Tackling drug resistance with limited resources

ITM researchers set out building blocks for clinical bacteriology in poor countries and host international expert for short course on antibiotic resistance.

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In an opinion paper for The Lancet Infectious Diseases, researchers of the Institute of Tropical Medicine Antwerp and international colleagues set out the six building blocks of clinical bacteriology for countries where the needs are great, but the means are limited. ITM currently also trains 22 international experts who can make a difference against antibiotic resistance in hospitals.
Poor countries are disproportionately burdened by infectious diseases and resistance to antibiotics, antiparasitic and antiviral drugs. Good quality bacteriology is a prerequisite for effective antimicrobial control, but countries with limited resources face infrastructural, technical and cultural challenges when implementing clinical bacteriology. This starts for example with the need for equipment that is resistant to harsh conditions such as high temperatures, humidity, dust, sunlight, and transport to remote locations. In the absence of clinical bacteriology, patients with fever often get the standard diagnosis malaria, even if they have a bacterial or parasitic infection.

The authors say the benefits of clinical bacteriology are numerous, not only for individual patient care, but also for surveillance of outbreaks, emerging resistance, management of hospital infections and the use of medication. As pathogens literally know no borders, tackling these problems in poor countries, where they are the most acute and least addressed, is of the essence.

ITM’s Dr. Sien Ombelet, one of the paper’s two lead authors, said: “Implementing clinical bacteriology in low-resource settings improves patient management and helps to tackle hospital-acquired infections. It also provides valuable surveillance for antibiotic treatment guidelines and policies, and supports the containment of antimicrobial resistance.”

**Expert course on antibiotic resistance in poor countries**

Generating and sharing knowledge about antibiotic resistance in poor countries is at the heart of ITM’s efforts in the field. The multidisciplinary BIT programme, ‘Bacterial Infections in the Tropics’, combines biomedical, clinical and anthropological research lines to have an impact on science, medical practice and capacity strengthening in countries with limited resources. Transferring acquired knowledge to Southern experts is crucial in this context.

Twenty-two students from Asia, Africa and Latin America are currently in Antwerp for an expert course on antibiotic resistance. The students are health care professionals from low-resource settings who are taught all relevant aspects of antibiotic resistance and its containment at hospital level.

Dr. Furaha S. Lyamuya works as a clinician at Kilimanjaro Christian Medical Centre, a zonal referral hospital in North Eastern Tanzania. He said “it has been great to share experience with colleagues from different countries and continents and realise that we are basically facing the same challenges. The knowledge and experience gained will have a positive resounding impact in containment of antibiotic resistance in our settings.”

**Link**

The article in The Lancet Infectious Disease: [Clinical bacteriology in low-resource settings: today’s solutions](https://www.thelancet.com/journals/infectdis/article/PIIS1473-3099(07)70256-2/fulltext)