Antimicrobial resistance (AMR) occurs when microorganisms such as bacteria, viruses, fungi and parasites change in ways that make treatments ineffective. AMR is a major concern because drug-resistant infections can kill, spread to others, and impose huge costs on individuals and society.

Antimicrobial drugs are often used unnecessarily, which increases the risk that microorganisms can become resistant, survive and multiply. A number of factors can increase the spread of these resistant microorganisms. These factors often work together to become ‘drivers of AMR’.

Tackling AMR requires a One Health approach – that is, the collaboration of multiple disciplines working locally, nationally and globally to achieve the optimal health of people, animals and the environment. This vision is being articulated in a series of action plans.

In 2015, the UK Department of Health launched the Fleming Fund – a One Health initiative to support the AMR response in low and middle-income countries (LMICs). The Fund is working collaboratively with relevant United Nations agencies and other development partners.

For more information about Antimicrobial Resistance (AMR) visit www.flemingfund.org
Why AMR is a threat

Almost 700,000 people worldwide die annually from drug-resistant infections. Without effective antimicrobial treatments, infections that have been treatable for decades could, once again, cause widespread death and suffering.

The economic costs

It is estimated that the economic cost of AMR through lost global production will be US$100 trillion between now and 2050. Direct and indirect impacts will disproportionately affect low and middle-income countries.

The global impact

The global impact of AMR could be 10 million deaths annually by 2050. The World Health Organization warns that AMR is happening now and ‘has the potential to affect anyone, of any age, in any country’.

The O’Neill report

The 2016 O’Neill report described a definitive 10-point plan for tackling the global challenge of AMR. This evidence-based plan outlined the action needed on surveillance, rapid diagnostics, drugs and vaccines, and a Global Innovation Fund.

For more information about AMR visit www.flemingfund.org
How AMR spreads

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Human drivers
Humans contribute to the spread of AMR through inappropriate and unregulated use of antimicrobial drugs, along with poor infection prevention and control. Increased global travel and trade also contributes to the spread of AMR.

Animal drivers
Antimicrobial drugs are used in animal husbandry and veterinary medicine for disease prevention and treatment, and growth promotion. Resistant microorganisms spread through the food chain, direct contact, poor hygiene measures and unregulated slaughter practices.

Crop production
Antimicrobials, such as antifungals, are used to increase the productivity of crops, including vegetables, fruit and cut-flowers. Drug-resistant microorganisms can spread through the food chain and through poorly controlled farming, processing and distribution practices.

Environmental drivers
Water systems can spread resistant microorganisms and their genes. Poorly controlled farming and aquaculture activities, as well as poor sewage and waste management practices, can lead to the spread of AMR.

CLICK RESOURCES

WHO: Factsheet on antimicrobial resistance
OIE Strategy on Antimicrobial Resistance
FAO: AMR in food and agriculture
FAO: Action Plan on AMR 2016-2020
FAO: Drivers, dynamics and epidemiology of AMR
Responding to AMR

Tackling AMR requires a One Health approach – that is, the collaboration of multiple disciplines working locally, nationally and globally to achieve the optimal health of people, animals and the environment. This vision is being articulated in a series of action plans.

Global Response
In 2015, the World Health Assembly endorsed The Global Action Plan on antimicrobial resistance. AMR surveillance is a cornerstone of the plan and is supported by the Global Antimicrobial Resistance Surveillance System (GLASS).

Tripartite Collaboration
The Food and Agriculture Organization, the World Organisation for Animal Health and the World Health Organization have formed a Tripartite Collaboration on AMR. This collaboration is providing leadership for global action on AMR within a One Health framework.

National Action Plans
Countries are urged to develop national AMR action plans linked to the five strategic objectives in the Global Action Plan. These cover: improved awareness; surveillance; infection prevention; optimal use of antimicrobials; and sustainable investments in the AMR response.

One Health Action
Implementation of Global and National Action Plans requires a One Health approach, working across human, animal and environmental health for evidence-based responses.

CLICK RESOURCES
- WHO: Global Action Plan
- WHO: GLASS
- Joint WHO/FAO/OIE Flyer on AMR
- FAO/OIE/WHO manual on developing AMR national action plans
- OIE infographic – role of awareness raising, capacity building, good governance, standards

For more information about AMR visit www.flemingfund.org
The Fleming Fund

Using a One Health approach, the Fleming Fund aims to improve laboratory capacity and strengthen AMR surveillance and data use in LMICs. Expected outcomes include: improved AMR knowledge; early detection of threats; and optimised use of antimicrobial drugs.

Fleming Fund Grants

The Fleming Fund Grants Programme is a central pillar of the Fleming Fund. It provides Country Grants, Regional Grants and Fellowship awards to advance Fleming Fund objectives. Mott MacDonald is the Management Agent for the Grants Programme.

Investment Areas

The five investment areas for Fleming Fund grants and awards are: strengthening laboratory infrastructure; capacity building; strengthening surveillance systems; improving AMR data use; and promoting rational use of antimicrobial medicines.

Scope and Principles

Fleming Fund support covers 24 eligible UK Official Development Assistance (ODA) countries in Sub-Saharan Africa, and South and South East Asia through Country and Regional Grants. Grants will follow the Fleming Fund principles of One Health, country ownership, alignment and sustainability.

For more information about AMR visit www.flemingfund.org

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The facts about AMR

How AMR spreads

Responding to AMR

The Fleming Fund

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LP1 | VERSION 1 | JANUARY 15TH 2017 | WWW.FLEMINGFUND.ORG