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All-Party Parliamentary Group on
Malaria and Neglected Tropical Diseases

Annual Report
2018–19



About the All-Party Parliamentary Group on Malaria and Neglected Tropical Diseases

The All-Party Parliamentary Group on Malaria and Neglected Tropical Diseases provides a forum for exploring issues pertaining to the fight against malaria and neglected tropical diseases (NTDs). Keeping malaria and NTDs high on the political agenda is crucial if we are to sustain the progress made in recent years to prevent, control and eliminate these diseases. This group provides a platform to bring together parliamentarians, academics and sector professionals to discuss both the problems and solutions to defeating some of the most devastating diseases in the world.

The Annual Report

This report covers the period from December 2018 to December 2019. The report also makes reference to key events outside of this reporting period that have influenced this All-Party Parliamentary Group's (APPG) activity during this past year and will inform the APPG's work over the coming year.

Publications by All-Party

Parliamentary Groups

This is not a publication for the House of Commons or the House of Lords. It has not been approved by either house or its committees. All-Party Parliamentary Groups are informal groups of Members of both Houses with a common interest in particular issues. The views expressed in this report are those of the group.

Declaration of Interests

Jeremy Lefroy MP (Immediate past Chair of the APPMG) sits on the Board of Liverpool School of Tropical Medicine and Innovative Vector Control Consortia (IVCC).

Abbreviations

ACT	Artemisinin-based combination therapy
APPG	All-Party Parliamentary Group
APPMG	All-Party Parliamentary Group on Malaria and Neglected Tropical Diseases
ASCEND	Accelerating the Sustainable Control and Elimination of Neglected Tropical Diseases
DFID	UK Department for International Development
EDCTP	European and Developing Countries Clinical Trials Partnership
EMA	European Medicines Agency
GSK	GlaxoSmithKline
IVCC	Innovative Vector Control Consortium
MDA	Mass drug administration
MMV	Medicines for Malaria Venture
MPV	Malaria Vaccine Implementation Programme
NTD	Neglected tropical disease(s)
PATH/MVI	PATH's Malaria Vaccine Initiative
PDP	Product development partnership
R&D	Research and development
SAGme	WHO Steering Advisory Group on Malaria Eradication
SAFE	Surgery, antibiotics, facial cleanliness and environmental hygiene
SDG	Sustainable Development Goal(s)
STH	Soil-transmitted helminths
WASH	Water, sanitation and hygiene
WHO	World Health Organization

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Chair-elect's Foreword



Catherine West MP, Chair-elect of the APPMG, at the World Malaria Day APPMG Meeting

There have been significant reasons to celebrate in both the malaria and NTD communities this year and yet there also remain major obstacles to defeating these devastating diseases for good. For this

reason, the APPMG exists to inform Parliamentarians and advocate for continued UK support in the fight against these diseases.

The global malaria community is full of passionate and dedicated people and this year we have celebrated many milestones including: the successful 6th replenishment of the Global Fund to Fight AIDS, TB, and Malaria; the launch of the Lancet Commission Report on Malaria Eradication; the launch of the SAGME Report; the start of vaccinations in the pilot programme of the first malaria vaccine RTS,S; and the emergence of new vector control tools and drugs. While there has been much to celebrate in the malaria community, unfortunately, for the 4th consecutive year, the WHO World Malaria Report has reported a plateau on progress. It is absolutely vital that momentum is not lost in the fight against malaria to ensure that we get back on track to the WHO Global Technical Strategy for Malaria, 2016-2030.

Regarding NTDs, major achievements this year have included the UK Government's announcement of a new flagship NTD programme, Accelerating the Sustainable Control and Elimination Neglected Tropical Diseases (ASCEND); several countries validated by WHO for the elimination of at least one NTD; the announcement of a World NTD day which will be on the 30th of January 2020 and the launch of a new WHO NTD Roadmap, 2021-2030. Progress

against this group of preventable diseases which affect the world's poorest has increased guided by the WHO NTD Roadmap 2012-2020 and supported by the 2012 London Declaration on NTDs. We look forward to a new Roadmap that aligns global efforts on NTDs with the 2030 Sustainable Development agenda and incorporates multisectoral collaborations to overcome challenges including insecurity, resource constraints, and ensuring the strengthening of health systems.

During a tumultuous Parliamentary year, the APPMG has strived to maintain focus on the devastation that continues to be caused by malaria and neglected tropical diseases. We are grateful to the many organisations which have supported and enabled us to hold regular meetings and events in order to hear from the leading experts and affected communities to keep Parliamentarians informed of key issues.

I would like to thank all of the officers of the APPMG for their dedication to this group and to keeping malaria and NTDs on the agenda throughout Parliamentary debates, questions and committees. Special thanks to Dr Paul Williams MP and Jeremy Lefroy MP for taking the time to visit Tanzania with the APPMG 2019 delegation this year in order to discuss cross-country collaboration on fighting these diseases.

The end of 2019 has brought a general election and unfortunately the APPMG had to say farewell to our previous Chair, Jeremy Lefroy who expertly led the group for 9 years. We would like to extend our sincere gratitude for the time and effort that Mr. Jeremy Lefroy has put into this group for the best part of the last decade and his dedication to those at risk of malaria and neglected tropical diseases. I hope that as the newly elected Chair of this group I am able to fill his shoes and ensure that we continue to effectively advocate for those affected by these diseases in the UK Parliament. I would also like to thank Ms Nathalie Spells in my Parliamentary office who co-ordinates the group's administration.

**Catherine West, Member of Parliament
for Hornsey and Wood Green**

Chair of the All-Party Parliamentary Group
on Malaria and Neglected Tropical Diseases

Reflections from the Outgoing Chair of the APPMG, **Jeremy Lefroy**

In September 2019, I was able – with other MPs from Tanzania, Germany and the UK – to visit Mvumi Hospital, about 30km outside Dodoma, the capital of Tanzania. We were briefed by the staff on the progress in tackling malaria. Two British doctors had worked there on the children's ward in the 1980s and had returned there to work voluntarily. 35 years ago, they said, the ward was full of children with malaria, often very severe or fatal. Now malaria cases were far fewer and rarely severe.

It was wonderful to hear first-hand evidence of progress. But it also reminded me that if malaria can be treated so successfully in Mvumi and throughout Tanzania, there is no reason why it should still claim more than 400,000 lives every year. Our work in supporting all who are tackling malaria – and neglected tropical diseases (NTDs) – must continue until the death and disability they cause is in the past.

In 2011, I wrote in the introduction to the report of the All-Party Group for that year that the aim of the Group was to 'provide a forum at the heart of the UK for discussing malaria and NTDs and to be a strong advocate in and out of Parliament for all those who are committed to tackling these diseases.'

That remains both true and necessary today. I am thankful to all those within and outside Parliament who have enabled us to speak up for the funding of the research, development and implementation needed to fight malaria and NTDs. I also recognise how much remains to be done.

Over the past three parliaments, the group has published eleven reports.¹ The themes of the reports reflect what has happened over this decade – great progress and the saving of millions of lives, alongside



Jeremy Lefroy MP receives a gift and blessing from the Maasai leader on the APPMG delegation to Tanzania 2019. Copyright © APPMG

increasing challenges from drug and insecticide resistance and instability.

As a group, we have always tried to concentrate on our work in parliament and with other parliaments. While it is governments who generally make decisions about commitments to development and health expenditure, their budgets have to be approved by parliament. It is therefore important that parliamentarians have the information they need to decide whether that expenditure is both justified and well targeted.

Our members have therefore sought to use parliamentary questions and debates in both Houses to highlight, and if necessary, challenge the work of Government. We have also worked closely with parliamentary groups and caucuses in other

countries – most notably Tanzania, Uganda, Kenya, Germany, France, the United States and Canada. In the past two years, we have welcomed MPs from Uganda, Tanzania and Germany for discussions in Westminster and our members have visited their parliaments.

We have continued the close relationships with UK research institutions which our founder, Sir Stephen O'Brien, always emphasised. Indeed, he has continued his work after leaving Parliament and now chairs the Innovative Vector Control Consortium (IVCC).

One of the highlights of my time with the APPMG has been our annual event with young researchers from around the world studying at Oxford University to present their policy research on addressing infectious diseases.

As a Group, we have emphasised the importance of work on tackling malaria and NTDs as being part of integrated health systems both nationally and globally. It has been encouraging to see the leadership and resources committed by endemic countries to tackle these diseases through their health systems growing substantially over the past decade.

This integration has been 'embodied' in the UK in the appointment both of the former Chief Medical Officer (CMO) for England Professor Dame Sally Davies as the UK's special envoy on Antimicrobial Resistance and of the malaria specialist Professor Chris Whitty as her successor as CMO. Chris's reviews of work on malaria and NTDs were highlights of our Christmas parties for many years.

The work of our Group would simply not be possible without our supporters – who contribute financially or with their time and expertise, or both. I wish to express my heartfelt thanks to all of you. Personally, I could not have chaired the Group for three parliaments without the work of our excellent coordinators (Susan Dykes, Hetty Bailey, Aparna Barua Adams and Nicole Vecchio), or of my office colleagues (Owen Meredith, Alex Simpson, Emily Mills and Jonathan Williams).

I particularly wish to thank those Members of both Houses of Parliament who have supported the Group as officers, in some cases for well over a decade. Their names are recorded below.²

I wish Catherine West MP, the new Chair-elect, and officers well for the future. They can be sure that I will continue to support them in whatever way I can.



Jeremy Lefroy

(MP for Stafford and Chair of the All-Party Parliamentary Group 2010-2019); Vice-Chair, Liverpool School of Tropical Medicine

1. List of reports published in the 2010-15, 2015-17 and 2017-19 parliaments (all are available from the Secretariat on request)

2011 Targeting zero – sustaining success in malaria control

2011 The Neglected Tropical Diseases

2012 Malaria – Consolidating the Gains

2012 UK Coalition against NTDs – Annual Report 2012

2013 Malaria at the crossroads

2013 UK Coalition against NTDs – Annual Report 2013

2014 Malaria in 2014 – An unprecedented opportunity at the dawn of a new era

2015 UK Coalition against NTDs – Annual Report 2014/15

2016 Racing against Time: Protecting the Gains Achieved in Malaria Control against Drug Resistance

2017 Annual Report 2016/17 Global Britain in the Fight against Malaria and NTDs

2018 Annual Report 2017/18 – highlighting the challenges faced in tackling both malaria and NTDs

2. Pauline Latham OBE MP (Mid Derbyshire), Baroness Helene Hayman GBE PC, Catherine West MP (Hornsey and Wood Green), Fiona Bruce MP (Congleton), Dr Paul Williams (MP for Stockton South 2017-2019), Chris Law MP (Dundee West), Professor Lord Sandy Trees, Professor Lord Ian McCall, Lord Nick Rea, Rt Hon. Dame Eleanor Laing MP (Epping Forest), Rt Hon. Sir Kevin Barron (MP for Rother Valley 1983-2019), Andrew George (MP for St Ives 1997-2015), Richard Bacon MP (South Norfolk), Lord John Mann (MP for Bassetlaw 2001-2019).

Overview of the year: **Malaria**

Summary of the World
Health Organization's
World Malaria Report 2019
by Nicole Vecchio

Malaria strikes PREGNANT WOMEN AND CHILDREN in Africa hardest

#endmalaria



World Health
Organization



Image credit @ WHO World Malaria Report 2019

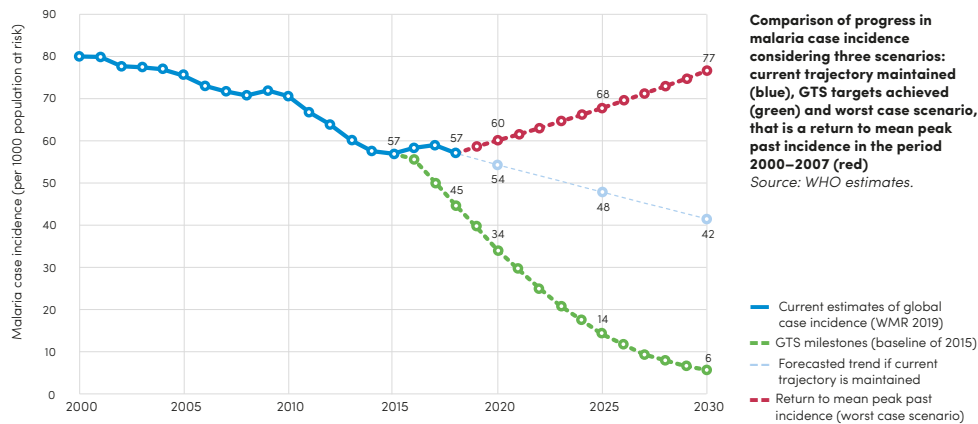
Malaria is caused by the *Plasmodium* parasites and spread to people through the bites of infected *Anopheles* mosquitos. Of the five parasite species, *Plasmodium falciparum* is the deadliest.³ From 2000-2015, we saw significant progress in the fight against this deadly disease and there have been major declines in mortality since 2010, but since 2015 progress has slowed.

The WHO World Malaria Report (WMR) 2019 has brought many reasons to celebrate including the certification of elimination of malaria in Paraguay and Uzbekistan (2018) and Algeria and Argentina (2019). However, challenges remain and the recent report has also confirmed that for the 4th year running, we are facing a plateau in progress against malaria worldwide. In 2018, there were an estimated 228 million malaria cases around the world and 405,000 deaths from malaria, coming down only marginally from 231 million cases and 416,000 deaths in 2017.⁴

3. WHO '10 Facts on Malaria', <https://www.who.int/news-room/facts-in-pictures/detail/malaria>
 4. WHO World Malaria Report 2019

As with the findings of the WHO's SAGme and the Lancet Commission on Malaria Eradication, the WMR 2019 also stresses the need for new tools and strategies as well as increased financing, especially from endemic countries, in order to get back on track to reach the 2030 targets of the Global Technical Strategy (GTS) for Malaria. 'Universal Health Coverage, with a well-functioning primary health system at its base' is essential to reaching elimination goals and ensuring that the most vulnerable (women and children) have access to prevention, diagnosis and treatment.

Many countries have maintained their progress against malaria and 10 out of 21 E-2020 countries are on track to reach elimination targets. However, in order to get the global response back on track, the pace of progress must be accelerated in countries that carry a high burden of the disease. Through the 'High Burden High Impact' (HBHI) approach – catalysed in 2018 by WHO and the RBM Partnership to End Malaria – 11 countries that together accounted for 70% of the global malaria burden are leading a targeted effort to jumpstart progress against the disease. The approach is founded upon four pillars: political will to reduce the toll of malaria; strategic information to drive impact; better guidance, policies and strategies; and a coordinated national malaria response. By November 2019, 9 of the 10 African countries have initiated the approach



GTS: Global technical strategy for malaria 2016–2030; WHO: World Health Organization; WMR: World Malaria Report.

as well as India. However, with the exception of India, direct domestic malaria investments in HBHI countries remain low. While India and Uganda achieved reductions in malaria cases of 2.6 million and 1.5 million, respectively, significant increases in malaria cases were seen in Nigeria and Ghana.

This year's WMR has a special focus on pregnant women and children in Africa, the 2 groups who are hardest hit by this disease. Malaria in pregnancy compromises the mother's health and can lead to her death. It also impacts the health of her foetus, which can lead to preterm birth and low birthweight. Malaria can also have severe health consequences for young children; nearly 70% of all malaria deaths are among children under the age of five.

In 2018 about 11 million pregnant women living in areas of moderate and high transmission in sub-Saharan Africa were exposed to malaria, causing an estimated 872,000 babies born with a low birth weight. Pregnant women need at least three doses of intermittent preventive treatment in pregnancy (IPTp), which is delivered through antenatal care clinics. A key finding of the report is that while there has been some success in increasing access to IPTp for pregnant women in Africa, only 1 in 3 women received the full course of preventative treatment in 2018.

The WMR also shows a strong positive correlation between malaria and anaemia in children under the age of 5. In 2018, approximately 24 million children in sub-Saharan Africa were estimated to have contracted malaria; of these, 12 million had moderate anaemia and 1.8 million had severe anaemia, a major contributor to child mortality.

The good news is that the tools needed to prevent and treat malaria are available and since 2010 there have been significant increases in distribution and use of insecticide treated bednets (ITNs), rapid diagnostic tests (RDTs), seasonal preventative malaria chemotherapy (SMC) and Artemisinin-based combination therapy (ACT). On the other hand, indoor residual spraying (IRS) – another powerful tool to reduce malaria transmission – has shown decreasing use during this time, from 5% in 2010 to 3% in 2017.

In 2018:

- 61% of children under five and pregnant women living in sub-Saharan Africa slept under an ITN compared to 26% in 2010
- 197 million ITNs distributed in 2018, though only half of those at risk of malaria in sub-Saharan Africa are sleeping under one
- 31 million children were protected from malaria through SMC in 12 countries of Africa's Sahel subregion, but 12 million children needing protection were not covered
- 259 million RDTs distributed
- 214 million ACT treatment courses delivered

Key global successes in malaria eradication

Advocacy

- The UK Government pledged £1.4 billion to the Global Fund to Fight Aid, TB and Malaria for their sixth replenishment cycle (2020-2022), an increase of 15% since the last replenishment.
- In recent years WHO's World Malaria Reports have indicated that progress in reducing malaria incidence has stalled after several years of global decline. In response to this, Sub-Saharan African leaders have rallied under the WHO and RBM's new 'high burden to high impact' response for malaria. Actions to reorient efforts focus on translating political commitment into tangible actions, improving the use of strategic information to drive impact, implementing the best global guidance, policies and strategies as well as improving coordination.
- Novartis Social Business commissioned two opinion research studies on perspectives of the future of malaria in Asia and in Central Africa in 2019. Both reports captured the views of malaria experts in key countries in each region and analysed responses based on opportunities and threats towards elimination. (Links in 'Resources' section.)

Vector control

- In 2019, WHO published new evidence-based guidelines for malaria vector control to provide a single resource for all countries and partners working to implement effective malaria vector control interventions.
- The availability and increased use of new insecticides for indoor residual spraying (IRS), especially the neonicotinoid clothianidin-based insecticides are a welcome addition to pirimiphos-methyl capsule suspension (CS) formulation which has been in use for a number of years. Clothianidin was introduced in about half a dozen African countries in 2018 by the US President's Malaria Initiative (PMI) VectorLink project, with co-payment support of the Unitaid-funded NgenIRS project. More countries are expected to use it in their IRS programmes this year, either alone or in combination with deltamethrin.
- A further product based on the pyrrole insecticide chlorfenapyr (another new class of insecticides in malaria control) is under regulatory review. With this choice of insecticides available, used in annual rotation to avert the risk of resistance, the full impact of IRS can be realised for some years to come. Likewise, insecticide treated bed nets, for so long the hero product of malaria control, has the potential, with the availability of new products combining Pyrethroids and the synergist piperonyl butoxide (PBO) or a second active ingredient alongside pyrethroids, to continue to be a significant intervention tool.

Vaccines

- A landmark pilot programme for RTS,S, the world's first malaria vaccine, began in three African countries – Ghana, Kenya and Malawi. The vaccine is being given in four doses to young children starting at 5 or 6 months of age with the fourth dose to be administered at the age of about 2 years, in areas where malaria is high burden and young children are at highest risk of dying from the disease. It is expected that the pilot will vaccinate approximately 360,000 children per year across the three countries. Clinical trials have shown the vaccine can prevent

approximately 4 in 10 malaria cases, including 3 in 10 cases of life-threatening severe malaria.

New Drugs

- After having been approved with no restrictions by the European Medicines Agency's (EMA) Article 58 process in 2015 for the treatment of uncomplicated *P. vivax* and *P. falciparum* malaria in children and adults, artesunate-pyronaridine (Pyramax[®]) is now considered by WHO to be safe and efficacious for use in all endemic areas as of October 2019. Countries have begun to procure the medicine, and several have already included it in their national treatment guidelines. Given mounting concerns of malaria drug resistance, there is a need for a wider variety of quality-assured antimalarial medicines for use in malaria-endemic countries. Pyramax represents an important addition to the ACT family. Recent therapeutic efficacy studies in the Greater Mekong Subregion have confirmed that Pyramax can play an important role where other ACTs are failing.
- Brazil became the first malaria-endemic country to approve single-dose tafenoquine for radical cure of *P. vivax* malaria. Tafenoquine is the first new medicine to be approved for the radical cure of relapsing *P. vivax* malaria in more than 60 years and as a single dose, facilitates compliance and effective relapse prevention. As such, the medicine heralds an important step forward in malaria elimination efforts. A study to explore the feasibility of introducing the medicine together with G6PD testing in Brazil is now set to begin.
- Use of WHO-prequalified severe malaria medicines continues to increase, saving countless additional lives compared to treatment with previous standard of care, quinine. There are now two WHO prequalified injectable artesunate (Inj AS) products for the treatment of severe malaria as well as two rectal artesunate (RAS) products for the pre-referral management of severe malaria. By the end of the year 2019, estimates are that over 150 million vials of WHO-prequalified Inj AS will have been distributed since WHO prequalification of the first product. Then for RAS, an estimated



Child receiving SMC medication in Nigeria.

Photo credit @ Malaria Consortium/Susan Schulman

1.2 million quality-assured products were ordered by endemic countries enough to help buy time for 800,000 children with severe malaria to reach a health center where they can get the full treatment they need.

Chemoprevention

- Over 350 million treatments of SPAQ, a WHO recommended child-friendly dispersible formulation to protect children from malaria in areas of high seasonal transmission, have been delivered since seasonal malaria chemoprevention (SMC) was first implemented in 2013. In 2019, over 90 million monthly doses of SMC were distributed, enough to provide protection for over 22 million children – a 12% increase in coverage compared to 2018.
- Despite the impressive increase in SMC uptake, 13.6 million eligible children across the Sahel zone were not covered. Governments and partners are working to close this coverage gap. A major scale-up is expected in Nigeria, the country with the highest number of eligible children in 2020, with full country-wide coverage expected by 2021.
- In 2017, only 22% of eligible pregnant women received the recommended three doses of sulfadoxine-pyrimethamine (SP) as intermittent preventive treatment in pregnancy (IPTp) recommended by the WHO to protect them from malaria. Jhpiego is leading a project entitled Transforming Intermittent Preventive Treatment for Optimal Pregnancy (TIPTOP) which is taking a community-based approach to expand coverage of

IPTp in four African countries. MMV is supporting this work in two ways: (1) helping strategically located manufacturers in Africa to manufacture SP for IPTp to international quality standards (WHO Prequalification); (2) developing improved patient-centric packaging to improve acceptability and correct use of SP for IPTp among pregnant women.

New opportunities

Vector control

- Currently a 'new nets project' in Benin & Tanzania is looking to combat pyrethroid (the main insecticide used on nets) resistance by using new active ingredients. Work will consist of cluster randomised trials to compare new nets to current LLINs. Baseline data collection has begun this year and nets will be distributed from January 2020. Before obtaining a recommendation from WHO, evidence needs to be generated on the new nets' impact on malaria in two separate settings. The project in Benin will provide evidence for the use of two new net types, whilst a sister project in Tanzania is generating evidence for three others. Together the trials will provide the evidence needed for a WHO recommendation.

New drugs in development

- Phase 2 trials are underway for two new combination medicines neither of which contains artemisinin, ganaplacide (KAF156)/lumefantrine single daily dose with Novartis and MMV and artefenomel/feroquine with MMV. These would provide simplified treatments, potentially given in a single day, which will be active in areas where Kelch13 artemisinin resistance occurs.
- A programme to develop a formulation for a new fast-acting injectable compound (cipargamin, Novartis and MMV), has been started with co-funding from Wellcome Trust: again, the goal is to have a new treatment for deployment in areas where artemisinin resistance is a concern.
- The European & Developing Countries Clinical Trials Partnership (EDCTP) has granted new



Recipients of long-lasting insect nets. Credit @ Malaria Consortium

funding of €10m over five years to support paediatric late-stage clinical trials of ganaplacide-lumefantrine through the West African clinical network, WANECAM. The trials will be conducted in four countries in West and Central Africa: Burkina Faso, Gabon, Mali and Niger. The aim is to advance the development of a much-needed new antimalarial therapy while strengthening clinical trial development capabilities in Africa. In addition, EDCTP has approved, in principle, €22M in funding for a new portfolio grant PAMAFRICA, with MMV and Novartis. This will support a next-generation combination of two new compounds for uncomplicated malaria, a new ratio of artemether-lumefantrine to be used in children <5kg and children who are malnourished, and also the work on severe malaria with cipargamin.

- MMV has established a partnership called the Malaria Drug Development Catalyst with pharmaceutical companies with antimalarial compounds in experimental medicine, to expedite the identification of the best combinations to progress for uncomplicated malaria. The partners include Novartis, Merck KGaA and Zydus-Cadilla. The legal framework to bring together the partners, molecules and data has been in place since June 2019 and to date 30 combinations reviewed.

Vaccines

- New human challenge studies at MRC Gambia are presenting a methodological way to study malaria immunity, which could provide the basis

upon which new vaccines can be created. Viable, infectious *Plasmodium falciparum* sporozoites produced by the US vaccine company Sanaria, were used to establish controlled malaria infections in two small cohorts of adult male volunteers – one with high levels of pre-existing malaria antibodies, the other with low antibody levels. In the low antibody group, detectable parasites arose in the blood two days faster on average, demonstrating the importance of immunity in managing malaria infections. This system promises to greatly facilitate vaccine-testing in the endemic country communities where the vaccines will be used, as effectiveness can be directly and more efficiently tested with safe, controlled infections rather than waiting for natural exposure to infected mosquitoes.

Funding and coordination

- The Global Fund to Fight AIDS, Tuberculosis and Malaria met their target of US\$14 billion from donors for the 2020-22 replenishment cycle (more detail can be found in the special focus section).
- The UK Government announced a five-year programme (2019-2024) funded through UK Aid to reduce the burden of malaria in Nigeria. The programme, Support to National Malaria Programme 2 in Nigeria (SuNMaP 2), is being delivered by Malaria Consortium in collaboration with global and national partners to develop sustainable models of intervention for the future as part of supporting universal health coverage.
- Ministers of Health from participating countries of the Sahel Malaria Elimination Initiative (SaMEI), together with international partners have established a new Sahel Malaria Commodities Fund to ensure essential malaria commodities are available in the region.
- MMV launched vivaxmalaria.org, an information hub containing key learnings, best practices, tools and resources in the treatment and control of relapsing malaria. This initiative has provided a relevant platform for increasing awareness of *P. vivax* malaria and promoting global partnerships to advance elimination of the disease.

Challenges

Threat of malaria spreading to urban areas

- The spread of *Anopheles Stephensi*, a vector that can transmit *Plasmodium falciparum* and *P. vivax* (the two most common types of human malaria) has been identified in the Horn of Africa. Previously confined to Southeast Asia and the Arabian Peninsula, *An. Stephensi* was first reported in Djibouti in 2012. It has spread to Ethiopia and most recently the Republic of the Sudan this year. Its ability to quickly adapt to the local environment and survive very high temperatures during the dry season makes it an efficient vector of urban malaria. Different control strategies will need to be devised in order to prevent further spread in the region, because current methods are not necessarily suited to an urban environment. Its spread could be a significant potential threat to malaria control and elimination in Africa and southern Asia.

Supply chain and health system performance

- While ~300 million quality-assured Artemisinin-based combination therapies (ACTs) have been manufactured and procured per annum in recent years for an estimated global disease burden of ~220 million cases, regular access to diagnosis and treatment with those medicines remains a challenge. The annual death toll of 430K deaths from malaria (WMR 2018) in part reflects the shortcomings of supply chain and health system capacity to ensure that timely diagnosis-treatment is available to patients, particularly in rural settings in high malaria burden countries.

Complexity and risk involved in research and development of new tools

- Research and development of new medicines for malaria remains a complex, risky and costly undertaking with attrition rates part of the process. Meanwhile, according to the WHO, today less than 1% of funding for health R&D investment goes to developing tools to tackle malaria.

Cost of new IRS insecticides and newer types of nets and the potential impact on coverage

- The cost of new IRS insecticides has limited the coverage of this effective intervention. It is hoped that wide-scale use may help to bring down prices of these chemicals in the future. Likewise, the prices of newer LLIN products may also pose a challenge in limiting coverage in the short-term but their increased use will reduce the market price
- Much of the remaining transmission in some countries is occurring outdoors away from the protection of IRS and LLINs, and we still have no effective tools to confront this serious challenge to continue working towards elimination. Research into improved tools for reducing outdoor transmission should receive stronger prioritisation.

Malaria diagnosis

- *Pfhrp2/3* gene deletion in *Plasmodium falciparum* has posed a challenge to malaria diagnosis using HRP2-based RDTs. The HRP2-based *P. falciparum* diagnostics have exerted selection pressure on parasite populations. As a result, parasites lacking HRP2 have a strong evolutionary advantage as they go undiagnosed and therefore untreated. Parasites with HRP2 deletions are now able to spread unchecked posing a major threat to malaria control.

Sustained political will for malaria surveillance

- With progress towards malaria elimination, it is essential that funding is maintained for surveillance efforts to avoid resurgence. Efforts must be increased to show the value of surveillance to policymakers and donors.

Antimalarial and Insecticide Resistance:

- Please see article on next page.

Anti-Malarial and Insecticide Resistance

Insecticide Resistance

Contribution by Innovative Vector Control Consortium (IVCC)

As reported by the recently published World Malaria Report insecticide resistance is widespread and is becoming an increasing threat to the effectiveness of both insecticide treated bed nets (ITNs) and indoor residual spraying (IRS), two interventions that have been the mainstay of reducing annual malaria deaths by more than 50% since the turn of the 20th century. Of the 81 malaria endemic countries that provided data for 2010–2018, resistance to pyrethroids – the only insecticide class currently used in ITNs – was reported in 73 countries. The benefits of restoring full effectiveness of ITNs, in particular, cannot be underestimated in the goal to eradicate malaria.

Liverpool-based IVCC is working with its funders and industry partners to develop and bring to market new insecticides, whether repurposed compounds from agriculture or brand-new chemistry to address this growing threat. In particular, IVCC is looking for insecticides with a fast action to replace pyrethroids. There are two new insecticidal compounds in the portfolio which meet this requirement and IVCC are working with partners to study these in greater detail to determine how to build effective, safe and affordable dual-insecticide ITNs. IVCC envisage combining a fast-acting insecticide with a second compound with differing mode of action to provide some assurance against insecticide resistance developing.

IRS faces similar challenges of widespread and growing insecticide resistance. However, IVCC has recently facilitated the introduction of 2 new classes of insecticides, Actellic CS and Clothianidin-based products, SumiShield and Fludora Fusion. A further product, Sylando, based on the insecticide Chlorfenapyr is under regulatory review and a fourth class of insecticide is under development. With this choice of insecticides available, used in annual rotation to avert the risk of resistance, the full impact of IRS can be realised for some years to come.



Man trains to spray indoor residual which kills mosquitoes and in turn prevents the spread of malaria. Photo credit @ Malaria Consortium/ Peter Caton

Anti-microbial resistance

Contributions from MMV, Malaria Centre at LSHTM and Malaria Consortium

Antimicrobial resistance (AMR) is naturally occurring, however, in recent years it has been accelerated by a number of factors including: inappropriate prescription and use of drugs; poor quality and fake drugs; intensified use of antimicrobials in agriculture and aquaculture; environmental contamination; and lack of access to safe water, sanitation and hygiene (WASH). By 2050, if we fail to address the threat of AMR, it could cause 10 million deaths annually.⁵

In the malaria community, AMR is one of the major challenges today. The most effective treatment for the most common and deadly form of malaria is artemisinin combination therapy (ACT). Partial resistance to artemisinin drugs was first reported in 2008 at the Thai-Cambodian border but resistance now occurs in 5 countries in the South East Asian region, and in Cambodia up to half of ACT treatments now fail. As of yet, ACT resistance has not been detected in Africa⁶ although there is some evidence of falling drug efficacy in some countries. One estimation is that, should the SE Asian form of resistant malaria spread to high burden areas, an additional 116,000 more people would die each year.⁷

5. Malaria Consortium, The Spread of Superbugs, pp.4-6

6. Malaria Consortium, The Spread of Superbugs, pp. 9

7. MMV, Antimalarial development: a step forward in the global fight against antimicrobial resistance. pp.2

The R&D community has had some success finding solutions to the resistant forms of malaria, including the drug artesunate-pyronaridine, which is proving more effective than the current failing treatment. MMV is also working to find a combination of different ACTs used concurrently in one area to reduce the pressure on a single overused ACT. Another key area of focus in the fight against anti-malarial resistance is the development of paediatric drugs to ensure the correct dosing, compliance and tolerability of medicine in children.

In order to prevent AMR from spreading and reversing all the hard-won progress on the fight against malaria, we must ensure to keep funding R&D for anti-malarial drugs. Among organizations involved in malaria drug development, MMV is leading the way with over 150 partners in public-private partnerships to share the risks, costs, ideas and efforts to find and fund new malaria drugs. Promoting transparency and collaboration in data, findings and materials can also help to speed up the process and reduce the costs associated with this work.⁸

All national malaria programmes and implementing partners on the ground should also ensure a thorough understanding of AMR and build surveillance of resistance into their activities as per the WHO Global Action Plan on AMR.

The WHO Global Action Plan on AMR endorses a 'One Health' approach with collaboration of the Food and Agricultural Organization and the World Organization for Animal Health. Below are the objectives set out in the Global Action Plan on AMR:⁹

- to improve awareness and understanding of AMR
- to strengthen knowledge through surveillance and research
- to reduce the incidence of infection
- to optimise the use of antimicrobial agents, and
- to develop the economic case for sustainable investment while also increasing investments in new innovations (e.g. medicines, tools, vaccines and other interventions)

8. Antimalarial development: a step forward in the global fight against antimicrobial resistance

9. Malaria Consortium, *The Spread of Superbugs*, pp.6-10



Photo credit @ Anna Wang/ MMV

With renewed purpose to step up the fight against malaria in 2019 and confirmation that ending malaria is a winnable fight, global stakeholders including governments, private sector, communities and civil society, took meaningful actions to reinforce global commitment to end this disease within a generation.

GLOBAL AND REGIONAL LEADERS STEP UP



THE GLOBAL FUND

Funding secured to support global malaria programmes for the next 3 years

The Global Fund to Fight AIDS, TB and Malaria announced record-breaking commitments – **USD\$14.02B** – from countries, the private sector and non-governmental organisations to ensure it can help save **16 million lives** and avert **234 million infections by 2023**. The Global Fund accounts for 65% of all external resources for malaria.



CROSS-BORDER COLLABORATION

Elimination goals accelerated through cross-border collaborations

- **Eight Sahelian Health Ministers** established a new regional fund to drive down prices and improve access to lifesaving malaria interventions in the region.
- Senegal and The Gambia worked together to distribute **11 million bed nets** and boost malaria control in the cross-border region.
- **The new Malaria Elimination in Melanesia Initiative (MEMI)** got underway in several Asia-Pacific countries, including Papua New Guinea, Solomon Islands, Timor-Leste and Vanuatu.
- **Agreements signed** with Economic Community of Central African States (ECCAS), the Southern African Development Community (SADC), and Economic Community of West African States (ECOWAS) to accelerate malaria elimination across these regions



ZERO MALARIA STARTS WITH ME

Five additional countries have joined the growing pan-African "Zero Malaria Starts with Me" movement in 2019

Eswatini, Ethiopia, Ghana, Sierra Leone and the United Republic of Tanzania. They launched country-wide campaigns to reignite focus and empower communities to take greater ownership of the need to achieve malaria elimination.



ZERO MALARIA FUND

As part of the Zero Malaria Starts with Me campaign, Eswatini launched a new End Malaria Fund to close the **\$US5 million** funding gap required to end malaria for good, raising close to \$700,000 on the first day.

MALARIA HIGH ON POLITICAL & DEVELOPMENT AGENDAS



African Union Summit, Addis Ababa

African Heads of State and Government committed to boost domestic resources for health from public and private sectors and adopted the 2018 African Union Malaria Progress Report.



World Malaria Day, Paris and Worldwide

Leaders, influencers and citizens around the world declared 'Zero Malaria Starts with Me/Zero Palu Je M'engage' on 25 April, World Malaria Day.



74th Session United Nations General Assembly

United Nations General Assembly, New York

The RBM Partnership ensured malaria elimination was at the heart of discussions on Sustainable Development Goals, Universal Health Coverage, climate change and gender equality

Update from the RBM Partnership to End Malaria

Contribution by Dr Abdourahmane Diallo, CEO, RBM Partnership to End Malaria

Over the past 12 months, Parliaments in the UK and around the world have demonstrated their leadership and resilience in dealing with the defining issues of today and those that will shape the opportunities for future generations.

Ending malaria is one such defining issue. The latest expert reports, notably by the World Health Organization (WHO) and the Lancet Commission on Malaria Eradication, have unequivocally stated that with political will, sufficient resources and the right tools and strategies, we can eradicate one of the oldest and deadliest diseases within a generation. I was delighted to have the opportunity to exchange on this issue with members of the UK Parliament during the roundtable hosted by the All-Party Parliamentary Group on Malaria and Neglected Tropical Diseases (APPMG) in September 2019.

In response to these reports, WHO Director General Dr Tedros Adhanom Ghebreyesus confirmed that the gains to be reaped from reaching this goal far outweigh what is required to achieve it, asserting 'that we, the global malaria community, know what we need to do.' This is indeed so. Moreover, a malaria-free world is within our grasp, with more countries than ever before – 46 – registering less than 10,000 cases, and several – including China, Malaysia and El Salvador – already at zero malaria cases for one year or more. However, there is no room for complacency, with malaria cases on the rise in some of the highest burdened countries in sub-Saharan Africa over the past two years.

In October, we have seen leaders around the world step up the fight by securing \$14 billion for the Global Fund to Fight AIDS, Tuberculosis and Malaria for the 2021-2023 period. We applaud the UK's largest to date contribution to the Global Fund of £1.4 billion, which will help accelerate efforts to end malaria and truly transform the world.

Next year will mark the first opportunity to review progress against the bold commitment made by 53 Commonwealth leaders at the 2018 CHOGM in London to halve malaria burden across the Commonwealth by 2023. This opportunity will present itself at the Kigali Summit on Malaria and Neglected Tropical Diseases (NTDs) to be hosted by the Government of Rwanda on 25 June 2020, together with the RBM Partnership to End Malaria and Uniting to Combat NTDs and other partners, including Malaria No More UK.

We hope that the Kigali Summit will offer a platform for strong parliamentary engagement from across the Commonwealth. Already, countries such as Uganda and United Republic of Tanzania are showing how parliamentarians can take the lead in advocating for a 'zero malaria' world, in support of the Zero Malaria Starts with Me campaign, endorsed by the African Union leaders in 2018 and co-led by the African Union Commission and the RBM Partnership to End Malaria. We hope to see more parliamentarians around the world join the growing Zero Malaria movement.

Parliamentary support remains paramount for continued UK leadership in the global fight against malaria, and the APPMG can serve as a model for other countries, both malaria-free and malaria-affected, for oversight of malaria programmes and advocacy for increased malaria investments. On behalf of the RBM Partnership, I would like to express our deepest gratitude to APPMG members and particularly its chair Jeremy Lefroy MP for their leadership and unwavering commitment to a healthier, more prosperous and equitable world, free from the scourge of malaria and other deadly diseases.

'Parliamentary support remains paramount for continued UK leadership in the global fight against malaria'

The Lancet Commission on Malaria Eradication

Contribution by Sir Richard Feachem, Commissioner and Director of the Global Health Group at University of California San Francisco

Malaria Eradication within a Generation: Ambitious, Achievable, Necessary

A future free of malaria, one of the world's oldest and deadliest diseases, can be achieved as early as 2050, according to a new report published by The Lancet Commission on malaria eradication. The Commission, a joint endeavor between The Lancet and the University of California San Francisco (UCSF), was convened in 2017 to consider the feasibility, affordability, and merit of malaria eradication, inform global opinion, and identify priority actions for the achievement of eradication.

The Commission's seminal report was published in The Lancet on September 8 of this year, and promoted in a series of events in London on September 11 and 12. Events included a breakfast roundtable with APPG members, a discussion with the UK Department for International Development, a high-level dinner at the House of Lords to discuss the Commonwealth commitment to halve malaria by 2023, and a moderated conversation with nearly 200 distinguished experts and report authors held at the Royal Academy of Engineering.

Authored by 41 of the world's leading malariologists, biomedical scientists, economists, and health policy experts, the Commission's report – *Malaria Eradication within a Generation: Ambitious, Achievable, Necessary* (<http://malariaeradicationcommission.com/>) – is the first peer reviewed, academic document of its kind.

The report synthesizes existing evidence with new epidemiological and financial analyses to demonstrate that – with the right tools, strategies, and sufficient funding – eradication of the disease is possible within a generation. Report authors use modelling to estimate plausible scenarios for the distribution and intensity of malaria in 2030 and 2050. Analyses indicate that socioeconomic



Commissioners at the launch of the report.

and environmental trends, together with improved coverage of current malaria interventions, will create a world in 2050 with malaria persisting in pockets of low-level transmission across equatorial Africa.

To achieve eradication by 2050, the Commission urges that specific and deliberate actions at country, regional and global levels must be taken. This report identifies three ways to 'bend the curve' – or accelerate the decline in malaria cases worldwide.

First, the world must improve the management and implementation of current malaria control programs and make better use of existing tools – what the Commission refers to as the 'software of eradication.' Second, Commissioners highlight the need to improve the 'hardware of eradication' by developing and rolling out innovative new tools to overcome the biological challenges to eradication. And lastly, malaria endemic countries and donors must provide the financial investment needed to ultimately rid the world of this disease. When combined with the increasing commitment and ambition by endemic countries and regions and strengthened leadership and accountability, these actions will propel us towards a world without malaria by 2050 or sooner.

The UK has played a pivotal role in driving down malaria over the last two decades. In light of its ground-breaking new research, the Commission encouraged the UK to continue and strengthen its leadership in accelerating progress across the Commonwealth and beyond, ending malaria within a generation.



On stage left to right is HE Yamina Karitanyi, Dr Soumya Swaminathan, Joy Phumaphi, Dr Kenneth Staley, Peter Sands, Matthew Rycroft CBE, Dr Winnie Mpanju-Shumbusho. Credit @ Mickey Visser, Malaria No More UK

Update on the Commonwealth Malaria Commitment

By Malaria No More UK

The Commonwealth continues to be disproportionately affected by malaria, with 90% of its citizens living in malaria endemic countries and attributing to over half of all deaths globally.

In April 2018, at the Commonwealth Heads of Government Meeting (CHOGM) in London, all 53 leaders committed to halve malaria across the Commonwealth by 2023. Realising this commitment will help prevent 350 million cases of malaria and save 650,000 lives. Since CHOGM 2018, there has been significant action across the Commonwealth, including in India, where there has been a substantial reduction in cases in Odisha State, and Rwanda, where the government has prioritised the adoption of different approaches to implementing vector control.

In April 2019, one year on from the CHOGM 2018, the global malaria community including representatives from governments, business, science and civil society, came together at the Science Museum, to discuss Commonwealth progress to date, and what more can be done to ensure the commitment is achieved.

DFID Permanent Secretary, Matthew Rycroft CBE, spoke on a high-level panel, alongside Peter Sands, Executive Director of the Global Fund to Fight AIDS, TB and Malaria, Dr Soumya Swaminathan, WHO Deputy Director General, Ken Staley, Director of the US President's Malaria Initiative, Dr Winnie Mpanju-Shumbusho, Chair of the RBM Partnership to End Malaria, and HE Yamina Karitanyi, the High Commissioner of Rwanda to the UK. The panel discussed the importance of data, close collaboration with communities, and examples of best practice.

The first formal review of progress towards meeting the Commonwealth Malaria Commitment is expected to take place at CHOGM 2020 in Kigali, Rwanda. This will be the next key milestone for galvanising action to halve malaria by 2023 and drive progress towards Sustainable Development Goal 3, health and wellbeing for all.

The UK has an important opportunity to work with other Commonwealth countries over the next year, and in its final months as Commonwealth Chair-in-Office, to ensure that there is meaningful follow up to the Commonwealth Malaria Commitment, including an appropriate focus at CHOGM 2020 to help accelerate cross-Commonwealth action to tackle malaria and bring us one step closer to ending the disease for good.

The Global Fund to Fight AIDS, TB and Malaria

By Malaria No More UK

The Global Fund was established in 2002 to accelerate the end of the epidemics of AIDS, TB and malaria. The Global Fund mobilises and invests more than US\$4 billion a year to support programs run by local experts in more than 100 countries. It channels almost 65% of international funding for malaria.

Smart, effective health investments through the Global Fund have saved 32 million lives to date and provided prevention, treatment and care services to hundreds of millions of people, helping to revitalize entire communities, strengthen local health systems and improve economies.

In an unprecedented show of global solidarity, donors at the Global Fund's Sixth Replenishment Conference in Lyon on 10th October pledged over US\$14 billion to fight the diseases over the next three years – the largest amount ever raised for a multilateral health organisation. These funds will help save an incredible 16 million lives and help get the world back on track to end the epidemics by 2030.

In June, the global malaria community warmly welcomed the UK's pledge of life-saving support to the Global Fund. The UK's game-changing investment of £1.4 billion over the next three years will help save

two million lives and demonstrates global Britain at its best, a compassionate and engaged partner on the world stage, tackling the most urgent global health challenges of our generation.

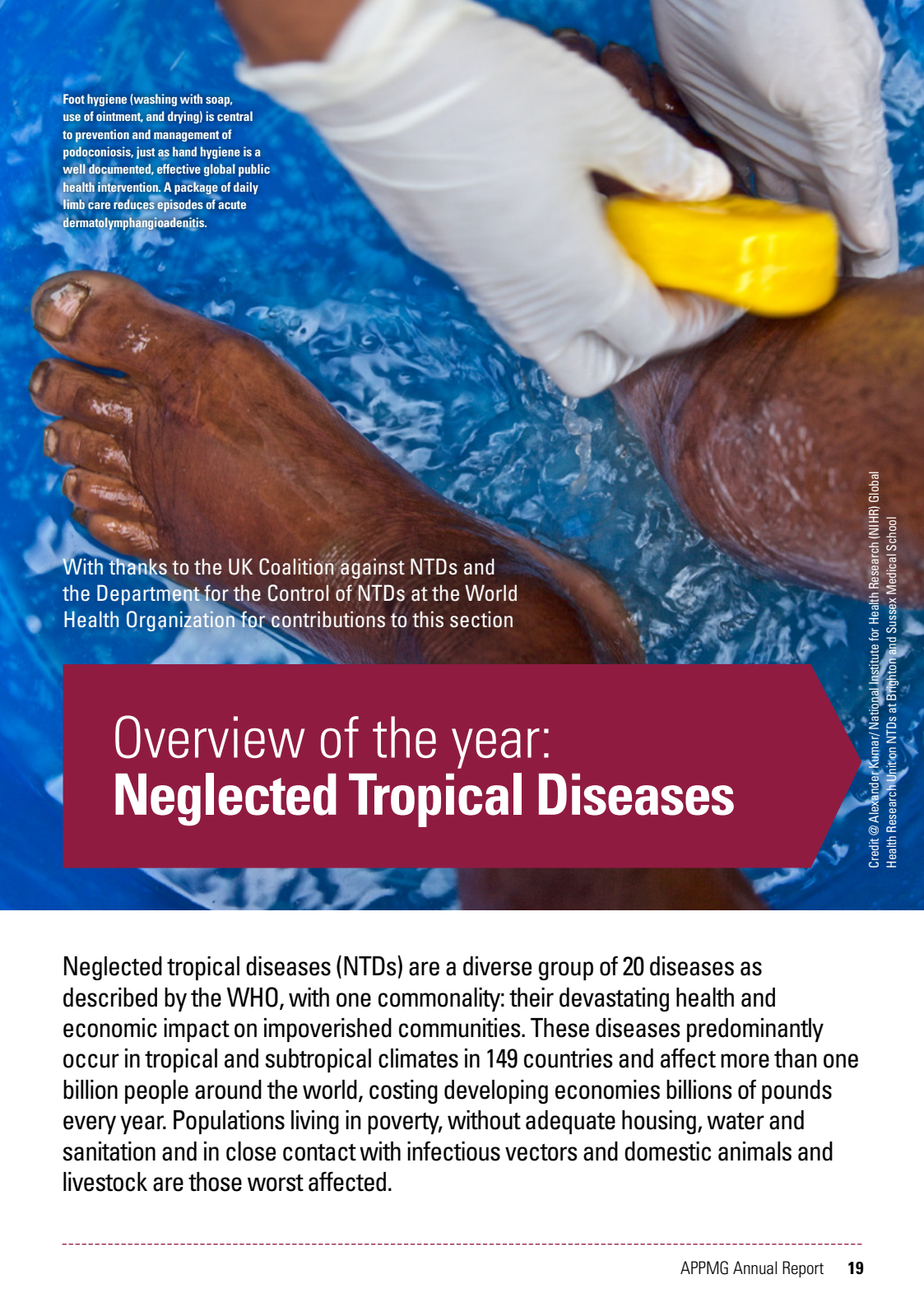
Included in the UK's pledge was a commitment to match fund private sector support for malaria. This has already helped to raise an incredible £100 million from organisations including the Bill & Melinda Gates Foundation and Nando's, which will now be doubled by UK aid. This new money from the private sector will help provide 20 million mosquito nets, prevent six million cases of malaria, and save over 75,000 lives.

To help drive public and political awareness, the Malaria Must Die campaign launched the world's first voice petition, led by David Beckham. Translated into 9 languages, the campaign reached half a billion people around the world in the run up to the Global Fund's Sixth Replenishment Conference, galvanising thousands of people to put their voices behind the urgent ask for action to end malaria and the needless deaths it continues to cause and encouraging world leaders to step up their investments.

The successful replenishment brings us one step closer to achieving the ambitious goal set at last year's Commonwealth Heads of Government Meeting, to halve malaria across the Commonwealth by 2023, where over half of all deaths occur. This is the next key opportunity to get the world back on track towards its goals.



Celebrating a successful 6th Replenishment of the Global Fund, October 2019, Lyon, France. Photo credit @ The Global Fund / David O'Dwyer



Foot hygiene (washing with soap, use of ointment, and drying) is central to prevention and management of podoconiosis, just as hand hygiene is a well documented, effective global public health intervention. A package of daily limb care reduces episodes of acute dermatolymphangioadenitis.

With thanks to the UK Coalition against NTDs and the Department for the Control of NTDs at the World Health Organization for contributions to this section

Overview of the year: **Neglected Tropical Diseases**

Neglected tropical diseases (NTDs) are a diverse group of 20 diseases as described by the WHO, with one commonality: their devastating health and economic impact on impoverished communities. These diseases predominantly occur in tropical and subtropical climates in 149 countries and affect more than one billion people around the world, costing developing economies billions of pounds every year. Populations living in poverty, without adequate housing, water and sanitation and in close contact with infectious vectors and domestic animals and livestock are those worst affected.

Credit @ Alexander Kumar/ National Institute for Health Research (NIHR) Global Health Research Unit on NTDs at Brighton and Sussex Medical School

Many NTDs have long-term consequences, impairing visual, physical and cognitive development and contribute to maternal and childhood illnesses. As a result, people with NTDs may have limitation in terms of productivity and earning potential. Additionally, NTDs are often strongly linked to stigma and can have social and mental health consequences. As a result NTDs trap the poorest, most marginalised communities in a cycle of poverty and disease.

NTDs are a diverse group of diseases but do share common features: they are treatable or preventable through relatively simple public-health interventions and are concentrated in the poorest countries and among the poorest people. The 2012-2020 WHO NTD Roadmap and the 2012 London Declaration on Neglected Tropical Diseases have helped to raise awareness of these diseases and political momentum for control and elimination efforts. However, NTDs largely remain neglected, meaning they are reported, diagnosed and treated late, often leading to chronic conditions and even death. Despite these characteristics NTDs are common, avoidable and potentially debilitating, which is why prioritizing their control is important.

Guided by the 2012-2020 WHO NTD Roadmap, recent increases in medicine donations by the pharmaceutical industry have enabled a scale-up of treatment interventions, increasing access to high-quality medicines free of charge for almost 1 billion people worldwide. As we look to the release of the 2021-2030 WHO NTD Roadmap aligned with the 2030 Sustainable Development Agenda, the global NTD community is evolving the way we work together to implement cross-cutting approaches that deliver NTD programmes for sustainable prevention, control and elimination of these diseases.

A new WHO NTD Roadmap 2021-2030: as with its predecessor, the new Roadmap to 2030 will be a pivotal guiding document for the global response to NTDs over the next decade. NTDs have traditionally

NTDs are common, avoidable and potentially debilitating, which is why prioritizing their control is important.

WHO recommends five public-health interventions to accelerate the prevention, control, elimination and eradication of NTDs:



1. Preventive chemotherapy –

large-scale delivery of free and safe, single-dose, quality-assured medicines, either alone or in combination, at regular intervals to treat selected diseases;



2. Innovative and intensified disease management –

management of diseases that are difficult to diagnose and treat and which can, in most cases, trigger severe clinical manifestations and complications;



3. Vector control and pesticide management –

safe and judicious management of public-health pesticides to achieve vector control through integrated vector management;



4. Safe drinking-water, basic sanitation and hygiene services, and education –

prioritization of improved sanitation combined with delivering preventive chemotherapy and health education to sustain reductions in prevalence of many of these diseases;



5. Zoonotic disease management

– application of veterinary sciences and interventions to protect and improve human health (veterinary public-health).

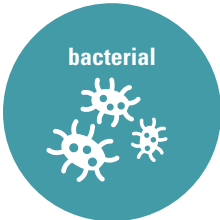
been approached and managed in vertical disease silos. Looking towards 2030, a critical shift will support movement towards a platform-based, holistic approach to achieve universal health coverage that coordinates cross-cutting interventions and improves the sharing and targeting of resources. This will include integrating interventions across NTDs and within national health systems, coordinating among NTD stakeholders and non-NTD health programmes, and collaborating with interdependent sectors including water, sanitation and hygiene (WASH), environment, education, nutrition, vector control and veterinary public health.

WHO list of neglected tropical diseases

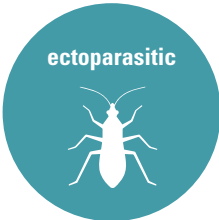
Category	Disease	Burden	Drug donation commitments
Bacterial	1. Buruli ulcer	2018: 2,713 new cases reported across 14 countries.	—
	2. Leprosy	2018: 208,619 new cases reported; 96% of cases occur across 23 priority countries. Targeted for elimination	Novartis: since 2002; unlimited supply of multidrug therapy
	3. Trachoma	2019: 142 million people at risk; 91% reduction since 2002. Targeted for elimination	Pfizer: unlimited supply 1998-2025
	4. Yaws	2019: 15 countries currently known to be endemic. Targeted for eradication	EMS (Brazil): 2018-2022; selected countries
Ectoparasitic	5. Scabies, Myiasis	130 million people at any time.	—
Fungal	6. Mycetoma, chromoblastomycosis, deep mycosis	Global burden unknown. Countries report cases from Africa, Asia, Europe and Latin America.	—
Helminth (parasitic worm)	7. Cysticercosis/Taeniosis (3 tape worm species)	Global burden unknown. T.solium identified as the cause of 30% epilepsy cases in endemic areas.	—
	8. Dracunculiasis (guinea worm)	2018: 28 human cases reported in 3 countries (Angola, Chad, South Sudan). Targeted for eradication	—
	9. Echinococcus	More than 1 million people affected at any one time.	—
	10. Foodborne trematodiasis	Global burden unclear, through cases have been reported in 70 countries worldwide.	Novartis: drug donations to WHO 2005-2022
	11. Lymphatic filariasis (elephantiasis)	2018: 893 million people in 49 countries required treatment. Targeted for elimination	Eisai Co. Ltd: since 2013 GSK: since 1997 MSD: since 1997
	12. Onchocerciasis (river blindness)	2018: Over 150 million people were treated. Targeted for elimination	MSD: since 1997
	13. Schistosomiasis	2017: 220.8 million people estimated to require treatment.	Merck: since 2007
	14. Soil-transmitted helminthiasis (ascariasis, Hookworm diseases, trichuriasis, strongyloidiasis)	1. 5 billion people infected worldwide.	GSK: since 2000 Johnson & Johnson: since 2006
Protozoan	15. Chagas' disease (American trypanosomiasis)	Estimated 6 – 7 million people worldwide; mostly in Latin America. Targeted for elimination	Bayer: 2012-2021
	16. Human African trypanosomiasis (sleeping sickness)	2018: 977 cases reported, a 95% reduction since 2000. Targeted for elimination	Bayer: until 2020 Sanofi: until 2020
	17. Leishmaniasis (cutaneous and visceral)	Cutaneous: estimated 600,00 – 1 million new cases/year. Visceral: 50,000 – 90,000 new cases/year. Targeted for elimination	Gilead Sciences Inc.: 2017-2020 for selected countries
Venom	18. Snakebite envenoming	An estimated 5.4 million people are bitten each year with up to 2.7 million envenomings. 81,000 – 138,000 deaths/year.	—
Viral	19. Dengue and chikungunya fevers	Modelling estimate indicates 390 million dengue virus infections per year. Chikungunya identified in 40 countries.	—
	20. Rabies	Rabies is estimated to cause 59,000 human deaths annually in over 150 countries. 95% of cases occur in Africa and Asia.	—

Cross cutting approaches to tackle NTDs sustainably

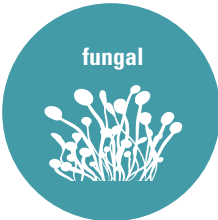
20 DISEASES



- Buruli ulcer
- leprosy
- trachoma
- yaws



- scabies, myiasis



- mycetoma, chromoblastomycosis, deep mycosis

Source: www.who.int/neglected_diseases/diseases/en/

BEHAVIOUR

Behaviours play a key role in tackling NTDs. Physical behaviours are addressed in NTDs programmes, tackling personal hygiene and other risk-reducing behaviours. Emphasising vector control, waste management and livestock keeping as well as protective and treatment-seeking behaviours all strengthen programmes. Addressing attitudes at all levels including community, schools, health systems etc., contribute greatly to successful programmes, promoting inclusion by families and society, of people affected by NTDs, particularly those subjected to stigma and misconception. Institutional behaviours are necessary to ensure NTD programmes contribute to system strengthening and the achievement of UHC.

ENVIRONMENT

A comprehensive approach to environmental sanitation is needed to achieve disease control priorities including separating waste from humans and animals, reducing the risk of vector breeding and contamination of water and soil. In healthcare settings, this must include infection prevention, control and vector control measures. Safe, reliable, affordable, universally accessible and sustainable water infrastructure is needed to prevent consumption of contaminated water, reduce contact with surface water and enable personal hygiene. Environmental disease control must include integrated vector management and veterinary public health services to ensure appropriate livestock keeping, food safety practices and use of expertise for disease surveillance and control.

SOCIAL INCLUSION

Achieving UHC by strengthening health systems and prioritising populations at risk of NTDs is a critical step towards equity and inclusion. This requires mainstreaming inclusion across all NTD interventions, ensuring infrastructure and services are accessible and reach women, children, people with disabilities and other targeted groups. Empowerment of affected communities is necessary to facilitate greater agency, participation and support of all individuals and communities to make decisions for their health and wellbeing. Addressing stigma and discrimination will mean provision of high quality social support services in the family, community, and formal and informal work.

TREATMENT

Strong health systems can provide health and other services to deliver comprehensive treatment, disease management and rehabilitation, based on a continuum of care that goes beyond preventing or curing an infection, but responds to the broader health needs. Preventive chemotherapy is a fundamental component of NTD programmes and should be implemented where a clear strategy has been developed for its large-scale implementation. As disease burden decreases and elimination is achieved, disease surveillance is essential to ensure goals are maintained via a health structure capable of detecting disease outbreaks and potential re-emergence.

LONG-TERM IMPACT

**one billion
people**

**149 countries
worldwide**





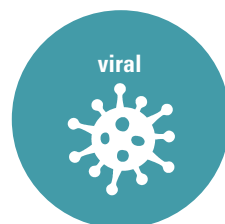
- cysticercosis/taeniosis (three tape worm species)
- dracunculiasis (guinea worm)
- echinococcus
- foodborne trematodiasis
- lymphatic filariasis
- onchocerciasis (river blindness)
- schistosomiasis
- soil-transmitted helminthiasis (intestinal worms)



- Chagas disease
- human African trypanosomiasis (sleeping sickness)
- leishmaniasis (cutaneous and visceral)



- snakebite envenoming

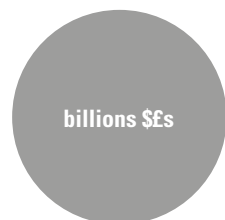


- dengue and chikungunya fevers
- rabies

THE BEST FRAMEWORK



Source: www.ntd-ngdonetwork.org/best-framework



NTDs and the 2030 Sustainable Development Agenda

Considerable progress has been made since the 2012 launch of the last WHO NTD Roadmap including 31 countries eliminating at least one NTD. However, not all targets set for 2020 will be achieved, and concerted action across sectors is required to sustain and build on the progress of the last decade, especially through cross-cutting approaches such as WASH. The WHO global strategy 'Water, sanitation and hygiene for accelerating and sustaining progress on neglected tropical diseases', (2015-2020) emphasizes the urgent need for collaboration between water, sanitation, and hygiene (WASH) sector and the NTD community to tackle NTDs and achieve broader health and development goals. The process to update this global strategy in line with the new roadmap has now started.

Recognising the interrelation between NTDs and several development priorities, NTDs are now an integral part of the 2030 Sustainable Development Goals (SDG), with NTD interventions directly contributing to the achievement of SDG 3.3: 'end the epidemics of...neglected tropical diseases'.

NTD interventions also indirectly impact: SDG 1, 2, 4, 5, 8, 10 and 17:



Progress towards these SDGs 6,9,11,13 will also be critical to tackle NTDs:



31 countries have eliminated at least one NTD.

In order to reach the SDG target for NTDs, it is crucial to integrate NTD activities and interventions into broader health systems, based on the principles of Universal Health Coverage (UHC), which is at the heart of the SDG health agenda. This is evidenced by the 2030 Agenda Declaration, which states that UHC is essential to promoting physical and mental health and well-being and to extend life expectancy for all so that 'no one is left behind.'



A mother administers POS to her child in Mungwi district, Zambia. Sightsavers Zambia, the Zambia MOH, and ITI observed MDA campaigns in Mungwi and Kasama districts in the Northern Province of Zambia from Sept 11-13, 2017. Photo credit: Sumon Ray/ International Trachoma Initiative.

Achieving Health for All: How UK action on NTDs is delivering Universal Health Coverage

People, not diseases

NTDs affect the poorest and most marginalised communities, groups and individuals in society. Those living in conditions of poverty and marginalisation are exposed to an even greater risk of infection due to poor access to water, sanitation and hygiene and inadequate housing, as well as to multiple barriers to accessing livelihoods and basic services through to disease-related stigma and social exclusion. These challenges interact with one another resulting in multiple outcomes at the individual and community

level. Given the range of and mutually reinforcing nature of NTD outcomes, the burden of NTDs represent a vital indicator of social and financial inequality.

Universal Health Coverage

The global development agenda enshrined in the Sustainable Development Goals recognises the multidimensional nature of health and the need for health systems to explicitly tackle inequalities and reach the poorest and most marginalised groups and individuals. Efforts to achieve SDG 3 – Health and Wellbeing for All – are underpinned by a global commitment to achieving universal health coverage (UHC).

For over 60 years the UK has proudly led the charge for Health for All, ensuring people who need health services can access the care that they need with no risk of financial hardship. This principle is strongly reflected in the UK's ongoing support to the fight against NTDs.

For over 60 years the UK has proudly led the charge for Health for All.

UHC and NTDs

In September 2019, ahead of the UN High Level Meeting on UHC in New York, the APPG on Malaria and NTDs convened UHC and NTD experts, from DFID, Chatham House and UK NGOs together with parliamentarians and supporters of the APPG to reflect on how the UK's investment in NTDs contributes to the progressive achievement of universal health coverage.



APPMG Meeting on UHC and NTDs 10 September 2019.

Key messages highlighted:

- **A long-term view of aid** to health is critical to both NTD elimination and developing strong health systems.
- **Collaboration across sectors** is critical to sustainably tackle diseases of poverty like NTDs: NTD stakeholders should work together as a community to strengthen the capacity of the health system, which in turns helps progress towards UHC.
- **Achieving UHC**, including publicly-financed promotive, preventive, curative and palliative services, is essential to tackling NTDs; at the same time, integration of NTDs into a package of essential services can contribute greatly towards achieving UHC in low and middle-income countries.
- **The UK has an important and distinctive role** in advising countries seeking to achieve UHC.
- **Intersectoral action** can strengthen health systems and learning from best practices can help avoid siloed approaches that are less likely to achieve sustained impact.
- **Mass drug administration** for NTDs should be implemented with other complementary strategies and delivered through primary healthcare systems in order to result in stronger health systems and sustained impact.

A summary of UK commitments to NTDs (since 2012 – present)

Date of announcement	Commitment	Composition/focus
September 2019	NTD flagship programme ASCEND: £220 million till 2022. This financing is an allocation from the £360 million announced in 2017.	5 NTDs across 25 countries: lymphatic filariasis; onchocerciasis; schistosomiasis; trachoma; and visceral leishmaniasis. This also includes an allocation of £6.5 million to support the WHO to tackle NTDs.
April 2018	£20 million through the 2018-2020 to support elimination of blinding trachoma in 10 Commonwealth countries through the implementation of the SAFE strategy (surgery, antibiotics, face washing, environmental improvements)	Focus countries include Kenya, Kiribati, Nauru, Nigeria, Papua New Guinea, Pakistan, Tanzania, Tonga, Solomon Islands and Vanuatu
April 2017	£360 million to support implementation programmes (2017-2022)	£205 million in new support £55 million (2017-2018) forming part of the 2012 UK commitment to NTDs £100 million from The Ross Fund (implementation)
April 2017	Allocations from The Ross Fund: £48 million to Drugs for Neglected Diseases Initiative (DNDi) for research and development on improved drugs for NTDs	Focus on sleeping sickness and visceral leishmaniasis
April 2017	£30 million to Foundation for Innovative New Diagnostics (FINN) to support R&D for diagnostics £10 million to the Coalition for Operational Research on Neglected Tropical Diseases (COR-NTDs)	Focus on Chagas disease and sleeping sickness Evidence generation to support effective delivery of NTD programmes
January 2016	The Ross Fund: £200 million allocated to NTDs from The Ross Fund	The Ross Fund is a £1 billion portfolio for research and development in products for infectious diseases and to strengthen delivery of products for antimicrobial resistance, diseases with epidemic potential and NTDs.
January 2012	£195 million to support integrated country approaches for NTD programmes (2012-2017)	Includes £20 million committed in October 2011. Guinea worm, lymphatic filariasis, river blindness, schistosomiasis, trachoma and visceral leishmaniasis.

Challenges for continued progress on NTDs

As we look to a new WHO NTD Roadmap and a changing global NTD landscape, several challenges must be addressed to continue momentum and ensure impacts of NTD programmes are sustained. Ongoing NTD leadership guided by the new 2021-2030 WHO NTD Roadmap will be crucial.



Shehara and Kalpani from Northern Province, Sri Lanka – a leprosy-affected mother with her five year old daughter – with access to clean water thanks to the installation of a new tube well. Credit: © Ruth Towell/The Leprosy Mission

Challenges facing the global NTD community include:

Climate change	Insecurity and conflict	Improved tools: diagnostics and treatments	Morbidity management and rehabilitation
Domestic financing for national health systems	Cross-sectoral engagement	Gender inequity	Stigma and social exclusion

Gearing up to defeat neglected tropical diseases over the next decade



Dr Mwēlecele Ntuli Malecela
Director, Department of Control of Neglected Tropical Diseases, World Health Organization, Geneva, Switzerland.

Neglected tropical diseases (NTDs) are mostly preventable infections that deform, disable, blind and kill. They affect over 1 billion people in more than 149 countries worldwide, mostly the poorest, most marginalized communities. NTDs cause immense suffering, lost productivity and reduced global prosperity.

The World Health Organization (WHO) prioritizes the prevention, control and elimination of 20 of these diseases of poverty, including the eradication of two (dracunculiasis and yaws).

Concerted global action over the past decade has driven progress through strong political determination by countries in which these diseases are endemic. Unflinching support by government agencies – including the UK Department for International Development and the United States Agency for International Development and with the assistance of a host of dedicated partners, donors, industry, stakeholders and nongovernmental organizations –

has halted the progression of many of these diseases and delivered the following results:

- treatment for more than one billion people for at least one NTD for four consecutive years since 2015;
- freedom from NTDs for almost 500 million people during the past decade;
- elimination of lymphatic filariasis as a public health problem in 16 countries;
- elimination of onchocerciasis in 4 countries;
- elimination of trachoma as a public health problem in 9 countries;
- historically low numbers of cases of human African trypanosomiasis (sleeping sickness) from more than 10,000 in 2009 to only 977 cases in 2018;
- near elimination of visceral leishmaniasis as a public health problem in South-East Asia;
- publication of WHO’s global strategy to prevent and control snakebite envenoming, advocating global action for timely access to safe, efficacious and appropriate anti-venoms for vulnerable communities;
- robust vector control with adequate local capacity as envisaged in the Global Vector Control Response to support universal health coverage by addressing the growing problems associated with climate change and the rapid spread of *Aedes* mosquitoes worldwide;
- rolling out WHO’s ‘Zero by 30’ strategy to achieve zero human deaths from rabies through intersectoral collaboration in prevention and control; and
- shipment of donated azithromycin to selected countries to accelerate the eradication of yaws.

Despite substantial progress, the targets set out in the roadmap for 2012–2020 will not be met.

Because NTDs are diseases of poverty, our defining task is both medical and social. To ensure that the targets for eradication, elimination and control are met, we need new, innovative tools that measure inequity just as they measure clinical impact.

To drive out these diseases, we must innovate, collaborate and accelerate. Efforts must be refocused on integrated approaches, improved diagnostics and greater collaboration to protect the gains made. To that end, and with the help of the global community, we have developed a new roadmap for 2021–2030 with bolder, more ambitious targets. With collaboration in mind, we have reached out to our stakeholders and partners the world over in making this the widest consultations by and for the NTD community, to date.

Implementation of the roadmap will contribute to achieving the health-related Sustainable Development Goals and to promoting primary health care and universal health coverage.

The roadmap targets a reduction in the number of people requiring interventions against NTDs by 90% to ensure a more just and equitable world in which people can share prosperity and lead healthier and fulfilling lives.

It aims also to increase from 40 to 100 the number of countries having eliminated one NTD, and to eradicate two diseases. By doing so, we can treat billions of people, train millions of community and health workers and provide access to health care for

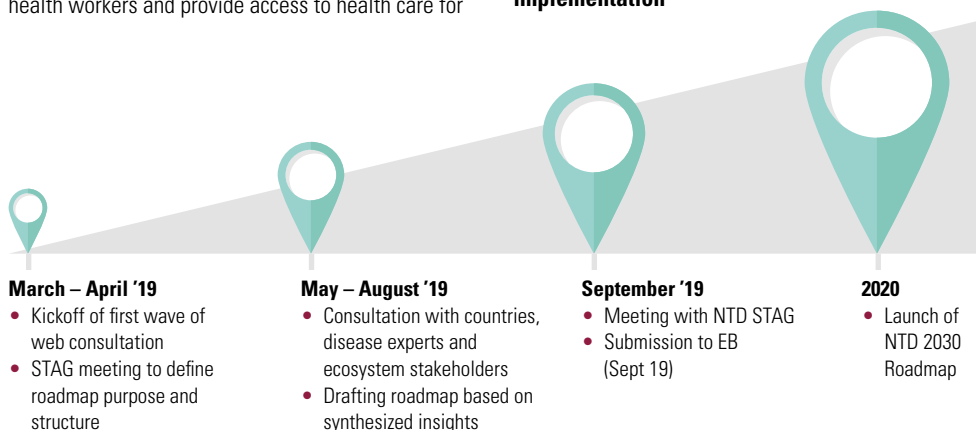
those who live far from a health facility. Above all, we can contribute to strengthening health systems.

To realize these ambitions, we must work with communities, local governments, regional bodies, national health and other systems as well as globally with other agencies. Success will depend on working with partners through cross-sectoral programmes such as education, water and sanitation, food safety, nutrition and climate change adaptation.

We must also use artificial intelligence (AI) and harness the power of convergent technologies to develop practical, ready-to-use tools and applications that support disease mapping and plans for distributing donated medicines. AI and platforms such as the Global Information System (GIS) can also be used to address last mile challenges such as identifying residual hotspots of a disease which are often found in remote areas. This innovative thinking is critical to the success of reaching the last mile.

Technology, as well as pooled resources and expertise can revolutionize the way we report, share and store data, and help us to monitor and evaluate programmes more effectively. As diagnostic and laboratory capacity is built, and as the impacts of climate change, urbanization, new agricultural methods and food insecurity on disease transmission are elucidated, we must continue to identify and adapt approaches to direct our road to 2030.

To recap – the Roadmap will be launched in 2020. Afterwards, the role of the Secretariat will be to guide and support countries with implementation



ASCEND: The UK's New Neglected Tropical Diseases Programme

Compiled from the DFID ASCEND Press Release and the ASCEND APPMG Meeting Report written by the SCI Foundation (on the APPMG website)

Background Information

The UK is a global leader in the fight against NTDs as a major funder for implementation programmes as well as research and development of drugs and diagnostics. At the 2017 NTD Summit, the UK Government committed to invest £360 million through 2022 on implementation programmes 'to help protect 200 million people worldwide from debilitating diseases' known as NTDs. At the 10th Annual Meeting of the NTD NGO Network (NNN) in Liverpool, the Parliamentary Under-Secretary of State for International Development, Baroness Sugg, announced the launch of the Accelerating Sustainable Control and Elimination of Neglected Tropical Diseases (ASCEND) programme which from mid-2019 will be the main vehicle for delivering this commitment.

ASCEND is the second phase of the UK's pilot NTD programme and will continue to focus on the 5 diseases covered in the original programme working alongside the World Health Organization, health ministries and communities: lymphatic filariasis, onchocerciasis, schistosomiasis, trachoma, visceral leishmaniasis. ASCEND will protect 200 million people across 25 countries. ASCEND will expand from the original programme on delivering control and elimination interventions with its increased focus on: (1) health systems strengthening and sustainability; (2) integration across NTDs and with the health system; and (3) cross-sector collaboration (particularly WASH and education).

The programme is divided into three contracts: two programmatic grants managed by implementing consortiums led by Sightsavers and Crown Agents. The third contract will cover third-party monitoring and evaluation.

ASCEND Lot 1 led by Crown Agents in consortium with Abt Associates, Oriole Global Health and the Royal Tropical Institute will support the programme in 12 countries in **East and Southern Africa and South**

Asia. As part of a focus on sustainability, they will be taking a fresh look at blockages and inhibitors of progress such as: fragmented supply chains, parallel processes, lack of coordination and prioritisation within health systems. During the ASCEND programme they will support progress towards 'the end game' in NTD programming by facilitating surveillance and transmission surveys that help countries progress towards achieving and demonstrating/validating elimination.

ASCEND Lot 2 led by Sightsavers along with a consortium of partners including the Schistosomiasis Control Initiative Foundation, the Liverpool School of Tropical Medicine and Mott MacDonald will support implementation across 13 of the world's poorest countries in **West and Central Africa.**

Between 2019 and 2022, ASCEND they will deliver 440 million treatments to reach the elimination threshold for diseases and promote long-term sustainable change.

The APPMG held a meeting on 22nd October 2019 to celebrate the launch of ASCEND.

Meeting Report

The Minister of State for International Development, the Rt Hon Andrew Murrison MP, opened the meeting by welcoming the announcement of the ASCEND programme. He noted that it builds upon learning from DFID's work to improve health, and that its structure of integration and health systems strengthening design takes account of the shortcomings of vertical programmes in reducing the burden of diseases and addressing the final cases of diseases towards elimination. He emphasised the role of tackling NTDs in increasing impact in economic growth, addressing poverty, and education across generations. The Minister expressed pride in UK investment on international development, and NTDs specifically, and noted the opportunity presented by the UK's hosting of the GAVI replenishment summit in 2020 to sustain the UK's leadership in global health. Warm congratulations were offered to the APPG's continued activity on malaria and NTDs, especially the leadership of the Chair, Jeremy Lefroy MP. In a round of questions from present parliamentarians including Dr. Paul Williams

MP and Fiona Bruce MP, the Minister further noted that targeting NTDs is fundamental to the achievement of Universal Health Coverage. He emphasised the low cost of many NTD interventions in relation to lives saved, making them a 'development best-buy' and consequently an area of great interest to DFID.

Lot 1: East and Southern Africa, South Asia

Kate Hargreaves, Team Leader for ASCEND Lot 1, Crown Agents, presented the overarching approach utilised by the Lot 1 consortium, emphasising the need for sustainability including reduced reliance of NTD programmes on donors and less emphasis on treatment. Philip Davies, Health Systems and Economics Lead, Abt Associates, explained that sustainability is woven throughout the approach, to ensure that the situation does not revert to pre-programme status once delivery ends. Sir Roy Anderson, Oriole Global Health provided an overview of NTD burden data, showing that many of these are highly concentrated. He noted the role of new diagnostics in reading prevalence level data and determining elimination achievement, the need to measure compliance with treatment programmes and how the programme aims to create a desire within health ministries to take ownership and leadership of NTD programmes.

Lot 2: West and Central Africa

Simon Bush, Director of NTDs at Sightsavers, emphasised that ASCEND is led by national governments and driven by community needs, aligned

with countries' own national plans. The main way in which ASCEND differs from previous programmes is the tackling of multiple diseases in one programme, recognising that people and communities carry multiple diseases. We then heard from Amy Clark, the ASCEND Knowledge Innovation and Learning Unit lead, about how the programme will have an embedded learning culture in each aspect of the programme to ensure continuous 'Collaboration, Learning and Adapting' throughout the project cycle.

Sunday Isiyaku, Ghana and Nigeria's Country Director for Sightsavers, and Agatha Aboe, the Global Technical Advisor for trachoma spoke of the success of NTD programmes such as UNITED and The Global Trachoma Mapping Project in Nigeria and Ghana thanks to DFID's support. The importance of health-systems strengthening, and partnership are key lessons learnt that are built into ASCEND to ensure its success.

Laura Westcott, Diseases of Poverty Hub Lead, DFID, joined the panel to address questions including those on impact evaluation, and concerns of antimicrobial resistance (AMR) in treatment programmes. Reassurance was given that DFID is addressing AMR in close collaboration with WHO, while improving treatment targeting and pausing mass drug administration where necessary. When asked whether there was a likelihood of expanding NTD investment to other countries DFID noted how closely they work with other donors and implementing partners to identify and address gaps.



(L-R) Sir Roy Anderson, Kate Hargreaves, Philip Davies, Jeremy Lefroy MP, Catherine West MP, Simon Bush, Amy Clark, Sunday Isiyaku, Agatha Aboe

Summary of Events

hosted by the APPG on Malaria and Neglected Tropical Diseases

11th December 2018

APPMG Christmas Party, Uhuru Day and Jamhuri Day

A joint reception hosted by the APPGs on Tanzania, Kenya and on Malaria and NTDs. This joint reception marked both 'Uhuru Day' (Tanzania's Independence Day), Jamhuri Day (Kenya's Independence Day) commemoration and annual progress across malaria and NTDs, with the launch of the APPMG's Annual Report. Jeremy Lefroy MP is the Chair of all three APPGs.

10th January 2019

Roundtable meeting with Philip Welkhoff, Director of Malaria at Bill and Melinda Gates Foundation

The officers of the APPG met with Philip Welkhoff, Director of Malaria at the Bill and Melinda Gates Foundation (BMGF). Despite the early start and the busy day of Brexit debate ahead, there was a good turnout with 4 of the 6 APPMG officers in attendance. Themes discussed in depth included the current global state of play including a discussion of the factors that are stalling progress and the BMGF's new malaria strategy and how they aim to overcome the challenges, the importance of a successful Global Fund replenishment, and ensuring no one is left behind.

31st January 2019

Meeting with Dr Mwele Malecela, Director of the Department for the Control of Neglected Tropical Diseases, World Health Organization

The APPMG took the opportunity to welcome Dr Mwele Malecela, the new Director of the Department for the Control of Neglected Tropical Diseases at the World Health Organization, along with representatives of the UK Coalition against NTDs and the London Centre for NTD Research. Discussions focused on the upcoming priorities of the WHO NTD Department and how the APPMG could support these goals. The WHO will launch a new NTD roadmap, 2021-2030 and seek extensive consultation to ensure community and endemic country buy in. The APPMG agreed to reach out and support endemic country parliamentary bodies and to support UK parliamentary discussions on a new roadmap.



Dr. Malecela with Francis Peel, Justine Marshall and Sir Roy Anderson of the London Centre for NTD Research, Aparna Barua of the UK Coalition against NTDs and Jeremy Lefroy MP, Chair of the APPMG.

5th February 2019

University of Oxford, MSc International Health and Tropical Medicine Students Presentation Series: Policy Briefings on Global Health



Oxford MSc International Health and Tropical Medicine Students 2019, copyright © Oxford University/ Alice Norton

The APPMG hosted students from the University of Oxford MSc International Health and Tropical Medicine programme to present their global health policy briefings at Parliament:

- 'What is the reality of specialist mental health services available for those living with HIV/AIDS and is there scope in aid programmes and funding to ensure that those in low income countries are able to access this support?' *Dr Adeniyi Aderoba, Ainura Moldokmatova, Dr Hai Duong Ha, Luzia Freitas, Sreymom Pol*
- 'What are the policy implications and opportunities from the BEST Framework to ensure inclusive development supports key populations including, children, maternal health, refugees, nomadic and indigenous communities in achieving access to Universal Health Coverage through NTD investments?' *Dr Alexey Youssef, Dr Vitalis Feteh, Dr Lilian Ibe, M. Fariba Hossain, Dr Zineb Bentounsi*
- 'In light of the overlap in endemicity of NTDs and the big three diseases, what are the entry points to include NTD investments within the Global Fund to Fight AIDS, TB and Malaria?' *Francisco Obando, Dr Li Ann Ong, Dr Mona Ibrahim, Dr Nicole Feune de Colombi, Rita Njeru, Dr Sulaiman Jalloh*

- 'UK Aid malaria funding: The differences for endemic country experience between direct bilateral funding for malaria programmes versus contributions to the Global Fund.' *Dr Elisha Ngetich, Dr Farah Jawitz, Dr Grace Mzumara, Martin Merello, Samantha Fien-Helfman*
- '40 Million by 2022: challenges and opportunities of TB programme scale-up to reach the missing millions' *Dr Claudia Paul, Dr Mesulame Namedre, Na'ima Nasir, Rachel Hounsell, Dr Zay Yar Phyo Aung*

5th March 2019

Roundtable on the Replenishment of the Global Fund to Fight AIDS, TB and Malaria



L-R: Stephen Kerr MP, Rt Hon. Nick Herbert MP, Preet Gill MP, Peter Sands, Rt Hon. the Lord Fowler – Lord Speaker, Virendra Sharma MP, Jeremy Lefroy MP, Rt Hon. Baroness Hayman, Catherine West MP, Lord Crisp

The Global Fund to Fight AIDS, TB and Malaria has helped to save 27 million lives since 2002. In 2019 the Global Fund is seeking to raise at least US\$14 billion to fund programs to fight the three diseases and build stronger, more resilient, health systems over the next three years. UK investment in the Global Fund has been a critical driver of progress to date and will be essential to the achievement of the Sustainable Development Goals. Peter Sands, the Executive Director of the Global Fund, joined the APPGs on HIV/AIDs, TB and Malaria and NTDs for a detailed discussion on the case for investment and the importance of the UK's pledge. Key outcomes of this meeting were the agreement to hold a Global Fund debate in the House of Commons and

to hold a Parliamentary reception both to advocate for a continued strong UK leadership with the 6th replenishment.

19th March 2019

Spotlight on UK Research: Overcoming challenges in Malaria – Drug resistance and drug development

Researchers from three British institutions shared the vital research that is being carried out to help overcome major global challenges in the fight against malaria.

Rob van der Pluijm, on behalf of the Mahidol-Oxford Tropical Medicine Research Unit (MORU), presented the Tracking Resistance to Artemisinin Collaboration II and the Developing Triple Artemisinin-based Combination Therapies (DeTACT) Project. We heard encouraging findings from the TRAC II programme, a multi-country programme exploring the current prevalence of drug resistance in the Greater Mekong Sub-region, and the efficacy of treating patients with three Artemisinin Combination Therapies (ACTs), or triple ACTs.

Sir Martyn Poliakoff and **Professor Michael George**, University of Nottingham, presented their work on the development of a greener, semi-synthetic artemisinin.

Artemisinin is one of the key components of many anti-malarial treatments. However, the main source of supply remains extraction from the plant *Artemisia annua* and with seasonal fluctuations, there is a need for an alternative supply. The team from University of Nottingham are funded by the Bill & Melinda Gates Foundation to develop an efficient and reliable method to produce semi-synthetic artemisinin.

Finally, **Dr Don van Schalkwyk** of the London School of Hygiene and Tropical Medicine, funded by the Medicines for Malaria Venture (MMV) presented his research to (1) explore the drug susceptibility of non-falciparum malaria parasites and (2) attempt to adapt a new malaria species to grow in the lab.

Plasmodium falciparum is the deadliest malaria species and is widely distributed in all malaria

endemic regions. But, as strategies to combat malaria take effect, the prevalence of this falciparum species may decline and the other species could become more important threats to health than they currently are and therefore medicines need to be tested on more neglected forms of malaria.

25th April 2019

World Malaria Day Celebration



The Rt Hon. Harriet Baldwin, Minister of State for International Development and for Africa spoke at the reception about DFID's work fighting malaria

To mark World Malaria Day, the APPMG invited representatives from similar Parliamentary bodies in endemic countries to discuss how these groups can support their respective governments and each other to reach the ultimate goal of ending malaria.

The World Malaria Day event began with a one-hour panel discussion and was followed by a reception with a speech from Rt Hon. Harriett Baldwin, the Minister of State of International Development and live music from the Pumphandle Blues Band. Stephen Kerr MP also shared his powerful experience of visiting those affected by malaria with Malaria No More UK in 2018 in Kenya.

The panel was comprised of representatives from Parliamentary malaria advocacy bodies in the UK, Uganda (Uganda Parliamentary Forum on Malaria, UPFM) and Tanzania (Tanzanian Parliamentarians against Malaria and NTDs, TAPAMA NTDs) as well as a Ministry of Health official from Uganda.

We heard passionate contributions from Dr Diana Atwiine, the Permanent Secretary of Health Uganda and Hon. Moses Balyeku MP, the Chair of the UPFM. Dr Hermengild Mayunga spoke on behalf of the TAPAMA NTDs group about the important role for Parliamentarians in supporting the Ministry of Health in the fight against malaria and the work that they were doing to create a regional Parliamentary malaria forum for East Africa. Mr. James Kiiru, Counsellor to the High Commissioner of Kenya to the UK, commented from the audience on the value of the Kenyan Government's commitment to fighting malaria and their support to see representatives from Parliamentary groups in East Africa as well as Ministry of Health officials together discussing this issue.



L-R: Dr Diana Atwiine, Jeremy Lefroy MP, Hon. Moses Balyeku MP, Catherine West MP, Dr Hermengild Mayunga

11th June 2019

With support from the British Society of Parasitology: Integrating Malaria and Neglected Tropical Diseases: From Intervention to Surveillance

The APPMG worked with Prof. Maria-Gloria Basáñez and Colin Sutherland, Co-Chairs of the British Society of Parasitology to showcase research and work being done by British scientists that crosses over between malaria and neglected tropical diseases. Presentations showcase what the NTD community has to gain taking learnings and tools from the malaria community and vice-versa and how more collaboration across these disease programmes can be beneficial to all.

- **Dr Menno Smit** (Liverpool School of Tropical Medicine) presented on how Ivermectin used to treat onchocerciasis and lymphatic filariasis has impacted on malaria control. Ivermectin can be used as an insecticide though dosages would need to be increased for this use and treatment more often.
- **Dr Rachel Pullan** (London School of Hygiene and Tropical Medicine), shared her research on mapping lymphatic filariasis (LF) and bednet distribution in Africa. The data has shown that bednet distribution and also indoor residual spraying (IRS) have had a positive effect on lowering LF. Using this research, the NTD modelling consortium are identifying specific areas of priority for bednet distribution. These areas are co-endemic for malaria and LF, high burden and approaching elimination.
- **Dr Martha Betson** (University of Surrey) presented on the potential interactions between treatments for malaria, STH and schistosomiasis. The findings have shown that in children who have been treated for STH and schistosomiasis, when they have needed the drug artemether-lumefantrine (AL) for malaria, this treatment has not been as effective. With the scale-up of preventative chemotherapy for STH and schistosomiasis in school-aged children, the global

health community must consider how to treat malaria effectively in those children.

- **Dr James La Course** presented research on behalf of **Professor Russell Stothard** (Liverpool School of Tropical Medicine) on enhancing co-surveillance of malaria and NTDs with non-invasive sampling. As we are approaching elimination of malaria and NTDs in some countries, increased surveillance is a top priority however, funding often seems limited. This study looks at how separate health programmes for malaria and NTDs can share samples to make surveillance more cost effective using urine, blood and stool.

18th June 2019

Tropical Snakebite

With the support of the Kofi Annan Foundation, Médecins Sans Frontières, The Global Snakebite Initiative, Health Action International, some governments and several academics, the WHO included snakebite envenoming within the list of recognised NTDs in 2017. On 23rd May 2019, WHO launched its strategy to halve global mortality and morbidity rates by 2030. On the 16th May, the Wellcome Trust announced a £80m/7 year Strategic Programme that provides urgently needed investment to achieve key tasks within WHO's strategy. On the same day the UK Department for International Development also announced their £9 million funding of the Scientific Research Project for Neglected Tropical Snakebite. In light of recent, unprecedented investments in tropical snakebite, the APPG met to review the medical and societal burden posed by snakebite. We heard of (i) WHO's strategy to halve this burden by 2030, (ii) which planks of WHO's multifaceted strategy will be supported with investments by Wellcome Trust and UK Government (iii) of other current/planned investment in this NTD including potential grants from the Hamish Ogsten Foundation. The objective of this APPG meeting was to identify which sections of WHO's snakebite-management strategy will require support and identify opportunities/strategies to plug these gaps

in the provision of effective systems to reduce the mortality and morbidity of snakebite.

Speakers included:

- Dr Diogo Martins – Wellcome Trust
- Dr Dirk Mueller – the UK Department for International Development
- Prof. David Warrell – Oxford University
- Prof. David Lalloo – Liverpool School of Tropical Medicine
- Prof. Robert Harrison – Liverpool School of Tropical Medicine

26th June 2019

Stepping up the Fight to End HIV, Tuberculosis and Malaria: A Parliamentary Reception hosted by the APPGs on HIV/AIDS, Global TB and Malaria and Neglected Tropical Diseases



Global Fund to Fight AIDS, TB and Malaria: (Jeremy Lefroy MP, Stephen Doughty MP, Rt Hon Dr Andrew Morrison MP, Michael Sheen, Charlie Webster, Rt Hon Nick Herbert CBE, Peter Sands, Alex Norris MP and Maurine Murenga)

The APPGs on HIV/AIDS, Global TB and Malaria and NTDs hosted a joint reception to gain Parliamentary support for the upcoming 6th replenishment of the Global Fund to End AIDS, Tuberculosis and Malaria. The Chairs of the 3 APPGs – Jeremy Lefroy MP, Stephen Doughty MP and Rt Hon. Nick Herbert CBE MP, welcomed over 25 Members of Parliament and other guests to the event and celebrated UK leadership to global health initiatives and as a major donor to the Global Fund.

Speakers included Peter Sands, Executive Director of the Global Fund; Maurine Murenga, a Global Fund Advocate from Kenya and person affected by HIV; Charlie Webster, TV presenter and malaria survivor/ advocate; and Michael Sheen OBE, actor and Global Fund advocate. The group heard about the devastation caused by these diseases, the investment case for the replenishment and spoke about the impact a successful replenishment would mean. Raising US \$14 billion would mean 16 million lives saved, getting back on track to end these diseases and contributing to SDG 3 and strengthened health systems.

Rt Hon. Dr Andrew Murrison MP, Minister of State for International Development, re-affirmed the UK Government's support to the Global Fund and its help to ensure a successful 6th Replenishment. Alex Norris MP, Shadow Minister of State for International Development also spoke of the Labour party's support to initiatives such as the Global Fund and the need to achieve universal health coverage.

An excellent follow-on from the event was the early announcement on Saturday 29th June 2019 at the G20 Summit in Osaka, Japan from the Prime Minister that the UK would increase its contribution to the Global Fund to End AIDS, TB and Malaria by 16 per-cent.

2nd July 2019

Annual General Meeting

At the Annual General Meeting, the APPMG officers and members conducted mandatory business to maintain an APPG including the election of officers and the approval of accounts. Members present also reviewed 2018/2019 events and made suggestions and recommendations and agreements for upcoming events for the rest of 2019 and 2020. The officers also approved a donation of bednets to a chosen beneficiary, Jinja Organisation of Parents with Deaf Children (JOPDC) in Uganda (further details in other APPG activities)

10th September 2019

Achieving Health for All: How UK action on NTDs is delivering Universal Health Coverage

Ahead of the High Level Meeting on UHC on 23rd September, the APPG on Malaria and NTDs, together with the UK Coalition on NTDs and the Action for Global Health network took this opportunity to take stock on what has worked to date, and what needs to be done to ensure that NTDs and UHC are closely aligned.

The session kicked off with Nel Druce from DFID's Health Services Team giving an overview of the UK's work towards universal health coverage (UHC). She highlighted that to tackle diseases of poverty like NTDs, collaboration across sectors was critical. She noted the importance of low and middle-income countries integrating NTDs into a package of essential services, which will contribute towards achieving UHC.

Robert Yates, Head of Global Health Security at Chatham House, gave an overview of UHC in relation to malaria and NTDs. He argued that implementing UHC was the best way to tackle these diseases. He also stressed the importance of a predominately publicly financed healthcare system. The UK achieved this in 1948 with the NHS, but in recent years UHC has declined and there is much to be done. He argued that the UK has a role to advise other countries that are seeking to achieve UHC, for example, with Kenya. Honing in on NTDs, Helen Hamilton, WaterAid and Yael Velleman, SCI Foundation, gave an overview of how four key elements of UHC – promotive, preventive, curative and palliative – are applicable to NTDs. They argued that intersectoral action can strengthen health systems, and that learning from best practices can help to move away from siloed approaches. This is notably demonstrated in a recent toolkit on WASH and NTDs developed by the NTD NGO Network (NNN) and the WHO, which has already been adopted and implemented in Kenya.

Christian Rassi from Malaria Consortium reflected on the success that chemoprevention through mass drug administration (MDA) has had for NTDs. However, he noted MDA could not be a standalone intervention, and other complementary strategies must also be considered. Integrating NTDs into primary healthcare can help to achieve UHC and Malaria Consortium have implemented a small-scale study in Ethiopia which provided lessons around the challenges of doing so.

The following discussion focused on the merits and challenges of integrating NTDs into health systems, with examples of how countries have integrated diseases into primary healthcare for a period of time before it became separated out again into 'vertical' programmes. Participants discussed the importance of a long-term view as critical to achieving both UHC and the elimination of NTDs. There was consensus that much more could be done to foster longer term vision.

11th September 2019

Roundtable presentation on The Lancet Commission on Malaria Eradication

The APPG hosted a breakfast meeting with global malaria leaders on the eve of the UK launch of the ground-breaking report from the Lancet Commission on Malaria Eradication, to informally discuss the report as well as the near and longer-term priorities, opportunities and challenges ahead in the fight against malaria, including critical interlinkages with wider health and development priorities.

Attendees:

- Dr Abdou Diallo, CEO, RBM Partnership to End Malaria.
- Dr Ken Staley, Global Malaria Coordinator, President's Malaria Initiative.
- Professor Sir Richard Feachem, Co-Chair of the Lancet Commission on Malaria Eradication.

- Dr Corine Karema, Senior Technical Advisor for Infectious Diseases, Quality and Equity Healthcare, Rwanda.
- Parliamentarians: Stephen Lloyd MP, Jeremy Lefroy MP, and Baroness Shas Sheehan, Liberal Democrat Spokesperson for International Development

Sir Richard Feachem has shared an article about the findings of the Lancet Commission on Malaria Eradication, which can be found on page 16 in the malaria section of this report.



L-R: Dr Abdou Diallo, Dr Ken Staley, Jeremy Lefroy MP, Baroness Sheehan, Dr Corine Karema and Sir Richard Feachem

22nd October 2019

The Launch of DFID's New NTD Programme, 'ASCEND'

The APPMG has worked with the DFID NTDs team and the leading implementing partners to introduce the new programme to the members of the APPMG at this meeting.

A full introduction to the ASCEND programme and meeting report can be found on page 29 and 30.

Meetings cancelled in November and December 2019 for the General Election.

Parliamentary Debates and Questions

Major themes that are relevant to the APPG on Malaria and NTDs that were debated in Parliament this year include the following:

The Global Fund to Fight AIDS, TB and Malaria

HOC 20th March and 6th June 2019

- Dr Paul Williams MP, Jeremy Lefroy MP, Dan Carden MP, Alistair Burt MP, Bambos Charalambous MP spoke in support of continued UK funding for malaria through the Global Fund and asked the Government to ensure that the Global Fund reaches the most marginalised and vulnerable populations

Sustainable Development Goals

HOL 10th July 2019

- Baroness Manzoor spoke of her support of the Global Fund as a means to reach SDGs

The role and future of DFID

HOC 27th February and 1st July 2019

- Jeremy Lefroy MP congratulated the Government on the role they have played through DFID funding

into malaria and neglected tropical diseases and the tremendous progress that has been made since the early 2000s on these diseases.

- Stephen Kerr MP spoke at length about his experience in Kenya with Malaria No More UK and his encouragement of the government to maintain funding for malaria programmes including with the Global Fund. Laurence Robertson MP, Harriet Baldwin MP, Maggie Throup MP also spoke of their support for malaria funding, including the Global Fund.
- Departmental update on 28th October 2019 in which Alok Sharma mentions DFID funding for malaria in bilateral programmes and also in their contribution to the Global Fund

Vaccinations and Health Screening Services

HOL 14th May 2019

- Baroness Hayman asked the Government for continued investment in vaccine research for malaria and other diseases.

Disability Inclusive Development

HOC 31st October 2019

- **Jeremy Lefroy MP** spoke of his support of DFID programmes, specifically regarding NTD programmes as NTDs cause many disabilities. Mr. Lefroy MP spoke about his personal experience visiting those with disabilities affected by NTDs, including from blindness and lymphatic filariasis and recounted his most recent APPMG delegation trip to Tanzania with Dr Paul Williams MP. Mr. Lefroy MP congratulated the Government on the launch of the ASCEND programme and the great impact the DFID programmes are having on the ground for those with disabilities.
- **Steven Twigg MP** thanked Jeremy Lefroy MP for his chairmanship of the APPMG as well as on the board of the Liverpool School of Tropical Medicine.

Universal Health Coverage

HOC 10th July 2019

- **Alistair Burt MP** spoke passionately about why and how the UK could make a great stand at the UN HLM on UHC including continued championing of the UK's commitment to fighting NTDs and their work on WASH programmes which will ultimately support in the fight against NTDs. Minister Burt



Jeremy Lefroy MP speaking in the House of Commons.
Credit @ Parliamentlive.tv

also spoke of the need for a continued focus on malaria and the important work of the Global Fund to Fight AIDS, TB and Malaria.

- **Jim Shannon MP, Dr Philippa Whitford MP, Chris Law MP, John Lamont MP, Stephen Twigg MP** all speak about the need for a strong Global Fund replenishment and continued efforts to fight malaria. Stephen Twigg MP championed the UK's commitment to fighting NTDs and the pride he has of the contributions of the Liverpool School of Tropical Medicine.

Role of the UK in the Commonwealth

HOL 12th June 2019, 25th July 2019

- **Baronesses Hayman and Sheehan** mention Malaria and NTD Summit at CHOGM 2020 in Rwanda
- Multiple debates about the Commonwealth in which **Jeremy Lefroy** and other MPs took the opportunity to discuss the commitments made at CHOGM 2018 Malaria Summit in which all Commonwealth leaders committed to halving malaria across the Commonwealth by 2030. **Stephen Twigg MP** spoke of his support of the Global Fund at the Britain's Place in the World debate and **Richard Graham MP** about his support of the Commonwealth Commitment to fight malaria.

Parliamentary Members' Activities

During this reporting period the secretariat supported members of the group to take part in global events on behalf of the APPG, championing continued UK aid across malaria and neglected tropical diseases.

UK – East Africa Health Summit

27th April 2019, London, UK

This summit brought together Government, Ministry of Health and private sector leaders from United Kingdom, Kenya, Tanzania and Uganda and the APPMG convened a panel discussion focused on malaria and how Parliamentary bodies such as the APPMG can support their respective governments in the fight against malaria.

This panel was a key highlight of the Summit because malaria in East Africa still exacts a heavy burden on the lives of their peoples and the development of their economies. Ninety per cent of the inhabitants of the Commonwealth live in areas affected by malaria. They also represent two-thirds of the global population at risk from a parasite that still claims more than 440,000 lives each year, despite significant progress since the start of the millennium.

Jeremy Lefroy MP, Chair of the APPMG chaired the session and was joined on the panel by Hon. Moses Balyeku – Chair of the Uganda Parliamentary Forum on Malaria, Dr Diana Atwiine – Permanent Secretary of Health Uganda, Dr Hermengild Mayunga – Programme Director of the Tanzanian Parliamentarians against Malaria and NTDs, Mr. Allan Mburu from the High Commission of Kenya speaking on behalf of the Kenyan Ministry of Health

and Joy Phumaphi representing the African Leaders Malaria Alliance.

Dr Atwiine shared that UK support through DFID has been critical to boost the Uganda Ministry of Health's efforts in eradicating malaria and celebrated the fact that this meeting showed the technical experts joining forces with political leaders as both must work together in order to combat this disease.

Hon. Moses Balyeku shared that the Uganda Parliamentary Forum against Malaria was created following commitments made by President Museveni at the 2018 Malaria Summit/ CHOGM meeting. Politicians such as himself agreed to become advocacy champions to ensure that government



Jeremy Lefroy MP, speaks about the work of the APPMG at the East Africa Health Summit.

allocates funds to malaria. Political will is key in eradicating malaria in addition to the need to combine infrastructure and healthy population actions and ensuring that messaging about the disease is consistent.

Dr Hermengild Mayunga introduced the work of TAPAMA NTD on behalf of Hon. Raphael Chegeni MP who was unable to attend due to visa delays. Dr Mayunga shared how important it is to have Parliamentarians advocating to keep the Ministry of Health focused on the fight against malaria and NTDs. Ms. Phumaphi shared with Parliamentarians and Ministry of Health officials the ALMA scorecard which tracks country progress against malaria elimination as an advocacy tool. Mr. Mburu shared comments from the Kenyan Ministry of Health regarding their progress against malaria.

Representatives also discussed how they could continue these conversations next year when TAPAMA NTDs and UPFM organise a meeting for Parliamentary advocacy groups in the East African regions to discuss how they could combine forces to demonstrate cross-border political will in the fight against malaria.

Neglected Tropical Diseases NGO Network's (NNN) 10th Annual Meeting and the 11th Annual European Congress on Tropical Medicine and International Health

16-20th September 2019, Liverpool, UK

Contribution by Lord Sandy Trees, Vice-Chair of the APPMG and Nicole Vecchio, Coordinator of the APPMG

In 2019, the UK hosted two international meetings on global health issues, the **Neglected Tropical Diseases NGO Network's (NNN) 10th Annual Meeting and the 11th Annual European Congress on Tropical Medicine and International Health (ECTMIH)**, with both meetings taking place in Liverpool. Together these two international meetings brought together over 1,600 delegates from 94 countries from across the NGO, public, private and philanthropic sectors as well as those leading



Baroness Sugg, DFID Parliamentary Under-Secretary of State, Professor Gail Davey, NNN Chair 2018/2019 and Dr. Mwele Malecela, WHO Director, NTD Department at the NNN. Photo credit © NNN/ Patrick Bannon

academic research in the field of infectious diseases.

The NNN is a unique platform of global NGOs working together to tackle NTDs, in support of the WHO NTD Roadmap and the achievement of the 2030 Sustainable Development Agenda. The theme of the meeting '**Our Vision Beyond 2020: Many Partners, One Voice**' expertly positioned 10 years of shared lessons and successes around collaboration and partnership between NGOs, the public, private and philanthropic sectors. Over the last 10 years the NNN has developed resources that support the delivery of NTD programmes through sustainable cross-cutting approaches, influence and engage stakeholders across WASH, disability and inclusion, and disease management. The NNN makes clear its mission to support all health ministries, guided by WHO and is an active participant in several WHO consultations connected to the new WHO NTD Roadmap and a new WHO NTD WASH strategy for 2020 release.

The value and necessity of local, regional and international collaboration towards a joint vision was reiterated by several key speakers during the opening plenary including Mr. Rajni Kant Singh, a person affected by the NTD lymphatic filariasis, Dr Mwele Malecela, WHO Director of the NTD Department and by Baroness Sugg, Parliamentary Under-Secretary of State, UK Department for International Development. The UK is a recognised leader in global health and NTDs and Baroness Sugg shared a formal announcement of the UK's latest investment, the ASCEND programme, a multi-NTD initiative across 25 countries to protect 200 million

people from NTDs, and investment through NTDs to support the strengthening of health systems. The DFID press release shares further details: <http://tiny.cc/k92ziz>

Dan Carden, MP for Liverpool Walden and Shadow Secretary of State for International Development spoke passionately at the closing plenary on the importance of universal access to healthcare and quality health services in order to lead dignified and healthy lives, and emphasised the ambitious SDG agenda to ensure sustainability and equity for all.

This year's European Congress on Tropical Medicine and International Health (ECTMIH) theme on 'One Health' was well aligned with the NNN conference and hosted by the Royal Society of Tropical Medicine and Hygiene. Accomplished veterinary surgeon, **Lord Sandy Trees, Vice-Chair of the APPG on Malaria and NTDs** led sessions on the One Health approach to NTDs, which looks at the intersection between human and veterinary public health (VPH) sectors working more closely together in the fight against NTDs. With almost 50% of all diseases defined by the WHO as NTDs having a zoonotic component to their lifecycle, a One Health approach is crucial to achieving the WHO NTD Road map targets.

Topical subjects presented on during the conference included discussion on growing concerns around antimicrobial resistance with a plenary including WHO's Chief Scientist, Dr Soumya Swaminathan; the anti-vaccine movement and 'fake news' on public health issues led by Professor Peter Hotez, founding Dean and Chief of Baylor College of Medicine's National School of Tropical Medicine; and snakebite-the latest NTD to join the WHO list.

Many NTDs are exemplars of One Health and this theme culminated in a so-called 'super-panel' discussion on the role of the RSTMH in One Health. The panel agreed that the role of the RSTMH should be as a convenor and communicator to promote getting One Health onto a range of undergraduate curriculums and to work with other Royal Societies to be truly integrated.

Cross-party support on NTDs remains at the very heart of the work of the APPMG to support parliamentary engagement and discussion on DFID policies that support the most vulnerable populations. We look forward to the next UK parliamentary session to continue our work and supporting the work of UK parliamentarians on international platforms like the NNN and ECTMIH, to ensure the UK continues to be a valued leader through its expertise across robust programmatic, scientific and parliamentary contributions to the NTD space.



One Health Panel at ECTMIH from L-R: Facilitator and Chair – Professor Chris Whitty, UK government's Chief Medical Officer; Dr John Amuasi, Executive Director of the African Research Network for NTDs and Co-Chair of the Lancet One Health Commission; Dr Morven Roberts, CEO of Global Alliance for Chronic Diseases; Dr Graeme Cooke, Deputy Chief Veterinary Officer, UK; Prof. Alistair Ager; Professor David Lalloo, Director of the Liverpool School and Tropical Medicine and Professor the Lord Trees, Vice-Chair, APPMG Malaria and NTDs. Photo credit @ RSTMH



Panel at MMV@20 Anniversary event, L-R: Robin Davies – Indo-Pacific Centre for Health Security, Jeremy Lefroy – Past-Chair of the APPMG, Glaudina Loots – Health Innovation at DST. Photo credit: Edouard Venceslau/MMV

20 years of MMV: Successes, challenges and aspirations

Contribution by MMV

On 11th November 2019, Medicines for Malaria Venture (MMV) celebrated its 20th anniversary in Geneva, Switzerland, bringing together close to 400 stakeholders, partners and team members to discuss MMV's past successes, present goals and future aspirations in the fight against malaria.

At the inaugural reception the evening before, Dr Tedros Adhanom Ghebreyesus, Director-General, World Health Organization (WHO) and Dr Abdourahmane Diallo, Executive Director of the RBM Partnership to End Malaria spoke to the gathered guests.

On the day of the anniversary conference, following opening comments from MMV's CEO Dr David Reddy, Mr. Mauro Poggia, Member of the Geneva State Council, congratulated MMV and lauded the organisation's key role in developing the new medicines that have helped save 2 million lives since 2009. 'It is only together that we will see this deadly infectious disease eliminated,' he said.

The theme of collaboration was reflected in the first session entitled 'Partnership Chain Reaction', where members of the MMV team and representatives

from MMV's pharma and academic partners shared the stories behind the partnerships that facilitated the progress of key projects and products that have enabled so many lives to be saved from malaria.

Jeremy Lefroy MP, Former Chair of the APPG for Malaria and NTDs was a panelist in a discussion with representatives of the MMV donor countries (including Switzerland, Australia, South Africa and the UK) exploring how defeating malaria would contribute to the goals of their individual countries in the 2030 Agenda for Sustainable Development. There was consensus that defeating malaria was crucial to attaining the global sustainable development goals, particularly in the context of improving maternal and child health as well as supporting development and poverty alleviation.

Later in the day, a panel of distinguished scientists discussed the importance of Big Data in the search for new malaria drugs to overcome resistance, block transmission and stop relapsing malaria; this was further elaborated by endemic country representatives with regard to ensuring access to vital antimalarials in the long last mile to patients. The day ended on a high note with a view to the future; nine next-generation researchers from malaria-endemic countries spoke passionately of their research and ambitions to contribute to the ultimate demise of malaria.

APPMG Delegation to Tanzania

Based on report from TAPAMA NTDs and feedback from the delegation, a full trip report can be found on the APPMG website

From September 16th to 20th 2019, members of the APPMG as well as a Member of the Bundestag (German Parliament) visited Tanzania. The delegation was invited by TAPAMA NTDs Chairperson Hon. Riziki Lulida MP and TAPAMA Secretary General Hon. Dr Raphael Chegeni MP of Busega Constituency and hosted by the Tanzanian Parliamentary Group against Malaria and NTDs (TAPAMA NTDs).

The delegation included Jeremy Lefroy MP for Stafford, Chair of the APPMG, Dr Paul Williams MP for Stockton South, member of the APPMG and Volkmar Klein Member of the Bundestag for North Rhine-Westphalia in Germany. Mr. Klein MP is also a member of the German Bundestag Committee on Economic Cooperation and Development and the Subcommittee on International Health which is concerned with malaria and NTDs. The delegation was supported by Alex Simpson and Dr Hermengild Mayunga of TAPAMA NTDs secretariat and coordinated by Nicole Vecchio. The delegation was accompanied by Dr Janet Lefroy and Ms Vicki Holt who are both medical professionals with considerable experience working in East Africa.

A goal of the visit was to provide the opportunity and forum for the APPMG members to visit Tanzania and meet members of TAPAMA NTDs to discuss Parliamentary initiatives to end malaria in Tanzania by 2030 and fight NTDs. The delegation also aimed to provide the opportunity for UK and German MPs to see the lived experience for those at risk of and suffering from malaria and NTDs and the important work being done by their respective governments to fight these diseases on the ground. The APPMG highly values the opportunity to bring MPs to endemic countries where they can see the direct impact of UK aid to those in need in order to create Parliamentary champions to ensure that the UK government continues to support initiatives to fight these diseases.

During this trip, the group were able to visit the following:



Dr Paul Williams MP observes trachoma trichiasis surgery to reduce the risk of sight loss. Photo credit @ Erin Smith/ Helen Keller International

A trachoma outreach surgical camp in the district of Rombo run by Sightsavers, Helen Keller International and the Kilimanjaro Centre for Community Ophthalmology (KCCO):

- Funded by DFID under the project 'Contributing towards the Elimination of Blinding Trachoma in the Commonwealth' and the Conflict, Stability and Security Fund (CSSF), pledged by the UK Government in support of the Commonwealth Heads of Government Meeting (CHOGM) 2018 commitment to the elimination of trachoma.

Maasai Community Development and Sustainable Health Initiatives – (MCD-SHI):

- The group visited Maasai community at Makuyuni – Mswakini area in Monduli District, Arusha Region to learn of the malaria and NTD interventions under the local NGO
- Key challenges include the lack of clean water and the increase of malaria prevalence in women and children. The lack of access to clean water means that the people are at risk of many NTDs and communicable diseases and they stressed trachoma as a main concern. Time spent looking for clean water takes away opportunities for economic activity and further contributes to poverty in the community. The delegation offered a donation to the Maasai community to buy mosquito nets or malaria medication.

Hospitals treating malaria and NTDs:

- Kilimanjaro Christian Medical Centre (KCMC) Hospital is mainly an eye-hospital and a teaching hospital for eye-surgeons but also treats other NTDs and malaria and is one of the largest referral hospitals in Tanzania. CBM supports this hospital and helped host the visit.
- Mvumi Hospital illustrated the amazing success in terms of reduced incidence of malaria and NTDs that can be had when a centre has the capacity and tools to carry out multiple interventions. The proper use of LLINs and early diagnosis, prompt treatment and cleaning of mosquito breeding sites have greatly reduced malaria while broad MDA, the SAFE strategy for trachoma and major improvements in WASH practices and facilities have led to a decline in NTDs.
- Ilala Maternity Hospital in Dar Es Salaam where the delegation distributed bednets to pregnant women

Apart from visiting programmes and hospitals, the delegation was able to hold meaningful meetings in Dodoma and Dar Es Salaam with:

- Ministry of Health officials including Deputy Minister of Health – the Hon. Dr Faustine Nduguliile, the acting NTD Programme Manager

– Dr. Oscar Kaitaba, the National Malaria Control Programme Manager – Dr. Ally Mohamed

- Members of Parliament in Tanzania who are also members of TAPAMA NTDs including: Chairperson Hon. Riziki Lulida MP, Hon. Dr Raphael Chegeni MP, Hon. Immaculate Sware MP, Hon. Venance Mwamoto MP and Hon Esther Matiko MP
- Representatives of various NGOs and advocacy groups (including African Leaders Malaria Alliance) working to fight NTDs and malaria in Tanzania

The group were updated on the status of malaria and NTDs in Tanzania and the work that the respective organizations are doing to fight these diseases. Discussions focused on the generous support of UK and German aid and how DFID funding has been critical to the country's NTD programmes and research. The delegation wanted to hear how they could best support Tanzania in reaching their eradication targets and the SDGs and emphasised that Tanzania must be seen as an equal partner in these discussions about aid.

Conversations also looked at how Parliamentary bodies such as the APPMG and TAPAMA NTDs could best support each other and their respective governments to enhance accountability, awareness and political will amongst Parliamentarians



The delegation outside of Tanzania Houses of Parliament

and government funding for malaria and NTD programmes. Suggestions were made to establish a network or coalition of inter-regional APPGs (similar to the Global TB Caucus) and for TAPAMA NTDs to organise the first Summit of this group in Tanzania in Spring 2020.

The APPMG would like to stress their congratulations to the Government of Tanzania and the Ministry of Health for reducing malaria prevalence from 14% to 7%, recognising there is still much to be done in order to reach elimination targets. The APPMG would also like to encourage the government to focus on long-term sustainability plans for a transition to these programmes being managed and funded by the Tanzania government when aid is no longer available. The national strategies for malaria and NTDs and the political will are promising for Tanzania, but resources are still limited and as we approach elimination surveillance mechanisms will need to be greatly improved. The APPMG delegation were encouraged by the progress and the brave Parliamentarians taking up this fight for the people in their constituencies. The collaboration between British, German and Tanzanian Parliamentarians was a highlight for all members involved in this delegation.

The APPMG would like to thank DFID UK, DFID Tanzania, TAPAMA NTDs, NGOs working in Tanzania on malaria and NTDs (including Sightsavers, CBM, KCMC, KCCO, Helen Keller International and the Global Fund) as well as Sarah Cooke, the British High Commissioner to Tanzania, and her team for their support in planning and hosting the delegation.

Donation of Bednets to Jinja Organisation of Parents with Deaf Children

Edited contribution by Sebastian Waiswa, Executive Director – Jinja Organisation of Parents with Deaf Children (JOPDC)

The APPMG had agreed at its AGM to donate £1800 to the Jinja Organization of Parents with Deaf Children (JOPDC) in Uganda for bednets that were needed by their children.



Sebastian, the Director of JOPDC setting off to one of the distribution points. This motorcycle was donated by Helping Uganda Schools (HUGS) UK. Photo credit © JOPDC

The APPMG has received a detailed report from JOPDC about the use of these funds. The organization was able to secure 478 LLINs (long-lasting insecticide treated bednets) and distributed them as follows:

- 378 mosquito nets went to Jinja via JOPDC – Sebastian Waiswa.
- 50 mosquito nets went to Lira, Uganda via Sr. Evangelista/Asili Girls School (The school built by Helping Uganda Schools/HUGS).
- 50 mosquito nets went to children in Kampala via Ronald Kamoga (Community Empowerment For Village Development).

There has been a significant increase in malaria in Uganda this year, with 1.4 million cases in June 2019 reported, a jump of 40% from the same month in 2018. In Uganda, malaria is the leading cause of death among inpatients aged below five years. The prevalence is attributed to the intermittent rains and the decline in the use of LLINs, indoor residual spraying of insecticides, use of ACT to treat uncomplicated malaria, and provision of intermittent preventative therapy for expectant mothers.

Most of the children with disabilities, especially those with hearing impairment, acquired their disability due to the side effects of malaria treatment. JOPDC was



The children who have received the bednets. Photo credit @ JOPDC

Children with disabilities are not always given the same value.

formed by the parents of children with hearing loss in order to better support them and today helps to find children with disabilities and link them up with school placements and other services.

Despite the fact that the Uganda Ministry of Health and various donors have distributed nets over the years, many children – especially those with a disability – have never received such nets. Often there are insufficient nets to cover every member of their family and protection is prioritized. Children with disabilities are not always given the same value. Of the beneficiaries of the nets in Jinja, 75% had not slept under a net for the last two years and 25% had a net but it needed replacing. More than half of those without a net had contracted malaria in the last

three months and sought treatment from government health facilities. However, about 55% never received any treatment as the drugs were out of stock in these facilities and resorted to herbal remedies or private pharmacies. Most have never bought the correct dose due to the high cost of medicines and many experience recurring episodes of malaria increasing the risk of drug resistance. Four families in Butagaya sub-county reported having lost one of their family members to malaria in the last five months, of which three were children below the age of five.

JOPDC would like to thank the APPMG for their generosity of this life-changing grant which will contribute to the reduction of malaria among many children with disabilities. They also feel indebted to Ms. Denise Ead and Ms. Primrose Magala of Helping Uganda Schools who advocated the needs JOPDC to the APPMG. It is the kind request and prayer that APPMG will continue to work with JOPDC in future to see that they continue with this noble cause of eliminating malaria and saving lives in Uganda.

Updates from other Parliamentarians working to fight malaria and NTDs

Tanzania Parliamentarians Against Malaria and Neglected Tropical Diseases (TAPAMA NTDs)

TAPAMA NTDs is a coalition of cross-party Members of Parliament, Tanzania dedicated to fighting malaria and NTDs founded in 2008. The main purpose of the group is to engage all members of Parliament in Tanzania who are dedicated to Roll Back Malaria (RBM) in Tanzania and to enhance the political will to end malaria in Tanzania.

The initiative comes as a result of the fact that the global health community recognizes malaria as a global emergency that knows no borders and the need to emphasize the role of political leaders and decision makers in supporting the Roll Back Malaria (RBM) campaign.

TAPAMA NTDs consists of 67 Members from all political parties and is supported by a secretariat including experts on malaria and NTDs. The TAPAMA NTDs secretariat consists of 8 members of staff.

Highlights of the year:

- Participation in the World Malaria Day event at the Science Museum in London, hosted by RBM and Malaria No More UK on 24th April 2019
- Participation in the APPG on Malaria and NTDs World Malaria Day event at the UK Parliament on 25th April 2019
- Participation at the East African Healthcare Investment Summit in London on 27th April 2019
- Hosting the UK APPG on Malaria and NTDs delegation to Tanzania from 16-20th September 2019

- Planning a global Summit for Parliamentarians fighting malaria and NTDs in Tanzania April/ May 2020

Vision: Tanzania without malaria and become a giant resource for policymakers on malaria intervention strategies in Africa.

Mission: To scale up malaria prevention and treatment intervention in order to reduce the mortality and morbidity rate caused by malaria in Tanzania and relieve the sufferings of disease among the most vulnerable groups, namely pregnant women and children under five years old.

German Parliamentary Advisory Group on NTDs

Contribution by the German Network against NTDs (DNTDS)

This year, a highlight of the German Parliamentary Advisory Group on NTDs was the organization of a delegation trip of Parliamentarians to Tanzania from 10-16th June 2019. The participants of the trip were: Mrs. Heike Baehrens MdB (Member of the Bundestag, German Parliament), socialist party (SPD); Prof. Andrew Ullmann MdB, liberal party (FDP); Prof. Achim Hoerauf, Parasitologist, University Bonn; PD Dr Inge Kroidl, Infectious disease specialist, University Munich (LMU) and Mrs. Rhan Gunderlach, head of the coordinating office of the German Network against Neglected Tropical Diseases (DNTD). The aim of the delegation visit was to learn about NTDs with support from the German embassy, NGOs and scientific institutions they were able to have

meetings with affected persons, health workers and health ministry officials.

Highlights of the trip include:

- **Dar Es Salaam:** National Institute of Medical Research visit to patients affected by lymphatic filariasis
- **Lake Victoria:** Visit to programmes run by Missionsärztliches Institut (MSI) and the German Leprosy and Tuberculosis Relief Association (DAHWA) who support persons affected by leprosy and run education programmes to fight Schistosomiasis
- **Mbeya:** Visit to biggest medical research programme in Tanzania at the Medical Research Centre Mbeya supported by the University of Munich.
- **Dar Es Salaam:** Action Medeor distribution centre which is responsible for the distribution of lifesaving medical products to different facilities in Tanzania

The DNTDS group was very supportive of the APPMG delegation plans for Tanzania in September 2019 and the participation of Mr. Volkmar Klein, MP in our delegation.

The German Parliamentary Advisory Group on NTDs would like to highlight the following topics discussed in the Sub-committee Global Health:

- **May 15, 2019** Parliamentary State Secretary, Federal Ministry of Food and Agriculture, reports on the transdisciplinary cooperation and one-health approach within the national health strategy; expert discussion on One Health with a special focus on rabies. Speakers: President of the Friedrich Loeffler Institute FLI, Prof. Dr h.c. Thomas Mettenleiter, Christian Griebenow, executive director, Antonia Braus, Tierärzte ohne Grenzen e.V.
- **April 10, 2019** New drugs against neglected tropical diseases – final report by The Office of Technology Assessment at the German Bundestag on ‘drugs for Africa’ by Dr Katrin Gerlinger.
- **February 20, 2019** Participation in the Memento Prize ceremony (awarded to scientists working in

the field of NTDs). Thomas Rachel, Parliamentary State Secretary, Federal Ministry of Education and Research on activities of his ministry on Global Health. Dr Georg Kippels, MP and Ottmar v. Holtz MP report on the field trip organized by DSW to – Tübingen, Bonn und Basel (among others, laboratories working on NTDs and malaria).

- **January 30, 2019** Prof. Dr Thomas Junghanss (University Heidelberg) and Lara Dovifat (Médecins Sans Frontières) report on snakebite.
- **December 12, 2018** Parliamentary State Secretary, Federal Ministry of Economic Cooperation and Sustainable Development (BMZ) reports on Health Systems Strengthening in the context of German developing policy.
- **September 26, 2018** Dr Georg Kippels MP reports on the foundation of the Parliamentary Council to Fight Neglected Tropical Diseases.

Uganda Parliamentary Forum on Malaria (UPFM)

The UPFM was formed as a result of a resolution of parliament and launched by His Excellency the president of the Republic of Uganda on the 5th of April 2018 alongside the subsequent launch of the Mass Action against Malaria (MAAM) initiative. The UPFM is a legally registered organization for a platform of Members of Parliament from different political shades who collectively generate visibility and provide leadership to the control and eventual elimination of malaria from Uganda. The forum brings together advocates for political, legislative and community action and commitment for a malaria free Uganda. The UPFM aims to respond effectively to the scourge of Malaria through advocacy and providing good practices for raising the profile of malaria and malaria prevention responses at community, national and international levels. UPFM works through its members to intensify the legislative, budgetary and oversight role necessary for cultivation of visibility of malaria issues at policy level. Each Member of Parliament has taken up the mantle of ensuring ‘A malaria free constituency is my responsibility’.



UPFM members and partners at their strategy meeting, Entebbe, Uganda 2-3 May 2019. Photo credit @ UPFM

Highlights of 2018-2019:

- National advocacy resulting in presidential pledge of 380 billion Ugandan shillings for indoor residual spraying in Uganda and establishment of the Presidential Malaria Trust Fund in a context of plateauing donor funding

- 16th April 2018: UPFM executive members and President Museveni attend Malaria summit held alongside CHOGM, join commitment to halve malaria across the Commonwealth by 2023

- 24-26th September 2018: Delegation visit of the UK All-Party Parliamentary Group on Malaria and Neglected Tropical Diseases (APPMG)

Lord Trees and Lord McColl visited UPFM on an experience sharing visit where they met with President Museveni, witnessed DFID funded malaria and NTD programmes, discussed UK Aid to Uganda through bilateral funding and the Global Fund and spoke highly of the UK's commitment to 0.7% overseas development assistance.

- March 2019: US President's Malaria Initiative Global Malaria Coordinator Dr Ken Staley's visit

- 24th April 2019: World Malaria Day event, Science Museum in London hosted by Malaria No More and RBM to mark the first anniversary of Malaria Summit 2018 and to maintain momentum on these commitments.

UPFM presented with the Commonwealth Malaria Honours for national advocacy for the enthusiasm and hard work towards the achievement of the CHOGM 2018 commitments

- 25th April 2019: World Malaria Day Event with the APPG on Malaria and NTDs at UK Parliament:

Hon. Moses Balyeku participated in the APPG panel along with Dr Diana Atwiine, Permanent Secretary at the Ministry of Health, at this important discussion of how endemic and donor country Parliamentarians can support each other and their governments in the fight against malaria.

- 27th April 2019: 4th UK – East African Health Infrastructure Improvement Summit:

Strengthening health systems to improve health outcomes in East African communities.

a spotlight on...

UNITAID

Contribution by Unitaid

Unitaid is an international organization that turns good ideas into ground-breaking global health solutions. It does this work by identifying the most promising inventions and approaches coming from the worlds of science and medicine, then shaping them into affordable, accessible medicines, diagnostics and prevention measures that can be used in lower-resource countries.

Unitaid's work is highly collaborative, recognizing that to achieve the momentous goal of universal health coverage, many entities must work together like the parts of a single organism. Unitaid coordinates closely with scale-up partners such as the Global Fund, with countries, with communities, and with the 127 partner organizations that are implementing \$US 1.3 billion in Unitaid grants all over the world.

Since it was founded in 2006, Unitaid has focused on bringing new weapons into the fight against the epidemics of HIV/AIDS, malaria and tuberculosis in low- and middle-income countries. Now Unitaid is building on that work with a view to supporting the global drive for universal health coverage. Three-quarters of the organization's projects support new ways to integrate health services – TB testing in pediatric clinics, malaria prevention with prenatal care, multiple diseases diagnosed by a single machine – a streamlining seen as essential to meeting the goal of universal health coverage.

At the same time, Unitaid is participating in an enormous push by the entire global health community

to stop the advance of drug-resistant microbes. Drug-resistant strains of TB, HIV and other diseases have brought illness, death and financial ruin to many thousands of people and are a threat to every country. Unitaid's role is to find and bring in innovative drugs, tests and prevention methods to help tackle superbugs. More than 60 percent of the organization's portfolio is dedicated to projects that fight antimicrobial resistance. Unitaid also invests heavily in innovations to eradicate malaria-carrying mosquitoes that are resistant to insecticides.

Unitaid has 48 grant projects under way. New and notable among these are initiatives to:

- Avert cervical cancer. Inexpensive screen-and-treat solutions using artificial intelligence aim to fend off this major killer of HIV-positive women.
- Protect people from malaria in sub-Saharan Africa with new-generation insecticide-treated nets.
- Introduce affordable HIV self-testing kits in Africa. The market for self-testing was virtually nonexistent in lower-income countries when Unitaid began to invest in 2015. Fifty-nine African countries now have policies on self-testing.
- Use mobile technology and 'smart' pillboxes to help patients adhere to TB treatment
- Stop preventable deaths among people with advanced HIV disease
- Equip primary health care workers with easy-to-use devices to measure oxygen in the blood so they can better identify severely ill children
- Pilot a powerful new technology for TB diagnosis. Next-generation genome sequencing provides fast, accurate diagnosis of drug-resistant TB, helping clinicians prescribe the correct medicine from the outset of treatment.

Recommended Resources and Sponsors

Reports

2017 WHO Fourth Progress Report on Neglected Tropical Diseases www.who.int/neglected_diseases/resources/9789241565448/en/

2019 WHO Press release: Neglected tropical diseases: treating over one billion people for the fourth successive year: www.who.int/neglected_diseases/news/treating-over-one-billion-people-for-the-fourth-successive-year/en/

WASH and health working together: a how to guide for Neglected Tropical Disease programmes: www.who.int/water_sanitation_health/publications/wash-health-toolkit/en/ WHO and NNN, January 2019

2019 WHO World Malaria Report: www.who.int/publications-detail/world-malaria-report-2019

Global Britain and Ending Malaria: The Bottom Line [www.ey.com/Publication/vwLUAssets/EY-global-britain-and-ending-malaria-the-bottom-line/\\$FILE/EY-global-britain-and-ending-malaria-the-bottom-line.pdf](http://www.ey.com/Publication/vwLUAssets/EY-global-britain-and-ending-malaria-the-bottom-line/$FILE/EY-global-britain-and-ending-malaria-the-bottom-line.pdf)

Global Fund to Fight AIDS, Tuberculosis and Malaria: 6th Replenishment www.theglobalfund.org/en/specials/2019-10-09-global-fund-sixth-replenishment-conference/

UNGA High-Level Meeting – Political Declaration on Universal Health Coverage: <https://undocs.org/en/A/RES/74/2>

Novartis MalaFA Reports (Malaria Futures for Africa/Asia/Central Africa): <https://www.novartis.com/our-company/corporate-responsibility/expanding-access-healthcare/novartis-social-business/malaria-futures-africa-and-asia>

Lancet Commission on Malaria Eradication: <http://malariaeradicationcommission.com/>

No Time to Wait: Securing the future from drug-resistant infections. Interagency Coordination Group on Antimicrobial Resistance. April 2019.

Global Action Plan on Antimicrobial Resistance. World Health Organization. May 2015. www.who.int/antimicrobial-resistance/global-action-plan/en/

The Spread of Superbugs. Malaria Consortium 2019. (<https://tinyurl.com/u7vnb53>)

DFID ASCEND Press Release. www.gov.uk/government/news/new-uk-aid-support-to-protect-200-million-people-from-debilitating-diseases

WHO Strategic Advisory Group on Malaria Eradication Report 2019. <https://www.who.int/publications-detail/strategic-advisory-group-malaria-eradication-executive-summary>

Websites

London Centre for NTD Research www.londonntd.org

Countdown: Calling Time on NTDs www.countdownonntds.org

Imperial College Network of Excellence in Malaria www.imperial.ac.uk/network-of-excellence-in-malaria

Neglected Tropical Diseases NGO Network www.ntd-ngonetwork.org

APPG on Malaria and NTDs Website www.appg-malariantds.org.uk

Sponsors

The All-Party Parliamentary Group on Malaria and Neglected Tropical Diseases is grateful to the following organisations and coalitions which have sponsored it during the past year:

Malaria Consortium www.malariaconsortium.org

Malaria No More UK www.malarianomore.org.uk

Medicines for Malaria Venture www.mmv.org

PATH's Malaria Vaccine Initiative www.maliavaccine.org

UK Coalition against Neglected Tropical Diseases ntd-coalition.blogspot.com/p/home.html

GSK – Sponsor of the Annual Report www.gsk.com



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