



Commonwealth Partnerships for Antimicrobial Stewardship 2: Scoping Exercise - Executive Summary

1. BACKGROUND

The Commonwealth Partnerships for Antimicrobial Stewardship 2 (CwPAMS2) programme is a project within the Fleming Fund.

The Department of Health and Social Care (DHSC) Fleming Fund

The Department of Health and Social Care (DHSC)'s [Fleming Fund](#) is a UK aid programme supporting up to 25 countries across Africa and Asia to tackle antimicrobial resistance (AMR), a leading public health threat across the world. The Fleming Fund invests in strengthening surveillance systems through a portfolio of country grants, regional grants and fellowships managed by Mott MacDonald, and global projects managed by DHSC partners. By supporting the capture of AMR surveillance data, and other relevant data, we will collectively be better able to understand the scale and scope of the problem in order to effectively tackle the issue of resistance.

The Fleming Fund does this through the following objectives:

1. Supporting the development of National Action Plans for AMR.
2. Developing and supporting the implementation of protocols and guidance for AMR surveillance and antimicrobial use.
3. Building laboratory capacity for diagnosis.
4. Collecting drug resistance data.
5. Enabling the sharing of drug resistance data locally, regionally, and internationally.
6. Collating and analysing data on the sale and use of antimicrobial medicines.
7. Advocating the application of data to promote the rational use of antimicrobials.
8. Shaping a sustainable system for AMR surveillance and data sharing.
9. Supporting fellowships to provide strong national leadership in addressing AMR.

The Fleming Fund will achieve these objectives through funding a number of projects with a diverse range of delivery partners, each focussing on a specific set of objectives and outputs, with a focus on sustainability and training.

The Commonwealth Partnerships for Antimicrobial Stewardship Programme 2

CwPAMS2 will build upon the work in earlier funded programmes (CwPAMS1, CwPAMS1.5), and contribute to achieving objectives 2, 7 and 9 from the above list – i.e.:

- Developing and supporting the implementation of protocols and guidance for AMR surveillance and antimicrobial use.
- Advocating the application of data to promote the rational use of antimicrobials.
- Supporting fellowships to provide strong national leadership in addressing AMR.

The programme will leverage the expertise of UK health institutions and technical experts to strengthen the capacity of the national health workforce and institutions in eight Commonwealth countries (Ghana, Kenya, Malawi, Nigeria, Sierra Leone, Tanzania, Uganda and Zambia), to address AMR challenges identified in countries individual AMR National Action Plans in existence or being drawn up with the support of the Fleming Fund.

Target countries have been carefully selected to derive maximum benefit from the established relationships already held by THET, the Fleming Fund and the UK Government more broadly in these locations. The project will be delivered to galvanise action amongst, and between, Commonwealth actors on AMR.

This programme of works can be seen as an extension of the Commonwealth's partnership working that has been an ever-present feature of the network. The importance of collaborative efforts such as these in progressing the development of nations, are emphasised in Sustainable Development Goal (SDG) 17, and aims to tackle the same priorities as the initial phase of CwPAMS through the Health Partnerships approach, while expanding its scope in line with the Fleming Fund strategy and aligns with the UK NAP for AMR ambition 1: *To be a good global partner.*

The Fleming Fund currently identifies its five core funding areas as:

- **Laboratory Infrastructure Enhancement:** building renovation, microbiology equipment purchase, biosafety and security equipment, reagents, durables and consumables and transport and logistics for goods and specimens.
- **Human Resource Strengthening:** training in AMR laboratory techniques, biomedical data management, bio data safety and biosecurity for fellows and country grant beneficiaries.
- **Surveillance System Strengthening:** support for Antimicrobial Resistance Coordinating Committees (AMRCC)s, cross-sectoral meetings, strategy reviews, quality assurance control and data analysis and storage.
- **Building Foundations for Surveillance Data Use:** support for awareness raising, publications, evidence-based strategy, data sharing platforms, etc.
- **Rational use of Antimicrobial Medicines:** Development of Antimicrobial Usage (AMU) or Antimicrobial Consumption (AMC) surveillance strategies and stewardship programmes

Priority Themes

The grant will **target themes and areas of investment currently not being developed by other Fleming Fund funded projects**, but which will make an important contribution to the overall success of the Fund. It aims to increase the rational use of antibiotics and ultimately a reduction in morbidity and mortality associated with AMR.

In particular, this grant will support partnerships to address priorities in the following areas:

- Improving antimicrobial stewardship, including surveillance at hospital and community level (**Rational use of Antimicrobial Medicines**)
- Building antimicrobial pharmacy expertise and capacity (**Human Resource Strengthening**)
- Enhancing infection prevention and control (**Human Resource Strengthening, Surveillance System Strengthening**)
- Improving the use of clinical microbiology and antimicrobial prescribing data to inform clinical decisions (**Building Foundations for Surveillance Data Use, Laboratory Infrastructure Enhancement**)
- Enhancing the detection and reporting of substandard and falsified antimicrobial medicines (**Laboratory Infrastructure Enhancement, Human Resource Strengthening, Building Foundations for Surveillance Data Use**)

2. SCOPING EXERCISE - SUMMARY FINDING - Nigeria

The previous programme scoping was completed in November 2021; it assessed the status of AMS in each of the 8 CwPAMS Extension countries, and how health partnerships could support institutions and contribute to each country’s AMR National Action Plan. Recommendations from that previous scoping will inform implementation of CwPAMS 2 projects.

This Executive Summary draws on detailed data available in Appendix 1 (Nigeria), and highlights gaps in AMS activities in-country. This document is developed as a non-judgemental tool, to be used to guide grant seekers through their application process, to highlight areas which would benefit from partnership activities, develop networks in-country as well as provide resilience and sustainable models of work and training to roll out in the future.

<p>Key needs and priorities identified</p>	<p>There are opportunities in the following areas:</p> <ol style="list-style-type: none"> 1. In country training for all stakeholders involved in AMS/AMR activities by involving academic institutes in Nigeria 2. AMU surveillance system in the human health sector 3. Strengthen AMR and AMU surveillance in food animals 4. Establish a foundation for AMR surveillance in aquaculture species 5. Establish a foundation for AMR surveillance in the environment 6. Antimicrobial surveillance in environmental sectors 7. AMS within Animal Health settings 8. Involvement, key policies, key actions of National Agency for Food and Drug Administration and Control (NAFDAC) in Substandard and Falsified medicines (SFMedS) 9. Antimicrobial Resistance Laboratory Surveillance - currently building a national AMR surveillance system coordinated by the Nigeria Centre for Disease Control. A surveillance system for AMR is also part of Integrated Disease Surveillance and Response (IDSR) implementation and health systems strengthening to
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	<p>reduce mortality and morbidity due to infectious diseases (2018 guideline-no updates since then). * Please find more information in the appendix</p> <ol style="list-style-type: none"> 10. Key actions undertaken as per the national AMR strategy document (2017-2022) 11. Evaluation, feedback, update, revision of The Mandatory Continuing Professional Development (MCPD) for health care professionals (doctors, pharmacists etc) for AMS 12. Economic impact of AMR 13. Investigation of outbreaks, unusual resistance phenotypes, or delineation of the flow of organisms/genes in AMR 14. Whole genome sequencing for AMR, equipment as well as trained professionals 15. Access to essential medicines (Antimicrobials) and strategies to improve 16. Public awareness of AMR 17. Veterinary drug residue monitoring 18. Water, Sanitation and Hygiene (WASH) and IPC 19. No literature evidence supporting implementation or data collection of Global Antimicrobial Resistance and Use Surveillance System (GLASS) 20. E-health, Big data IT, software, mobile apps for AMR 21. Social prescribing, social media, impact, influence and opportunity for AMS 22. Interventions/services/activities targeting community pharmacy interventions, Midwives and local health workers, community health workers (primary care) 23. Behaviour change interventions for AMR for public and healthcare professionals 24. Inter/intra-collaboration of key stakeholder, organisations, ministries moving in unison towards improved AMS 25. Implementation, evaluation and uptake of National Action Plan (NAP) 26. Global Point Prevalence Survey (GPPS) update report 27. Quality improvement methodologies
<p>Good practice from previous CwPAMS phases</p>	<ol style="list-style-type: none"> a. Secure firm commitment and support of College of Medicine of the University of Lagos (CMUL) management, AMS Committee re-inaugurated and now fully institutionalised, development of a 3- year AMS Plan for the institution b. Successfully trained various staff (doctors, pharmacists, nurses and lab scientists) leading a successful conduct and uploading a PPS,
<p>FF partners in country with AMR/AMS projects (titles)</p>	<p>Include:</p> <p>Microbiology laboratories:</p> <p>1a National Centre for Disease Control (NCDC), National</p>

	<p>Reference Laboratory Active Human health 1b National Hospital, Abuja, FCT Active Human health 2a University College Hospital Active Human health 2b University of Ibadan (UI), Department of Public Health, Veterinary School Active Veterinary 3a Lagos University Teaching Hospital Active Human health 3b Nigerian Fisheries Laboratory, Federal Department of Fisheries Active Aquaculture 4a Obafemi Awolowo University Teaching Hospital, Ile-Ife, Osun Active Human health 4b Ladoke Akintola Teaching Hospital, Osogbo, Osun Active Human health 5a University of Nigeria Teaching Hospital, Nsukka, Enuga Active Human health 5b Veterinary Teaching Hospital, Faculty of Veterinary Medicine, University of Nigeria, Nsukka Active Veterinary 6a University of Ilorin Teaching Hospital, Ilorin, Kwara Active Human health 6b Veterinary Teaching Hospital, Faculty of Veterinary Medicine, University of Ilorin Active Veterinary 7 Aminu Kano Teaching Hospital, Kano Active Human health 8 Federal Medical Centre, Jalingo, Taraba Active Human health 9 University of Calabar Teaching Hospital, Calabar, Cross River Active Human health 10 National Veterinary Research Institute Active Veterinary 11 Veterinary Teaching Hospital, Faculty of Veterinary Medicine, Usman Danfodio University Active Veterinary 12 Veterinary Teaching Hospital, Faculty of Veterinary Medicine, Ahmadu Bello University Active Veterinary</p> <p>Previous CwPAMs partner institutions Lead UK Partner: UK Faculty of Public Health (FPH)/Lead LMIC Partner: College of Medicine of the University of Lagos (CMUL)</p>
<p>Non-FF grant holders in country with AMR/AMS projects (titles)</p>	<ol style="list-style-type: none"> 1. Federal Ministry of Water Resources with invaluable support from UNICEF (title: Provision of equitable access to WASH) 2. USAID (title: The funded Maternal and Child Survival Program (MCSP) created Water, Sanitation and Hygiene (WASH) and IPC Facility Assessment Scorecards to help reduce infections in mothers and children in Nigeria) 3. WHO (title: Global Antimicrobial Resistance Surveillance System (GLASS)- (GLASS) Report (2016-2017, 2017-2018, 2020). 4. WHO (title: WHO PPS tool, which provides for reporting stockouts) 5. German service provider for sustainable development (GIZ) and bioMérieux, a global leader in in vitro diagnostics, signed a collaboration agreement to support

	<p>the Nigerian Center for Disease Control (NCDC) in the fight against Antimicrobial Resistance (AMR).</p> <ol style="list-style-type: none"> 6. NCDC, GIZ, RKI and US CDC (Title: Healthcare waste management in Nigeria) 7. AMR Coordinating Committee (AMRCC) coordinates regular meetings with the AMR Technical Working Group (TWG), TWG comprises key members representing animal health, food and animal production, human health and the environment (spearheads a multi-sectoral approach to combat AMR) 8. UCL Institute for risk and disaster reduction is working together with colleagues at the Infection Control Africa Network (ICAN), surgical teams at the Lagos University Teaching Hospital and Lagos State University College of Medicine for the Gamified Antimicrobial Stewardship Mobile Decision Support App (GADSA) project 9. Centre for Disease Dynamics, Economics & Policy (CDDEP) was contracted by WHO (title: Resource mobilisation for antimicrobial resistance (AMR)) 10. Ducit blue, In partnership with the Infectious Disease Society of America (IDSA), (working with health facilities to implement Antimicrobial stewardship program including the use of a telemedicine platform to aid point of care diagnosis and remote clinical reviews) 11. U-think management, Pan Africa (further information to be supplied in Appendix)
AMS activity in-country since 2021 (GPPS, WHO PPS, other)	The nation has adapted WHO- PPS chosen method, however no current updates
AMU reviews in-country since 2021 (non-PPS)	(none found)
Evidence of use of data gathered in development of NAP (especially GPPS methodology)	No
Principal stakeholders in AMS arena in-county	<p>National Agency for Food and Drug Administration and Control (NAFDAC)</p> <p>Nigeria Center for Disease Control</p> <p>International Foundation Against Infectious Disease Federal</p> <p>Ministry of Agriculture and Rural Development</p> <p>Federal Ministry of Environment</p> <p>Federal Ministry Of Health</p>
Training	<p>Evidence of pre-service HealthCare professional and in-Service Health Care professional training</p> <p>Yes (FF)</p>

	<p>Participatory training on behavioural change to improve uptake of IPC measures facilitated by NCDC, Federal Ministry of Health (FMOH) through support from Robert Koch Institute (RKI) has been ongoing since 2017 with 15 out of the targeted 23 hospitals having completed the training</p> <p>FF policy fellowships</p>
Registered pharmacist numbers in-country (2021-2022)	<p>According to the PCN, as of 2020 there are 28,515 registered pharmacists in Nigeria, though some may not be in active service.</p> <p>*please see the attached appendix for more information</p>
Other registered healthcare professionals	<p>Doctors: 74, 543 (last updated on 01-2022)</p> <p>Medical and Pathology scientist number: 26, 677</p> <p>Medical and pathology technician number: 29, 803</p> <p>Pharmacists: 24 668 (2019)</p> <p>N: 180, 709 (2019)</p>
Evidence of leadership training for HCPs	Yes
Evidence of CQI/Behaviour Change training for HCPs in the AM arena	<p>Yes, Pharmacists are now involved in antimicrobial dispensing.</p> <p>Participatory training on behavioural change to improve uptake of IPC measures facilitated by NCDC, Federal Ministry of Health (FMOH) through support from Robert Koch Institute (RKI) has been ongoing since 2017, with 15 out of the targeted 23 hospitals having completed the training (16).</p>
Registered numbers of clinical microbiologists	Clinical microbiologists mostly head the IPC and AMS committees
Evidence of Good Practice in AMS, AMU, AMR in Community Health arena	<p>Yes</p> <p>Nigeria is utilising social media for AMS awareness and has an AMR Awareness Facebook page where information is shared to support the implementation of the Global Action Plan on Antimicrobial Resistance to minimise the impact of AMR on Human, Animal and Environment (38). A project was conducted to increase the awareness of AMR from February 2nd to May 13th, 2019, in Nigeria. The awareness-based project used community outreaches and social media to raise awareness on AMR and address issues such as misconceptions and knowledge gaps. The student-led project had over 200,000 hits on Facebook indicating how social media can be a powerful tool to reach the masses.</p> <p>Nigeria's Centre for Disease Control in collaboration with relevant ministries, departments and agencies in the animal and human health sectors, participates in the World Antibiotic Awareness Week commemorations every year. In 2020, under the theme "Antimicrobials: Handle with care", several activities</p>

	<p>were conducted. These included a webinar on operationalising One Health interventions on AMS, engagement with livestock farmers and training with Fleming Fund Fellows on AMR and AMU surveillance.</p> <p>According to the WHO checklist, awareness campaigns targeting different audiences are held yearly; there is an antibiotic guardian pledge that is promoted. Radio jingles, vox pops, radio and TV talks are held to increase awareness. National Agency for Food and Drug Administration and Control (NAFDAC) has a TV programme that runs throughout the year where AMS messages are integrated. In addition, other health days are leveraged to promote AMR. Various global days are also celebrated in Nigeria.</p> <p>Nigeria CDC in collaboration with relevant ministries, departments and agencies in the animal and human health sectors, leads the World Antibiotic Awareness Week several activities were conducted.</p>
<p>Evidence of Supply Chain management processes in-country</p>	<p>Yes</p> <p>Most of the AMR activities within the NAP have been incorporated within the Federal Ministry of Health (FMoH) programmes, including pharmaceutical supply chain management and drug distribution networks. The control and regulation of medicines is done through the National Agency for Food and Drug Administration and Control (NAFDAC), Pharmacists Council of Nigeria (PCN) and the Food and Drug Services of FMoH. Research and development into AMR organisms, new products, and indigenous medicines being conducted</p>
<p>Evidence of Substandard and Falsified Medicines reporting mechanisms</p>	<p>Yes but not specific to AMR</p> <p>NAFDAC has been highly proactive and vigilant toward curbing SFMeds in the country in all efforts to safeguard the health of the Nigerian populace.</p> <p>NAFDAC collaboration with sister agencies such as Pharmacists Council of Nigeria, Pharmaceutical Society of Nigeria, Nigerian Association of Patent and Proprietary Medicines Dealers, Nigeria Medical Association, National Institute for Pharmaceutical Research and Development, Standards Organization of Nigeria, Federal Competition and Consumers Protection Commission (FCCPC) are very critical for curbing SFs. Equally important is close collaboration with Nigeria Customs Service, National Drug Law Enforcement Agency, Department of State Services, Civil Society and other professional bodies. NAFDAC plans to work closely with the pharmaceutical regulatory and professional bodies to jointly call for action in curbing SFs.</p>

