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KVA ONE HEALTH, AMR AND ZOONOSES TWG

Fact sheet on antimicrobial resistance (AMR)

Understanding Antimicrobial Resistance (AMR) and Transmission from Foods of Animal Origin

What is AMR?

- AMR occurs when bacteria, viruses, fungi, and parasites develop the ability to defeat the drugs designed to kill them.
- Humans and animals do not become resistant to drugs,the bugs that make them sick do.

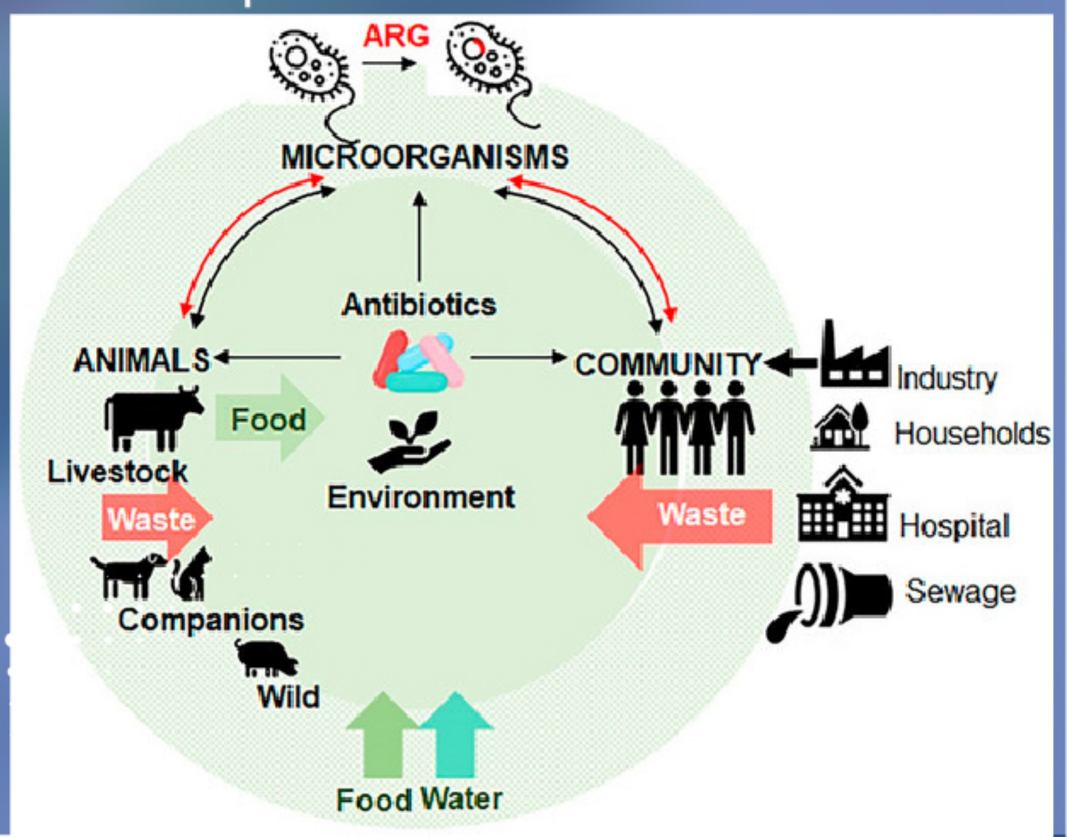
Why is AMR a Public Health Concern Worldwide?

- **Reduced effectiveness of drugs particularly antibiotics therefore;**
  - Common infections become harder to treat in humans and animals.
  - Longer hospital stays or treatment of animals.
  - Higher veterinary and medical costs.
  - Increased mortality.

- **Food safety risks:**

  - Overuse of antibiotics in food-producing animals can contribute to the development and spread of resistant bacteria.
  - Resistant bacteria can be transmitted to humans through the consumption of contaminated animal products.

- **Global impact:**
  Resistant bacteria can spread between humans, animals, and the environment, and can spread across large geographical areas through wind, water, animal and human movement.



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2. Transmission Through Animal Products:

o **Contaminated Meat and Animal Products:** Bacteria carrying genes of resistance from animals can be present in meat, milk, and eggs.

- If these products are improperly handled or undercooked, resistant bacteria can enter the human body.

o **Contact with Animal Waste:** Animal waste containing resistant bacteria can contaminate water, soil, and crops.

- People may feed on these bacteria through contaminated farm produce or water.

3. Environmental Spread:

o Animal manure used as fertilizer can spread resistant bacteria to crops, which are then consumed by humans.

Common Foods Linked to AMR Transmission:

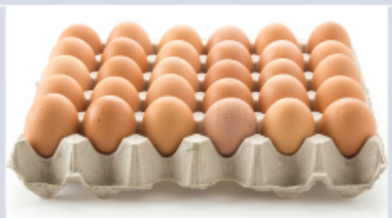
MEAT

(Beef, Poultry, Pork and Fish):
Improperly cooked or handled meat can contain bacteria like Salmonella or E. coli that are resistant to antibiotics.

DAIRY PRODUCTS

(Milk, Cheese):

Unpasteurized milk and products can carry resistant bacteria.



EGGS

Contamination during production at the farm, processing or handling can transmit resistant bacteria to consumers.

How Can You Protect Yourself and Your Family?

1. Practice Good Food Hygiene:

o ***Cook food thoroughly:*** Ensure meat, poultry, and eggs are well cooked to kill bacteria.

o ***Wash hands and utensils:*** Clean hands and all items used in handling raw meat and animal products to avoid contamination with resistant bacteria.

2. Responsible Antibiotic Use:

o ***Promote biosecurity and proper hygiene***: Enhance farm biosecurity and hygiene to reduce use of antibiotics in farms.

o ***Promote sustainable farming practices:*** Support and advocate for use of antibiotics in farms only when unavoidable.

3. Avoid Consumption of Raw Animal Products:

o Avoid consuming raw or undercooked meat, unpasteurized milk, or undercooked eggs.

What Can We Do as a Community?

1. Promote Awareness:

o Educate others about the dangers of AMR and how antibiotic use in animal farming contributes to the problem.

2. Advocate for Policy Change:

o Support policies that regulate and reduce the use of antibiotics in livestock and aquaculture production.

3. Support AMR Research:

o Advocate for scientific research to find alternatives to antibiotics in farming, such as vaccines, non-antibiotic growth promoters or improved hygiene practices in livestock production.

References:

1. World Health Organization (WHO) Global Action Plan on Antimicrobial Resistance (2015). https://www.who.int/publications/i/item/9789241509763
2. World Organization for Animal Health (OIE). Annual Report on Antimicrobial Agents Intended for Use in Animals: Better Understanding of the Global Situation (2022).
3. Global trends in antimicrobial use in food animals." Proceedings of the National Academy of Sciences 112.18 (2015): 5649-5654. DOI: https://doi.org/10.1073/pnas.1503141112
4. Food animals and antimicrobials: impacts on human health. Clinical Microbiology Reviews 24.4 (2011): 718-733.DOI: https://doi.org/10.1128/CMR.00002-11
5. Restricting the use of antibiotics in food-producing animals and its associations with antibiotic resistance in food-producing animals and human beings: a systematic review and meta-analysis." The Lancet Planetary Health 1.8 (2017): e316-e327. DOI: https://doi.org/10.1016/S2542-5196(17)30141-9

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