Facing the challenge of antibiotic resistance

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Opinion

We must all play our part in addressing the threat of antibiotic resistance, argues Andrea Ammon.

Antibiotic resistance threatens the health and safety of patients in all healthcare settings in Europe.

With increasing resistance to even last-line antibiotics, we face a future where routine surgery, childbirth, pneumonia and even skin infections could once again become life threatening.

Already, many patients across Europe die or are heavily impacted by healthcare-associated infections and diseases caused by germs that are resistant to antimicrobial medicines.
Antibiotics are commonly used in hospitals and long-term care facilities for the treatment or the prevention of infections. Yet up to 50 percent of antimicrobial use in European hospitals is deemed unnecessary or inappropriate.

The dosage may be wrong, the prescribed antibiotic may be of the wrong kind or the patient may not even require antibiotics.

The latest data from the European Antimicrobial Resistance Surveillance Network (EARS-Net) show that the extent of the problem varies greatly between EU member states depending on the bacterial species, antimicrobial group and geographical region.

In general, higher resistance is being reported by countries in the south and east of Europe than those in the north. These high percentages of resistance are of great concern and represent a serious threat to the safety of European patients.

“It is crucial to protect critical antibiotics through policies that are effectively implemented across the EU, including measures to ensure prudent use of antibiotics in both humans and animals”

The good news is that there is still time to turn the tide of antibiotic resistance and ensure that these medicines remain effective, now and in the future. This involves using antibiotics prudently and only where necessary.

The implementation of antibiotic stewardship programmes in hospitals and long-term care facilities across the EU can provide more training and awareness raising activities for healthcare professionals. Such programmes can also help improve medical practices, for example avoiding prolonged and unnecessary antibiotic prophylaxis, ensuring the use of narrow-spectrum antibiotics where possible and switching to a more appropriate type of antibiotic when necessary.

As many infections acquired in hospitals and long-term care facilities are caused by antibiotics-resistant bacteria, another crucial measure is to implement good infection prevention and control practices in healthcare facilities.

These include hand hygiene for healthcare professionals, such as disinfection with an alcohol-based rub or washing with soap and water. As antibiotic resistance is inevitable, treating those patients with the most resistant infections will nevertheless rely on new, effective antibiotics, as the number of treatment options available become more limited.

Therefore, promoting the research and development of new antibiotics with novel mechanisms of action is important. In addition, the development of resistance to any new drugs must be kept to a
minimum through prudent use and effective infection prevention and control measures.

The European Centre for Disease Prevention and Control (ECDC) works closely with its national partners across Europe, as well as the World Health Organisation (WHO) and Centres for Disease Control and Prevention (CDC).

We also collaborate with the European Commission’s DG SANTE as well as contributing to the implementation of the European One Health Action Plan against Antimicrobial Resistance.

We support the Joint Action on Antimicrobial Resistance and Healthcare-Associated Infections. By providing evidence for effective and efficient decision-making, ECDC strengthens public health and surveillance systems, and supports the responses of EU member states to public health threats, including antibiotic resistance.

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Since 2008, we have organised the European Antibiotic Awareness Day (EAAD). This is an annual European health initiative taking place in November to raise awareness on the importance of using antibiotics prudently and the threat that antibiotic resistance poses to public health.

This year’s EAAD will be marked by national events and campaigns on prudent antibiotic use across the EU during the week of 18 November. On 15 November, an EAAD event will be held in Brussels, where the latest data and research will be presented.

Participants include professional organisations with an interest in antibiotic resistance, national representatives and media. Anyone can watch the live stream of the event on ECDC’s YouTube channel or on EAAD’s Facebook page.

Around EAAD, we will release new data, resulting from two large-scale point prevalence surveys that we coordinated in 2016-2017, on the situation of antibiotic resistance, antibiotic consumption and healthcare-associated infections in member states.

In addition, we will provide updated estimates of the burden of infections with antibiotic-resistant bacteria, in terms of attributable deaths and disability-adjusted life years (DALYs), for the European Union overall and for each member state individually.

It is crucial to protect critical antibiotics through policies that are effectively implemented across the EU. This includes measures to ensure prudent use of antibiotics in both humans and animals.

Concerted action is therefore required at all levels, from policymakers to healthcare providers and individual clinicians. Ultimately, however, everyone is responsible for addressing this threat to human health: patients, doctors, nurses, pharmacists, veterinarians, farmers, policymakers as well as you and me.

More information about the European Antibiotic Awareness Day is available at: https://antibiotic.ecdc.europa.eu. The 15 November event will be live-streamed at the EAAD Facebook page: https://www.facebook.com/EAAD.EU and on the ECDC’s Youtube channel https://www.youtube.com/user/ECDCchannel. The latest available EU/EEA data on a number of infectious diseases (including EARS-Net data) is available through ECDC’s Surveillance Atlas of Infectious
Diseases: [https://atlas.ecdc.europa.eu](https://atlas.ecdc.europa.eu) [9].

**About the author**

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