

Understanding antibiotic use to combat antimicrobial resistance

It's World Antimicrobial Awareness Week - Antimicrobials: handle with care

20-11-20



Dit is de omschrijving

Every year, World Antimicrobial Awareness Week aims to increase awareness of global antimicrobial resistance. Bacterial infections are still a major health threat in all parts of the world, and resistance to antibacterial treatment and antibiotics makes infections harder to treat and increases the risk of severe illness or death. Overuse and misuse of antibiotics in humans, livestock and agriculture, as well as poor access to clean water, sanitation and hygiene have all been contributing to the accelerating threat of antimicrobial resistance (AMR) worldwide. ITM has antibiotic resistance high on its agenda.

The focus at ITM lays on a multidisciplinary and interactive approach, where bacteriologists, specialists in tropical laboratory medicine, epidemiologists and medical anthropologists collaborate. Our multidisciplinary 'Bacterial Infections in the Tropics' (BIT) team has set up surveillance of bloodstream infections in their own country, Cambodia, Burkina Faso, DRC, Benin, Mozambique, Ethiopia and Peru. In a [recently published study](#) in *Clinical Microbiology and Infection*, researchers looked into antibiotic use in patients with persistent fever before seeking medical care in a hospital in low- and middle-income countries (LMIC). They found that "Watch" antibiotics were, in fact, widely used in certain LMICs, such as Nepal and Cambodia. According to the 2019 Access/Watch/Reserve (AWaRe) Classification by the World Health Organization, the "Watch" group includes clinically important antibiotics that are at relatively high risk of selection of bacterial resistance, and they should be prioritised as key targets of antibiotic stewardship programmes and monitoring.

This study informed other ongoing research at ITM, which, in collaboration with ITM partners Institut National pour la Recherche Biomedicale (INRB), Centre de Recherche en Santé de Kimpese (CRSK), and Clinical Research Unit of Nanoro (CRUN), aims to look into antibiotic use in the community in the DRC and Burkina Faso, and compare that to the use in hospitals. Due to various factors, such as lack of financial resources or the proximity to hospitals, in the South self-medication before seeking formal care is common. Access to antibiotics is unregulated in private pharmacies and private clinics, which are important and easily accessible health care providers in the community. By carrying out qualitative and quantitative research, interviews in the community and large-scale population surveys, researchers aim to find out which factors drive antibiotic use and determine which medicines are used in the various settings. The ultimate goal of the research is to find out how best to optimize antibiotic use in order to prevent a further increase in AMR.

AMR has not only been the subject of intensive research, but it is also part of ITM's academic curriculum in the form of a course on antimicrobial resistance in hospitals. The "[Hospital-based Interventions to Contain Antibiotic Resistance in Low-resource Settings](#)" (AIM) course offers specific learning tracks on antibiotic stewardship, infection prevention & control and microbiological surveillance in the hospital setting, which are closely linked key components in the successful containment of antibiotic resistance. The AIM course continues to be an excellent vehicle for dissemination of newly generated evidence to health professionals from around the world.

To learn more about AMR, you can participate in the [Twitter chat](#) featuring ITM researcher Sien Ombelet on "How can we improve awareness for Antimicrobial Resistance in Africa?" on Saturday 21 November 19:30 – 20:30 East African Time (EAT), by using the hashtags #AfricaWAAW and #WAAW2020. The Twitter chat is organised by the Africa regional tripartite members (FAO, OIE, WHO), UNEP, Africa Centres for Disease Control and Prevention (Africa CDC) and African Union Inter-African Bureau for Animal Resources (AU-IBAR).

More about BIT

Between 2015-2020, Baillet Latour patronage enabled ITM to significantly boost research on [bacterial infections in the tropics \(BIT\)](#), neglected yet disproportionately affecting developing countries. Spearhead research in the laboratory, in the hospital and in the field were undertaken. The BIT team has been a pioneer in identifying best practices for clinical bacteriology in low-resource settings. They also conducted ground-breaking work in collaboration with top international research centres and ITM's partners in the South to study antibiotic resistance that is emerging and spreading in developing countries. Lastly, the team examined the reservoir and transmission routes of typhoidal *Salmonella* in Cambodia and non-typhoidal *Salmonella* in sub-Saharan Africa.