



World Organisation
for Animal Health



UN Multi-Partner
Trust Fund Office



Seminar for Veterinary Students: “Spread Awareness, Stop Resistance”

Current Situation of Antimicrobial Resistance (AMR) in the World and Global Measures Being Implemented

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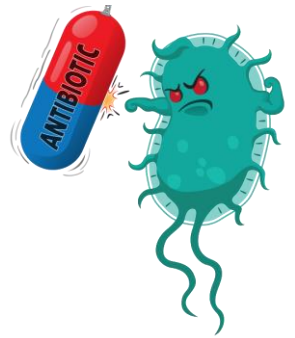
9 April 2026

CONTENT:

- Define **AMR**
- Understand global burden
- Identify key drivers
- Describe global interventions
- Apply stewardship in veterinary practice



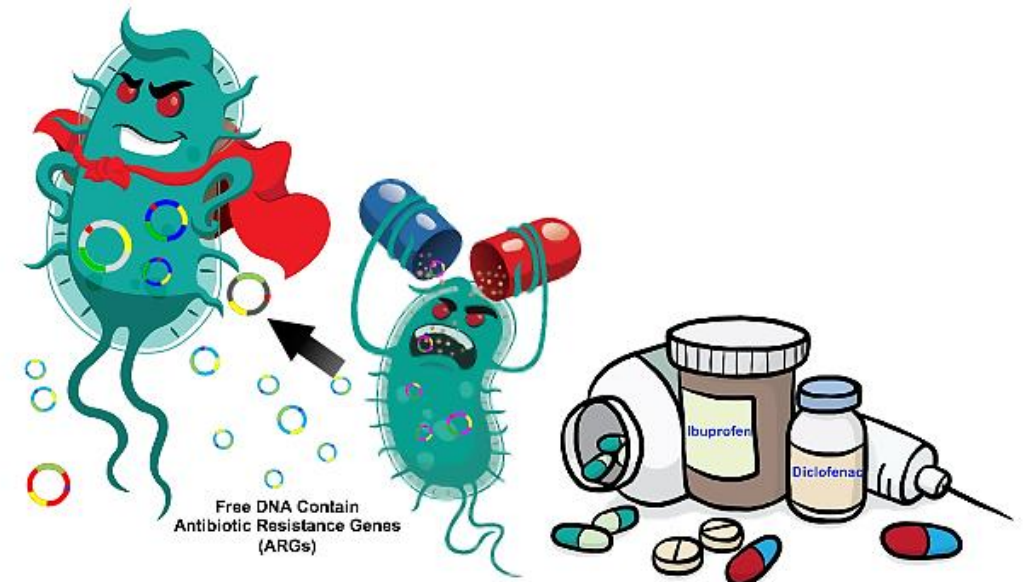
WHAT IS **AMR**



Resistance = survival despite **ANTIMICROBIAL (AM)** exposure

Applies to:

- Bacteria
- Viruses
- Fungi
- Parasites



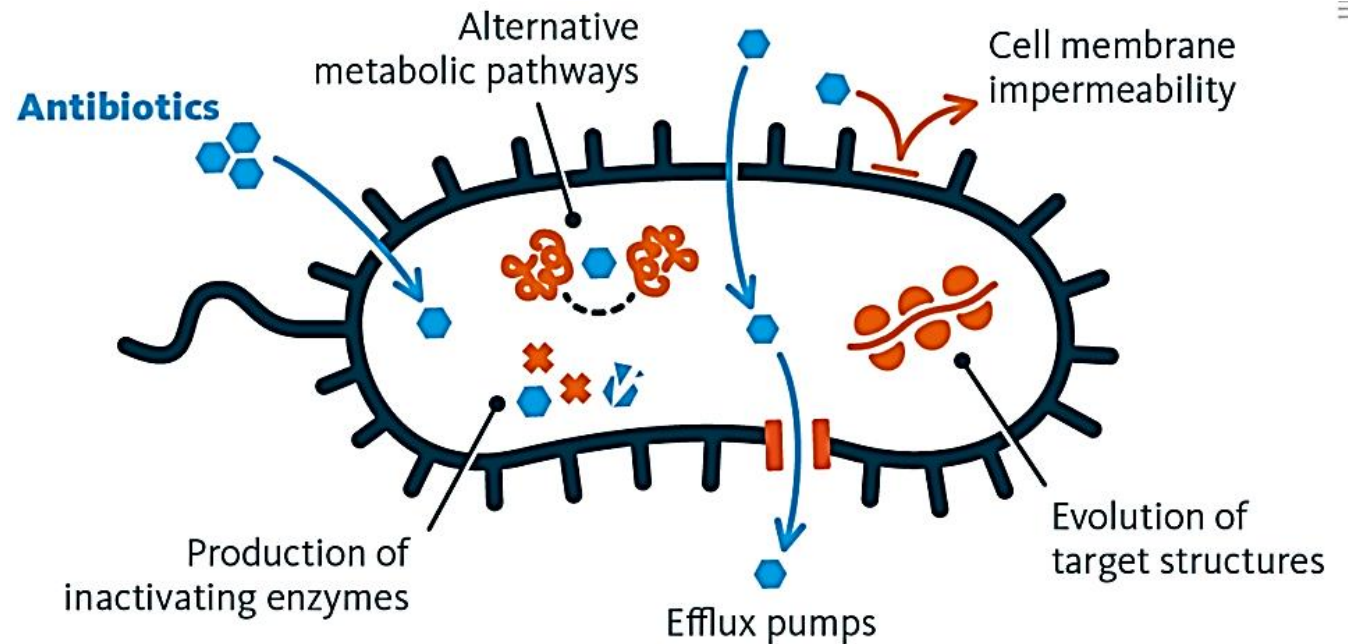
NATURAL VS **ACQUIRED RESISTANCE**

MECHANISMS OF AM VS AMR

AM mechanism of action

- Disrupting cell walls
- Inhibiting protein synthesis
- Inhibiting DNA synthesis

Mechanisms of AMR



AM IN VET. MEDICINE

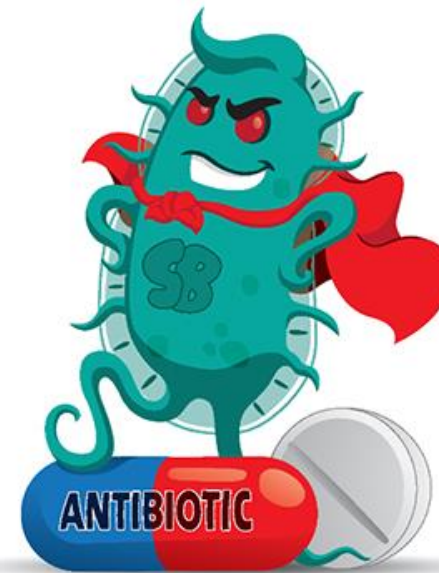
- Therapeutic use
- Prophylactic use
- Metaphylaxis
- Growth promotion

2017 - 99,502 tonnes of AMs used in animals.



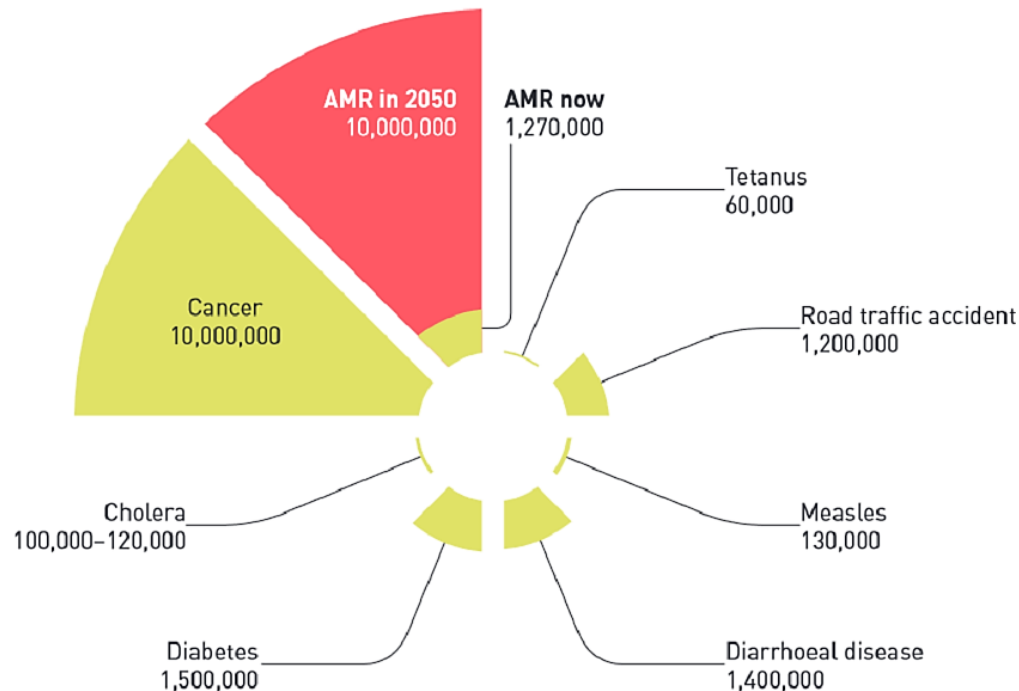
DRIVERS OF AMR

- Overuse or misuse in humans
- Overuse or misuse in animals
- Poor hygiene & infection control
- Environmental contamination



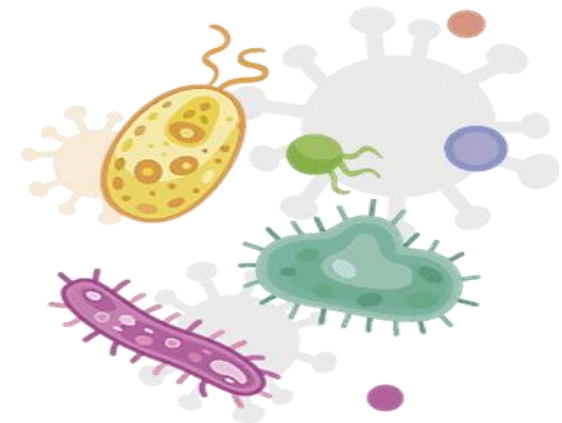
GLOBAL BURDEN OF AMR

- ~1.27 million deaths/year
- Projected 10 million/year by 2050
- Massive economic losses



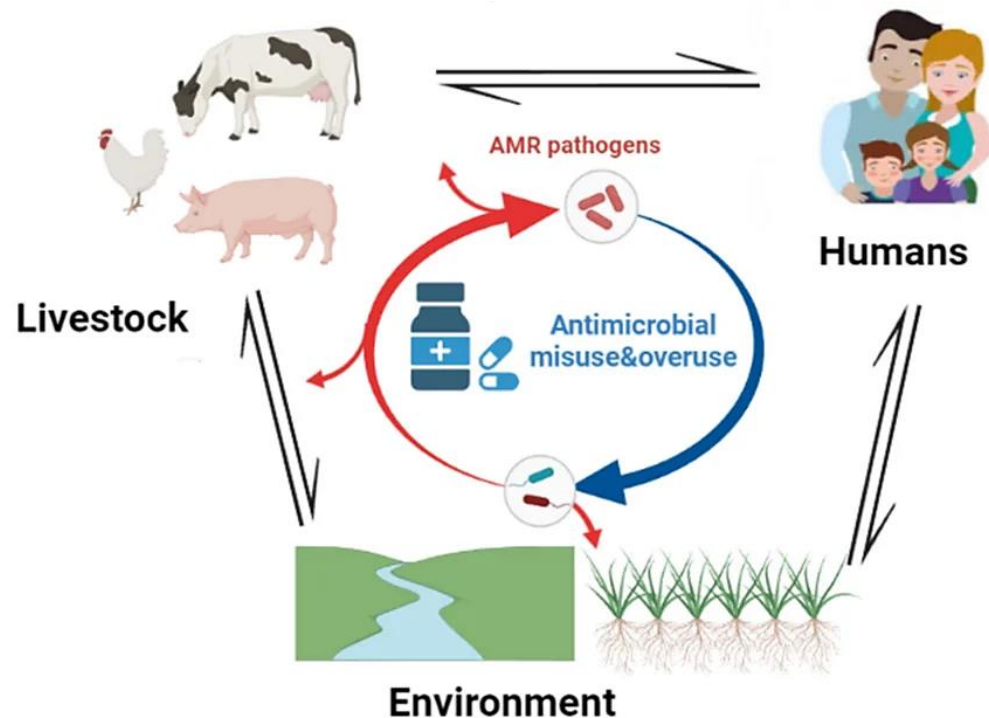
KEY AMR PATHOGENS

- MRSA
- ESBL-producing *E. coli*
- Carbapenem-resistant Enterobacteriaceae
- MDR *Salmonella*



TRANSMISSION OF AMR

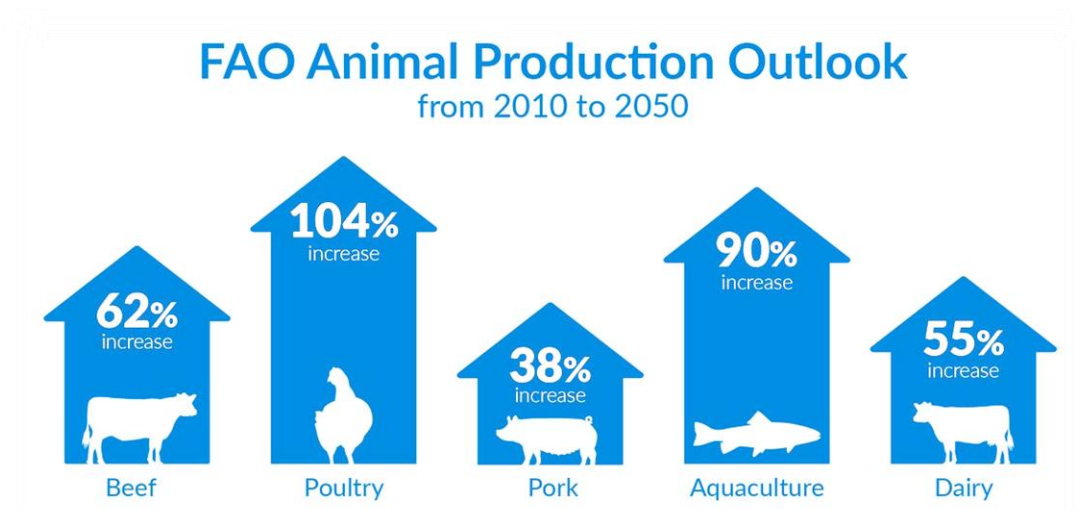
- Food chain
- Direct contact
- Environmental spread



FOOD SYSTEM ROLE

- Food safety
- Sustainable farming
- AMR mitigation

Over 70% of all medically important AMs are consumed in food producing animals.



THE QUADRIPARTITE COLLABORATION

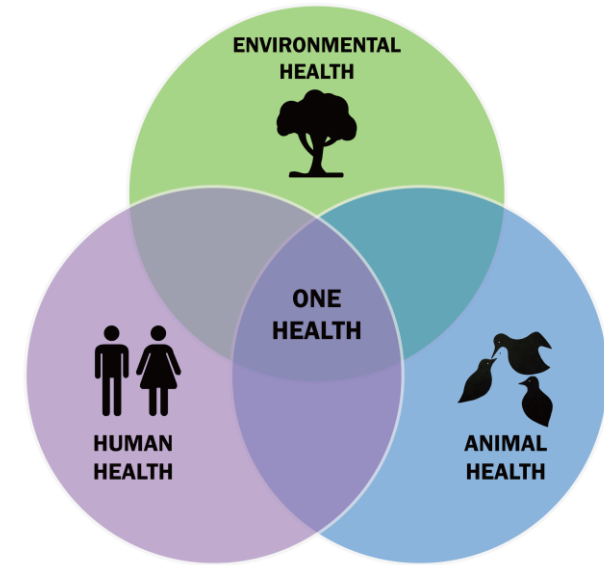


- WHO
- FAO
- WOHAI
- UN Environment Programme

In 2015



ONE HEALTH CONCEPT



178 have developed multisectoral National Action Plans (NAPs).

GLOBAL SITUATION

- Increasing resistance globally
- High burden in developing regions
- Limited surveillance in many countries

GLOBAL MEASURES

- Ban growth promoters
- Prescription-only use
- Improve hygiene
- Vaccination



GLOBAL COMBAT **AMR**

Global Surveillance

- WHO (GLASS)
- WOAHA monitoring (ANIMUSE)
- FAO systems (InFARM)

Global Action Plan (WHO)

- Awareness
- Surveillance
- Infection prevention
- Optimize use
- Investment



CHALLENGES

- Few new antibiotics
- Weak regulation
- Economic pressure
- Lack of awareness



FUTURE DIRECTIONS

- Rapid diagnostics
- Global cooperation
- Policy strengthening



AM STEWARDSHIP

- Right drug
- Right dose
- Right duration
- Right indication

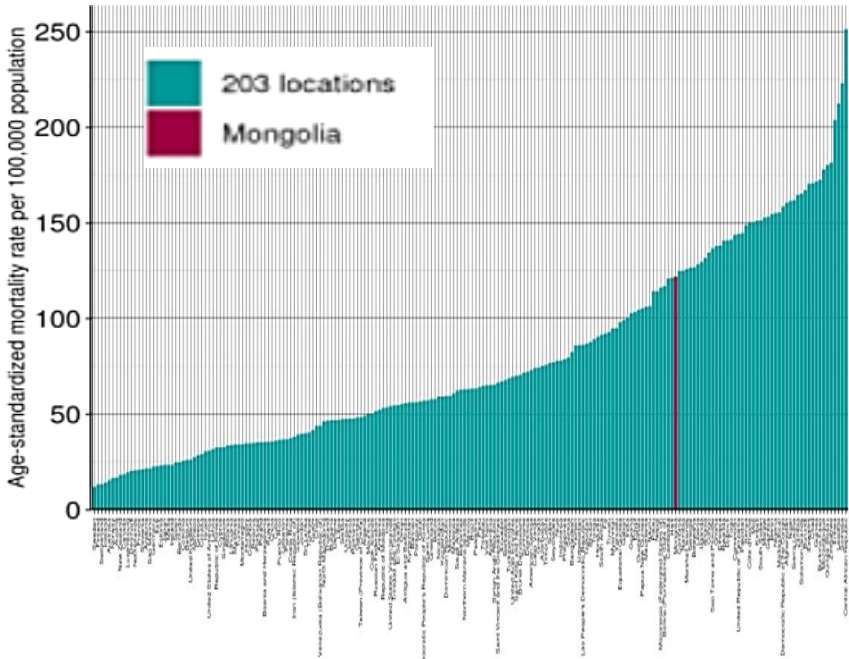


ROLE OF VETS

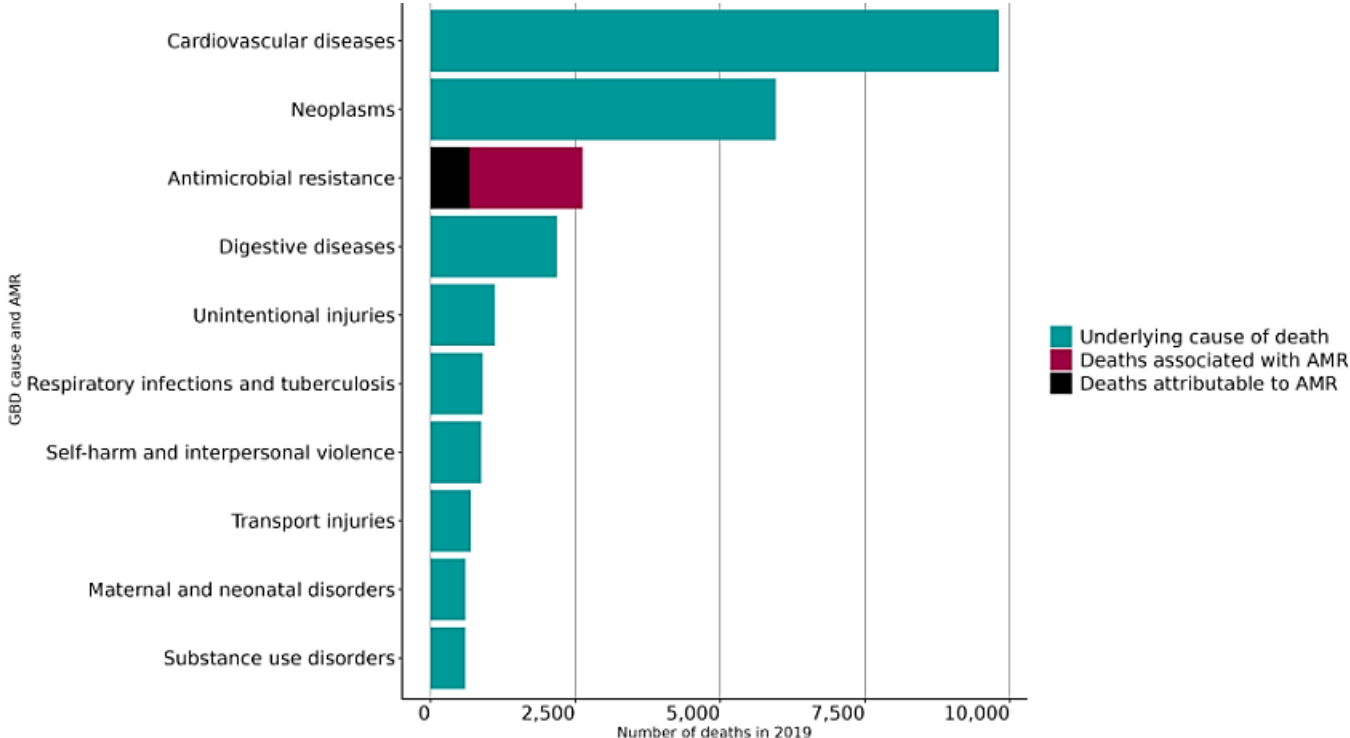
- Rational prescribing
- Farmer education
- Biosecurity
- Surveillance participation



BURDEN OF AMR IN MONGOLIA



- *Escherichia coli*
- *Klebsiella pneumoniae*
- *Staphylococcus aureus*
- *Acinetobacter baumannii*
- *Streptococcus pneumoniae*



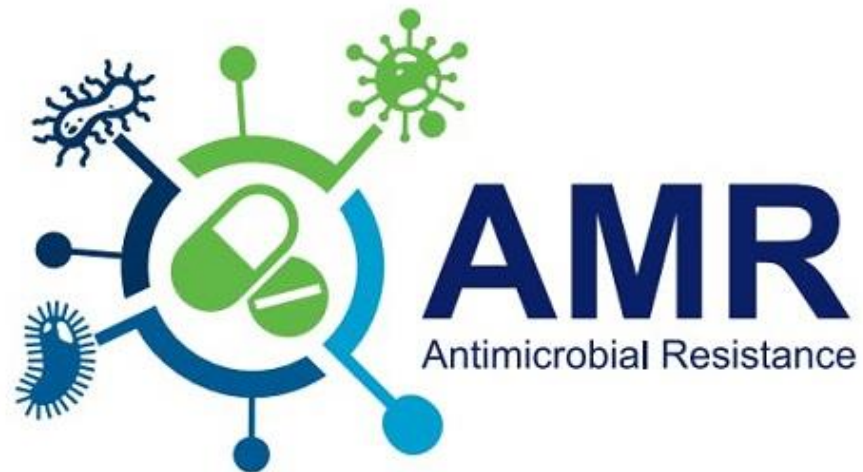
The length of each bar states the number of deaths by GBD cause and those associated with/attribution to AMR in 2019.

FAO Knowledge Repository

AMR is already in Mongolia!

CONCLUSION

- AMR = global crisis
- Veterinary role is critical
- One Health is essential



ALTERNATIVES

- Vaccines
- Probiotics
- Phage therapy
- Improved management



Thank you for your attention

“Every prescription you write matters.”

