

Contribution to the European Commission Open Call to strengthen Member States' action against AMR in public health

(24th of March, 2022)

Key Recommendations:

- To prioritise the **social innovations** when creating communication campaigns for prevention of antibiotics use
- To assess periodically, on multiple layers the **attitudes, perceptions and behaviours of the citizens** with regards to antibiotic consumption, identifying vulnerable groups
- To build a **new model of personalised communication, education and engagement** for reducing the risk of AMR, based on individual behaviour, influencers and perceptions

The Centre for Innovation in Medicine, a European research & innovation civil society organisation, with interest in innovative health policies, health education and personalised communication, welcomes the invitation of the European Commission to contribute to the public consultation to strengthen Member States' action against AMR in the area of public health.

AMR, a challenge in Eastern Europe

Antimicrobial resistance is a problem of serious concern especially in Central and Eastern Europe. Many experts argue that the next pandemic will be a bacterial pandemic. Eastern Europe already had high levels of AMR and by adding the migration generated by the war in Ukraine(1) - more than 3,3 million people displaced in neighbouring countries - creates the perfect outbreak point. Poland, Moldova, Slovakia, Hungary, Romania are their new homes, in some cases for a couple of days or for longer in others.

The consumption of antibiotics(2) is the main determinant of the emergence of new mechanisms of microbial resistance, including multidrug resistance, but also one of the triggers of healthcare associated infections. Although nosocomial bacterial infections (acquired during hospitalisation) in Romania are underreported, the data regarding antibiotic and antimicrobial resistance (AMR) from ECDC(3) show a different picture, placing

Romania, the 7th Member State in terms of population (as well as other neighbouring countries) high on the AMR ranking.

“The current levels of antimicrobial resistance (AMR) in Romania are a serious concern. The reported levels of AMR in key indicator bacteria from humans are very high and/or rising in comparison to most other EU/EEA countries.” - ECDC 2018 conclusion after visiting and analysing the situation in Romania(4)

The situation did not improve much. The Covid-19 pandemic was the perfect hurricane for antibiotic administration. According to the Romanian Society of Microbiology(5), in 2020, the usage of antibiotics in hospitals, adapted for the number of inhabitants in Romania was 55.1%, while in the EU, this percentage was 38.6%, placing Romania in 3rd place. **Although viral infections are not treated with antibiotics, in Romania, in 2020, the consumption of macrolides (a class of antibiotics) increased by 44% in the context of SARS-CoV-2 infection.** Of these, the consumption of azithromycin, in particular, increased by 193% compared to 2019.

The unprescribed consumption rate of antibiotics is high in Eastern Europe

Data from the Special Eurobarometer 478 (2018)(6) shows that **1 in 6 Romanians obtained antibiotics “not from a medical practitioner” in the last 12 months**, the highest rate in Europe. The same data shows that Romanians are more likely to interrupt the antibiotic treatment when they feel better than the rest of the EU residents.

Data from the most recent report on AMR in the EU(7), published on 8th of March, shows that Romania, allegedly, is using only 50% of antibiotics in the Access classification, established in 2017 by WHO. In the ‘Access’ group are included mostly first-line and second-line therapies that offer the best therapeutic value, while minimising the potential for AMR and should make up at least 60% of total national consumption by 2023.

Unfortunately, these data are not surprising - the latest Eurobarometer (516) on EU citizens’ knowledge and attitudes towards Science and Technology(8) shows that only **3 out of 10 Romanians know that antibiotics can only be used to treat bacterial infections.** The percentage decreased compared to 2005, although we had the crisis of nosocomial infections in the past, and many awareness campaigns on antibiotics usage 5 years ago.

Preventive actions for reducing antibiotic consumption should be based on social innovations

One of the main components of a public health policy aiming to prevent AMR by reducing irresponsible antibiotic use should be the understanding of what are the main factors that influence antibiotic consumption in countries from Eastern Europe, like Romania, with a history of communism, with conservative views, high rate of emigration in young populations, with 45% population living in rural areas and many more living in disadvantaged areas and in small, isolated communities. By understanding these factors, communication campaigns and personalised (targeted) preventive actions could be employed.

Based on our experience with the cancer burden in Romania and the targeted communication campaigns that changed the narrative around cancer, by using a behavioural matrix developed by the Centre for Innovation in Medicine, there are three levels of engagement in each population: micro (family/friends), meso (community/groups) and macro (national level/authorities). For the creation of the matrix, we used two main elements:

- Periodical assessment of the attitudes, perceptions and behaviours on cancer in Romania (every 2 years, starting 2016);
- Qualitative analysis of the communication campaigns developed and implemented since 2014 in Romania regarding the theme of cancer.

The Covid-19 pandemic gave us the chance to strengthen this concept, because it allowed us to measure in real-time, in a situation of crisis, how the citizens engage with the messages deployed at the national level. But the meso level engagement was missing, creating a gap between the national authorities' communication and the individual understanding. Moreover, although many surveys assessed the attitudes of the society to different measures (vaccination, mask wearing), the authorities and public bodies did not act in accordance with those findings.

A model based on citizens' behaviour could be the key to achieving prevention of AMR by reduction of antibiotic use in countries with a low antibiotic literacy level and inadequate consuming patterns.

As with viral infections, the idea that nobody is safe until anyone is safe applies with AMR too. So a best practice model needs to be created in countries where the information campaigns employed so far are not effective and do not reach the target populations.

This approach is more important than ever, when a new population that has specific cultural, religious, social, economic backgrounds, and health conditions is entering the EU. As the Ukrainian migrants travel in harsh conditions and are later integrated in different societies, the risk of enhanced bacterial infections and AMR mechanisms emerging along this journey is high.

References

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