



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 Coordination Committee (AMRCCs), 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 AMC (Antimicrobial Consumption) 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 - ZAMBIA

The previous programme scoping was completed in November 2021; it assessed the status of Antimicrobial Stewardship (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 at Appendix 1 (ZAMBIA), 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.

Key needs and priorities identified	<ul style="list-style-type: none"> ● AMS training both pre and in-service. A review of the curriculum showed major gaps in coverage, the AMS training manual developed by the Brighton-Lusaka Pharmacy Link Initiative provides some opportunities. ● More support in the use of data for action. ● There is strong evidence for the need for educational and positive behavioural change interventions in both human and animal health. ● Expansion of AMS microbiology capacity. ● Support in supply chain management systems. ● More engagement for AMS activities in Community healthcare settings utilising the community pharmacists and existing systems.
Good practice from previous CwPAMS phases	<ul style="list-style-type: none"> ● Development and roll out of a catalysed self-sustaining hub and spoke AMS network to facilitate provincial AMS hubs. The Hub Hospital, University Teaching Hospital (UTH) and the spoke pilot sites at Kabwe Central Hospital (Central Province) and Kitwe Central Teaching Hospital (Copperbelt Province). ● Development of Antimicrobial drug Prescription chart at University Teaching Hospital which was shared and adapted by other sites eg. Chipata Central Hospital

	<ul style="list-style-type: none"> ● Strengthening of Infection prevention and Control including; Training in manufacturing of alcohol hand rub, Bare Below the Elbows' and clean hands at UTH¹ ● Development of AMS Training manual by the Brighton-Lusaka Pharmacy Link Initiative.
FF partners in country with AMR/AMS projects (titles)	<ul style="list-style-type: none"> ● Centre for Infectious Diseases Research in Zambia (CIDRZ) , Zambia Country Grant 1 (CG1)
Non-FF grant holders in country with AMR/AMS projects (titles)	<ul style="list-style-type: none"> ● ICARS - International Centre of Antimicrobial Resistance solutions <ol style="list-style-type: none"> 1) Optimisation of antimicrobial use for bloodstream infections (BSI) and urinary tracts infections (UTI); 2) Combating antimicrobial resistance and antimicrobial residues in the Zambian poultry sector; 3) Supporting National Action Plans (NAPs) on AMR in Africa through contextualised tools for implementation research ● The Food Safety and Toxins Team at Centre for Science and Environment, CSE - developed an Integrated Surveillance Framework for Antimicrobial Resistance, Lusaka, Zambia (2019) ● Wellcome Trust and ICARS - Supporting project co-funded by Wellcome Trust to test and implement the Responsive Dialogue toolkit² ● ReAct Africa - Zambia Strategic Program for Antimicrobial Stewardship (ZASPARS) -The program is an adaptation of the Swedish strategic programme against antibiotic resistance (STRAMA)
AMS activity in-country since 2021 - Global Point Prevalence Survey (GPPS), WHO Point Prevalence Survey (PPS), other	The Tripartite Antimicrobial Resistance (AMR) Country Self-assessment Survey (TrACSS) 2021-2022 ³
AMU reviews in-country since 2021 (non-PPS)	No
Evidence of use of data gathered in development of NAP (especially GPPS methodology)	No

¹ https://docs.google.com/presentation/d/17iEOTtP3lfnUy_mPc6bYRIACP4xNul5M/edit#slide=id.p1

² <https://icars-global.org/zambia-projects-launch/>

³

Principal stakeholders in AMS arena in-county	<ul style="list-style-type: none"> ● Zambia National Public Health Institute (ZNPHI) ● Pharmaceutical Society of Zambia (PSZ) ● Health Professions Council of Zambia (HPCZ) ● Hospital Pharmacist Association of Zambia (HOPAZ) ● Zambia Medicines Regulatory Authority (ZAMRA) ● Ministry of Fisheries and Livestock ● Veterinary Association of Zambia (VAZ) ● Ministry of Health ● National Multisectoral Steering Committee (NMSC)
Training	<p>Pre-service HealthCare professionals - limited In-Service Health Care professional - limited</p> <p>Literature review showed gaps in AMR training⁴ both pre and in service with extensive gaps in the undergraduate pharmacy curriculum⁵. The Brighton-Lusaka Health Link partnership in Zambia has developed an AMS training manual being used within CwPAMs partnership. The manual is yet to be adopted for country level rollout.</p> <p>Currently there is the Fleming Fund Professional fellowships -Online AMR modules and Zambia - AMR Champion Intervention by ReAct Africa engaging students at primary and tertiary level</p>
Registered pharmacist numbers in-country (2021-2022)	Pharmacists - 1560; 5890 Pharmacy technicians ⁶
Other registered healthcare professionals	Further information to be supplied once available
Evidence of leadership training for HCPs	No
Evidence of Continuous Quality Improvement (CQI) /Behaviour Change (BC) training for HCPs in the AMS	<p>Yes</p> <ul style="list-style-type: none"> ● Chipata Central Hospital (CCH) developed an action plan to further carry out AMS activities, conducting periodic

⁴ Kalungia AC, Mwambula H, Munkombwe D, Marshall S, Schellack N, May C, Jones ASC, Godman B. Antimicrobial stewardship knowledge and perception among physicians and pharmacists at leading tertiary teaching hospitals in Zambia: implications for future policy and practice. J Chemother. 2019 Nov-Dec;31(7-8):378-387. doi: 10.1080/1120009X.2019.1622293. Epub 2019 May 30. PMID: 31145043.

⁵ Moonga, H. 2006. Curriculum Review and Interview of Experts to Identify Topics Included on Antimicrobial Use and Antimicrobial Resistance in the Undergraduate Pharmacy Training Program, University of Zambia: January 2006. Submitted to the U.S. Agency for International Development by the Rational Pharmaceutical Management Plus Program. Arlington, VA: Management Sciences for Health.

⁶ -5890<https://www.hpcz.org.zm/services/health-practitioners-registration/>

arena	<p>surveys and collecting microbiology data, that will feed into prescribing policies to be developed post project</p> <ul style="list-style-type: none"> ● The linking up of CCH with Lusaka Brighton group has opened up knowledge sharing in- country and further development AMS activities with the Chipata Team. ● Adoption of the prescribing tool ● Alcohol Hand based rub training ● Hub and Spoke Model demonstration with Brighton-Lusaka group ● Through patient training, the Zambia / NHS Highland group project demonstrated improved knowledge in behaviours that reduce infection risks as seen in the pre and post verbal assessment. <p>However, there is ample research in-country for the need to support more QI/BC training ⁷⁸⁹</p>
Registered numbers of clinical microbiologists	Further information to be supplied once available
Evidence of Good Practice in AMS, AMU, AMR in Community Health arena	No, very limited Some elements of Gender Equality and Social Inclusion (GESI) elements through workshops run by THET, otherwise not well developed.
Evidence of Supply Chain management processes in-country	<p>Yes All supply chain functions are undertaken by Medical Stores Limited (MSL) with oversight from the Ministry of Health (MOH) including forecast and supply planning. More details in the Health Sector Supply Chain Strategy and Implementation Plan 2019 - 2021¹⁰.</p> <p>There are some gaps e.g in infrastructure, noted United Nations Development Programme (UNDP) support in construction of warehouses under the health system strengthening arm.¹¹</p>
Evidence of Substandard and Falsified Medicines (SFMed) reporting mechanisms	Yes, ZAMRA has a working portal on their website where SFMed are reported. https://www.zamra.co.zm/#

⁷ <https://www.frontiersin.org/articles/10.3389/fphar.2020.551522/full>

⁸

https://www.researchgate.net/publication/359208903_Awareness_of_Antimicrobial_Resistance_and_Associated_Factors_among_Layer_Poultry_Farmers_in_Zambia_Implications_for_Surveillance_and_Antimicrobial_Stewardship_Programs

⁹ <https://doi.org/10.1016/j.ijid.2021.12.042>

¹⁰ https://www.moh.gov.zm/?wpfb_dl=50

¹¹ <https://www.undp.org/zambia/projects/strengthening-supply-chain-health-sector-zambia>

