

# Annual Report 2018

LONDON  
SCHOOL *of*  
HYGIENE  
& TROPICAL  
MEDICINE



## From Our Partners



### Dr Natalia Kanem

United Nations Population Fund (UNFPA) Executive Director and LSHTM Honorary Fellow (2018)

UNFPA ensures sexual and reproductive health rights and choices, to deliver a world where every pregnancy is wanted, every childbirth is safe and every young person's potential is fulfilled. That vision had many victories as well as challenges in 2018. I am proud to be an Honorary Fellow at LSHTM, whose work closely mirrors our transformative goals. Its research agenda and convening power are contributing to a policy-relevant evidence base for gender and public health. This is vital work that helps us 'make the case to make a difference,' for example, to help end gender-based violence. LSHTM also attracts, inspires and nurtures future public health leaders through exceptional teaching. I've had the pleasure of discussing emerging reproductive health and human rights issues with brilliant students who are working on projects all over the world. These are remarkable individuals whose time at the School provides them with a foundation to go forth and improve global health for all!



### Dr Soumya Swaminathan

Deputy Director-General for Programmes at the World Health Organization

In 2018, I was honoured to be invited to give the keynote address at the second annual Women Leaders in Global Health Conference, hosted by LSHTM. I am passionate about advancing women in our field, and the conference was an important opportunity to join participants from around the world to discuss current barriers and how we can address them. A key focus of our work at WHO is to ensure that everything we do translates into real health impacts that benefit populations around the globe, and gender plays a critical role. Generating data to measure the equity of health programmes is key. By conducting leading research that helps inform and shape future programmes, LSHTM is helping to ensure no-one is left behind.



### Mahima Datla

Managing Director of Biological E Limited, Hyderabad, India

Vaccines are the most cost effective health interventions we have, and despite great achievements in the past year, we are far from reaching the point where vaccines are both accessible to and accepted by all those who need them. Partnerships between the private and public sector are vital in this area and are helping drive innovation to address current challenges and ensure wider coverage than ever before. LSHTM is conducting crucial work on all aspects of vaccine research, from development and testing, to roll-out, evaluation and sentiment tracking. In 2019 I am looking forward to meeting LSHTM's talented staff and student community when I deliver its annual Women in Health Lecture, highlighting the important contributions of women in the scientific community and the work taking place to improve global health.

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## Foreword From The Chairman Of Council

The past year brought new challenges for us and for almost all universities in the UK, while in contrast, we were joyfully merging with the Medical Research Council Units in The Gambia and Uganda. So, when 2018 was over, it turned out to have been a successful year, and it helped make us ready for a stronger 2019... which will be LSHTM's 120th anniversary.

After more than a century, we might have reason to hope that research and technology might be bringing immediate progress in the field of public health. But as we know from our own history, leaps forward in science do not translate easily into improvements in social well-being. Translating advances into benefits for communities requires training, public education, administrative support, goodwill and courage.

While we seek strategies and therapies for age-old maladies, we are also combating climate change and hoping for an end to such conflicts as Yemen's three years of civil war, where international proxy battles have left 8 million people facing famine. Our School is built on science and research, but it does not confine itself to situations in life that are fungal, viral, or bacterial; we have to prepare for man-made assaults on human life, too.

### Our ambition for our School in 2019

#### For the students

Our aim is that the students at LSHTM will both absorb skills and construct big ideas so that they can teach and implement their expertise ever more widely. We want to send the best-prepared people with the best-developed solutions out into the world to innovate and engage at every level.

#### For our School's environment

We've been wary of using what capital we have to restore our buildings and laboratories, but we can no longer manage with old equipment and small alcoves for research. So we are planning to invest £50million over the next five years (which we must raise) in the development and refurbishment of our estate.

This year saw the completion of the first phase of re-development of our Keppel Street building. We are grateful to the visionary donors who supported the newly completed second and third floor laboratories. These are now home to research groups who are translating original research findings into new solutions for infectious diseases.

Beyond our home base, we are developing a new facility at our Tavistock Place site. This addition to our estate will consolidate the Faculty of Epidemiology and Population Health into a four-story facility of 2,350 square metres.

### For ways to help

We are beginning to find the support that might help us achieve our goals for LSHTM. Our own alumni were incredibly generous in the last year, giving over £900,000; and we are also seeking support from charitable foundations, corporations and individuals. As we raise new funds, we must also diversify our support base, attracting an increasing number and variety of donors to support our other priorities of ground-breaking research and scholarships to allow the brightest minds to join us.

We look forward to this year. If you are working or studying in our School, I hope you will take time to see what Council is doing – just as we would like to grow closer to students and faculty alike. Much remains unpredictable, but we can all surely promise to do our part in addressing some of the world's greatest health challenges.



**Dame Marjorie Scardino**  
Chairman of Council

### Membership of Council – our governing body – as at January 2019

Chairman: Dame Marjorie Scardino, DBE FRSA  
Deputy Chairman: Mr John O'Donnell, BA LLB LLM

Director: Professor Baron Peter Piot, KCMG, FRCP, FMedSci (ex officio)

External members: Dr Precious Lunga PhD; Ms Ann Grant, BA MSc; Mr Paul Klingenstein; Mr Jonathan Roper, MA (Cantab); Ms Diana Layfield, BA MPA; Dame Una O'Brien DCB

Chairman of the Court, Dr Annalisa Jenkins, MBBS, FRCP (ex officio)

Elected staff members: Professor Alison Grant, MBBS MSc PhD DTM&H; Professor Richard White, MSc, PhD; Professor Nicholas Mays, MA FFPH; Ms Gemma Donaldson, MA (Cantab)

Chair of the Students' Representative Council: Anubhav Nangia, BSc (ex officio)

Secretary to the Council: Mrs Lucinda Parr, BMus MMus (ex officio)

In attendance: Deputy Director and Provost, Professor Anne Mills, DCMG CBE MA DHSA PhD FMedSci FRS (ex officio); Chief Operating Officer, Dr Matt Lee, PhD (ex officio)

## Introduction From The Director

2018 was a pivotal year for our School. On the 1st of February, the MRC Units in The Gambia and in Uganda joined LSHTM, transforming our School into a truly global institution. By working even more closely together with these leading African Units, we can enhance scientific collaboration and career opportunities across all three institutions, and ultimately make an even greater impact on improving health worldwide.

Our excellence in research continues to be the defining pillar of our work around the world and new awards in 2017/2018 were our highest ever, at over £180 million. Our continued success in increasing our research funding, combined with the joining of the two MRC Units and for the first time receiving nearly £5 million in philanthropic gifts, has meant that our total income has reached well over £200 million – doubling in the past eight years. We greatly appreciate the hard and excellent work of our scientists and professional services staff, and the support of our philanthropic donors, whose generous gifts ensure that we continue to make important contributions to public and global health.

We have also seen great achievements this year in education at our School. Our new Doctoral College was launched as a cross-faculty focal point for doctoral training and early career researcher development. Through this initiative and others, we will continue to build a stronger doctoral community across LSHTM and continue to strengthen our provision of Distance Learning programmes to ensure that we are staying ahead of the curve on education for the years to come.



Peter Piot and Natalia Kanem at a UNFPA round table meeting at LSHTM in October 2018.

In November, we were greatly honoured to host the 2018 Women Leaders in Global Health Conference at our School, and with incredible success. Welcoming more than 900 participants from more than 70 countries, the conference shone a light on inspiring women leaders in global health from local communities to global organisations. A strong social justice imperative is at the heart of our work at LSHTM and through our research, education, and engagement, together we can build on the momentum generated from this conference and work toward achieving meaningful change.

I would like to share my heartfelt thanks to our passionate and talented staff and student community, as well as our dedicated Council members, volunteers, and donors for their continued commitment and hard



*P. Piot*

**Professor Peter Piot**  
Director, LSHTM

work throughout 2018. 2019 marks the 120th anniversary of our School's opening on 2 October 1899 by Sir Patrick Manson. On this momentous anniversary year, and for the academic year of 2019/20, I look forward to celebrating together 120 years of health innovation at our School – both past and present – and to developing new opportunities to stimulate future innovation across our global LSHTM community. By embracing innovation and entrepreneurship at LSHTM, we can create new possibilities to further our mission of improving health worldwide.

## From The MRC Unit Directors



**Professor Umberto D'Alessandro**  
Director of MRC Unit The Gambia at LSHTM

This year has been particularly successful as we have secured grants from a variety of sources to support the Unit's broad research portfolio. The Unit is currently implementing more than 80 different research projects, some of which are clinical trials of different sizes – from a few hundred to several tens of thousands of study subjects. Besides our three research themes of Disease Control and Elimination, Vaccines and Immunity, and Nutrition, the Unit works in two cross-cutting areas, namely Maternal & Neonatal Health, and West Africa. For the latter, we are increasingly working with our Senegalese partners and other West African countries, and we are planning to extend our activities in the region. In addition, the Unit continues to invest considerable efforts in training and capacity building, particularly on post-doctoral training. Such training activities may expand in the future thanks also to our integration with LSHTM on 1 February 2018.



**Professor Pontiano Kaleebu**  
Director of the MRC/UVRI and LSHTM Uganda Research Unit

The Unit's transfer to LSHTM was a major milestone that builds on our already strong relationship, with new opportunities for research and career development. In 2018, we held our first Scientific Advisory Committee meeting for the current MRC quinquennial funding – among the recommendations was the reorganisation into three themes: HIV & Emerging Infections; Vaccines & Immunity; and Chronic Diseases & Cancer. These themes, each with overarching research questions, guide the programmes, projects and sections to focus and create synergies in a multidisciplinary approach. This year we won more research funding including an MRC programme grant. New studies have been initiated on topics including gestational diabetes. We have generated important data contributing to knowledge, policy and practice. We strengthened our collaboration with TASO an AIDS NGO with more than 120,000 patients countrywide. Capacity building, career development and stakeholder engagement continue to be an important mission for the Unit.

A field worker at the Kyamulibwa field station measures the height of a young girl who is enrolled in the MRC/UVRI & LSHTM Uganda Research Unit general population cohort.



## Research

Researchers at LSHTM are exploring all aspects of health challenges, with expertise from fundamental laboratory science through to policy appraisal and analysis, encompassing statistical, clinical, laboratory, epidemiological and social science research in the UK and globally. As our research grant income grows (with new awards rising to over £180m in 2017/18), we continue to work closely with partners, funders and all those involved with – or who could benefit from – our research to maximise the real world impact of our specialist skills and knowledge. In 2018, LSHTM was ranked first in Europe and 8th internationally for research impact in sciences in the CWTS Leiden Ranking based on its proportion of publications that belong to the top 1% most frequently cited publications. Over 20% of the scientific articles published by LSHTM (2013-2016) were in the top 10% of the most influential publications.

Here we highlight some key research from our two units in Africa – the MRC Unit The Gambia at LSHTM and the MRC/UVRI and LSHTM Uganda Research Unit, and three faculties – the Faculty of Epidemiology and Population Health, which brings methodological excellence such as statistical analysis, field and clinical trials to improve



Discovery



Development  
& Evaluation



Delivery  
& Evaluation



Policy Appraisal  
& Analysis

the health of populations worldwide; the Faculty of Infectious and Tropical Diseases, which encompasses laboratory-based research and clinical and epidemiological aspects of infectious disease; and the Faculty of Public Health and Policy, which concentrates on economic and social sciences with a focus on health policy, systems and services. In the last year we have seen the launch of our 13th multi-disciplinary centre, the Applied Genomics Centre, which will share knowledge and provide support to fulfil our School's potential as a global leader in genomics and public health. Our diverse and multidisciplinary research skills underpin our position as a leader in public and global health. These range from the molecular to the global, the theoretical to the applied, the analytical to the political. Our 2018 research highlights are grouped into areas in line with our 2017-22 strategy.



### Infectious disease

A study by Prof Mark Rowland, Dr Natacha Protopopoff and colleagues showed that 'resistance breaking' bed nets treated with a chemical that neutralises mosquitoes' ability to resist pyrethroid insecticide provided children with greater protection against malaria than standard long-lasting pyrethroid nets. The results, published in *The Lancet*, led to WHO revising its recommendations to include the **net treated with piperonyl butoxide (PBO LLIN)** as a new class of long lasting insecticidal net.

Another key innovation in malaria research came with the discovery that children infected with the **malaria parasite** produce distinctive skin smells making them more attractive to malaria mosquitoes than uninfected children. The study, led by Dr Ailie Robinson in Prof James Logan's group and published in *Proceedings of the National Academy of Sciences*, was the first to identify this **unique**

**chemical fingerprint**, opening up the possibility of developing a system to lure mosquitoes away from human populations, or diagnosing the disease.

Sticking with the senses, Prof Val Curtis analysed the role of disgust in helping people avoid disease and infection in research published in the *Philosophical Transactions of the Royal Society*. The study used the perspective of disease to identify **six common categories triggering disgust** which could help to target public health messaging, for example to encourage handwashing with soap or to counter stigma associated with sickness.

Dr Adam Kucharski helped design a BBC experiment which simulated the spread of a highly infectious disease, generating a 'dream' dataset for researchers. *Contagion! The BBC Four Pandemic* used smartphone data

to reveal how nearly 30,000 people moved about in the UK and interacted with others. This information is vital to **prepare for potential global outbreaks** such as flu pandemics, as outlined by Dr Petra Klepac in a paper published in the journal *Epidemics*.

In a *PLOS Pathogens* study, Dr Lisa Dawson and colleagues unravelled the **genetic code of C. difficile in the lab**, and discovered it produces a unique compound called *para-cresol* which prevents other bacteria growing, allowing it to gain a competitive foothold during infection. This understanding of how *C. difficile* behaves provides unique opportunities to design specific antibiotics against this hospital superbug.

Research by Rachel Kawuma and colleagues in the **REALITY (Reduction of EARly mortality in HIV infected adults and children starting antiretroviral therapy)** trial into delays in accessing care, found people in Uganda and Zimbabwe did not go for HIV testing or treatment because they felt they were not sick or that "treatment was not yet necessary".

Taking a broad look at the issues, Prof Peter Piot joined other experts in a *Lancet Commission* report to warn the response to the HIV/AIDS epidemic is at risk of 'dangerous complacency' and to reiterate the need for an **urgent change in approach**.

The **UK Public Health Rapid Support Team**, funded by the UK Government and jointly run by LSHTM and Public Health England, was deployed to three countries in 2018 to tackle disease outbreaks which had the potential to develop into major health emergencies. These were Nigeria (Lassa fever), Bangladesh (twice for infectious disease outbreaks in the Rohingya refugee camps), and the Democratic Republic of Congo (Ebola, two deployments).



Newly built labs in Keppel Street before staff moved in.



### Chronic conditions and diseases

Results from the **CONCORD-3** study, led by the Cancer Survival Group at LSHTM, were published in *The Lancet*. The largest and most up-to-date study of population-based cancer survival trends, covering countries that are home to more than two-thirds of the world's population, found that although cancer survival has generally increased, survival trends vary widely.

In another large-scale data study (3.6 million people and 367,512 deaths were included in the analysis), Prof Krishnan Bhaskaran and colleagues found that **Body Mass Index (BMI) was linked to risk of death** from every major cause except

transport accidents. The research was published in *The Lancet Diabetes and Endocrinology* and the team hopes the findings from this study will increase understanding of how underweight and excess weight might directly affect different aspects of health, or indicate underlying health problems.

A Ugandan birth cohort analysis by Swaib Lule, Emily Webb and colleagues, published in the *International Journal of Epidemiology*, measured **blood pressure** in early adolescence in around 1,200 adolescents followed from birth. The study found that postnatal

weight gain rather than birth weight is important in the developmental programming of blood pressure, with fast-growing low birth weight children at particular risk. The authors propose that efforts to control blood pressure should adopt a life course approach rather than focusing specifically on adults or on the prenatal period.

Meanwhile in a *BMJ*-published study of the health records of almost 2 million people in the UK, Prof Sinead Langan and colleagues found that adults with **severe eczema** could face an increased risk of experiencing non-fatal cardiovascular disease.



## Health systems and economics

Health economists Prof Richard Smith and Dr Laura Cornelsen published a new analysis in *BMJ Open*, which estimated that taxing sweet snacks could lead to greater reductions in the amount of sugar purchased than similar increases in the price of sugar-sweetened beverages. They called on policymakers and researchers to consider a broader range of fiscal measures to improve diet.

Bowel cancer patients living in the most deprived areas have up to 13% higher proportions of **emergency hospital admissions** before a diagnosis than patients living in the least deprived areas, according to new research published in the *British Journal of Cancer*. The study, led by Dr Francisco Rubio, analysed hospital admissions data for around 65,000 patients diagnosed with bowel cancer between 2011 and 2013. The findings could help to target campaigns and policies toward the most vulnerable groups.

Dr Rosa Legood and colleagues found that screening all British women over 30 years of age for **breast and ovarian cancer gene mutations**, as opposed to just those at high-risk of carrying this mutation, is cost effective and could prevent more ovarian and breast cancers than the current clinical approach. The research was published in the *Journal of the National Cancer Institute*.



Above: Dr Laura Cornelsen conducts research on food choices and sugar tax at LSHTM. Credit: Christian Sinibaldi.

Right: Geoffrey Odoch, a lab technician at the MRC/UVRI & LSHTM Uganda Research Unit removes frozen samples from storage in liquid nitrogen.



Dr Mustapha Bittaye, trial obstetrician and Mr Buba Jadama, trial midwife, undertaking a gestational ultrasound scan as part of the PROtecting from Pneumococcus in Early Life (PROPEL) study at MRC Unit The Gambia at LSHTM.



## Environment, climate change and health

Heatwave deaths are likely to rise considerably by 2080 without appropriate **climate and health policies**, according to a study published in *PLOS Medicine* and co-authored by Dr Antonio Gasparrini. It warned that deaths caused by heatwaves could increase dramatically in tropical and subtropical regions, followed by Australia, Europe and the United States, if strategies to reduce greenhouse emissions and heat-related risks are not implemented.

Another result of environmental changes could be the significant **reduction of global production of vegetables and legumes**, according to research by Dr Pauline Scheelbeek and colleagues published in the *Proceedings of the National Academy of Sciences*. If no action is taken to reduce negative impacts on agricultural yields, the researchers estimate that the environmental changes predicted to occur by mid-to end-century in water availability and ozone concentrations would reduce average yields of vegetables and legumes by 35% and 9% respectively.

Improved housing with access to piped water may be crucial in **eliminating malnutrition and stunting in children**, according to research published in *BMC Medicine*. The findings, stemming from a unique study examining the health trajectories of the children of staff working in The Gambia, suggest that better housing with piped water into the home, and keeping animals away from the domestic space, are the pivotal factors that would lead to improving childhood growth.



## Other research highlights

The **conflict in South Sudan** is likely to have led to nearly 400,000 excess deaths in the country's population since it began in 2013, with around half of the lives lost estimated to be through violence, according to a new report by Prof Francesco Checchi and colleagues. The authors said the findings indicated that the humanitarian response in South Sudan must be strengthened, and that all parties should seek urgent conflict resolution.

Restorative practice – bringing together pupils involved in bullying, conflict or misbehaviour to appreciate the harms caused and improve relationships – could **help tackle**

**bullying**, improve mental health and lower rates of regular smoking and drinking alcohol in secondary school, according to research published in *The Lancet*. Prof Chris Bonell and colleagues carried out a randomised controlled trial to test a new approach called the 'Learning Together' programme.

Fresh analysis using data from the **National Surveys of Sexual Attitudes and Lifestyles (Natsal)** revealed changes in young people's sexual practices over the last 20 years. Increased understanding of sexual trends could help guide education policy and safeguard young people's health and well-being, according to

the study published in the *Journal of Adolescent Health*.

Young people have a crucial role in many public health issues and this was brought into the spotlight with the publication of a policy paper by LSHTM and the charity Sentebele arguing that **young people in sub-Saharan Africa are integral to future HIV/AIDS policy**. Commenting at the launch, Prof Piot said: "To end HIV/AIDS it's crucial we start engaging with young people in sub-Saharan Africa who are affected – interventions to improve their lives needn't be complex and costly, just sustainable, targeted and developed closely with them."

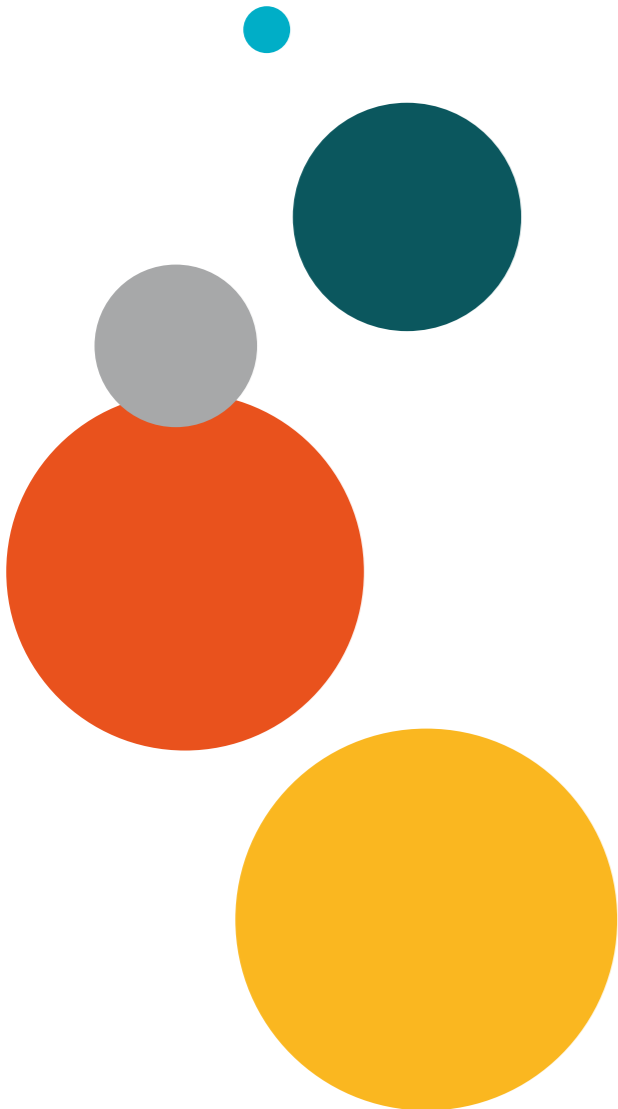
# Our year in numbers

## New research grants

Total value of new research grants awarded 2017/18: £ 182.2m

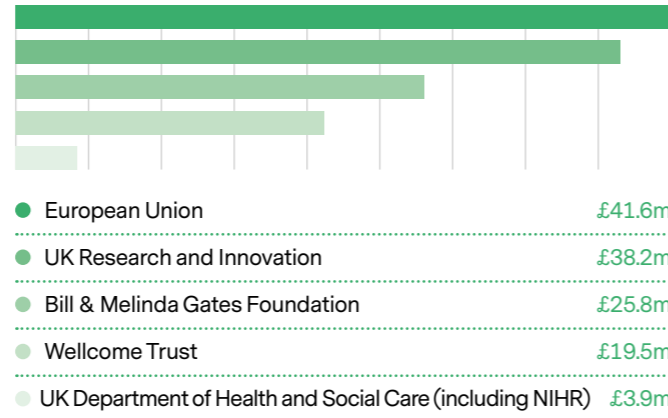
London £144.9m | The Gambia £20m | Uganda £17.3m

### Top five funders for all LSHTM 2017/18

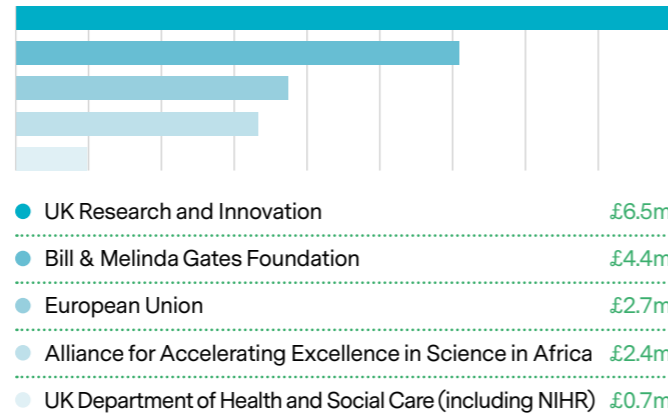


European Union	£50.5m
UK Research and Innovation	£47.3m
Bill & Melinda Gates Foundation	£30.2m
Wellcome Trust	£21.5m
UK Department of Health and Social Care (including NIHR)	£6.2m

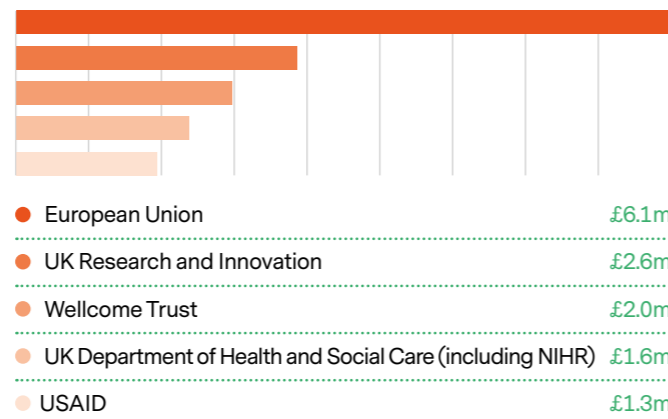
### Top five funders – London 2017/18



### Top five funders – The Gambia 2017/18



### Top five funders – Uganda 2017/18



## Financial summary

Total annual income 2017/18: £212m



Government Funded Research Grants	£80.5m
Charity Research Grants	£42.1m
Other Research Grants	£18.0m
Research England/Office for Students Core Research and Teaching Funding	£25.3m
Tuition Fees	£19.8m
Donations and Endowments	£6.7m
Other Income	£19.6m

Total annual income 2017/18:



Total annual expenditure 2017/18:



## Staff



### Staff by area of LSHTM:



<ul style="list-style-type: none"> <li>Faculty of Epidemiology &amp; Population Health: 322 academic staff</li> <li>Faculty of Infectious &amp; Tropical Diseases: 308 academic staff</li> </ul>	<ul style="list-style-type: none"> <li>Faculty of Public Health &amp; Policy: 262 academic staff</li> <li>LIDC &amp; Central Services: 11 academic staff</li> </ul>	<ul style="list-style-type: none"> <li>Professional services staff across LSHTM (non-Unit): 595 staff</li> </ul>	<ul style="list-style-type: none"> <li>MRC Unit The Gambia at LSHTM: 878 scientific staff; 110 non-scientific staff</li> </ul>	<ul style="list-style-type: none"> <li>MRC/UVRI and LSHTM Uganda Research Unit: 349 scientific staff; 466 non-scientific staff</li> </ul>
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We have staff from **80** countries of origin

## Research Rankings

#4 in the world for the proportion of its publications that have been written by co-authors from two or more countries

77% of our outputs are produced with an international collaborator

64% of our outputs are produced with a collaborator situated >5000 km from London

Data from CWTS Leiden Ranking 2018 (All Sciences)

#1 in Europe and #8 internationally for research impact on sciences based on proportion of publications that belong to the top 10% most frequently cited publications

1	Rockefeller University
2	MIT
3	Princeton University
4	Stanford University
5	Harvard University
6	University of California – Berkeley
7	Caltech
8	London School of Hygiene & Tropical Medicine
9	Weizmann Institute of Science
10	University of California – San Francisco

## Education

1,210

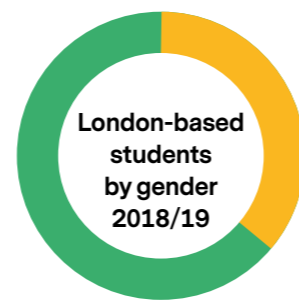
London-based students 2018/19 (768 Master's and 442 doctoral)

3,337

Distance learning students 2018/19

941

Professional development course participants for 2017/18



### Students by region

Region	Doctoral	MSc (London-based)	Distance learning
Africa	63	103	480
Central and Eastern Asia, Middle East	28	37	256
UK	170	306	737
Europe (non-UK)	72	118	640
North and Central America (inc. Caribbean)	75	125	786
South America	6	10	47
South Asia	13	33	115
South East Asia & Oceania	13	29	275
Not provided	2	7	1

Almost 30,000

alumni in 180+ countries

28


international alumni chapters

46

alumni chapter events across 21 countries throughout 2018

# School Centres


Cross-Faculty networks of academics, collaborating and innovating to address global health challenges.



**Providing the authoritative academic voice on malaria.**

The Centre celebrated its 20th anniversary in 2018. We provided expert evidence on vector control and drug resistance for the 2018 All-Party Parliamentary Group report on Malaria and Neglected Tropical Diseases, and Centre members advanced research on vector control, seasonal malaria chemoprevention and parasite genetic variation.


[@LSHTM\\_malaria](#)



**Inspiring innovation in AMR research through interdisciplinary and international engagements.**

Centre members are working in 22 countries on the drivers of AMR and potential solutions. We've been involved in global processes for addressing AMR across animal, human and environmental sectors.


[@LSHTM\\_AMR](#)



**Improving understanding and responses to chronic conditions.**

We launched the Sub-Saharan Africa Chronic Conditions Research Network, and co-hosted a symposium on fixed-dose combination pills for cardiovascular disease and hypertension, with the George Institute for Global Health and Médecins Sans Frontières.


[@LSHTM\\_CGCC](#)



**Placing mental health on the global agenda.**

The Mental Health Innovation Network – which we operate jointly with WHO – continues to grow and now provides 5,000 members with the largest knowledge management platform in the field of global mental health, alongside two regional networks in LMICs.


[@GMentalHealth](#)



**Improving global health practice through evaluation.**

Centre work was presented at the International AIDS conference this year. We play a central role in CEDIL, a £3m 5-year grant from DfID which aims to contribute to the attainment of the Sustainable Development Goals.


[@LSHTMEvaluation](#)



**Improving health worldwide for women, children and adolescents.**

200+ MARCH Centre members worked on more than 145 studies in over 100 countries in 2018. More than 260 papers were published on MARCH topics, many with media coverage, policy linkage, and student-led blog posts.


[@MARCH\\_LSHTM](#)



**Gathering statistical and methodological expertise to strengthen research capacity in epidemiology, public health, and policy.**

We have been supporting the advancement of early career researchers, providing them with a platform to present their work and get feedback from prominent academics. Our monthly seminar series has fostered internal collaboration and welcomed external experts.


[@LSHTMstatmethod](#)



**Boosting big data expertise and applying genomic technologies across LSHTM.**

We launched in 2018 to consolidate work across LSHTM on applied genomics.


[tagc.lshtm.ac.uk](#)



**Research and advocacy to end TB.**

The Centre was one of the few UK organisations to participate in the first UN General Assembly on TB. We jointly formed a platform for ongoing advocacy and coordination among UK TB organisations, and we held 20+ events that raised awareness of world-leading research and technology innovations in TB.

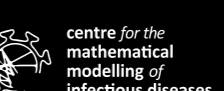
[@LSHTM\\_TB](#)



**Improving the health of populations affected by humanitarian crises.**

We advised the Public Health Minister of Afghanistan on the development of a basic package of health services, ran a new short course on health system assessment in humanitarian crises, and worked on the new multi-country RECAP programme on decision making in humanitarian crises.


[@LSHTM\\_Crises](#)



**Modelling infectious disease dynamics to improve global health.**

We sponsored four international workshops and set up a PhD forum to train the next generation of mathematical modellers. We established eight research themes for our work: real-time outbreak analysis; evolutionary dynamics; TB; computation & inference; elimination and eradication; vaccination; vector-borne diseases; health economics.

[@cmmid\\_lshtm](#)



**Bringing vaccine research together.**

Prof Beate Kampmann became the new Centre Director in 2018 and established three themes which the Centre will work around: innovation, application and evaluation. We also enhanced our presence in LSHTM's MRC Units.

[@LSHTM\\_Vaccines](#)

## Staff Community

Our talented and diverse staff community doubled in size in 2018 when the MRC Units joined LSHTM. Now a **truly global institution** with over 3,000 staff, our School has more people based outside of the UK than within it for the first time. The global nature of our institution comes with many opportunities to increase our impact on health worldwide, and makes LSHTM unique in the public and global health field.

As our staff community has grown, we have continued our commitment to fostering an **inclusive environment**. This year we saw the renewal of our Athena SWAN Charter to bronze at institutional level, and silver in the Faculty of Public Health & Policy. Since the previous Athena SWAN review in 2013, we saw an increase in female Associate Professors from 46% to 58%, and women in the entry band of Professors from 37% to 47%, demonstrating that our pipeline for female staff is strong. Our commitment to the advancement of **gender equality** was further strengthened when we hosted the Women Leaders in Global Health conference in November. We also proudly welcomed Professor Polly Roy, Professor of Virology, as our 2018 Women in Health lecture speaker – the first time a LSHTM staff member had held this honour.

We launched our LSHTM Voices series during Black History Month, providing a space for regular discussions on equality, diversity and inclusion, beginning with a look at **race and ethnicity** within our School.

Our annual LSHTM Week was once more a success with hundreds of staff joining sessions in London and online to share ideas and strengthen skills. The week included the inaugural **LSHTM Director's Awards**, recognising the exceptional work that takes place across LSHTM.

### 🏆 2018 LSHTM Director's Award winners

**Outstanding academic contribution** – Basia Zaba, Professor of Medical Demography (posthumous honour)

**Outstanding academic team** – Emergency and Epidemic Data Kit Team

**Early career academic** – Claire Thompson, Assistant Professor

**Outstanding professional services contribution** – Alex Anderson, Strategic Research Officer, and Ousubie Jawla, Field Supervisor for the MDEG2 Supplementation Trial (joint winners)

**Outstanding professional services team** – Estates Maintenance Team

**Early career professional services** – Lauren King, Project Management Office Governance Coordinator

**Public engagement** – Daisy Payling, Research Fellow, & Hannah J Elizabeth, Research Assistant

**Excellence & innovation for learning, teaching, assessment or the wider student experience** – Claire Rogers, Head of Teaching and Diagnostic Unit & Principal Biomedical Scientist, and the Public Health Distance Learning Team (joint winners)

**Excellence and innovation in developing students as researchers** – Assan Jaye, Head of Research Training & Career Development, and Anna Foss & Rebecca French, Associate Professors (joint winners)



Assan Jaye, Head of Research Training & Career Development



Honorary Fellows: Prof Janet Hemingway, Dr Matshidiso Moeti, Dr Natalia Kanem

### Notable awards and honours

- Joy Lawn and Nicholas Jewell elected to the National Academy of Medicine, USA
- John Edmunds and Liz Corbett elected as Fellows of the Academy of Medical Sciences
- Peter Piot awarded the Grand Cordon of the Order of the Rising Sun by the Japanese Government, the KU Leuven honorary medal, and elected to the German National Academy of Sciences, Leopoldina
- Dr Matshidiso Moeti (WHO Regional Director for Africa), Dr Natalia Kanem, (United Nations Under-Secretary-General and Executive Director of UNFPA, the United Nations Population Fund), and Professor Janet Hemingway, (former Director of Liverpool School of Tropical Medicine and Senior Technical Advisor on NTDs for the Bill & Melinda Gates Foundation) became LSHTM Honorary Fellows
- WOMAN trial awarded third place in the Horizon Birth Day Prize by the European Commission

LSHTM awarded the Queen's Anniversary Prize for Higher and Further Education in recognition of our response to the Ebola epidemic in West Africa in 2014/15

Andrew Bastawrous gave the keynote speech at the 2018 Commonwealth Service at Westminster Abbey



To mark Professor Sir Brian Greenwood's 80th birthday in 2018 and in recognition of his 50-year career carrying out research in Africa, we inaugurated the **Greenwood Africa Award**. Sir Brian's work has had an extensive impact on major infectious diseases including malaria, meningitis, pneumonia and Ebola, and he has long championed medical education and research in Africa, mentoring new generations of leaders. The Award recognises the research achievements and future potential of a mid-career African scientist in contributing to the control of infectious disease in sub-Saharan Africa, and will be awarded at our 2019 graduation ceremony.



**In memory of Basia Zaba**  
Our exceptional colleague Professor Basia Zaba died in July 2018. She leaves an enormous legacy, primarily through her work on demographic estimation and population-level HIV surveillance, and her mentorship and guidance of generations of demographers at LSHTM and overseas. Basia started her long association with our School in 1975 when she enrolled to study Medical Demography and then stayed on as a Research Fellow. She established the ALPHA network of population surveillance sites, became Professor of Medical Demography in June 2008, and Head of the Department of Population Health in August 2015.

### New Professorial Appointments

#### Faculty of Epidemiology & Population Health

- Krishnan Bhaskaran, Professor of Statistical Epidemiology
- Ian Douglas, Professor of Pharmacoepidemiology
- Sinead Langan, Professor of Clinical Epidemiology
- ◇ Nicholas Jewell, Chair of Biostatistics

- Internal appointment
- ◇ External appointment

#### Faculty of Public Health & Policy

- Clare Chandler, Professor of Medical Anthropology
- Lucy Platt, Professor of Public Health Epidemiology
- Cicely Marston, Professor of Public Health

- ◇ Sasha Shepperd, Professor of Health Services Research and Pro-Director (Learning, Teaching & Enhancement)
- ◇ Carl May, Professor of Medical Sociology
- ◇ Ellen Nolte, Professor of Health Services and Systems Research

#### Faculty of Infectious & Tropical Diseases

- Sian Clarke, Professor of Epidemiology
- Helen Fletcher, Professor of Immunology
- ◇ Pontiano Kaleebu, Professor of Immunovirology (MRC Unit transfer)
- ◇ Serge Mostowy, Professor of Cellular Microbiology

- ◇ Kathryn Holt, Professor of Microbial Systems Genomics
- ◇ Beate Kampmann, Professor of Paediatric Infection & Immunity
- ◇ Donald Bundy, Professor of Epidemiology and Development
- ◇ Thomas Shakespeare, Professor of Disability Research

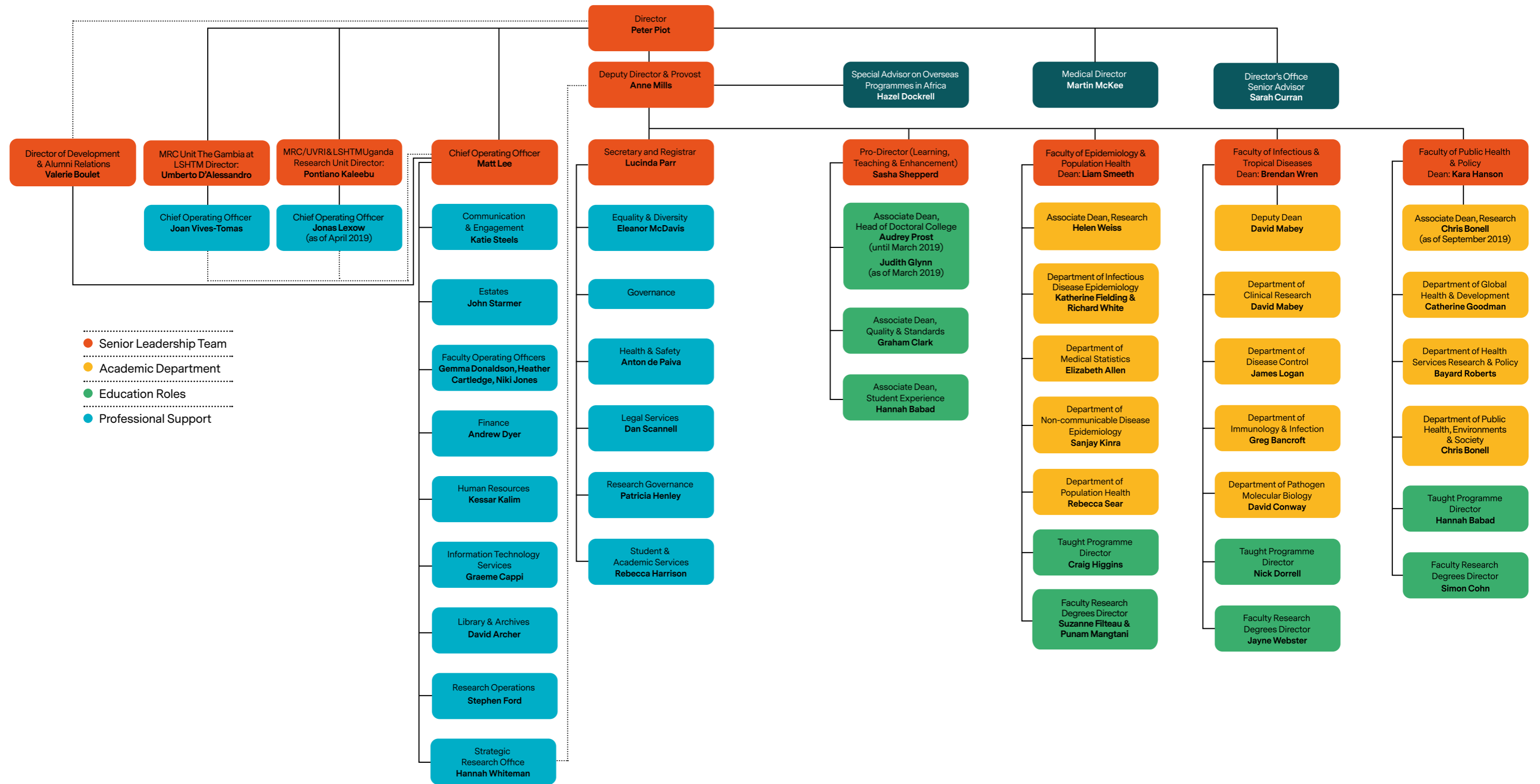
- ◇ Nicholas Paton, Professor of Infectious Diseases (joint appointment with National University of Singapore)

#### New appointments to strengthen mental health research

- Dixon Chibanda, Associate Professor of Global Mental Health
- Abhijit Nadkarni, Associate Professor of Global Mental Health



# Organisational Chart as of January 2019



## Education



Our students in 2018 on the steps of Keppel Street, London.

Makerere University in Uganda, and Johns Hopkins University and University of Washington in the USA.

In October, the first cohort of five students took up their places on our new **joint PhD programme for Global Health** with Nagasaki University and the programme was selected to receive scholarship funding from the Japanese government's Doctoral Program for World-leading Innovative & Smart Education. In October, we concluded an agreement which enables undergraduate students from **Peking's Institute for Medical Humanities** to apply for intercalated Master's study at LSHTM.

Our Executive Programme for Global Health Leadership successfully concluded its inaugural year with a week in Cape Town in June. The Programme, which was developed to address the crucial need for strong, dynamic and resilient leadership in global health, welcomed its second cohort of Fellows in September.

### 2018 rankings

**3rd in the world for public health; 40th in clinical medicine and 76th in human biology**

Shanghai Ranking 2018

**9th in the UK overall and 13th in world in the fields of social sciences and public health**

US News Best Global Universities Ranking 2019

**21st in the world for medicine**

QS World University Rankings 2018

Our new **Doctoral College** launched in November 2018, establishing a focal point for doctoral training and early career researcher development. It provides our vibrant community of doctoral students with enhanced support and opportunities for training, development and networking.

We continue to develop our programme of face-to-face and distance learning Master's. In 2018, 89% of the students attending an MSc in London, and 80% of the distance learning students, reported a high level of satisfaction with the Master's programmes (Postgraduate Taught Experience Survey results).

Our highly successful suite of **free online courses** continued to grow in 2018, and have been studied by more than 55,000 participants globally. Our latest courses included Global Health & Disability, Control & Elimination of Visceral Leishmaniasis (kala-azar), and Diabetic Eye Diseases: Strengthening Services. New courses are launching

in early 2019 on topics including antimicrobial resistance, vector control, outbreak response, and eye health.

Following the success of the Health in Humanitarian Crises free online course, a **new distance learning MSc programme** in Health in Humanitarian Crises was approved by the Senior Leadership Team for launch in October 2020. This new distance learning programme will respond to the need for accessible education for those facing the challenges of delivering healthcare in crisis settings, providing knowledge of public health within a humanitarian context.

There have been significant developments in educational collaboration. In April, we renewed our agreement for collaborative delivery of the **Professional Diploma in Tropical Medicine & Hygiene: East African Partnership**, a collaboration between LSHTM, Kilimanjaro Christian Medical University College in Tanzania,

## Partnerships

Working in partnership with others is central to achieving our mission. This year the transfer of the MRC Unit The Gambia and the MRC/UVRI Uganda Research Unit to LSHTM opened up opportunities for strengthening regional linkages, including through the **West Africa Global Health Alliance** which links MRC Gambia with Université Cheikh Anta Diop and Institut de Recherche en Santé, de Surveillance Epidémiologique et de Formation in Senegal.

We have strengthened coordination of our many and varied activities in Ethiopia, and in July we hosted a visit from the new Ethiopian Minister of Health, His Excellency Dr Amir Aman Hagos, to discuss ways of developing the relationship between

LSHTM and the **Ethiopian Federal Ministry of Health**.

In November, we celebrated the 10th anniversary of the **Mwanza Intervention Trials Unit** in Tanzania, which was jointly established by LSHTM and the Tanzanian National Institute for Medical Research, with a three day scientific symposium on adolescent health.

Our long-standing partnership with **Nagasaki University** in Japan was strengthened this year by the award of a Rutherford Fund Strategic Partner Grant, enabling five Nagasaki early career researchers to spend up to six months in London, developing their research and exploring collaboration.

We have also strengthened our partnership with the **National University of Singapore** and the **National University Health System** in Singapore by making two professorial level parallel appointments.

Our partnership with **Fiocruz** in Brazil has been stimulated through reciprocal leadership visits to explore ways of extending and deepening the existing relationship.

In Europe, we established a new partnership with the **Charité – Universitätsmedizin Berlin** in Germany to enhance collaboration and cooperation in global health.

## Innovation

At a time when change is rapid and transformational, we have drawn on our local, national and international networks to ensure that we are at the leading edge of innovations in data science, vaccines and tackling anti-microbial resistance.

We successfully collaborated on a bid for a Health Data Research (HDR) UK London Partnership and led a successful application for a prestigious **HDR UK Innovation Fellowship scheme**, equipping our researchers with the skills to capitalise on emerging opportunities in health informatics.

The power of open software and open hardware is leveraged by the **LSHTM Open Research Kit** project which implements sophisticated electronic data collection, monitoring and analysis systems.

We consolidated our knowledge exchange relationships with local institutions in Bloomsbury, and explored disruptive ideas to tackle

infectious diseases and antimicrobial resistance through a collaborative **Research England Connecting Capability Fund** grant led by the Royal Veterinary College.

Through strengthening our national networks, LSHTM successfully partnered with Imperial College London, the University of Oxford, Merck Sharp and Dohme, GE Healthcare and Janssen Vaccines & Prevention B.V. to develop the UK's first-ever dedicated **Vaccines Manufacturing Innovation Centre**.

Our spinouts have continued to transform our ideas and specialist knowledge into innovative products and services. **Peek Vision's** school eye health screening programme in Kenya was the overall winner of the 2018 All African Public Service Innovation Awards.

**ARCTEC**, a world-leading testing centre for consultancy and vector control products based at LSHTM, continues to successfully bridge the

gap between industry and academia. ARCTEC spans the translational pipeline from laboratory development to full field evaluation of arthropod control products, and has a key role in the Global Vector Hub, a novel open access platform for sharing and disseminating data and information on vectors.

The innovative bacterial glycoengineering platform pioneered by our emerging spinout **ArcVax** has continued to strengthen its ability to produce low cost new vaccine combinations.

To nurture a culture of innovation, we have formed a new **LSHTM Innovation Committee**, and worked closely with Wellcome to develop an Institutional Translation Partnership Award. As we enter 2019, and celebrate the past 120 years of health innovation, LSHTM researchers will build on these initiatives and continue to be agile contributors to the global innovation ecosystem.

## Engagement



LSHTM is a world-leading centre for debate on health, and our engagement with policy and practice communities, as well as the public, is a core part of our work.

On 8-9 November, we hosted the **Women Leaders in Global Health** conference, with more than 900 participants of 80+ nationalities and coming from 70+ countries of residence. Globally, women occupy less than 25% of influential leadership positions despite making up 75% of the healthcare workforce. Led by Professor Heidi Larson, the conference set to address that imbalance by highlighting emerging and established women leaders in global health, putting a cultural and gender lens on leadership and health issues, and providing training opportunities and mentorship. Keynote speaker Dr Soumya Swaminathan, Deputy Director-General for Programmes at the World Health Organization, called for a focus on the drivers that lead to gender inequity.

Some of the key areas identified for action included mentorship, equity in funding opportunities and peer review panels, and equal presence on conference panels.

At least 17 speakers and delegates from low-and middle-income countries in Africa and Asia were **denied visas to enter the United Kingdom** to attend the conference. LSHTM Director Peter Piot wrote to the UK Home Secretary Sajid Javid MP to express grave concern about the current visa application process for international academics and scholars to visit the UK for academic conferences.

At another major conference, AIDS 2018, held in Amsterdam in July, Peter Piot joined **HRH The Duke of Sussex** for a round table session on tackling the structural drivers of HIV. Working with charity Sentebale, the session set out to advance the ambition that youth in Lesotho and Botswana encourage their peers to know and manage their HIV status, and drive positive

change in HIV interventions that better support the needs of this age group in their region. Many other LSHTM experts attended the conference to present research and run sessions.

LSHTM was invited to attend the first-ever **United Nations high-level meeting on TB** in September. Bringing together heads of state and ministers, health professionals and academics, the event in New York demonstrated firm commitment to end TB and the need for stronger global efforts and investment.

In 2018, Peter Piot chaired six meetings of the Strategic Coherence of ODA-funded Research (SCOR) Board. The SCOR Board, which comprises representatives from UK government departments and research funders, provides high-level strategic coordination for the UK's ODA-funded research with the aim of maximising its impact and putting the UK in a leadership role in the international development community.

In July, the **UK National Health Service (NHS)** celebrated its 70th anniversary. LSHTM has been publishing research on the NHS for over 60 years – from work to improve patient health outcomes to research that has helped shape and influence NHS policy and service delivery. As part of an LSHTM communications campaign to mark the anniversary, our experts led discussion at public events and in the media, published thought leadership pieces, and reflected on what the NHS looks like at 70, how it needs to evolve, and with what potential reforms.

LSHTM research has continued to influence policy in 2018. Significant contributions included the **State of Vaccine Confidence in the EU** 2018 report in October, led by

Prof Heidi Larson, which found vaccine confidence was improving in some EU countries but decreasing in others. The Vaccine Confidence Index<sup>(TM)</sup> developed by the Project was also used to measure a dramatic drop in vaccine confidence in the Philippines, evidence which was used to advocate for investment in strengthening public trust in the immunisation programme.

In October, the **UK Minister for Africa**, Harriett Baldwin, visited the MRC/UVRI and LSHTM Research Unit. The Minister hailed the historical and strong collaboration between the UK and Ugandan governments, and announced new funding for Ebola preparedness and prevention efforts in Uganda.

In November, Professor Deborah Watson-Jones presented some of the EBOVAC1 Ebola vaccine project's achievements at a **high-level conference co-hosted by the European Parliament and the European Commission**. EBOVAC1 was one of only 20 projects chosen to showcase the best of European research and innovation.

Also that month, **HRH Prince of Wales** visited the MRC Unit The Gambia at LSHTM as part of his tour to celebrate the country's return into the Commonwealth. The Prince of Wales visited entomology laboratories to hear about work on malaria infection, saw the biobank of human and pathogen biological materials that are used for research on disease prevention, diagnosis and treatment, and visited molecular diagnostic facilities.



His Royal Highness Prince of Wales and MRC Unit The Gambia at LSHTM Director Professor Umberto D'Alessandro.

Our research and expertise generated **widespread media coverage around the world**, with more than 20,000 pieces about LSHTM in 2018. Interviews on BBC's flagship Today, World Service Newsday and Health Check programmes, two front page Times stories, and regular coverage across outlets including BBC World, Reuters, CNN, Times of India, and Washington Post, have highlighted global health issues, conveyed important health messages to the public and informed policymakers.

Our @LSHTM Twitter account gained nearly 9,000 followers in 2018 and our **social media reach** across the main LSHTM Twitter, Facebook, Instagram and LinkedIn channels now exceeds 90,000 followers. LSHTM experts have used their own social media presence to effectively engage with the public, research and policy communities. Professor Martin McKee is one of our most engaged users and his tweets have been quoted widely in health stories in the media.

Our **public engagement** continued to create dialogue between LSHTM researchers and members of the public in the UK and worldwide on a range of topics including antimicrobial resistance, big data and food choices. Our public engagement small grants scheme, now in its fourth year, funded 13 innovative projects in the UK, Uganda, The Gambia, and India. We received a second year of strategic funding from **UK Research & Innovation** for embedding public engagement within research at LSHTM, and staff were awarded over £80,000 for public engagement.

Our award-winning Young Scientists programme welcomed 22 students (aged 14-18) from nine schools across London to LSHTM in 2018, giving them the opportunity to see and experience first-hand how biomedical research is conducted. Staff in Uganda welcomed more than 900 students from 24 schools to an open day involving interaction with their research and researchers, and staff in The Gambia worked with 17 schools to promote girls and women in science.

Young Scientist 2018 participant in our teaching laboratory.



## Thank you

We would like to thank all those who supported LSHTM in the last financial year (1 August 2017 – 31 July 2018). Our supporters helped to fund capital improvements, scholarships and research.

Members of our giving societies along with our most generous corporate, foundation and governmental grantees are listed below. Donors to the First 500 make annual gifts of between £500 and £9,999, while members of the Director's Circle make gifts of £10,000 or more.

Special thanks goes to board members of the American and Canadian Friends of LSHTM who raise money to support our School.

### Corporation, foundation and governmental funders (£1M+)

Biotechnology and Biological Sciences Research Council  
Bill & Melinda Gates Foundation  
European Commission  
European and Developing Countries Clinical Trials Partnership  
Economic & Social Research Council  
European Research Council Executive Agency  
Family Health International 360  
GlaxoSmithKline  
Innovative Medicines Initiative  
Medical Research Council  
Norwegian Institute of Public Health  
Population Services International  
UK Department of Health & Social Care (including National Institute for Health Research)  
Wellcome Trust

### Corporation, foundation and governmental funders (£100,000 - £999,999)

3ie  
Aeras  
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And one additional donor

### First 500

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Lester Mascarenhas	
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“  
Social media gives us an opportunity to communicate our work directly to a vast audience. I can't see the point of doing research if we simply publish our findings in journals read by people like ourselves, and I certainly learn a huge amount by following a range of people on Twitter.  
”

Professor Martin McKee,  
LSHTM Medical Director



61,000+ followers  
of @LSHTM on Twitter,  
Facebook and Instagram



31,500+ followers  
on LinkedIn



20,000+ pieces of global  
media coverage about  
LSHTM in 2018

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