



DEBATE PACK

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Research and development on tackling infectious diseases

This pack has been prepared ahead of the debate to take place in the Commons Chamber on Thursday 20 April 2017 on research and development on tackling infectious diseases. The subject for the debate has been selected by the Backbench Business Committee.

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The House of Commons Library prepares a briefing in hard copy and/or online for most non-legislative debates in the Chamber and Westminster Hall other than half-hour debates. Debate Packs are produced quickly after the announcement of parliamentary business. They are intended to provide a summary or overview of the issue being debated and identify relevant briefings and useful documents, including press and parliamentary material. More detailed briefing can be prepared for Members on request to the Library.

1. Summary

This debate pack is prepared for a general debate on research and development on tackling infectious diseases. The debate will be led by Virendra Sharma, Jeremy Lefroy and Stephen Doughty.

In his application to the Backbench Business Committee, Mr Sharma said that the debate would give Members an opportunity to talk about a wide range of issues relating to infectious diseases. These included, ensuring access to new and existing medicines, investing in research and development of new medicines, diagnostics and vaccines, and the Government approach to tackling antimicrobial resistance.

The UK Government invests in the research and development to tackle infectious diseases in a number of ways. These include:

- The Medical Research Council provides grants and career awards to scientists in UK universities and hospitals;
- [The Ross Fund](#) was created for research and development in products for infectious diseases, particularly tackling anti-microbial resistance, diseases with epidemic potential such as Ebola, and neglected tropical diseases. It includes £350 million allocated for the delivery of new products including vaccines, drugs and diagnostics;
- [The Global Challenges Research fund](#), which aims to “ensure UK science takes the lead in addressing the problems faced by developing countries”¹. In December 2016, the first phase of awards for health research were announced. These focused on two areas- non-communicable diseases and infection; and
- The Government has committed £120 million to aid the development of new vaccines between 2016 and 2021². The Department of Health, through the [UK Vaccine Network](#), are currently funding 26 projects at a cost of £23 million.³

The United Nations Secretary-General's High-Level Panel on Access to Medicines

In November 2015, the UN Secretary-General, Ban Ki-Moon appointed a High-Level Panel on Access to Medicines. The panel were tasked with assessing the evidence on access to medicines globally and provide recommendations to promote the development and production of health technologies in a way that balances trade, human rights and public health.

The [panel's final report](#) was published on 14 September 2016. It stated that new approaches were required to ensure access to medicines and encourage innovation to improve health worldwide and reduce

¹ [UK Aid: tackling global challenges in the national interest](#), HM Treasury/DFID, November 2015.

² [UK Vaccine Network](#), GOV.UK

³ [Projects currently being funded by the Department of Health through the UK Vaccine Network](#), 8 February 2017.

inequality. Numerous recommendations were made to governments, multilateral organisations, and private sector companies.⁴

In response to a Parliamentary question in December 2016, James Wharton, the Parliamentary Under-Secretary of State for International Development, stated that DFID supported the aims of the panel's recommendations but noted a lack of consensus from the panel, and that the World Health Organisation had developed a strategy in this area:

DFID supports the aims of the UN High Level Panel on Access to Medicines, but we note that this panel of experts could not reach consensus. The World Health Organisation has analysed the barriers that limit access to medicines, and developed a Global Strategy and Plan of Action on Public Health, Innovation and Intellectual Property. It is, therefore, well-placed to consider, with partners, which of the Panel's recommendations add value.⁵

The development of the World Health Organisation (WHO) global strategy and plan of action on public health, innovation and intellectual property followed a resolution at the World Health Assembly in 2008. Through the strategy the WHO plays a role in improving access to medicines, driving innovation and encouraging research into diseases which disproportionately affect those in developing countries.⁶

The WHO has also developed the [R&D Blueprint](#), a global strategy to allow the rapid activation of research and development to respond to epidemics.

⁴ [Report of The United Nations Secretary-General's High-Level Panel on Access to Medicines](#), 14 September 2016.

⁵ [PQ55942](#) [UN High-level Panel on Access to Medicines], 6 December 2016.

⁶ WHO, [The Global Strategy and Plan of Action on Public Health, Innovation and Intellectual Property](#)

2. Antimicrobial resistance

Antimicrobial resistance occurs where disease causing microbes become resistant to the antimicrobial drugs that were one effective. This natural process is accelerated by a number of actions, these include inappropriate prescribing, poor infection control practices and the excessive use of antimicrobials in agriculture.

Antimicrobial resistance (AMR) is a significant and increasing threat to public health globally. It is estimated that in the US and Europe alone, antimicrobial-resistant infections currently cause at least 50,000 deaths per year with hundreds of thousands more dying in other areas of the world.

If we are unable to slow the acceleration of AMR, future consequences will be worse still. The Review on antimicrobial resistance has estimated that 10 million people a year could be dying as a result of AMR by 2050.⁷ The Chief Medical Officer, Professor Dame Sally Davis has said it is possible we will return to a time where 40 per cent of the population die prematurely from infections we cannot treat.⁸

There is action that can be taken to slow the progression of AMR. Examples of these actions include:

- Improving infection control;
- Ensuring appropriate prescribing and use of antibiotics in both humans and animals;
- Investing in the research and development (R&D) of new drugs and diagnostic tools; and
- Ensuring adequate monitoring of prescribing and resistance on a national and international basis.

The Independent Review on Antimicrobial Resistance (the review) was launched by the former Prime Minister, David Cameron in July 2014 and was led by the economist Lord O'Neill of Gatley.⁹ The review board aimed to understand the global implications of AMR and propose international solutions for addressing it.¹⁰ It has published a number of reports both on the consequences and actions to tackle antimicrobial resistance. The final report was published in May 2016 and made ten recommendations (see box below), these included better surveillance of antimicrobial use and resistance, a global public awareness campaign on this issue, and new approaches to funding medicine and diagnostics development. The Government responded to the report in September 2016. It agreed with a need for improved investment in R&D, and said

⁷ The Review on Antimicrobial Resistance, [Antimicrobial Resistance: Tackling a crisis for the health and wealth of nations](#), December 2014

⁸ Kings Fund, [What if antibiotics were to stop working?](#)

⁹ Department of Health and Prime Minister's Office, [Prime Minister warns of global threat of antibiotic resistance](#), 2 July 2014

¹⁰ The Review on Antimicrobial Resistance, [Antimicrobial Resistance: Tackling a crisis for the health and wealth of nations](#), December 2014

it would work to gain global support for the recommendations in the report.

Box 1: Recommendations of the Review on Antimicrobial Resistance

A global public awareness campaign on AMR with the aim of reducing demand for antimicrobials from patients and agriculture. The AMR review estimated that this awareness campaign could cost between \$40 and 100 million and this can be provided by public health programmes, support for programmes in middle and low income countries, and corporate sponsorship for events.

Improved hygiene and sanitation to reduce the number of infections. The report claims that all countries will need to act in this respect – developing countries may need to focus on ensuring access to clean water and sanitation, whereas developed countries should look to reducing infections in healthcare settings.

Reduce the unnecessary use of antimicrobials in agriculture for infection prevention, or growth promotion. The review recommended three steps to tackle this issue:

1. 10 year targets for antibiotic reduction. This will require Government support and improved surveillance
2. Restrictions on the use of antibiotics that are last-resort human treatments; and
3. Transparency in the food market should be increased.

Improved global surveillance of antimicrobial resistance in humans and animals is required to monitor use of antimicrobials, and the levels of resistance. This will require action from individual Governments with oversight from WHO.

Diagnostic technology needs to be improved to ensure antimicrobials are used appropriately. The Chair of the Review board called on the governments of rich countries to ensure that by 2020, all prescriptions for antibiotics will be on the basis of surveillance information and a rapid diagnostic test where one is available. The review recommended a diagnostic market stimulus to support the diagnostic technology market.

Vaccines and other alternative treatments should be promoted. Vaccines have an important role in preventing infection, which can reduce the need for antimicrobials, and slow the development of antimicrobial resistance. The Review suggest the following actions in this area:

- 1) Use existing vaccines and alternatives more widely in humans and animals;
- 2) Renew impetus for early-stage research; and
- 3) Sustain a viable market for vaccines and alternatives.¹¹

Increase the numbers working in infectious disease, and improve pay and recognition. The review reports that in the US, infectious disease doctors are the lowest paid of medical specialties, and there are similar findings across other healthcare workers and researchers in this field.

A Global Innovation Fund is needed for early stage and non-commercial research. The review proposes a global fund of up to US\$2 billion. It proposes that this be used to fund early stage “blue sky” research and that which is unlikely to receive commercial support.

Incentives for the development of new treatments will increase production of much needed innovative antimicrobials. The review calls for Government to find new ways to make the production of new antimicrobial medicines attractive to the pharmaceutical industry:

The total market for antibiotics is relatively large: about 40 billion USD of sales a year, but with only about 4.7 billion USD of this total from sales of patented antibiotics (that is about the same as yearly sales for *one* top-selling cancer drug). So it is no wonder that firms are not investing in antibiotics despite the very high medical needs. This will not change until we align better the public health needs with the commercial incentives. Governments must change this at the national level by considering possible changes to their purchase and distribution systems for antibiotics, to find ways to support better rewards for innovation while helping to avoid over-use of a new product. This can be partly achieved through adjustments to national purchasing and distribution systems, to reflect the diversity of health systems around the world. At the same time, for the drugs that are most needed globally and for which global stewardship and global access are important, we need new ways to reward innovation while reducing the link between

¹¹ Review on Antimicrobial resistance, [Tackling Drug-resistant infections globally: final report and recommendations](#), May 2016

profit and volume of sales and ensuring that developers give access and promote stewardship globally.¹²

The review suggest the introduction of incentives (market entry awards) for the development or new antibiotics or alternative treatments.

The establishment of a global coalition on AMR. The review emphasises that action on AMR must be on a global basis in order to be successful. It calls on the UN and the G20 to lead on this issue.

UK Antimicrobial resistance strategy

The Government announced [its 5 Year Antimicrobial Resistance Strategy](#) in September 2013.¹³ The strategy identifies antibiotic resistance as the greatest concern but aims to slow the spread and development of AMR in general via 3 strategic aims:

- 1 Improved knowledge and understanding of AMR
- 2 Ensuring existing treatments stay effective
- 3 New therapies

Further information on the strategy is available on the [Antimicrobial Resistance \(AMR\) Collection webpage](#).¹⁴

The most recent progress report to the UK AMR strategy was published in September 2016.¹⁵ The summary of the report provides an overview of activity in 2015. It reports that progress has been made putting in place the building blocks for success, and early signs suggested good results with some initiatives, but that there is yet to be unequivocal evidence that measures are making a difference:

We made considerable progress at a national level putting the building blocks for success in place including better data, guidance and a strengthened framework for antimicrobial stewardship. However, we were acutely aware that we had yet to see unequivocal evidence that we are making a difference, although, at the end of 2015, early signs suggested that initiatives begun earlier in the year were having good results. The challenge now is to shift focus from the development of national tools and guidance to local delivery. We have begun to empower and support local leaders to drive change and hold them to account for delivery, not least through increased transparency of the detailed data local teams need to understand their own performance; these local data are transparent, simple to understand and accessible by both professionals and members of the public. To support local action, we will continue to work to change behaviours around the demand for, and prescribing of, antibiotics by increasing the understanding of AMR among the public, and by supporting professionals to reduce prescribing for both humans and animals.

¹² Ibid.

¹³ Department of Health and Department for Environment Food and Rural Affairs, [UK five year antimicrobial resistance strategy 2013 to 2018](#), September 2013

¹⁴ DH, PHE, Defra, and Veterinary Medicines Directorate, [Antimicrobial Resistance \(AMR\)](#), 14 August 2014

¹⁵ Department of Health, [Progress report on the UK 5 year AMR strategy: 2015](#), September 2016

Internationally we will build on what has been achieved in 2015 by reinforcing the importance of AMR as a global economic and social threat, to secure wider international political support for tackling AMR. In particular, we are working with international partners to achieve a successful high level declaration or resolution on AMR at the United Nations General Assembly in 2016.

Our strategy rests on the three pillars of prevent, protect and promote: preventing infection, protecting the antibiotics that we have and promoting the development of new drugs and alternative treatments. This report is structured around those pillars. The pillars are underpinned by better surveillance, better identification of research needs and collaboration, improved understanding and awareness of AMR and greater international collaboration.¹⁶

Global action plan on AMR

The World Health Organisation, working with the World Organisation for Animal Health (OIE), and the Food and Agriculture Organisation (FAO) has led the work to acknowledge, monitor and address the progress of AMR. Detailed information on this activity is provide on [the WHO website](#).

The World Health Assembly endorsed a Global Action Plan on AMR in May 2015. This plan was developed in co-ordination with the FAO and OIE. The goal of the plan is to keep effective prevention and treatment of infectious diseases available to all for as long as possible. There are five strategic aims within the plan:

1. to improve awareness and understanding of antimicrobial resistance;
2. to strengthen knowledge through surveillance and research;
3. to reduce the incidence of infection;
4. to optimize the use of antimicrobial agents; and
5. develop the economic case for sustainable investment that takes account of the needs of all countries, and increase investment in new medicines, diagnostic tools, vaccines and other interventions.¹⁷

An important action within the Global Action Plan is the monitoring of actions to address AMR in countries around the world. This will contribute to a report on global progress on AMR which will be presented at the World Health Assembly in May 2017.

In February 2017, the World Health Organisation published a list of the bacteria, where research and development into new therapies is urgently needed. The list aims to encourage governments to produce policies to incentivise R&D into new antibiotics.¹⁸

¹⁶ Department of Health, [Progress report on the UK 5 year AMR strategy: 2015](#), September 2016

¹⁷ WHO, [Global action plan on antimicrobial resistance](#)

¹⁸ WHO, [WHO publishes list of bacteria for which new antibiotics are urgently needed](#), February 2017

United Nations High-Level meeting

On 21 September 2016, world leaders met at the United Nations in New York to commit to an approach on AMR. Commitments were made to develop national action plans in co-ordination with WHO global action plan. The WHO, FAO and OIE have been asked to work with other stake holders to co-ordinate planning and actions and report back to the UN Assembly in September 2018.¹⁹

¹⁹ WHO, [At UN, global leaders commit to act on antimicrobial resistance](#), September 2016

3. News Articles

Observer

Britain doubles funding to fight tropical diseases

Programme will help protect 200 million in world's poorest countries

Rebecca Ratcliffe 16 April 2017

<https://www.theguardian.com/global-development/2017/apr/15/britain-fights-neglected-tropical-diseases>

BBC News Online

Roslin Institute awarded £29m for infectious diseases work

11 April 2017

<http://www.bbc.co.uk/news/uk-scotland-39559327>

Guardian

Decades of TB progress threatened by drug-resistant bacteria, warn experts

Rise of multi-drug resistant strains of tuberculosis could derail global efforts to eradicate the disease, according to a new report

Sarah Bosely 23 March 2017

<https://www.theguardian.com/society/2017/mar/23/tb-progress-threatened-by-drug-resistant-bacteria-warn-experts-tuberculosis>

Independent

Scientists develop molecule that reverses antibiotic resistance

Shehab Khan Saturday 21 January 2017

<http://www.independent.co.uk/news/science/antibiotics-breakthrough-resistance-disease-health-infections-scientists-oregon-state-a7539721.html>

Independent

Superbugs deploy 'decoy flares' like fighter jets to avoid being killed by antibiotics

The antibiotic of last resort fails to kill about a third of MRSA infections and scientists believe they have found out why

Ian Johnston 24 October 2016

<http://www.independent.co.uk/news/science/superbugs-antibiotics-resistant-decoy-flares-study-research-mrsa-a7377681.html>

Telegraph

Mark Zuckerberg pledges \$3bn to 'rid the world of all disease'

22 September 2016

<http://www.telegraph.co.uk/business/2016/09/21/facebook-founder-zuckerberg-puts-3bn-to-work-on-curing-all-disea/>

4. Press releases

Wellcome Trust

Breakthrough in battle against resistant TB

24 March 2017

A cutting-edge technique developed by Wellcome-funded researchers in Oxford means that tuberculosis (TB) can now be diagnosed much faster and more accurately.

The researchers' method uses whole genome sequencing to quickly assess which strains of TB a patient is infected with. Patients will receive their diagnosis in just over a week, rather than waiting up to a month.

This will improve treatments and help reduce the spread of drug-resistant infections.

It will also be possible to improve identification and treatment of other resistant pathogens.

The news comes as World TB Day marks global efforts to eliminate a disease that infects 10 million people and kills 1.5 million each year. The spread of resistant strains of TB are of particular concern. In 2015, an estimated 480,000 people worldwide developed multidrug-resistant TB.

Tim Jinks, Wellcome's Head of Drug Resistant Infection, said: "New tools for faster and more accurate diagnosis of infections are vital, so patients get the most appropriate and most effective treatments, and to help us track and stop drug resistant infection spreading."

Professor Derrick Crook, Head of Oxford's Modernising Microbiology team, said: "We are immensely proud of the contribution this makes to the prospects of better treatment of TB globally. This approach will also increasingly be used for many other infectious diseases. Our ambition is to achieve this as quickly as possible so many infections can be better diagnosed and treated."

The research was also funded by Public Health England, the Bill & Melinda Gates Foundation, MRC Newton Fund Genomics England, and the National Institute for Health Research.

To find out more [read the University of Oxford press release. \(opens in a new tab\)](#)

UNAIDS

UNAIDS warns that countries will miss the 2020 target of reducing HIV-associated TB deaths by 75% unless urgent action is taken

24 March 2017

On World Tuberculosis Day, 24 March, UNAIDS is urging countries to do much more to reduce the number of tuberculosis (TB) deaths among people living with HIV. TB is the most common cause of hospital admission and death among people living with HIV. In 2015, 1.1 million people died from an AIDS-related illness—around 400 000 of whom died from TB, including 40 000 children.

“It is unacceptable that so many people living with HIV die from tuberculosis, and that most are undiagnosed or untreated,” said Michel Sidibé, Executive Director of UNAIDS. “Only by stepping up collaboration between HIV and tuberculosis programmes to accelerate joint action can the world reach its critical HIV and tuberculosis targets.”

Eight countries—the Democratic Republic of the Congo, India, Indonesia, Mozambique, Nigeria, South Africa, the United Republic of Tanzania and Zambia—account for around 70% of all TB deaths among people living with HIV. Scaling up action in these eight countries would put the world on track to reach the ambitious target in the 2016 United Nations Political Declaration on Ending AIDS of reducing TB-related deaths among people living with HIV by 75% by 2020.

Weaknesses in health systems are continuing to result in missed opportunities to diagnose TB among people living with HIV—around 57% of HIV-associated TB cases remained untreated in 2015. Inadequate linkages to care after diagnosis, poor tracking of people and loss to follow-up, failure to reach the people most at risk of disease—particularly marginalized populations, including people who inject drugs, prisoners and migrant workers—and poor treatment outcomes contribute to the lack of progress. In 2014, around 11% of HIV-positive TB patients died, compared with 3% of HIV-negative TB patients. Early detection and effective treatment are essential to prevent TB-associated deaths, especially among people living with HIV.

Drug resistance is also a major concern—in 2015, there were an estimated 480 000 new cases of multidrug-resistant TB. The recent approval of two new medicines to treat TB, the first in more than 60 years, is improving the outlook for people with drug-resistant TB.

UNAIDS calls for the elimination of TB deaths among people living with HIV and for health systems to be strengthened and services integrated to allow for a more rapid scale-up of HIV and TB programming. Countries must expand HIV prevention and treatment programmes that include regular TB screening, preventive therapy and early treatment, since they are simple, affordable and effective programmes that prevent TB deaths.

UNAIDS is continuing to support countries to Fast-Track their efforts to reach the critical 2020 targets of the 2016 Political Declaration. As part

of these efforts, UNAIDS is urging countries to intensify action in 35 high-priority countries to accelerate results by implementing focused, high-impact programmes to advance progress in ending the AIDS epidemic.

UNAIDS

The Joint United Nations Programme on HIV/AIDS (UNAIDS) leads and inspires the world to achieve its shared vision of zero new HIV infections, zero discrimination and zero AIDS-related deaths. UNAIDS unites the efforts of 11 UN organizations—UNHCR, UNICEF, WFP, UNDP, UNFPA, UNODC, UN Women, ILO, UNESCO, WHO and the World Bank—and works closely with global and national partners towards ending the AIDS epidemic by 2030 as part of the Sustainable Development Goals. Learn more at unaids.org and connect with us on [Facebook](#), [Twitter](#), [Instagram](#) and [YouTube](#).

Medical Research Council

Research councils lay foundations for ambitious new global health research programmes

15 December 2016

The research councils have together announced the first phase of health research awards from the new £1.5bn Global Challenges Research Fund (GCRF). They will address issues affecting people in low and middle income countries (LMICs) using the UK's world-class research expertise.

The MRC, AHRC, BBSRC, ESRC and NERC, are allocating over £20m to 41 short-term projects, across 39 UK research organisations, working in partnership with up to 32 different countries around the world. These will complement existing UK strengths in global health research, exploring new, more diverse opportunities, building broader multidisciplinary links and new partnerships in LMICs.

The awards focus on two areas: non-communicable disease and infection (both MRC-led). New research awards in global agriculture and food systems (BBSRC-led) will be announced early in 2017.

The awards support moderately sized, short to medium-term investments spanning diverse research specialisms. The aim is to target new, innovative and multidisciplinary research that will meet the existing or future health needs of LMICs. A principal objective will also be to strengthen LMIC/UK research partnerships in order to champion world-class research.

Declan Mulkeen, the MRC's Chief of Strategy, said: "The five research councils involved in the Foundation Awards have been working collectively to provide new and broader approaches to meet global research challenges. It's encouraging to see these projects tackling the broader environmental and economic factors affecting health, as well as using new technologies to bring cost-effective treatments within reach.

He added: "The MRC has a strong track record in global health research, often in partnership. Infectious disease has been the main focus and remains the largest area of funding, but as countries develop their health needs change. The Global Challenges Research Fund will enable us to tackle a broader range of health problems, for local and global benefit.

"These awards represent a significant win for global research. We hope that many of the research partnerships being supported will move on to even more ambitious work over the coming years."

Investments made through the GCRF will address global challenges through multidisciplinary research, strengthening capability for research and innovation within both the UK and low and middle income countries.

Case study 1: Climate change and snakebite

[more text](#)

Case study 2: Big data in Africa

[more text](#)

Case study 3: Exploring disease variability across countries

[more text](#)

Case study 4: Camel to human transmission

[more text](#)

Case study 5: Immunotherapy for oral cancers

[more text](#)

World Health Organisation

WHO welcomes global health funding for malaria vaccine

News release

17 November 2016

The world's first malaria vaccine will be rolled out in pilot projects in sub-Saharan Africa, WHO confirmed today. Funding is now secured for the initial phase of the programme and vaccinations are due to begin in 2018.

The vaccine, known as RTS,S, acts against *P. falciparum*, the most deadly malaria parasite globally, and the most prevalent in Africa. Advanced clinical trials have shown RTS,S to provide partial protection against malaria in young children.

"The pilot deployment of this first-generation vaccine marks a milestone in the fight against malaria," said Dr Pedro Alonso, Director of the WHO Global Malaria Programme. "These pilot projects will provide the evidence we need from real-life settings to make informed decisions on whether to deploy the vaccine on a wide scale."

Vaccine financing and development

The Global Fund to Fight AIDS, Tuberculosis and Malaria today approved US\$ 15 million for the malaria vaccine pilots, assuring full funding for the first phase of the programme. Earlier this year, Gavi, the Vaccine Alliance and UNITAID announced commitments of up to US\$ 27.5 million and US\$ 9.6 million, respectively, for the first 4 years of the vaccine programme.

RTS,S was developed through a partnership between GlaxoSmithKline and the PATH Malaria Vaccine Initiative (MVI), with support from the Bill & Melinda Gates Foundation and from a network of African research centres.

“WHO recognizes and commends the leadership and support of all funding agencies and partners who have made this achievement possible,” said Dr Jean-Marie Okwo-Bele, Director of the WHO Department of Immunization, Vaccines and Biologicals.

Vaccine programme recommended by two WHO advisory bodies

In October 2015, two independent WHO advisory groups comprised of the world’s foremost experts on vaccines and malaria – the Strategic Advisory Group of Experts (SAGE) on Immunization and the Malaria Policy Advisory Committee (MPAC) – recommended pilot implementation of the RTS,S vaccine in 3 to 5 settings in sub-Saharan Africa. These recommendations followed a July 2015 announcement that the European Medicines Agency (EMA) had issued a positive scientific opinion of the RTS,S vaccine.

WHO officially adopted the SAGE-MPAC recommendations in January 2016 and has since worked to mobilize financial support for the pilots and to finalize the programme design. The pilot programme will evaluate the feasibility of delivering the required 4 doses of RTS,S; the impact of RTS,S on lives saved; and the safety of the vaccine in the context of routine use.* It will also assess the extent to which the vaccine’s protective effect demonstrated in children aged 5–17 months old in the Phase 3 trial can be replicated in real-life settings.

Country selection

RTS,S is the first malaria vaccine to successfully complete pivotal Phase 3 testing. The Phase 3 trial enrolled more than 15,000 infants and young children in 7 countries in sub-Saharan Africa. Countries that participated in the Phase 3 clinical trials will be prioritized for inclusion in the WHO pilot programme. Consultations are ongoing and the names of the 3 selected countries will be announced in the coming weeks.

A complementary control tool

The RTS,S vaccine is proposed as a tool to complement the existing package of WHO-recommended malaria preventive, diagnostic and treatment measures and will be used in combination with the current interventions. Other tools include: long-lasting insecticidal bed-nets, spraying inside walls of dwellings with insecticides, preventive treatment

for infants and during pregnancy, prompt diagnostic testing, and treatment of confirmed cases with effective anti-malarial medicines.

Deployment of these tools has already dramatically lowered malaria disease burden in many African settings. Between 2000 and 2015, the rate of new malaria cases in sub-Saharan Africa fell by 42% and malaria mortality rates fell by 66%. However, this region continues to account for approximately 90% of global malaria cases and deaths.

As RTS,S is only partially effective, it will be essential that any vaccinated patients with a fever be tested for malaria, and that all those with a confirmed malaria diagnosis are treated with high quality, effective anti-malarial medicines.

Partner quotes:

Dr Seth Berkley, CEO of Gavi, the Vaccine Alliance:

"These pilots are critical to determine whether this vaccine can be rolled out more broadly, adding an important new tool to the proven interventions we already have in the fight against malaria. The Global Fund's commitment marks the beginning of a historic partnership between Gavi, the Global Fund and UNITAID, bringing together three of the world's biggest health financing institutions to tackle one of the leading killers of children."

Mark Dybul, Executive Director of the Global Fund:

"The new vaccine is a potentially valuable new tool in the fight against malaria. With the pilots funded, we are eager to see how this vaccine works in combination with insecticide-treated nets and indoor spraying."

Lelio Marmora, Executive Director of UNITAID:

"Ending malaria, a disease that kills a disproportionate number of children, is going to require a high degree of ingenuity and boldness. We must seize the opportunity to pilot a vaccine that could strengthen the means at our disposal to combat this deadly disease."

Note to the editors:

There were 2 target age groups in the Phase 3 RTS,S trials:

- Infants who received the malaria vaccine together with other routine childhood vaccines at 6, 10 and 14 weeks of age.
- Older children who received their first dose of the malaria vaccine between 5 and 17 months of age.

Among children in the older age group, there was a risk of febrile seizures within 7 days after any of the vaccine doses. Among infants, this risk was only apparent after the fourth dose. There were no long-lasting consequences due to any of the febrile seizures.

Among children in the older age group, an increase in the number of cases of meningitis and cerebral malaria was found in the group receiving the malaria vaccine compared to the control group. The significance of these findings in relation to the vaccination is unclear. An

excess of meningitis and cerebral malaria was not seen in infants aged 6–12 weeks.

Bill & Melinda Gates Foundation

Global Britain, Global Health

27 October 2016

Bill Gates backs British innovation, challenges UK government to step up investment in science and R&D

Today Bill Gates, Sir Richard Branson, and Secretary of State for International Development, Priti Patel, will join over 1,000 of the world's leading scientists in London to celebrate the Grand Challenges programme that finds solutions to the toughest problems in health and development. Grand Challenges partners have invested more than \$1 billion into more than 2,000 innovations from 87 countries. Also today, a ground-breaking new programme to fight Zika, Dengue and Yellow Fever will be announced.

- Gates will praise Britain for its *“extraordinary leadership in science and innovation, which has been good for Britain and good for the world”* and will call for the UK government to increase its own investments in science and R&D to safeguard Britain's global leadership as the UK negotiates its exit from the EU. Gates will underscore his own commitment to the UK, with the Bill & Melinda Gates Foundation continuing its \$1 billion investment programme in British research and innovation.
- His remarks come as over 1,000 of the world's leading scientists come together at the [Grand Challenges](#) conference in London this week. This initiative provides financial incentives to the world's leading scientists to find solutions to the world's most pressing problems. It has awarded more than 2,000 grants in 87 countries to, amongst others, create and improve vaccines, control insects that spread disease, cure infections, and limit drug resistance. British grants include an [Imperial College](#) project using genetic material to cause dramatic reductions in the population of malaria and Zika transmitting mosquitos; an [Oxford University](#) study for a potential malaria vaccine; research at [University College London](#) on pioneering new approaches to measure children's cognitive development; and a [ground-breaking](#) breakthrough in the search for TB treatments.
- The conference will culminate with the [announcement](#) of a new \$18 million investment from the Bill & Melinda Gates Foundation, the Wellcome Trust, and the governments of the UK, US, Colombia, and Brazil to prevent the spread of mosquito borne diseases like Zika, dengue, Chikungunya, and Yellow fever, which could protect 2.5 billion people around the world from these diseases.

- Also today, in partnership with the British Science Association's CREST Awards, Bill Gates has launched the [Youth Grand Challenges](#) programme for school children aimed at inspiring the next generation of great British scientists and innovators.
- Later today, Bill Gates will join Grammy-award winning musician and advocate for education, will.i.am, in a celebration of British innovation at the Evening Standard's Progress Conversation at the Science Museum in London. This will be followed by an exciting [Lates](#), supported by the Bill & Melinda Gates Foundation, where over 150 researchers and scientists will help thousands of visitors discover more about infectious diseases and how we can protect ourselves from the threat of contagion.

Celebration of Britain's leadership in science and innovation, as Grand Challenges comes to London

Founded by the Bill & Melinda Gates Foundation, the Foundation for National Institutes of Health, the Wellcome Trust and the Canadian Institutes of Health Research in 2003, the [Grand Challenges](#) is an initiative which seeks to incentivise the best and brightest minds to find solutions to the most pressing problems facing people in the developing world.

Inspired by the 18th century Longitude Prize and Hilbert's problems in mathematics, anyone, whether they be students or professors, from universities, government, or the private sector, can apply for a grant of \$100,000 rising to \$1,000,000 if they have an innovative idea which could lead to breakthrough advances in health and development challenges.

After more than a decade of innovation, the Grand Challenges conference has come to the UK for the first time. Over the last few days, leading scientists from around the world have convened at the Queen Elizabeth II centre to demonstrate their innovations and to share ideas on topics ranging from crop research, vaccines, and antimicrobial resistance to menstrual hygiene, cognitive development and mental health.

Scale-up of ground-breaking innovation to eradicate mosquito-borne diseases like Zika, Dengue and Yellow Fever announced

A ground-breaking innovation that received funding from the Grand Challenges programme comes from Scott O'Neill of Monash University in Australia. He has discovered a way to inoculate the *Aedes aegypti* mosquito with a bacteria called Wolbachia that prevents these mosquitos from passing Zika, Dengue, Chikungunya, and Yellow fever on to people.

Today, the Bill & Melinda Gates Foundation, together with the Wellcome Trust and the governments of the UK, US, Colombia, and Brazil, are committing [\\$18 million](#) in new funding to scale-up field trials of this Wolbachia method across Latin America. If these trials are successful, the Wolbachia method could be scaled up across the tropics

and sub-tropics in the next decade, helping to protect 2.5 billion people from these diseases.

Gates renews his commitment to British science and R&D, and calls for the UK to step up its investments in science and innovation to tackle the great challenges of our time

At the closing plenary of the Grand Challenges Conference later today, Bill Gates, co-chair of the Bill & Melinda Gates Foundation, Sir Richard Branson, Founder of Virgin and Secretary of State for International Development, Priti Patel, will come together to celebrate the role that Britain has played as a global centre of innovation.

Bill Gates will say, "The world needs innovative leadership now more than ever. The complexity of our most urgent global problems – extreme poverty, the persistence and spread of disease, feeding a growing world – requires that we invest in science and put our best minds to work on finding solutions. As the UK seeks to negotiate its exit from the EU, it is critical that the government steps up its investments in science and innovation if we are to meet the challenges of tomorrow – and grow the UK's economy."

Gates will go on to say, "If we want more and better jobs, greater equality, and a better healthier life for our children, then we need to invest in the science and technology that will cement the UK's place as a leading global innovation hub. If we want to keep safe from the spread of disease, tackle extreme poverty, combat the causes of forced migration, and deal with the challenge of climate change, then we need to apply that same relentless focus on innovation to these problems."

Our foundation has a rich set of partnerships with universities and research institutes across the UK that deliver the life-changing innovations the developing world so desperately needs – innovations that are only possible because of the British government's continued commitment to R&D funding and international development. I look forward to continuing to work with an outward-looking, global Britain that plays a vital role in innovating not only for itself, but also for the world."

Sir Richard Branson, Virgin Group Founder, will speak about the critical role of private capital in driving innovation, saying, *"British scientists, engineers and innovators have been responsible for some truly transformative developments in health and poverty alleviation over the years but these changes are not possible without sustained investment. Philanthropists, government and business all have a role to play to maintain this effort. These investments benefit British businesses as well as the most vulnerable people in the world."*

Today will also see the launch of a project by think tank Policy Exchange to assess the impact that Britain's investment in R&D for the developing world has had on the UK and on solving some of the world's most urgent global health challenges. It will consider the role that continued investment in this type of R&D will have for Britain's future role in the world and as part of the government's modern industrial strategy. The scoping document can be found [here](#). The paper will feature a

contribution from George Freeman MP, Chairman of the Prime Minister's new No 10 Policy Board and Minister for Life Sciences, 2014-2016, responsible for U.K. global health research.

Young people need to be inspired to help find solutions to the great challenges of our time as the Youth Grand Challenges launch

Also this morning, Bill Gates launched the Youth Grand Challenges in partnership with the British Science Association's CREST Awards. Aimed at inspiring young people, aged 11-to-19, to see how science and technology can be used to tackle global health issues, it will challenge students to use their skills, passions and interests to develop innovative solutions that have the potential to change the world. The individuals and teams judged to have the best projects will have the opportunity to participate in an international trip to see medical research in action and the chance to be mentored by some of the UK's leading scientists. Find out more at www.youthgrandchallenges.org

Glittering celebration of British leadership in science and innovation at Science Museum

Later today, Bill Gates will join Grammy-award winning musician and advocate for education, will.i.am, on stage at the Science Museum to address celebrity supporters, politicians and the public in a glittering celebration of British innovation at the Evening Standard Progress Conversation hosted at the Science Museum.

The event will be followed by the Science Museum's [CONTAGION Lates](#), where members of the public can discover more about infectious diseases and how we can protect ourselves from the threat of contagion. Visitors can explore the Malaria Zone to test how tasty their blood is for mosquitos, visit the Ebola Zone's treatment centre to find out more about the life saving techniques used in the field, and meet the heroes who helped contain the Ebola epidemic. Visitors to Lates can also enjoy live DJs, the Punk Science comedy show, and the best silent disco in London.

Global Britain, Global Health

With a rich tradition of success, a supportive government and a creative private sector, the UK is at the forefront of the global fight to alleviate poverty and improve global health. The Bill & Melinda Gates Foundation is proud to continue to partner with the UK government and the British people to fight disease and end extreme poverty.

About the Bill & Melinda Gates Foundation

Guided by the belief that every life has equal value, the Bill & Melinda Gates Foundation works to help all people lead healthy, productive lives. In developing countries, it focuses on improving people's health and giving them the chance to lift themselves out of hunger and extreme poverty. In the United States, it seeks to ensure that all people—especially those with the fewest resources—have access to the opportunities they need to succeed in school and life. Based in Seattle, Washington, the foundation is led by CEO Sue Desmond-Hellmann and

Co-chair William H. Gates Sr., under the direction of Bill and Melinda Gates and Warren Buffett.

About the Science Museum

As the home of human ingenuity, the Science Museum's world-class collection forms an enduring record of scientific, technological and medical achievements from across the globe. Welcoming over 3 million visitors a year, the Museum aims to make sense of the science that shapes our lives, inspiring visitors with iconic objects, award-winning exhibitions and incredible stories of scientific achievement. More information can be found at sciencemuseum.org.uk

About the British Science Association

The British Science Association (BSA) believes that science should be part of – rather than set apart from – society and culture, and is owned by the wider community. Our programmes encourage people of all ages and backgrounds to engage with science, become ambassadors for science, and ultimately to be empowered to challenge and influence British science - whether they work in science or not. Established in 1831, the BSA is a registered charity that organises major initiatives across the UK, including British Science Week, the annual British Science Festival, regional and local events, the CREST Awards and other programmes for young people in schools and colleges. The BSA also organises specific activities for professional science communicators, including a specialist conference and training. For more information, please visit www.britishsociety.org.

United Nations Secretary-General's High-Level Panel on Access to Medicines

United Nations Secretary-General's High-Level Panel on Access to Medicines Calls For New Deal to Close the Health Innovation and Access Gap

September 14, 2016 by Matthew Matassa

Whether it's the rising price of the EpiPen, or new outbreaks of diseases, like Ebola, Zika and yellow fever, the rising costs of health technologies and the lack of new tools to tackle health problems, like antimicrobial resistance, is a problem in rich and poor countries alike.

According to a High-Level Panel convened to advise the UN Secretary-General on improving access to medicines, the world must take bold new approaches to both health technology innovation and ensuring access so that all people can benefit from the medical advances that have dramatically improved the lives of millions around the world in the last century.

For decades, many international treaties and national constitutions have enshrined the fundamental right to health and the right to share in the benefits of scientific advancements. Yet, while the world is witnessing

the immense potential of science and technology to advance health care, gaps and failures in addressing disease burdens and emerging diseases in many countries and communities remain. The misalignment between the right to health on the one hand and intellectual property and trade on the other, fuel this tension.

The UN Secretary-General established the High-Level Panel to propose solutions for addressing the incoherencies between international human rights, trade, intellectual property rights and public health objectives. The report recommendations come at the end of a ten-month process for the Panel under the leadership of Ruth Dreifuss and the former President of the Swiss Confederation and Festus Mogae, the former President of the Republic of Botswana.

“Policy incoherencies arise when legitimate economic, social and political interests and priorities are misaligned or in conflict with the right to health,” said President Ruth Dreifuss. “On the one hand, governments seek the economic benefits of increased trade. On the other, the imperative to respect patents on health technologies could, in certain instances, create obstacles to the public health objectives and the right to health.”

The Panel has formulated a set of concrete recommendations to help improve research and development of health technologies and people’s access to vital therapies that are currently priced out-of-reach of patients and governments alike. The Panel’s report points out that the cost of health technologies are putting a strain on both rich and poor countries.

“With no market incentives, there is an innovation gap in diseases that predominantly affect neglected populations, rare diseases and a crisis particularly with antimicrobial resistance, which poses a threat to humanity,” said Malebona Precious Matsoso, Director General of the National Department of Health of South Africa. “Our report calls on governments to negotiate global agreements on the coordination, financing and development of health technologies to complement existing innovation models, including a binding R&D Convention that delinks the costs of R&D from end prices.”

The Panel suggested that initially governments should form a working group to begin negotiating a Code of Principles for Biomedical R&D, and report annually on their progress in negotiating and implementing the Code in preparation for negotiating the Convention.

The Panel examined the way in which the application of the flexibilities found in the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) has facilitated access to health technologies, and how WTO Members can tailor national intellectual property law, competition law, government procurement and drug regulatory laws and regulations to fulfil public health obligations.

The new report noted with grave concern reports of governments being subjected to undue political and economic pressure to forgo the use of TRIPS flexibilities. The Panel felt strongly that this pressure undermines the efforts of governments to meet their human rights and public health

obligations and violates the integrity and legitimacy of the Doha Declaration.

“WTO Members must make full use of TRIPS flexibilities as reaffirmed by the Doha Declaration on TRIPS and Public Health. This is essential to promote access to health technologies,” said Michael Kirby, member of the High-Level Panel and chair of the Expert Advisory Group. “In particular, governments and the private sector must refrain from explicit or implicit threats, tactics or strategies that undermine the right of WTO Members to use TRIPS flexibilities. WTO Members must register complaints against undue political and economic pressure. They need to take strong, effective measures against offending Members.”

Transparency was a recurring theme throughout the report of the High-Level Panel. The Panel repeatedly raised concerns regarding the negative impact of insufficient transparency on both health technology innovation and access. The Panel was also critical of the lack of transparency surrounding bilateral free trade and investment negotiations. The Panel views transparency as a core component of robust and effective accountability frameworks needed to hold all stakeholders responsible for the impact of their actions on innovation and access.

“A paradigm shift in transparency is needed to ensure that the costs of R&D, production, marketing, and distribution, as well as the end prices of health technologies are clear to consumers and governments,” said President Festus Mogae. “Governments should require manufacturers and distributors of health technologies to disclose these costs and the details of any public funding received in the development of health technologies, including tax credits, subsidies, and grants.”

The Panel also recommended the UN General Assembly convene a Special Session no later than 2018 on health technology innovation and access to agree on strategies and an accountability framework that will accelerate efforts towards promoting innovation and ensuring access in line with the 2030 Agenda for Sustainable Development.

Wellcome Trust

New US-UK partnership to tackle antibiotic resistance

28 July 2016

Wellcome is part of a major new transatlantic partnership to tackle the growing threat of drug-resistant infections. It will speed up the development of new antibiotics, diagnostics and other therapies.

The Combating Antibiotic Resistant Bacteria Biopharmaceutical Accelerator (CARB-X) brings together leaders from industry, philanthropy, government and academia.

It could provide hundreds of millions of pounds over the next five years to boost the antimicrobial drug-development pipeline.

The international partnership will support a suite of products through early preclinical development. CARB-X aims to get products to a stage where private or public investors can then take them forward.

Wellcome will play a key role in selecting and overseeing projects funded through CARB-X.

Other partners include:

- the Biomedical Advanced Research and Development Authority, in the US government Office of the Assistant Secretary for Preparedness and Response
- the Antimicrobial Resistance Centre, a public-private initiative based in Alderley Park, Cheshire
- Boston University School of Law, which will host the CARB-X executive team made up of experts with decades of experience in antibiotic drug development
- the National Institutes of Health's National Institute of Allergy and Infectious Disease (NIAID)
- MassBio in Cambridge, Massachusetts, and California Life Sciences Institute in the San Francisco Bay Area
- the Broad Institute of MIT and Harvard in Cambridge, Massachusetts, which will host a new Collaborative Hub for Early Antibiotic Discovery
- RTI International.

Wellcome has invested £286.7m in drug-resistant infection activities since 2004-05 and will draw on our track record to provide guidance for product developers funded through CARB-X. We will help to monitor project progress and provide feedback and advice through each milestone.

"Drug-resistant infections are already costing lives all over the world," said Wellcome Director Dr Jeremy Farrar. "A problem of this scale can only be tackled through coordinated international effort to curb our massive over use of existing antibiotics, and to accelerate the development of new ones."

Read more on [Boston University's website \(opens in a new tab\)](#).

Wellcome will be accepting applications from early 2017. Potential applicants can visit the [CARB-X website](#)

Review on Antimicrobial Resistance

Jim O'Neill presents final international recommendations for the world to defeat superbugs

19 May 2016

Lord Jim O'Neill's global Review on AMR will set out its final recommendations, providing a comprehensive action plan for the world to prevent drug-resistant infections and defeat the rising threat of superbugs – something that could kill 10 million people a year by 2050, the equivalent of 1 person every 3 seconds, and more than cancer kills today. Building on eight interim papers, this is the final report from Lord O'Neill's Review, established by the UK Prime Minister David Cameron in 2014 to avoid the world being "cast back into the dark ages of medicine".

The costs of AMR

The report sets out why AMR is such a huge problem and that it must be tackled. AMR is a problem that is getting worse. Antimicrobial drugs are becoming less effective and the world is not developing enough new ones to keep up. The global costs if we do not take action now could be 10 million people dying every year by 2050, and a cumulative economic cost of around 100 trillion USD.

How AMR can be tackled

It then sets out 10 areas where the world needs to take action to tackle AMR. Many of these measures focus on how we can reduce the unnecessary use of antimicrobials, and so the rate at which resistance increases, making our current drugs last longer. Others look at how we can increase the supply of new antimicrobial drugs because, even if we reduce unnecessary use, our arsenal to defeat superbugs is running out and needs to be replenished. All 10 areas are important, and the full list is available in the executive summary of the attached paper, but four are particularly important and are outlined in more detail here:

1. *A global public awareness campaign* to educate all of us about the problem of drug resistance.

This must be an urgent priority and the Review urges international campaign developers, industry experts, and non-governmental organisations to consider how they could help to support such a campaign. This should begin this summer if we are to really make progress, and could be launched formally by heads of state at the UN General Assembly in September.

2. *The supply of new antibiotics needs to be improved* so they can replace existing ones as they become ineffective. A truly new class of antibiotic has not been seen for decades because the lack of incentives for investment has led to reduced R&D, and many of the 'low hanging fruit' in terms of development have already been picked. We need a group of countries such as the G20 to reward new antibiotics after they are approved for use. These *market entry rewards*, of around one billion USD each, would be given to the developers of successful new drugs, subject to certain conditions that ensure they are not 'over-marketed' but are available to patients who need them wherever they live.

3. *We need to use antibiotics more selectively through the use of rapid diagnostics*, to reduce unnecessary use, which speeds the incidence and spread of drug resistance. To do this, we need a step change in the

technology available. Doctors in most countries around the world still prescribe important medicines like antibiotics based only on their immediate assessment of a patient's symptoms, just like when antibiotics first entered common use in the 1950s.

Governments of the richest countries should mandate now that, by 2020, all antibiotic prescriptions will need to be informed by up to date surveillance and a rapid diagnostic test, wherever one exists. This would encourage investment and innovation, by showing developers that they will find a market for their products. Once the technology has improved, markets in developing countries should be supported with a system we have called a *diagnostic market stimulus*, which would provide top-up payments for successful products once they are purchased or used - not dissimilar to the great work that Gavi, the vaccine alliance, have done to improve global child vaccination.

4. *We must reduce the global unnecessary use of antibiotics in agriculture.* In the US, for example, of the antibiotics defined as medically important for humans by the US Food and Drug Administration (FDA), over 70 percent (by weight) are sold for use in animals. A number of other countries are also likely to use more antibiotics in agriculture than in humans but many do not even hold or publish the information. Firstly, surveillance needs to be improved in many parts of the world, so we know the extent of antibiotic use in agriculture. Then targets need to be set by individual countries for this use, enabling governments to have the flexibility to decide how they will reach lower levels. Alongside this, we need to make much quicker progress on banning or restricting antibiotics that are vital for human health from being used in animals.

How solutions can be paid for

The paper then discusses how these solutions would be paid for. The costs of action are dwarfed by the costs of inaction: the proposals made by the Review on AMR would cost up to 40 billion USD over 10 years. However, the cost of AMR between now and 2050 could be as much as 100 trillion USD, that's 100,000 billion USD. The economic case for action is clear, as well as the tragic human consequences of inaction. The solutions could be paid for by one or more of the following:

- a) Allocating a very small percentage of G20 countries' existing healthcare spending to tackling AMR
- b) Reallocating a fraction of global funding from international institutions to AMR
- c) Apply an antibiotic investment charge to pharmaceutical companies who do not invest in research for AMR
- d) Implementing a tax on antibiotics
- e) Introducing transferrable 'vouchers' to reward new antibiotics

Different countries can choose different ways to pay for global action on AMR.

Next steps

International collaboration for real action via the World Health Assembly, G7, G20 and the UN is needed to deliver these policy proposals and turn discussions on AMR into action. This needs to build on promising steps made by governments, and by industry recently affirming its commitment to tackle AMR with a landmark declaration at Davos. Here, over 85 companies, including vaccine developers, large pharmaceutical companies, diagnostic developers and biotechs, committed to further action to reduce drug resistance, increase research and improve access. With this momentum, and 700,000 people already dying every year from AMR, 2016 is a crucial year.

5. Parliamentary material

Debates

Lords debate: Neglected Tropical Diseases

HL Deb 03 April 2017 | Volume 782 cc914-

<https://hansard.parliament.uk/Lords/2017-04-03/debates/681D0D0B-59FE-44AC-B5D7-171B923CD03A/NeglectedTropicalDiseases>

Lords debate: Drug-Resistant Infections

HL Deb 15 September 2016 | Volume 774 cc1584-

<https://hansard.parliament.uk/Lords/2016-09-15/debates/16091542000350/Drug-ResistantInfections>

Westminster Hall debate: Antibiotics: Research and Development

HC Deb 26 April 2016 | Volume 608 cc523WH-

<https://hansard.parliament.uk/Commons/2016-04-26/debates/16042645000002/AntibioticsResearchAndDevelopment>

Westminster Hall debate: Global Fund to Fight AIDS, TB and Malaria

HC Deb 12 January 2016 | Vol 604 cc247WH-

<https://www.publications.parliament.uk/pa/cm201516/cmhansrd/cm160112/halltext/160112h0001.htm#16011278000001>

PQs

[Antibiotics: Drug Resistance](#)

Asked by: Villiers, Mrs Theresa

To ask the Secretary of State for Health, what contingency plans the Government has made in the event of an anti-microbial resistance pandemic; and if he will place a copy of those plans in the Library.

Answering member: Nicola Blackwood | Department: Department of Health

The United Kingdom Government has plans in place for responding to pandemic influenza and other infectious diseases. Antimicrobial resistance (AMR) is not a single infectious disease as defined for the purposes of pandemic planning.

AMR is recognised as a long term risk and the numbers of infections complicated by it might rise markedly over a period of 20 years. It is in the National Security Risk Assessment which sets out the top risks likely to pose a threat to the UK in the next five to 20 years.

The Government is taking strong cross-government action to tackle AMR through the UK Five Year Antimicrobial Resistance Strategy published in 2013. The strategy represents an ambitious programme to slow the development and spread of AMR taking a "One-Health" approach spanning people, animals, agriculture and the wider environment. This includes an ambition to halve inappropriate prescribing in the UK by 2020, mitigating the risks of increased resistance.

Antimicrobial resistance is a global problem. The Government's global leadership has helped secure a United Nations declaration on AMR and a commitment from the G20 to look at solutions to the market failure on the development of new antimicrobials.

HC Deb 27 March 2017 | PQ 68795

[Antibiotics: Drug Resistance](#)

Asked by: Osamor, Kate

To ask the Secretary of State for Health, whether the Government will adopt the recommendation from the High Level Meeting of the General Assembly on Anti-Microbial Resistance for research and development to be guided by principles of affordability in relation to the Ross Fund.

Answering member: Nicola Blackwood | Department: Department of Health

The Government is already implementing the commitments made in relation to research and development at the recent United Nations General Assembly in its Declaration on Antimicrobial resistance (AMR), through the launch of a £50 million Global AMR Innovation Fund which is a Ross Fund project.

In line with the declaration commitment the fund aims to leverage substantial new international investment in AMR research and development for new antimicrobials and alternative medicines, rapid diagnostic tests, vaccines and other important technologies, interventions and therapies. While still in its scoping phase, central to the project's aims is the commitment to ensuring lower and middle income countries benefit from the AMR research and development. Affordability is therefore a key concern. We recognise the importance of equitable access and we will look to address this in the design of the project.

HC Deb 16 March 2017 | PQ 67610

[Infectious Diseases](#)

Asked by: Hodgson, Mrs Sharon

To ask the Secretary of State for Health, if he will commission an all-encompassing analysis of the overall health burden of infectious diseases in the UK.

Answering member: Nicola Blackwood | Department: Department of Health

England participates in the international Global ongoing Global Burden of Disease (GBD) study which assesses and compares health within and between countries. This includes an overall assessment of the burden of infectious diseases. Results from the GBD show changes over time, comparisons and ranking of infectious diseases and other diseases and is available at:

<http://vizhub.healthdata.org/gbd-compare/>

The most recent analysis on the GBD study was published by Public Health England in September 2015 and is available at:

<https://www.gov.uk/government/publications/burden-of-disease-study-for-england>

HC Deb 08 February 2017 | PQ 62566

[Developing Countries: Tuberculosis](#)

Asked by: Brake, Tom

To ask the Secretary of State for International Development, what steps the Government is taking to encourage international co-operation to tackle the spread of tuberculosis.

Answering member: James Wharton | Department: Department for International Development

Tackling the spread of infectious diseases like tuberculosis (TB) is a priority across the recently published bilateral and multilateral development reviews and the research review. The United Nations General Assembly recently agreed to hold the first ever High Level Meeting on TB in 2018 and ahead of this, we will work with international partners to galvanise increased commitments.

HC Deb 13 January 2017 | PQ 58865

[Overseas Aid: Infectious Diseases](#)

Asked by: Phillipson, Bridget

To ask the Secretary of State for International Development, what funding the Government has committed to the Global Fund Investment Case, Fifth Replenishment 2017-19 for fighting infections.

Answering member: James Wharton | Department: Department for International Development

The Fifth Replenishment Conference for the Global Fund to Fight AIDS, Tuberculosis and Malaria took place on 15 and 16 September in Montreal, Canada.

At the conference, the Secretary of State announced an investment of £1.1 billion in the Global Fund, including a commitment to double private sector contributions for tackling malaria, up to a maximum of £200 million, and £90 million linked to successful delivery against a performance agreement.

The UK's investment will help to fund 40 million bednets to tackle malaria; provide enough lifesaving anti-retroviral therapy for 1.3 million people with HIV; and support the treatment of 800,000 people with tuberculosis. Overall, our investment will help the Global Fund to save 8 million lives, avert 300 million infections and help build resilient and sustainable systems for health.

HC Deb 12 October 2016 | PQ 47346

[Developing Countries: Drugs](#)

Asked by: Lucas, Caroline

To ask the Secretary of State for International Development, if she will make it her policy to support the work of the UN High Level Panel on Access to Medicines; with reference to the Prime Minister's comments on the pharmaceutical industry to the BBC on 2 July 2014, what recent assessment she has made of the steps to take to resolve market failure related to the development of new classes of antibiotics in that industry; and if she will make a statement.

Answering member: Mr Nick Hurd | Department: Department for International Development

The UK is committed to ensuring access to low cost, effective medicines in the developing world, providing a range of significant inputs to increasing access to essential medicines.

We support the provision of essential medicines and other health products through innovative global partnerships such as the Global Fund for AIDS, TB and Malaria (GFATM), UNITAID, GAVI and the Medicines Patent Pool (MPP). We work to strengthen systems weaknesses, such as weak supply chains or poor procurement, which deter private investment, keep medicines prices high or lead to misuse or waste of medicines. We also place a great emphasis on research and development of new vaccines, medicines and diagnostics for conditions that affect millions of poor people. A new £1 billion fund – the Ross Fund - was recently announced with the aim of developing, testing and delivering a range of new products to help combat the world's most serious diseases, such as malaria, Ebola and TB in developing countries.

Tackling Antimicrobial Resistance is a key priority for this Government. We are awaiting the final report of the O'Neill Independent Review on Antimicrobial Resistance later this month and the Department of Health will then lead a cross-Government response.

We support the aims of the UN High Level Panel on Access to Medicines. For it to fulfil its potential to improve access to affordable and quality medicines, including antibiotics, it will need to take a balanced approach, building on the WHO Global Strategy and Plan of Action and engaging with existing global partnerships, and use its influence to galvanise Member States, public and private sectors around a common approach to this important issue.

HC Deb 11 May 2016 | PQ 36813

[Developing Countries: *Infectious Diseases*](#)

Asked by: Colvile, Oliver

To ask the Secretary of State for International Development, when investments pledged under the Ross Fund will be made available for research and development into infectious diseases.

Answering member: Mr Nick Hurd | Department: Department for International Development

The Ross Fund is a new £1 billion fund that will be used to support the global fight against malaria and other infectious diseases.

Programmes under the Ross Fund will be led by either the Department of Health or the Department for International Development. Details about the exact nature and timing of investments pledged under the Ross Fund are still under development.

HC Deb 07 March 2016 | PQ 28792

[Developing Countries: *Infectious Diseases*](#)

Asked by: Freer, Mike

To ask the Secretary of State for International Development, what assessment she has made of the adequacy of her Department's research on development funding for infectious diseases.

Answering member: Grant Shapps | Department: Department for International Development

DFID has supported some of the best research on infectious diseases. Recent examples include a new diagnostic for sleeping sickness, a new vaccine for rotavirus diarrhoea and a new drug for treating malaria in children. Globally, there is a lack of investment in research and development for infectious diseases. This includes diagnostics, drugs, vaccines, and research to improve the delivery of health services. DFID is the second largest Government funder of product development research.

The new Government made a manifesto commitment to lead a major new programme to develop drugs for the world's deadliest diseases. DFID is currently working on a strategy to deliver on this commitment.

HC Deb 22 July 2015 | PQ 7075

[*Infectious Diseases*](#)**Asked by: Freer, Mike**

To ask the Secretary of State for International Development, with reference to the press notice from the Prime Minister's Office dated 7 June 2015, announcing a global programme of drug development and research into infectious diseases, what the contents and timing of that programme will be; and what steps her Department plans to take to ensure the success of that programme.

Answering member: Grant Shapps | Department: Department for International Development

The Manifesto commitment was made to respond to the urgent need for research to develop new health products for infectious diseases. There is insufficient funding globally available for the development of new drugs and vaccines for neglected diseases and resistance to essential drugs is a growing problem globally. DFID is currently working on a strategy to deliver on this commitment.

The UK Government has a strong track record of supporting successful product development research, through public-private Product Development Partnerships (PDPs). In the last ten years, DFID-supported PDPs have developed 11 new drugs, 2 new vaccines and 6 new diagnostic tests. Success is judged not only by cost-effective development of the products but also by ensuring that they are affordable and made available to the poorest in low and middle income countries.

HC Deb 21 July 2015 | PQ 7130[Health: Research](#)**Asked by: McPartland, Stephen**

To ask the Secretary of State for Business, Innovation and Skills, what steps his Department is taking to promote basic science research into (a) TB, (b) HIV/AIDS, (c) malaria and (d) other global health priorities.

Answering member: Joseph Johnson | Department: Department for Business, Innovation and Skills

The Department for Business, Innovation and Skills supports research in these areas through the UK Research Councils, which support a strong portfolio of research addressing different aspects of these diseases and global health priorities. Basic, clinical and translational research into pathogens implicated in human infectious diseases is primarily supported by the Medical Research Council (MRC). Much of the fundamental research in these areas is supported through the MRC's infections portfolio. This provides the basis for further research funded through targeted support for translation and global health, to ensure that the findings from basic research are translated into practice and new treatments.

A new UK Research and Development Vaccines Network has recently been announced, which will bring together the UK's leaders in vaccine development and research to focus on the most serious global health threats. Up to £20m will be invested from the outset to focus on the most threatening diseases including Ebola, Lassa, Marburg and Crimean-Congo Fever.

The UK, through the MRC and the Department for International Development, is a member of and contributes funding to the European and Developing Countries Clinical Trials Partnership (EDCTP), which aims to accelerate the development of new or improved drugs, vaccines, microbicides and diagnostics against HIV/AIDS, tuberculosis, malaria and other neglected diseases.

In December 2014 the second phase of the partnership, EDCTP2, was launched with funding of over 1 billion euros over the next 10 years from the European Union, the Participating States and third parties. Further information can be found at: <http://www.edctp.org/>

HC Deb 17 June 2015 | PQ 1603

6. Useful links and further reading

Medical Research Council funding page: Infections and immunity

<https://www.mrc.ac.uk/funding/science-areas/infections-immunity/>

EU Innovative Medicines Initiative *ND4BB New Drugs for Bad Bugs*

<http://www.imi.europa.eu/content/nd4bb>

UK Clinical Research Funding *Microbiology and Infectious Diseases Research Funding*

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