Who are we?

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.

Focusing on low- and middle-income countries (LMICs), as they bear the heaviest consequences of the spread of drug-resistant infections, the programme generates, shares, and uses robust and quality-assured data to support AMR strategies and interventions.

Supporting AMR data collection and analysis, through a One Health approach across human clinical, animal, and environmental sectors will help improve patient health, inform health policies, and warn of emerging threats.

Country context

Built upon the 68th World Health Assembly resolution, 2015, and the ‘Political Declaration of the High-Level Meeting of the United Nations General Assembly (UNGA) on Antimicrobial Resistance’, 2016, the Fleming Fund programme in Uganda aims to strengthen surveillance systems for AMR, antimicrobial use (AMU) and antimicrobial consumption (AMC) in animal, human and environmental health sectors through a One Health approach.

Guided by the AMR National Action Plan (AMR-NAP) 2018-2023, Uganda’s interventions sought to prevent, slow down and control the spread of resistant organisms and protect endangered antimicrobials by influencing change in health practices and policy.

Government support in Uganda

We are strengthening National AMR Governance by contributing to the operationalisation of the National AMR Sub-committee (NAMRSC), a sub-committee of the national One Health Technical Working Group (OHTWG).

NAMRSC quarterly meetings are conducted to discuss AMR data generated and policy recommendations to the OHTWG. Additionally, a draft AMR-NAP Governance Structure in Uganda was developed to streamline governance and leadership of the national AMR surveillance system.

Country Grant

Grantee: Infectious Diseases Institute
Value: £5,898,971
Duration: Oct 2020 – Mar 2023

Fellowship Scheme

Fellows: 9 (6 Professional, 2 Policy)
Host Institution: University of Edinburgh
Value: £680,000
Duration: Nov 2018 – Dec 2022

Regional Grants

Grantees: International Vaccine Institute, Technical University of Denmark
Total value: £2,712,824 (across multiple countries)
Duration: (ranging from)
Jan 2019 – May 2023

Acting against drug resistance for a healthier world
Country Grants

Management Agent: Mott MacDonald
Grantee: Infectious Diseases Institute (IDI)

Sub-Grantees: College of Veterinary Medicine, School of Pharmacy, Makerere University, HEPS UGANDA

Project objectives

- Strengthen the governance of AMR surveillance with a One Health Approach
- Sustain existing support to AMR and AMU surveillance in terrestrial animals, and expand to additional sites
- Sustain existing support to AMR and AMU/C surveillance in human health and expand to additional sites
- Expand AMR surveillance to include the Environment sector

Investment areas

- Laboratory infrastructure enhancement
- Human resource strengthening and workforce reforms
- Surveillance systems strengthening
- Establishing mechanisms for AMR surveillance data use
- Promoting rational use of antimicrobial medicines
**Achievements**

- **6,102** priority AMR samples processed at 12 human health AMR surveillance sites.
- **20,502** blood culture samples prepared at NHLDS for External Quality Assurance Proficiency Testing (EQAPT) as part of Antimicrobial Susceptibility Testing (AST).
- **770** AMR isolates re-tested, confirmed and archived at National Health Reference Laboratory at National Health Laboratory and Diagnostic Services.
- **8** district One Health taskforces activated and trained on NAP-AMR, providing leadership on implementation of AMR activities at sub-national level.
- **2,968** AMR isolates from surveillance sites to National Health Laboratories and Diagnostics Services (NHLDS).
- **127** laboratory platforms at 7 surveillance sites maintained.
- **55** microbiology standard operating procedures (SOPs) to support standardisation of microbiology services across surveillance sites, reviewed and finalised by Department of Medical Microbiology - Makerere University.
- **770** AMR isolates re-tested, confirmed and archived at National Health Reference Laboratory at National Health Laboratory and Diagnostic Services.
- **7** Medicines and Therapeutic Committees (MTC) at Fleming Fund supported regional referral hospitals (RRHs) appointed with terms of reference. MTCs trained in GLASS diagnostic and antimicrobial stewardship (D-AMS) and Point Prevalence Survey (PPS) methodologies.
- **5** point prevalence surveys (PPS) conducted at 9 RRH using the WHO PPS tool.
- **250** best practice documents developed for MTCs to aid standardisation in implementation of AMR surveillance activities.
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**Fellowship Scheme**

**Management Agent:** Mott MacDonald

**Professional Cohort I:** AMR Surveillance, AMR Laboratory and AMU Surveillance Fellows in Human Health (HH) and Animal Health (AH)

**Professional Cohort II:** Bioinformatics and Sequencing, AMU/C Surveillance Fellows in AH, plus AMR Laboratory Fellow in HH

**Policy Fellows:** AH and HH

### Achievements

| Key role in organising annual national events for World One Health Day and World Antimicrobial Awareness Week, and regional outreach including farmers in Masaka District to understand AMU and AMR perception. | Assisted drafting of policy brief on status of AMR in Uganda for Ministry of Agriculture, Animal Industry and Fisheries (MAAIF). |
| Worked with the Commonwealth Partnerships Programme on Antimicrobial Stewardship (AMS) to develop and implement AMS checklist for Sub-Saharan Africa. | AH fellows partnered with HH fellows on whole genome sequencing of samples collected to develop own expertise and transfer best practice procedures to AH laboratories. |
| Policy fellows contributed to draft principles for ‘Animal Diseases Amendment Bill 2022’ and drafted AMR policy brief with inter-ministerial staff. | Collaborated with fellows from Malawi and Kenya to discuss and harmonise approaches to, and practices in AMR surveillance. |
| Fellows train newly recruited staff from host institutions in statistical computing and design ‘R’ software and laboratory personnel in management and quality assurance of AMR data. | Fish farms in Mukono, Wakiso, and Luwero districts conducted AMU/AMC surveys which showed minimal use of antibiotics in aquaculture at the time of the survey in 2022. |
| MTC plan developed by Cohort II Fellow at Arua Regional Referral Hospital together with MTC - covering training, mentorship, development of hospital antibiograms, and awareness raising. | Policy Fellows playing a leading role in reviewing Uganda NAP. |
| Provided multiple training sessions with laboratory and hospital staff on laboratory use in AMR surveillance and stewardship to improve take-up of testing within clinical settings. | Fellows provided training in biochemical identification of Gram-negative organisms, WHONET, culture plates and bioinformatics to study AMR genes. Participants included hospital personnel: surgeons, medical officers, doctors, nurses, and clinic/departmental In-charge staff. |
## Regional Grants

**Management Agent:** Mott MacDonald  
**Grantees:** International Vaccine Institute (IVI), Technical University of Denmark (DTU)

### Achievements

**MAAP**  
**Gathering Historical AMR Data, ASLM**  
**Value:** £3,159,258*  
**Duration:** Nov 2018 – June 2022  
Supports the collection and analysis of historical AMR data across key Fleming Fund countries to provide early information for policymaking.

- Working with local stakeholders on AMR, AMC, and AMU.  
- Shared data analysed for national information on surveillance capacity, data availability, resistance epidemiology, and AMC patterns.  
- Country reports shared with recommendations for policymakers and health care providers on AMR/AMC surveillance.  
- **88,116** total blood culture results collected from 16 facilities. Data collection conducted in 11 targeted pharmacies.

**EQuAFRICA**  
**External Quality Assurance, Africa - ASLM**  
**Value:** £4,511,176*  
**Duration:** Oct 2019 – Mar 2023  
Supporting development of External Quality Assurance (EQA) practices in laboratories around Asia to ensure confidence in laboratory testing results.

- Supported development of National Laboratory Quality standards and policies.  
- Strengthening pathogen ID and AST while improving access to EQA in **14** African countries.  
- **4 laboratories** in Uganda enrolled in EQA programme.

**QWArS**  
**Training on Epidemiology & Microbiology, ASLM**  
**Value:** £3,924,547*  
**Duration:** Oct 2019 – May 2023  
Supporting human resources strengthening and capacity building for laboratory AMR surveillance through epidemiology and microbiology training.

- **QWArS** developed series of short training courses on epidemiology and laboratory microbiology at skilled and expert levels.  
- **375** students from **17** countries taken **QWArS** courses including participants (13) from Uganda.

**RADAAR**  
**Policy, Practice & Advocacy, IVI**  
**Value:** £2,715,217*  
**Duration:** Sep 2019 – April 2023  
Supporting data sharing for global AMR planning and advocacy, providing evidence to policymakers for robust, data-based policy recommendations.

- **4 regional analyses**, including all Fleming Fund priority countries, to identify data-sharing bottlenecks.  
- Delivered both regional data and policy workshops, developing plans to improve data sharing and analysis.  
- **4 countries**, including Uganda, developed ilot initiative to strengthen capacities in translating emerging AMR data/evidence for informed policy briefs, with Evidence-informed Policy Network (EVIPNet).

**SEQAFRICA**  
**Whole Genome Sequencing in Africa, DTU**  
**Value:** £6,766,632*  
**Duration:** May 2019 – Feb 2023  
Supporting development of regional capacity for and bioinformatics.

- **5 regional sequencing centres** reviewing and accepting isolates/samples for whole genome sequencing (WGS) on rolling basis across **18** African countries.  
- **140** individuals trained by **SEQAFRICA** in WGS and bioinformatics for bacterial AMR and SARS-CoV-2 surveillance.

* (across multiple countries, including Uganda)
Strategic Alignment Grants

Management Agent: Mott MacDonald

Achievements

FIND

**Value:** £2,586,226*
**Duration:** Apr 2022 – Dec 2023

Enhancing common approaches to laboratory QMS, bacteriology laboratory network design, collation and analysis of AMR surveillance data, and clinical engagement strategies.

Using digital tools to reduce time taken to clean AMR data received from surveillance sites, leading to more efficient HH and AH data analysis, and national-level reporting.

New opportunities for cross-sectoral AMR data use and interventions based on the collation of AH and HH AMR data in single repository.

Commonwealth Pharmacists Association

**Value:** £1,152,947*
**Duration:** Dec 2021 - Dec 2023

Assisting with AMU surveillance and using data to improve prescribing practices.

CPA networks established in Fleming Fund-supported countries to provide HH and AH guidelines for uploading data sharing permission documents.

Identified clinical sites for PPS training aligning with sustainable model to ensure capacity in-country to undertake and support future AMR studies.

WHONET

**Value:** £889,045*
**Duration:** Apr 2022 – Dec 2023

Providing training and technical support to use free WHONET desktop application for managing and analysing microbiology laboratory data, with focus on AMR surveillance.

Running centralised training (both on-site and remotely) and identifying gaps for specialist training in Fleming Fund-supported countries.

Developing training materials and providing ongoing technical support to software users.

Supporting development of modules, including online data entry and integration platform compatible with DHIS-2 software, and providing scientific guidance for breakpoints (aiding pathogen AST) interpretation and report generation for AMR analysis.

*(across multiple countries, including Uganda)*

The Fleming Fund supports a range of additional projects delivered at national, regional, and global levels to support the generation, sharing, and use of high-quality AMR data. These all align closely with the country and regional grants and fellowships portfolio and support further achievement of the Fleming Fund objectives. A full list of global grants is available on the [Fleming Fund website](https://www.flemingfund.org).

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