What is the Fleming Fund?

The UK Government established the Fleming Fund (FF) to respond to the global threat of antimicrobial resistance (AMR). The FF is a One Health Initiative to fight AMR in low- and middle-income countries. The FF supports countries to collect, analyze, share, and use high-quality data on AMR and to put data relevant to AMR in the hands of decision-makers to enable local, national, and global trend monitoring, to enable evidence-based decision-making, and to assess the impact of changes to policies or working practices.

The goal of the FF is to avert the human and economic burden of AMR. AMR cannot be addressed by any single organization or sector. As such, the project takes a coordinated response, and in Vietnam, PATH collaborates with the following international partners to support governments in this AMR effort:

- US Centers for Disease Control and Prevention (CDC), to strengthen the AMR surveillance system in human health.
- Food and Agriculture Organization (FAO) and FHI 360, to strengthen the antimicrobial use and consumption (AMU/AMC) surveillance system in animal health.
- World Health Organization (WHO), FHI 360, and Oxford University Clinical Research Unit (OUCRU), to strengthen AMR information and data reporting between reference laboratories and AMR surveillance sites.

Table. Countries where the Fleming Fund supports PATH's work and partnerships.

<table>
<thead>
<tr>
<th>Country</th>
<th>PATH role</th>
<th>Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya</td>
<td>Prime</td>
<td>Agha Khan University, International Livestock Research Institute, Kenya Medical Research Institute, Washington State University (WSU) and WSU Global Health–Kenya, University of Nairobi</td>
</tr>
<tr>
<td>Senegal</td>
<td>Prime (human health)</td>
<td>Institute Pasteur of Dakar, Fondation Mérieux, International Union for the Conservation of Nature</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>Prime</td>
<td>Sri Lanka College of Microbiologists, University of Peradeniya, Faculty of Veterinary Medicine &amp; Animal Science, University of Sri Jayewardenepura–Faculty of Medical Sciences, Foundation for Innovative New Diagnostics</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Sub to FHI360</td>
<td>Medical Services Administration (MSA), 19 hospitals in the AMR surveillance network, Department of Animal Health (DAH), Drug and Vaccine Management Department, three animal health laboratories, National Institute of Hygiene and Epidemiology (NIHE), and National Institute of Veterinary Research (NIVR)</td>
</tr>
<tr>
<td>Zambia</td>
<td>Sub to Centre for Infectious Disease Research in Zambia</td>
<td>University of Zambia–School of Veterinary Medicine</td>
</tr>
</tbody>
</table>

Vietnam FF Grant Overview

AMR is an emerging multisectoral problem affecting both human and animal health. Key areas contributing to AMR include patient drug-uptake behavior, lack of adherence to prescription guidelines and good human and animal health practices, and inappropriate prescription of antimicrobial medicines, such as antibiotics.

Our consortium includes international organizations (CDC, FHI 360, FAO, WHO, OUCRU, and PATH); Vietnam Ministries of Health and Agriculture and Rural Development (MOH/MARD); the Drug and Vaccine Management Department (DVMD); and local partners NIHE and NIVR and leverages decades of experience in laboratory and surveillance system innovations to strengthen and scale up existing laboratories to join the AMR surveillance systems. PATH provides expertise and technical advice in the use of technology, information systems, and data to support the Government of Vietnam in strengthening and scaling up effective AMR and AMU/AMC surveillance activities and interventions, informing national policy to reduce AMR, and improving collection and quality of AMC data.

The primary grant objectives are developed and agreed in partnership with the Government of Vietnam, including the following:

1. Strengthen One Health approaches to information sharing.
2. Strengthen AMR and AMU surveillance system in the human health sector.
3. Strengthen AMR and AMU surveillance system in the animal health sector.
AMR surveillance sites

1. Bach Mai Hospital
2. National Hospital for Tropical diseases
3. Vietnam Germany Hospital
4. Hanoi Medical University Hospital
5. Saint Paul Hospital
6. Vietnam National Children Hospital
7. Vietnam Blood Donor Unit Bi Hospital
8. Vietnam Czechoslovakia Hospital
9. Hue Central Hospital
10. Hue University Hospital
11. Danang General Hospital
12. Binh Dinh General Hospital
13. Dak Lak General Hospital
14. Kinh Hoa General Hospital
15. Cho Ray Hospital
16. Hospital for Tropical Disease, HCMC
17. Pediatric Hospital No. I
18. HCMC University Medical Center
19. Can Tho Central General Hospital

Project Details

Prime: FHI 360 Vietnam
Sub-recipients: OUCRU; PATH; NIHE; NIVR
Duration: 23 months (October 15, 2019–May 31, 2021)

PATH Partners

- MSA/MOH
- Hospitals in the AMR human health surveillance network
- DAH/MARD
- DVMD and three laboratories in the AMR animal health surveillance network:
  1. National Center for Veterinary Hygiene Inspection No. I.
  2. National Center for Veterinary Hygiene Inspection No. II.
  3. Regional Animal Health Office No. IV.

PATH’s Roles

With support from FF/FHI 360 Vietnam, PATH will work and support the MSA, DAH, and AMR surveillance laboratories to:

- Strengthen the AMR surveillance system in the human health sector, in particular the two-way mechanisms linking relevant clinical data to laboratory results.
- Establish AMR surveillance and AMC information systems in the animal health sector, including:
  - Implementing AMR data reporting that adopts WHONET standards and includes GIS data in the National Center for Veterinary Hygiene Inspection No. I and No. II and the Regional Animal Health Office No. IV laboratories.
  - Establishing a mechanism to share data between the DVMD and contributing laboratories.
- Develop the function for AMR data exchange and sharing between MSA/MOH and DAH/MARD.

For more information, please contact the Vietnam Country Program: vietnam@path.org

Taking a One Health approach to AMR

Photos from top to bottom: PATH, Matthew Dakin, Pham Huong Lien

PATH is a global organization that works to accelerate health equity by bringing together public institutions, businesses, social enterprises, and investors to solve the world’s most pressing health challenges. With expertise in science, health, economics, technology, advocacy, and dozens of other specialties, PATH develops and scales solutions—including vaccines, drugs, devices, diagnostics, and innovative approaches to strengthening health systems worldwide.

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