



Lessons from the field: The impact of war on antimicrobial resistance

The AMR Global Health Academy Newsletter September/October 2024

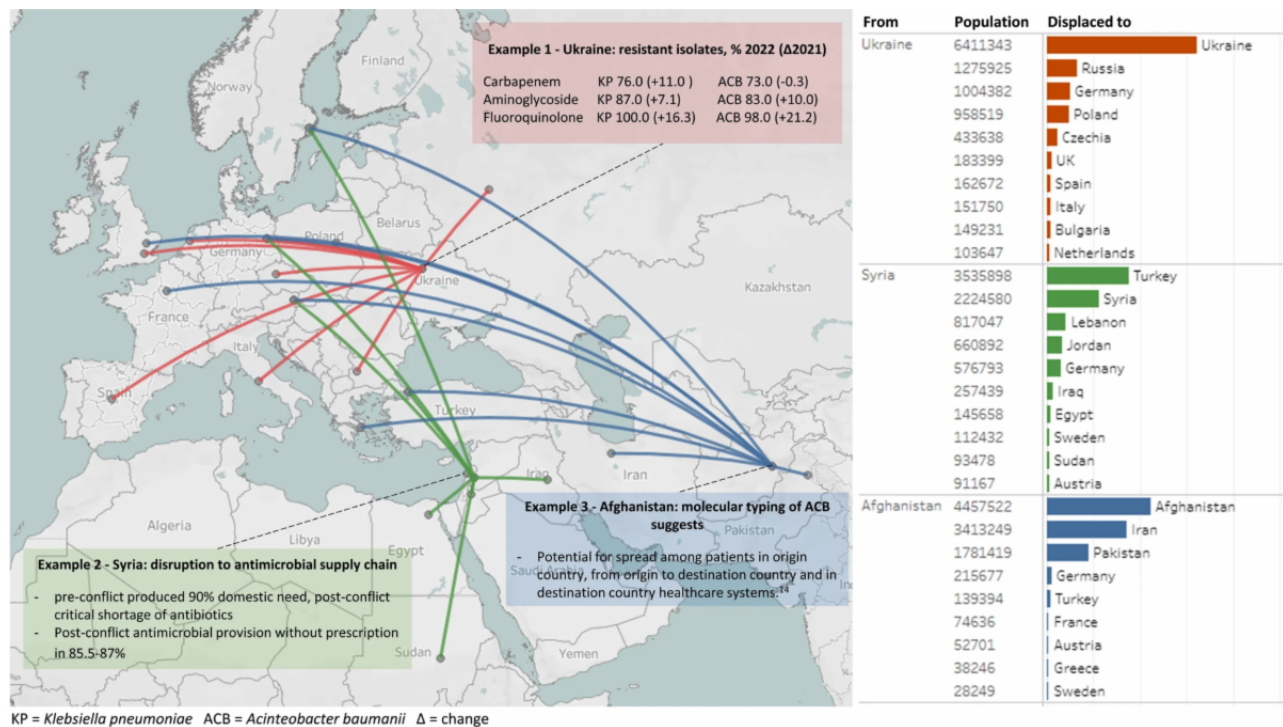


Welcome to the bimonthly AMR Global Health Academy Newsletter, September/October edition. The AMR Global Health Academy serves the global health professional and antimicrobial steward in low- and middle-income countries with a free online educational curriculum designed to advance AMR knowledge and best practices. Every two months we share important updates from the AMR field, especially as it relates to AMR testing, diagnostics, and surveillance. We also present AMR problem-solving case studies and feature laboratories and AMR champions battling

News Story

Maintaining public and individual health priorities during war

A recent [comment](#) in Nature highlighted “the contribution of human conflict to the development of antimicrobial resistance.” In this article, the authors highlight that AMR can be exacerbated due to war in multiple ways: 1) at the conflict site through conflict-related wounds that are often managed in informal facilities, the reduction of strict hygiene measures, and damage to water and sanitation systems; and 2) globally through emigration away from conflict areas.



Furthermore, the authors note that “damage to laboratory infrastructure, which is already often underdeveloped in many conflict areas, can limit any ongoing testing for microbes”, thereby limiting the identification of AMR and clinical support to antibiotic decision-making.

The authors highlighted several opportunities for consideration to reduce the spread of AMR. These included:

- Implementation of basic IPC best practices, namely hand hygiene and isolation of patients or keeping patients with the same infections together;
- Ensuring the availability of adequate diagnostics to reduce inappropriate use of antibiotics;
- Support to nations experiencing conflict to build capacity for maintained delivery of AMR

surveillance programs;

- Active collaboration amongst international emergency organizations to optimize provision of expertise and coordinate potential surveillance activities.

Most of these considerations apply during non-war times as well where laboratory infrastructure remain underdeveloped.

In 2023, WHO published [guidance](#) on methods to improve nationally representative surveys, in particular, for countries with limited surveillance capacity.

Article Spotlight

Identification of increased AMR rates during conflict in Ukraine

Kuzin *et al.* published an [article](#) in the US CDC's *Morbidity and Mortality Weekly Report* (MMWR) entitled, *Notes from the Field: Responding to the Wartime Spread of Antimicrobial-Resistant Organisms – Ukraine, 2022*.

Through a collaborative analysis between US CDC, the Center for Public Health of Ukraine (UPHC), local clinical and public health authorities, and international partners, the group uncovered a number of challenges within infection prevention and control efforts and laboratory infrastructure in the war-ravaged settings.

Point prevalence surveys at three regional hospitals identified a number of AMR-related presentations:

- 14% of patients on surveyed wards had health care-associated infections
 - Of these, 60% of patients had an infection with a carbapenem-resistance organism
 - Among 20 *Klebsiella pneumoniae* isolates, all were resistant to 3rd gen cephalosporins and 19 were also carbapenem-resistant

Each of these proportions far exceed those found in a pre-war (2016-2017) point prevalence survey.

In Case You Missed It

– [Nature News Article released 17 September 2024 - 40 million deaths by 2050: toll of drug-resistant infections to rise by 70%. By 2050, around 2 million people – the](#)

[majority aged 70 and over — could die from drug-resistant infections each year.](#)

– [The Lancet published a series on Antimicrobial Resistance: The need for sustainable access to effective antibiotics. \(Published: May 23, 2024\).](#)

UK announces ~\$108 million USD of funding to boost global fight against antimicrobial resistance. See the related article [here](#).

WHO has released a new [policy brief](#) entitled, “Antimicrobial Resistance Diagnostic Initiative”, that aims to boost global diagnostic capacity.

Tanzania Medicines and Medical Devices Authority (TMDA) has issued a [notice of revocation of marketing authorization for medicinal products containing ampicillin active ingredient as monotherapy](#) following a review that demonstrated considerable resistance towards ampicillin monotherapies.

A recent perspective [article](#) in *Emerging Infectious Diseases* by Mangalea *et al.* provides insights into how pathogen reduction could prevent antimicrobial resistance and healthcare-associated infections.

WHO releases updated [target product profiles](#) for tuberculosis diagnosis and detection of drug resistance.

Africa CDC announced the Launch of the Africa Landmark Report on Antimicrobial Resistance (AMR). See [here](#) for more details.

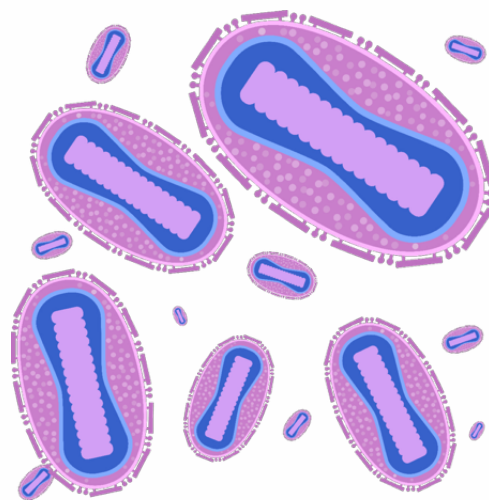
What's Next

For a vast variety of ethical, and public and individual health reasons, national and global stakeholders should prioritize and support challenged and war-torn settings in the global fight to prevent and reduce the spread and threat of AMR.



Special Highlight

Both [WHO](#) and [Africa CDC](#) have declared mpox as a public health emergency. A new viral strain, clade I, has emerged in the Democratic Republic of the Congo that spreads rapidly, including to neighbouring countries where mpox is not endemic, causes more severe infections, and has a higher mortality rate than clade II mpox (from the 2022 outbreak). Strong and reliable clinical testing as well as a robust surveillance program will be critical to manage and contain this outbreak.



GHCPD will soon be hosting a webinar on strengthening laboratory preparedness in the mpox response. Be on the lookout for our mailer with registration details.

AMR Learner Profiles

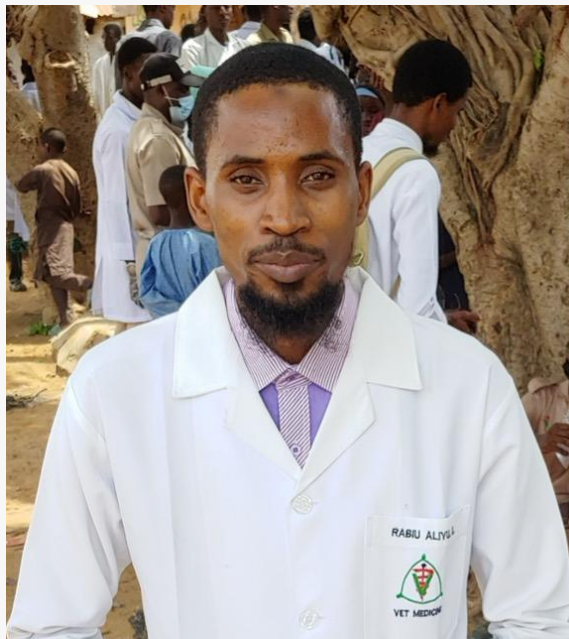
In this section, we present two AMR champions battling real-world AMR problems.



Ali Mahmoud Youssouf is an accomplished Clinical Laboratory Medicine Expert and Public Health Epidemiologist with extensive experience in laboratory management, infectious disease control, and climate and health coordination. He has worked in various capacities, including roles in Regional and Referral Laboratories in Somaliland, and is currently working with UN Clinics in Somalia. Ali has been actively involved in controlling outbreaks, such as the cholera outbreak in Somaliland.

Recently, he completed a course on "The Role of Microbiology Laboratory in the Fight Against Antimicrobial Resistance (AMR)" from Global Health CPD, further enhancing his expertise in combating AMR. Ali has also made significant contributions to raising awareness about the fight against AMR in several universities across Somaliland, advocating for stronger public health measures in Africa and beyond.

"The course on the role of the microbiology laboratory in the fight against AMR has been a significant addition to my knowledge and skills, equipping me to contribute more effectively to public health challenges in Africa and beyond."



Aliyu Umar Rabi is a dedicated 5th year veterinary student in the faculty of Veterinary Medicine, Ahmadu Bello University Zaria, Nigeria. Aliyu has a strong interest in One Health and public health, he has actively participated in various health initiatives, including mass rabies vaccination campaigns, medical caravan and animal deworming programs in rural communities. Aliyu was also a one-time Campus Junior Ambassador for the World Organization for Animal Health (WOAH) under IVSA, where he has conducted awareness and sensitization on global health issues such as rabies, tuberculosis, and antimicrobial resistance (AMR) in his campus.

Passionate about youth engagement and public health advocacy, Aliyu aims to leverage his experience to strengthen health systems in Africa through a multidisciplinary approach.

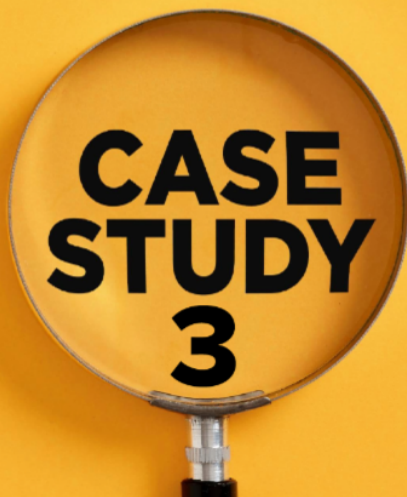
"Participating in the GHCPD course, 'Role of Microbiology Laboratory in the Fight against AMR,' has been a transformative experience. The course has deepened my understanding of the critical role microbiology laboratories play in combating antimicrobial resistance, from antibiotic susceptibility testing to infection prevention in healthcare settings. As a veterinary student with a passion for One Health, I found the content highly relevant and aligned with my commitment to improving health outcomes across both human and animal populations. The knowledge gained will undoubtedly enhance my capacity to contribute to public health initiatives in Africa and beyond."

Creating AMR Awareness

The Global Health Continuing Professional Development (GHCPD) course, [Microbiology Laboratory Testing to Address AMR](#), describes AMR tests and methodologies to strengthen the capacity and standards of AMR laboratories and surveillance programs.

The GHCPD course, [The Laboratory in the Prevention and Control of Healthcare-associated Infections: Making healthcare facilities safer](#), discusses infection prevention and control (IPC) effects on health care facilities and antimicrobial resistance.

To join the AMR Global Health Academy, enroll in the Global Health Continuing Professional Development (GHCPD) free online [AMR courses here](#).



Want to test your knowledge in AMR?

Case study 3 will soon be released. Solve a puzzling case of a potential outbreak of *Klebsiella pneumoniae* in a neonatal intensive care unit in Brazil.

Global Health Impact Group | 1678 Glencove Ave SE | Atlanta, GA 30317 US

[Unsubscribe](#) | [Update Profile](#) | [Constant Contact Data Notice](#)



Try email marketing for free today!