Antimicrobial Resistance: A Global, One Health Concern

DRUM
Drivers of Resistance in Uganda & Malawi

What is antimicrobial resistance (AMR)?

When the medicines known as antibiotics no longer kill the microbes they have been developed to cure, this is known as **antimicrobial resistance**, or AMR. AMR is a threat today, and has the potential to become the biggest threat to human health in the next 50 years, with fewer and fewer effective antibiotics available to treat infections.

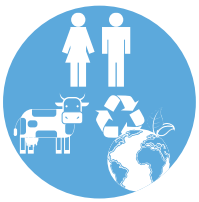
What is One Health?

The Centers for Disease Control and Prevention (CDC) defines One Health as *"a collaborative, multisectoral, and transdisciplinary approach — working at the local, regional, national, and global levels — with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment."*[1]

AMR is a One Health issue, and it is possible that human and animal waste can spread resistant bacteria in the wider environment. More evidence is needed on how AMR is spread between humans, animals and the environment.

What causes AMR?

The widespread use of antibiotics is a major contributor to AMR. Unsanitary conditions and poor water, sanitation and hygiene (WASH) practices also may contribute to the spread of resistant bacteria.



Why is AMR a problem?

When a person or an animal has an infection caused by AMR-bacteria, it may not be possible to treat the infection. This problem is increasingly being seen around the world, though the exact number of deaths due to drug-resistant bacteria is not known.

While AMR is a global concern, low- and middle-income countries like Malawi are likely to be more severely affected by AMR with stretched health systems and limited access to alternative antibiotic regimes.

How can AMR be prevented?

Antibiotic use touches all aspects of human life. Whilst not all the answers are known, a holistic approach is needed, including:

- Reducing transmission of infections through;
- Infection prevention and control (IPC) in hospitals;
- Improving WASH infrastructure and practices;
- Improved use of antibiotics by doctors, veterinarians, drug vendors and patients.

[1] *Centers for Disease Control and Prevention (CDC). One Health Basics (2018). https://www.cdc.gov/onehealth/basics/index.html*

Did you know?

Facts about Antibiotics

Infections caused by AMR-bacteria can increase the risk of spread of infection to communities and livestock and result in l**onger duration of illness, higher mortality rates, and increased costs of alternative treatment.**

Here are five facts you should know to help ***preserve the future of antibiotics:***

1. Antibiotics save lives. When a patient needs antibiotics, the benefits outweigh the risks of side effects or the future risk of AMR. Antibiotics are critical tools for treating life-threatening conditions such as pneumonia or sepsis.
2. Antibiotics aren't always the answer. Everyone can help improve antibiotic prescribing and use, including you.
3. Antibiotics do not work on viruses or parasites, such as those that cause colds, flu, malaria, bronchitis, or runny noses, even if the mucus is thick, yellow, or green. Antibiotics will not make you feel better if you have a virus.
4. Antibiotics are only needed for treating infections caused by bacteria, but even some bacterial infections get better without antibiotics, including many sinus infections and some ear infections.
5. If you need antibiotics, take them exactly as prescribed. Talk with your doctor if you have any questions about your antibiotics.

Drivers of Resistance in Uganda and Malawi: The DRUM Consortium

The DRUM Consortium is a group of researchers seeking to understand more about the spread of AMR between humans, animals, and the wider environment in rural and urban parts of Malawi and Uganda. Ultimately, this information will help identify the best ways to control antimicrobial resistance in Malawi and Uganda.

The DRUM Consortium is funded by the Antimicrobial Resistance Cross-Council Initiative through a grant from the Medical Research Council, a Council of UK Research and Innovation, and the National Institute for Health Research. This award is part of the EDCTP2 programme supported by the European Union.

Government of Malawi

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