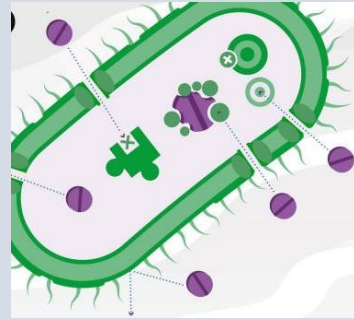


Antibiotic Resistance

November 2024



AMR

The Growing Threat

Statistics: According to the World Health Organization (WHO), at least 700,000 people die each year due to antibiotic-resistant infections. Without urgent action, this number could rise to 10 million annually by 2050.

Common Resistant Bacteria:

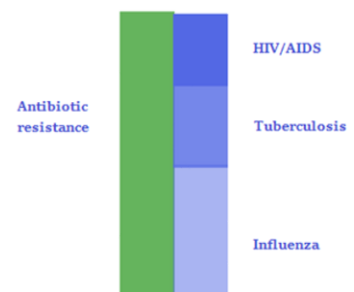
Methicillin-resistant *Staphylococcus aureus* (MRSA)

Vancomycin-resistant *Enterococcus* (VRE)

Multidrug-resistant tuberculosis (MDR-TB)

What is Antibiotic Resistance?

- The ability of bacteria to combat the action of one or more antibiotics. Bacteria, not humans or animals, become antibiotic-resistant. The health impact of antibiotic-resistant infections become comparable to that of influenza, Tuberculosis, and HIV/AIDS combined





ANTIBIOTIC RESISTANCE

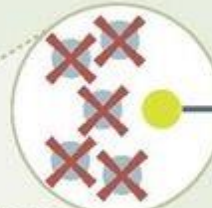
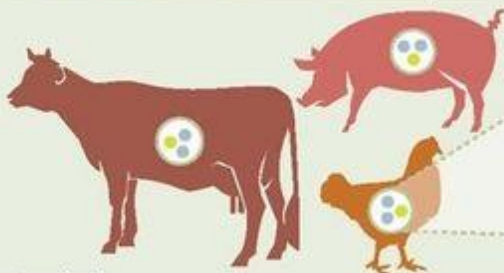
from the farm to the table

RESISTANCE

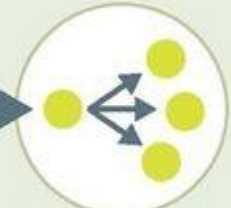
All animals carry **bacteria** in their intestines



Antibiotics are given to animals



Antibiotics kill most bacteria



But resistant bacteria survive and multiply

SPREAD

Resistant bacteria can spread to...



animal products



produce through contaminated water or soil



prepared food through contaminated surfaces



the environment when animals poop



EXPOSURE

People can get sick with resistant infections from...



contaminated food



contaminated environment

IMPACT

Some resistant infections cause...



mild illness



severe illness and may lead to death



Who is affected by Antimicrobial Resistance?



Short answer: Everyone! Antimicrobial resistance (AMR), or drug resistance, occurs when viruses, bacteria, fungi, and parasites evolve to resist treatment. As drugs become less effective, disease duration, severity, and mortality increase. However, some people are more vulnerable to these difficult-to-treat infections.

AMR Resistance

Babies



An estimated 3 million cases of sepsis (severe blood infections) occur each year in newborns alone, resulting in up to 570,000 deaths – many due to drug resistance. Certain antibiotics in Southeast Asia are now only 50% effective at treating sepsis and meningitis in newborns.¹

The Elderly

The multidrug-resistant fungal infection, *Candida auris*, has death rates ranging from 30% to 60%. It spreads easily through skin-to-skin contact and is a major concern for elderly people in assisted living facilities.²



Women



Uncomplicated urinary tract infections (UTIs) disproportionately affect women, and they are one of the leading reasons for antibiotic prescriptions worldwide. Resistance against pathogens causing UTIs has emerged globally.³

AMR Resistance

AMR Resistance

People in Low-Resource Settings

Economic inequality, weak governance, political instability, and poor healthcare infrastructure can worsen AMR and its consequences. An analysis showed that in 2019, Western sub-Saharan Africa had the highest burden of AMR deaths globally, namely 27.3 deaths per 100,000.⁴



People with Underlying Conditions



People with Type 2 Diabetes are twice as likely as those without the condition to get drug-resistant urinary tract and respiratory infections. In 2020, a United Kingdom survey found that 5% of surgical patients with cancer develop drug-resistant infections.

AMR Resistance

AMR Resistance



Solutions



The Key is:

There are several ways to address this threat and ensure that antibiotics remain effective in the future.

- **Using antibiotics prudently, only when they are necessary.**



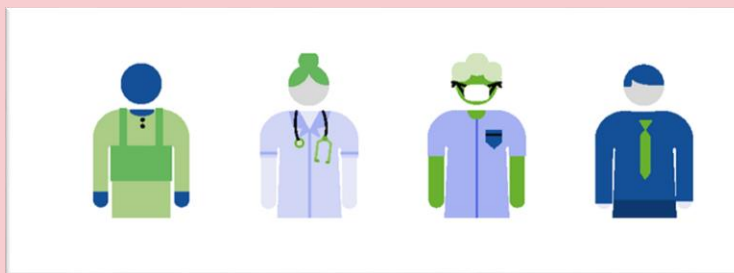
- **Implementing good infection prevention & control practices such as hand hygiene, screening for infection with multi-drug-resistant bacteria & isolated infected patients.**



- **Promote research & development of antibiotics.**

Everyone is responsible

Everyone is responsible and can make a difference in addressing this growing threat to human health: patients, doctors, nurses, pharmacists, veterinarians, farmers, and policy makers.



Everyone is responsible