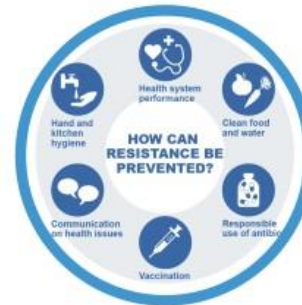


# Antimicrobial Resistance

## What is AMR?

Antimicrobial Resistance (AMR) is the ability of a microorganism (like Bacteria, viruses and some parasites) to stop an anti microbial (such as antibiotics, anti-viral and anti-malarials) from working against it. As a result, standard treatments become ineffective, infections persist and may spread to others.



## Proposed Methodology

A comprehensive methodology would be adopted for this project. It would include:

1. Extensive literature review upon AMR current practices, surveillance protocols and published data in context of One Health.
2. AMR stakeholder's analysis and development of data spread sheet to identify gaps and analyze existing needs for improvement of AMR surveillance system.
3. Learned Group Meetings for improving AMR protocols, opportunities and surveillance system.
4. Development of Common Protocols for AMR data collection, analysis and interpretation among FF Priority Countries.
5. Piloting and deployment of AMR surveillance common protocols in Pakistan.

## International Best Practices for AMR

1. Improving infection prevention and control (IPC) practices in animals and humans.
2. Improving professional education, training and public engagement.
3. Strengthening surveillance and monitoring, and moving towards national 'One Health' surveillance systems.
4. Fostering R&D of new antimicrobial therapies, diagnostics and vaccines.
5. Providing Better evidence and awareness of the challenges of AMR
6. Improving Inter-sectoral coordination.

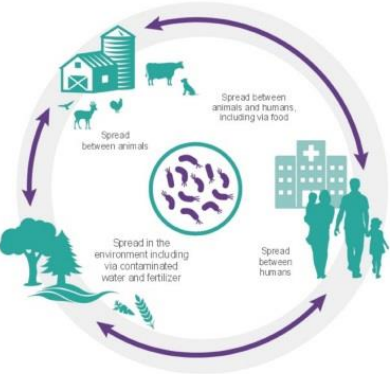
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## What Causes AMR?

- When human and animal health professionals over prescribe antibiotics
- When people don't take antibiotics as directed
- Due to poor hygiene and a lack of infection prevention and control e.g. Not washing hands properly
- Due to people travelling around the world, spreading resistant bacteria.



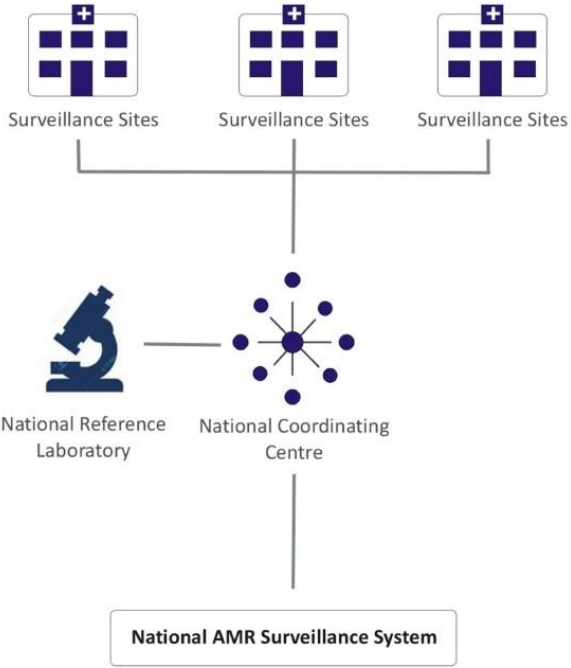
## What is AMR Surveillance?

Surveillance of antimicrobial resistance (AMR) tracks changes in microbial populations, permits the early detection of resistant strains of public health importance, and supports the prompt notification and investigation of outbreaks. Surveillance findings are needed to inform clinical therapy decisions, to guide policy recommendations, and to assess the impact of resistance containment interventions.

## Components of Anti Microbial Surveillance System

Surveillance There are 3 core components of a national AMR surveillance system:

- A national coordinating centre
- National reference laboratory
- AMR surveillance sites



## POHA-Fleming Fund AMR Surveillance Project

During 2020, Pak One Health Alliance in close coordination with Ending Pandemics USA, Fleming Fund and regional organizations would conduct a comprehensive AMR Surveillance situation analysis and stakeholders mapping in context of One Health.

This exercise spans October 2019 to September 2020. The main activities of this exercise would be following:

1. Conduct mapping and gap analysis of needs, current practices, and opportunities for common surveillance protocols across the South Asia region. It includes reviewing uptake of Tricycle Program in the 4 FF sub-regions, and across FF countries.
2. Establishment of common protocols for AMR data collection, analysis and interpretation using One Health approach.
3. Piloting of common protocols and SOPs developed in All Rights Reserved Sites