



The
Fleming Fund



PAKISTAN



The Department of Health and Social Care (DHSC)'s Fleming Fund is a UK aid programme that supports up to 25 countries across Africa and Asia to tackle antimicrobial resistance (AMR), a leading public health threat, globally. 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.

Country Context

Studies in Pakistan have shown increasing human and veterinary medicine resistance rates. For example, a 2019 WHO report ranked Pakistan among the top five countries with the highest neonatal deaths caused by resistant bacteria. In 2016, Pakistan developed a National AMR Framework, the AMR National Action Plan (NAP), and established a Multi-Sector AMR Steering Committee. AMR surveillance is listed as one of the seven priority areas of the NAP.

In phase 1, an AMR Secretariat was established at the National Institute of Health and an AMR Coordination Unit at the Animal Husbandry Commissioner's Office.

The Ministry of National Health Services Regulation and Coordination coordinates a multi-sector One Health AMR response and reports to the Global Antimicrobial Resistance and Use Surveillance (GLASS) on behalf of the Government. In decentralised Pakistan, the provinces are responsible for resourcing and managing AMR surveillance capabilities and data use.

The main aim of the Pakistan Country Grant in phase 2 is to build on and maximise the impact of investments made to date by supporting the multi-stakeholder revision of the AMR NAP. This will consolidate surveillance toward an integrated One Health system to produce more data-driven decision and policymaking. The grant will continue to decentralise AMR response and planning to provincial levels as per federal policy.

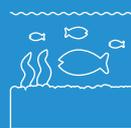
Phase 2 Country Grant – Expected Results



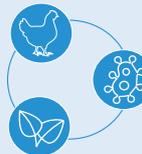
Continue to strengthen the capacity of federal and subnational stakeholders to produce, analyse, and share quality data on emerging AMR bacteria.



Support the development of a revised NAP and an aligned costed operational workplan.



Support the adoption of the first National AMR Surveillance Strategy in Aquatic Animals and the development of the National AMR Surveillance Plan for the Environment, specific to the animal farm environment.



Assist government counterparts in national environmental AMR surveillance at select food production settings, aligned with the proposed AMR surveillance strategy in food animals and the environment.



Support the country's National Reference Laboratory, providing quality assurance and referral service as a routine responsibility to human health (HH) surveillance sites; establish the Pakistan biorepository.



Develop AMR and antimicrobial use (AMU) surveillance reports for technical fora. The analysis will be shared at the annual AMR-One Health symposium and for public release to improve awareness and understanding.

Phase 2



Country Grant

Grantee: DAI Global
Sub-grantees: Health Security Partners, Indus Hospital Health Network, Shifa International Hospital, Liverpool School of Tropical Medicine
Value: £5,954,616
Duration: Jan - Dec 2025

Fellowships

No. of Fellows: 10
Host Institute: The Doherty Institute for Infection and Immunity
Total value: £3,272,442
Total duration: Nov 2023 - Dec 2025

Regional Grants

(Across multiple countries, including Pakistan)

International Vaccine Institute
Regional Antimicrobial Resistance Data Analysis for Advocacy, Response and Policy (RADAAR)
Value: £1,999,956
Duration: Dec 2023 - Dec 2025

International Vaccine Institute
Technical Assistance for Clinical Engagement Asia (TACE Asia)
Value: £1,999,956
Duration: Dec 2023 - Dec 2025

International Vaccine Institute
Capturing Data on Antimicrobial Resistance Patterns and Trends in Use in Regions of Asia (CAPTURA)
Value: £3,186,597
Duration: Oct 2023 - Dec 2025

Technical University of Denmark

External Quality Assessment of Laboratory Data Asia (EQuAsia)
Value: £2,497,995
Duration: Nov 2023 - Dec 2025

Massey University

AMR and One Health South Asia (AMROH SA)
Value: £1,145,833
Duration: Jan 2024 – Dec 2025

Liverpool School of Tropical Medicine

Gender, Equity and Antimicrobial Resistance Mainstreaming (GearUp)
Value: £2,199,925
Duration: Feb 2024 - Dec 2025

International Vaccine Institute

Technical Assistance for Data and Evidence Use Asia (TADEU Asia)
Value: £1,687,091
Duration: Dec 2023 - Dec 2025

Strategic Alignment Grants

(Across multiple countries, including Pakistan)

Brigham and Women's Hospital
WHONET: Management and Analysis of Microbiology Laboratory Data
Value: £453,328
Duration: Mar 2024 - Dec 2025

Commonwealth Pharmacists Association
Surveillance and Prescribing Support for Antimicrobial Stewardship Resource Capacity Building (SPARC)
Value: £806,742
Duration: Mar 2024 - Dec 2025

Phase 1



Country Grants

Grantee: DAI Global

Sub-grantees: Aga Khan University, Liverpool School of Tropical Medicine, Health Security Partners

Value: Country Grant 1 – £2,777,210, Country Grant 2 – £6,930,547

Duration: Country Grant 1, May 2019 - May 2021, Country Grant 2, Jan 2021 - Dec 2023

Fellowships

Number of Fellows: 12

Host Institution: American Society for Microbiology, and Doherty Institute

Total value: £720,000 (across multiple countries, including Pakistan)

Total duration: Jul 2020 - Oct 2023



Regional Grants

(Across multiple countries, including Pakistan)

International Vaccine Institute

Capturing Data on Antimicrobial Resistance Patterns and Trends in Use in Regions of Asia (CAPURA)

Value: £2,043,671

Duration: Jan 2019 - Sep 2023

Technical University of Denmark

External Quality Assessment of Laboratory Data Asia (EQuAsia)

Value: £4,247,345

Duration: Jan 2020 - Oct 2023

International Vaccine Institute

Regional Antimicrobial Resistance Data Analysis for Advocacy, Response and Policy (RADAAR)

Value: £2,598,397

Duration: Sep 2019 - Nov 2023

Strategic Alignment Grants

(Across multiple countries, including Pakistan)

Brigham and Women's Hospital

WHONET: Management and Analysis of Microbiology Laboratory Data

Value: £887,722

Duration: Apr 2022 - Feb 2024

Commonwealth Pharmacists Association

Surveillance and Prescribing support for Antimicrobial Stewardship Resource Capacity Building (SPARC)

Value: £1,077,569

Duration: Dec 2021 - Dec 2023



Phase 1 – Key Achievements

22

laboratories (11 HH, 11 AH) renovated and equipped, including three National Reference Laboratories.



Upskilling of the National Institute of Health to function as the National Reference Laboratory for HH.



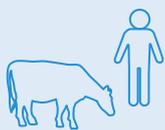
AMR data use informed decision-making and policy recommendations around healthcare and pharmacy service provision and clinical practice.



National Surveillance strategies for AMR in food animals and aquaculture were drafted in consultation with government departments, academic institutes, and other stakeholders.



The first Point Prevalence Survey in the dairy and poultry industries was conducted and a national AMC database was established.



First Veterinary Laboratory Policy and Guidelines developed, guiding efforts for diagnostic harmonisation and laboratory quality control in the AH sector.



Pakistan enrolled in GLASS and contributed AMR data since 2017. Visual AMR dashboards were trialled to improve accessibility to information in real-time for key health system planners.

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Fleming Fund Fellows were trained and mentored to contribute to AMR containment efforts. Fellows facilitated the development of Pakistan's National AMR Surveillance Plan and played key roles in coordination committees, capturing, and sharing data, and raising awareness of AMR in Pakistan.



A suite of technical assistance grants provided bespoke support to key stakeholders in Pakistan. This included:

- ✓ EQA Proficiency Testing service on pathogen identification and AST, focusing on GLASS priority pathogens and *Campylobacter*.
- ✓ Training and technical support for the WHONET free desktop application to manage AMR data.
- ✓ Development of approaches to laboratory quality management systems, bacteriology laboratory network design, collation and analysis of AMR surveillance data, and clinical engagement strategies.



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