in Moshi, Tanzania

Alumni donations help fund scholarships

Fardous Abeya, from South Sudan, recently completed the East African Diploma in Tropical Medicine and Hygiene.

I come from a country with a heavy burden of tropical diseases and severe shortages of skilled doctors trained in investigating and managing them. This course, based within the region, has given me a golden chance to learn

from tutors and other participants and gain exposure to different experiences and approaches. South Sudan is a newly independent country with many challenges. Although the government encourages doctors to undertake postgraduate studies, they can't support them financially, and this is why the support of the School's alumni network is so vital.



Dr Fardous Abeya (centre in green) with fellow students on the diploma course

Strengthening malaria research capacity



Research laboratory at Makerere University, Kampala

The shortage of trained personnel in malaria endemic countries is a major issue. [The Malaria Capacity Development Consortium](#) (MCDC) is working to strengthen capacity for research in Africa. It supports African scientists studying for PhDs at five partner institutions, improving systems and infrastructure for post-doctoral programmes and providing career development support to malaria researchers. Funded by the Wellcome Trust and the Bill & Melinda Gates Foundation, the consortium is led by Brian Greenwood and David Schellenberg with a steering group including Gibson Kibiki of Kilimanjaro Christian Medical College and Moses Kamya of Makerere University.

Research training in infection and immunity

The School is a partner in the [Makerere-Uganda Virus Research Institute](#) research training programme in infection and immunity, which aims to raise the profile of science and support young Ugandan scientists to develop international research careers. This is led by Alison Elliott and Stephen Cose, with Makerere and Cambridge Universities. Activities include open days for schools, undergraduate internships, and a Masters, PhD and post-doctoral fellowship scheme, as well as a new short course in immunology in the tropics, and a series of seminars presented by visiting scientists.

Tropical Epidemiology Group fellowships

The [Tropical Epidemiology Group](#) has a 40 year history supporting African institutions, and has since 2005 run a unique fellowship scheme which enables statisticians from Africa to study for the MSc in Medical Statistics at the School, followed by a placement year at an African partner research institution. Eight Fellows have completed the training, and have gone on to further research training and careers as medical statisticians in Africa.

THRIVE partnership

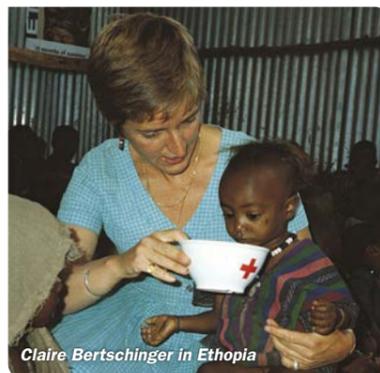
The School works with a range of African institutions as part of Wellcome Trust initiatives to support research across the region. [The Training Health Researchers into Vocational Excellence in East Africa](#) (THRIVE) partnership aims to strengthen institutional research capacity in the region, and to support the next generation of East African researchers to become international scientific leaders. It is co-ordinated by Nelson Sewankambo, Principal of the Makerere University College of Health Sciences in Uganda, with partners Kilimanjaro Christian Medical College, Gulu University, National University of Rwanda, Mwanza Intervention Trials Unit, the Uganda Virus Research Institute, and the International Centre of Insect Physiology and Ecology in Kenya.

[The Southern African Centre for Infectious Disease Surveillance](#) is a consortium of southern African medical and veterinary, academic and research institutions involved with infectious diseases of humans and animals. Led by Mark Rweyemamu based at Sokoine University in Tanzania, it runs projects including one on tuberculosis at Muhimbili University, Dar es Salaam.

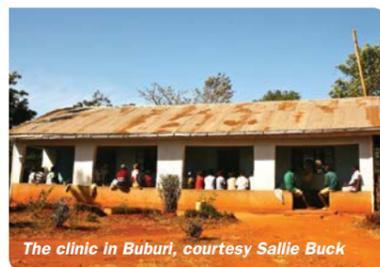
Focus: Diploma in Tropical Nursing

The School's Diploma in Tropical Nursing has over recent years proven an outstanding success in preparing nurses to work in low-income settings and make significant contributions to world health. It has now grown to 130 students a year, the vast majority of whom are self-funded, travelling from their workplaces across the UK and beyond to study one day a week at the School. We are now working on a new scholarship scheme to enable top graduates to go on to Master's programmes.

Claire Bertschinger, Course Director for the Diploma in Tropical Nursing, has worked with the International Committee of the Red Cross in over a dozen countries including Kenya, Sudan, Uganda and Ethiopia. During the 1984 famine, she appeared in the BBC news report that inspired Bob Geldof to launch Band Aid and Live Aid, and has since won honours including the Florence Nightingale Medal, Human Rights in Nursing Award, and Dame Commander for services to Nursing and to International Humanitarian Aid.



Claire Bertschinger in Ethiopia



The clinic in Buburi, courtesy Sallie Buck

Alumni Sallie Buck, Noreen Collins and Joanna Hanks set up a charity which supports a small community clinic in Buburi in rural Western Kenya. The group pays the salaries of 10 local people and buys all the drugs and testing equipment. The clinic treats more than 10,000 patients every year, and also provides maternity services and a small in-house laboratory.

When I previously worked in Uganda, I was shocked by the impact of malaria in pregnancy and high rates of HIV. The Diploma course enabled us to think outside the box, work in difficult conditions and be prepared for emergencies. In Somalia, midwives have to deal with everything from counselling rape victims to administering antivirals. The group I worked with were amazing and I look forward to returning this year.

In 2012, Libin Ali Saleebaan, a midwife at King's College Hospital in London, went to Somalia to teach midwives in a maternity hospital, having completed her Diploma in Tropical Nursing at the School.



Sammy Ayalew Assefa works at the School as a post-doctoral malarial genome researcher. As a young student, he was the first recipient of a scholarship from the African Children's Educational Trust, which supports vulnerable Ethiopian children and has built ten schools with places for over 10,000 children. Claire Bertschinger is a long-term trustee.



Support our work

The London School of Hygiene & Tropical Medicine's work in East Africa is only possible thanks to the generous support of funders who share our commitment to improving health worldwide. Gifts from individuals and institutions make all the difference in making sure good ideas become good policy and practice. We hope you will join us in contributing to a healthy future for East Africa.

Children from Mulanda primary school, Tororo, Uganda, part of a Malaria Capacity Development Consortium PhD student project investigating the impact of intermittent preventive treatment on malaria morbidity and cognition among primary school children.

Photo by Helen Allwood, MCDC

For more information about supporting our work, please contact:

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