



World Health Organization
Kancelář v České republice

Outputs of the European Antibiotic Awareness Day 2009 Roundtable, Czech Republic

The event was organised under the auspices of the WHO Country Office in the Czech Republic¹, European Centre for Disease Prevention and Control, Subcommittee for Antibiotic Policy of the Czech Medical Association of J.E. Purkyně and Central Coordinating Group of the National Antibiotic Programme

9th November, 2009

The roundtable was the first official national event organised in support of the European Antibiotic Awareness Day campaign. The event was organised by the WHO Country Office in the Czech Republic and took place on 9th November 2009.

Representatives of prominent institutions, organisations and the general public were invited to take part in the roundtable (Ministry of Health, National Institute of Public Health, State Institute for Drug Control, Institute for State Control of Veterinary Biopreparates and Drugs, health insurance companies, National Referential Centre, Czech Chamber of Pharmacists, Subcommittee for Antibiotic Policy of the Czech Medical Association of J.E. Purkyně, professional and expert societies representing general practitioners and paediatricians, Central Coordinating Group of the National Antibiotic Programme, official coordinators of the European initiatives for antimicrobial resistance in the country, patients' initiatives and nation-wide media).

The aim of the roundtable was:

- to explain the variety of health threats connected to the loss of effectiveness of antibiotics, which are posed to the wide public;
- to identify current barriers, which are preventing effective prescription control, and
- to find ways, through a common consensus, to overcome these barriers, so that effective measures can be implemented.

The participants of the roundtable agreed on the following facts and priorities that need to be addressed in order to maintain effectiveness of antibiotics in the Czech Republic:

¹ WHO Country Office in the Czech Republic funded the event from resources of WHO Biennial Collaborative Agreement 2008-2009.

1. In comparison to Europe, does the Czech Republic have a problem with antimicrobial resistance and overuse of antibiotics in primary care?

- The loss of clinical effectiveness of antibiotics as a consequence of the spread of antimicrobial resistance is a real threat, which is posing a significant risk to the health of people in the Czech Republic and Europe in general.
- Resistance of the main bacterial sources of respiratory diseases (pneumococcus and haemophilus) to basic antimicrobial agents (penicillin) remains on very low levels in the Czech Republic, which enables their safe use in clinical therapy. This country-specific indicator remains one of the positive trends in comparison to the rest of the Europe.
- In recent years, some bacteria consistently show considerable and fast increase in resistance. For example the most common source of urinary infections (*Escherichia coli*) is quickly gaining resistance to a number of key antibiotics (fluorochinolons, cotrimaxazol, cephalosporins). Some of these antibiotics can not be used for empirical treatment, because the risk of failure is too high. In this regard, the Czech Republic is among European countries with the worst situation.
- After a short period of decrease (connected to a time-limited intervention focused on preventing the over-use of antibiotics in primary care), there is a continuous increase of *Streptococcus pyogenes* (the source of tonsillitis) resistance to macrolid antibiotics. The Czech Republic did not succeed in keeping its low consumption of macrolids, compared to Belgium, where there is a long-term programme in place. This programme is supported by the government and health insurance companies and its implementation led to the decrease of resistance from 16 per cent to 2 per cent (this value now stays stable).
- Overall outpatient consumption of antibiotics in the Czech Republic can be considered to be average in comparison to other European countries. Since 2002, there has even been a temporary mild decrease and the level of consumption was comparable to some Nordic countries, Germany, or Austria, where the use of antibiotics is traditionally prudent. However, in the last five years, the trend in outpatient consumption has been again sharply increasing.
- The use of basic antibiotics (penicillin, amoxicillin, nitrofurantoin) has been traditionally decreasing. On the other hand, as a consequence of intensive marketing strategies, the prescription of alternative, broad-range and costly antibiotics, which are epidemiologically risky, has been increasing. This trend is worrying, as their over-use can lead to fast increase in resistance (macrolides, aminopenicillins with beta-lactamase inhibitors, fluorochinolons, cephalosporins).
- Therefore, it is necessary to strengthen the system of monitoring antimicrobial resistance in the Czech Republic and ensure optimal conditions for their long-term effect. These measures will make it possible to detect the occurrence of a dangerous resistance in a timely manner, assess its cause and introduce a functional and cost-effective solution.

- It is necessary to ensure accessibility to structured data about antibiotic consumption (aggregated according to the active substance, specialisation of the prescribing doctor, geographic location, individual medical facilities, etc.) from all relevant sources, so that all developments can be continuously monitored, all non-standard prescriptive behaviour timely detected, adequate measures restricting over-use adopted and the effect of individual measures evaluated.
- With regard to antimicrobial resistance, it is necessary to effectively coordinate preventive and control efforts in both humane and veterinary domain, on national, regional and local level.

2. a) What are the barriers to objective evaluation and influencing the quality of prescribing antibiotics in primary care?

2. b) How can we support rational prescription of antibiotics? What can we do to improve the current situation?

- It is necessary to create an effective system of promoting rational prescription of antibiotics in primary care, in cooperation with professional associations of general practitioners, antibiotic centres and health insurance companies. Economic regulation on its own can not effectively contribute to increasing cost-effectiveness and can be in effect detrimental to proper practices. Despite the fact that similar activities supporting rational prescription of antibiotics have been tested in several locations and their effectiveness has been proven, there is a number of barriers that are standing in the way of their nation-wide application. These barriers need to be identified and removed.
- In order to reach long-term and sustainable improvements, we must not limit our attention to primary care only. Efforts have to be coordinated with similar programmes focusing on outpatients and long-term care settings. System of active influencing of the use of antibiotics should not be based on repressive measures, as it in its character is discouraging. Motivating prescribing general practitioners in a positive way is what is desired.
- In connection with promotion of rational prescribing of antibiotics, it is necessary to set up and implement to standard practice scientifically founded, comprehensible and predicative quality indicators of the use of antibiotics. In this respect, data of health insurance companies are one of the most valuable sources of information.
- Attention should also be given to improving availability of diagnostic methods, which make it easier to distinguish between bacterial and viral aetiology of infections and thus target the indication of antibiotic treatment in general practitioners' offices.

3. How can patients contribute to responsible use of antibiotics?

- Prudent and temperate use of antibiotics is a common responsibility of prescribers, patients and the general public. It is necessary to organize long-term and sustainably financed campaigns focusing on improving awareness of the general public in regard

to responsible use of antibiotics. Moreover, in long-term it is necessary to systematically cooperate with the media in order to impartially inform the general public about the threats linked to antimicrobial resistance and ways to control and prevent it.

- It is necessary to find suitable methods of educating the general public in prevention of antimicrobial resistance and infectious diseases and provide basic knowledge about the prudent use of antibiotics. This education has to systematically focus on specific groups, whose behaviour has the biggest impact on the overall situation in long-term perspective (pre-school and school children and their parents).

4. Do we need to formulate ethical rules of antibiotic policy?

- It is necessary to initiate a discussion about ethical aspects of antibiotic policy and reach a consensus of all relevant parties in terms of ethical rules. Once applied, these rules should enable better detection of possible conflict of interest and ensure transparent links between expert community and pharmaceutical industry. The industry's legitimate efforts for individual drugs to succeed on the market should be coordinated in accord with the priorities of the national antibiotic policy. Formulation of these ethical principals should contribute to gaining a level of independence of recommended procedures, training in prudent use of antibiotics and in objective interpretation and use of data on monitoring resistance and consumption of antibiotics.

5. How can we jointly contribute to the functionality and effectiveness of National Antibiotic Programme in the Czech Republic?

It is desired to:

- finalise the structure of National Antibiotic Programme and ensure its effective functioning on national, regional and local level (in accord with the Council Recommendation of 15 November 2001 on the prudent use of antimicrobial agents in humane medicine); it is especially necessary to innovate and support the function of the existing network of antibiotic centres;
- participate in international strategies and campaigns supporting efforts to reduce antimicrobial resistance, initiatives focusing on prevention and infection control and in activities strengthening the safety of patients, which are organised by international organisations (especially World Health Organization and European Centre for Disease Prevention and Control);
- make a use of present outputs and the possibility to further consult and prosper from expert assistance in implementation of projects focusing on the issue of rational prescription arising from the Biennial Collaborative Agreement (BCA) between WHO Regional Office for Europe and the Ministry of Health.