

## **FAQ's about antibiotic resistance**

### **1. What is antibiotic resistance?**

Antibiotic resistance is the natural process by which bacteria develop resistance over time to the medicines used to treat them. As resistance develops, these medicines become progressively less effective – and eventually they lose their effectiveness entirely. Antibiotic resistance is a consequence of the use of antibiotics, and misuse accelerates the emergence of resistance.

### **2. What is the difference between antibiotic resistance and antimicrobial resistance (AMR)?**

Antibiotic resistance occurs when bacteria change in response to the use of these medicines. Antimicrobial resistance (AMR) is a broader term, encompassing resistance to drugs to treat infections caused by other microbes as well, such as parasites (e.g. malaria), viruses (e.g. HIV) and fungi (e.g. Candida).

### **3. What constitutes “inappropriate” use of antibiotics?**

Inappropriate use occurs when antibiotics are taken when not needed, or taken for too short a time, at too low a dose, at inadequate potency, or for the wrong disease. Both overuse and underuse play a role: overuse such as through the over-prescribing of antibiotics, and underuse due to lack of access, inadequate dosing, poor adherence and poor-quality drugs. Economic hardship can mean that many patients stop taking an antibiotic as soon as they feel better, which may occur before the microbe has been eliminated.

### **4. How much does antibiotic resistance cost society?**

Antibiotic resistance is both a medical and a financial burden. When the antibiotic of choice (first-line treatment) fails, other more expensive antibiotics need to be used (second-line treatment). The difference in cost between first- and second-line drugs is an estimated 50- to 100-fold increase. For example, for anti TB drugs, it is around 2- to 60-fold increase.

### **5. Why is WHO putting so much effort into combating antibiotic resistance?**

Antibiotic resistance is not a new problem and is, in essence, a natural phenomenon. It is, however, becoming more dangerous as more bacteria develop or acquire resistance to the medicines used to treat them at an increasing and alarming speed. The invention of antibiotics and other antimicrobial drugs has changed the course of human history, but their effectiveness is under threat. In the absence of urgent corrective and protective actions, the world is heading towards a post-antibiotic era, in which many common infections will no longer have a cure and will, once again, claim lives.

## **6. What is WHO doing in Sri Lanka?**

WHO Sri Lanka is supporting the government to implement the National Strategic Plan for combating AMR with focus on improving public awareness, improving infection prevention and control measures, assessing the burden of AMR, improving rational use of antibiotics in the veterinary sector among many.

## **7. What can you do?**

Antibiotics are a precious resource. Like any global good, we have a responsibility to protect this resource and to use it responsibly. Consumers can help by using antibiotics only when they are prescribed and always completing the course of treatment. When people take only part of a course of treatment, this contributes to the development of drug resistance. It is important for consumers to understand that antibiotics designed for bacterial infections are not useful against viral infections such as a cold, a cough or influenza. It is also important that consumers don't demand antibiotics from their Doctors or Pharmacists.

## **8. What can veterinarians and farmers do?**

The use of antimicrobials in agriculture – in livestock, fish farming, crops and even in horticulture – has grown. Antimicrobials are not only used as medicines but are sometimes added in low concentrations to animal and fish-feed as a way of stimulating growth. Resistant microorganisms carried by food-producing animals and fish can spread to humans through consumption of contaminated food, from direct contact with animals, or by environmental spread, for example in contaminated water. Farmers can help by improving health management for food animal production by ensuring good hygiene practices and compliance with good farming practices. Veterinarians can help by being prudent when prescribing antibiotics, especially those that are also critically important for human medicine.