



**World Health  
Organization**

REGIONAL OFFICE FOR

**Europe**

---

**Regional Committee for Europe**

EUR/RC68/8(I)

68th session

**Rome, Italy, 17–20 September 2018**

7 August 2018

180421

Provisional agenda item 5(o)

ORIGINAL: ENGLISH

## **Progress report on implementation of the European Strategic Action Plan on Antibiotic Resistance**

This report describes progress in implementation of the European Strategic Action Plan on Antibiotic Resistance for the period 2011–2020 (document EUR/RC61/14), which was adopted by the WHO Regional Committee for Europe at its 61st session in resolution EUR/RC61/R6.

The report highlights activities and achievements in 2016–2017 of the WHO Regional Office for Europe and partners in implementing the seven strategic objectives of the European Strategic Action Plan and the support provided by the Regional Office to the development and implementation of the Global Action Plan on Antimicrobial Resistance since its adoption in 2015.

## **Background and introduction: the European and global action plans**

1. At the 61st session of the Regional Committee for Europe, in September 2011, the 53 WHO Member States of the European Region adopted the European Strategic Action Plan on Antibiotic Resistance for the period 2011–2020 (document EUR/RC61/14), in resolution EUR/RC61/R6. The Action Plan is intended to comprehensively address the complex factors related to bacterial resistance. Implementation of the Action Plan has been initiated, supported, and facilitated by the WHO Regional Office for Europe through a variety of activities in countries and areas of the Region.
2. In 2015 the World Health Assembly adopted the Global Action Plan on Antimicrobial Resistance (AMR) in resolution WHA68.7. The goal of the Global Action Plan is to ensure, for as long as possible, continuity of successful treatment and prevention of infectious diseases with effective and safe medicines that are quality-assured, used in a responsible way, and accessible to all who need them.
3. Following the adoption of the Global Action Plan, the number of global initiatives in this area increased dramatically. WHO, together with the Food and Agriculture Organization of the United Nations (FAO) and the World Organisation for Animal Health (OIE), increased the support provided to Member States in meeting the objectives of the Global Action Plan. Some highlights of this collaborative work are listed below.
4. In 2015 the first World Antibiotic Awareness Week was organized and the Global AMR Surveillance System was launched.
5. In 2016 tools and guidance were developed to support AMR action plan development, revised guidelines on core components of infection prevention and control programmes at the national and acute health care facility level were published, and the Global Antibiotic Research and Development Partnership was initiated to develop and deliver new treatments for bacterial infections where drug resistance is present or emerging, or for which inadequate treatment exists.
6. In 2017 work started on the global framework for development and stewardship to combat AMR, and the WHO Model List of Essential Drugs was updated with new advice on the use of antibiotics in three groups: ACCESS (available at all times as treatments for a wide range of common infections); WATCH (recommended as first- or second-choice treatments for a small number of infections); and RESERVE (last-resort options in the most severe circumstances).
7. OIE, FAO and WHO jointly developed and disseminated a questionnaire to Member States to assess their progress with regard to multisectoral work on AMR, developing a national AMR action plan, and implementing key activities to address AMR. The final report of the survey results was made available during the Seventieth World Health Assembly in 2017 via an online portal which displayed all the responses by country, in tabular form as well as in the form of maps. The survey will be repeated in 2018.

## **Action taken and progress made in implementation of the European Strategic Action Plan on Antibiotic Resistance**

8. The present report highlights the activities and achievements in 2016–2017 of the Regional Office and partners in implementing the seven strategic objectives of the European Strategic Action Plan on Antibiotic Resistance, and the support provided by the Regional Office for the implementation of the Global Action Plan on Antimicrobial Resistance.

### ***Strategic objective 1: strengthen national multisectoral coordination for the containment of antibiotic resistance***

9. Since the adoption of the European Strategic Action Plan in 2011, the Regional Office has assessed individual Member States' efforts to tackle AMR, focusing on all areas identified in the Action Plan. Based on the observations and recommendations from these situation analyses, tailored plans were developed for follow-up activities, which have been reported in previous progress reports.

10. The Regional Office and WHO country offices organized stakeholder meetings during follow-up missions to countries. The aims were to introduce the concept of intersectoral coordination in tackling AMR, and to convene groups of relevant stakeholders in order to ensure the engagement of relevant sectors in the development and implementation of national AMR action plans through a One Health approach. Such meetings were organized in 13 countries. Further support to the development of AMR action plans was provided both in-country and remotely, through targeted missions and reviews of draft plans by members of the AMR working group in the Regional Office and senior policy consultants trained by WHO.

11. Several multicountry workshops were organized to support Member States in the development of their national AMR action plans, as described below.

12. In March 2016 WHO headquarters, the Regional Office and country offices jointly organized a multicountry AMR workshop in Istanbul, Turkey, for delegates from seven countries to boost national action plan development. Regional FAO and OIE offices contributed by providing the participating Member States with advice on veterinary, food and agricultural matters. The focus of the meeting was on governance and coordination of national AMR action plan development and implementation, awareness raising, behaviour change and education, and generating evidence through research and surveillance.

13. In June 2017 the regional offices of OIE, FAO and WHO organized a tripartite meeting on AMR national action plan implementation for the central Asian countries in Bishkek, Kyrgyzstan. Each country shared the status of its development and implementation of the One Health approach in their national action plans and in related initiatives. The main topics included awareness raising and communication, antimicrobial stewardship, surveillance, and laboratory capacity development.

14. In September 2017 the Regional Office organized a multicountry workshop in Berlin, Germany, that enabled experts from 11 countries to identify good practices and interventions for containing AMR. The workshop focused on: awareness raising; education and behaviour change; and infection prevention and control, including antimicrobial stewardship.

15. In collaboration with the WHO Evidence-informed Policy Network, the AMR programme in the Regional Office supports Member States in developing evidence-based policy briefs on AMR that condense all available national and regional information into two or three feasible policy options for intervention. Hungary was the first country in the European Region to finalize such a policy brief, which was subsequently presented and discussed at a policy dialogue meeting in December 2017 in Budapest. A cohort of six European Member States is currently being supported and more countries will follow in 2018–2019.

16. By the end of 2017, 29 Member States had developed a national AMR action plan, while action plans in most of the remaining Member States in the Region were in development or awaiting approval. The Regional Office and partners will continue to provide tailored technical support.

### ***Strategic objective 2: strengthen surveillance of antibiotic resistance***

17. Surveillance is an essential tool for assessing the sources of and trends in antibiotic resistance, informing policies and interventions and monitoring their impact. In countries of the European Union and/or the European Economic Area, antibiotic resistance surveillance has been performed for almost two decades. This has been coordinated by the European Centre for Disease Prevention and Control (ECDC) since 2010 through the European Antimicrobial Resistance Surveillance Network. In 2011, when the European Strategic Action Plan was adopted, only a few European countries outside this network systematically collected and shared data on antibiotic resistance. Therefore, the Regional Office, together with the Dutch National Institute for Public Health and the Environment and the European Society of Clinical Microbiology and Infectious Diseases, established the Central Asian and Eastern European Surveillance of Antimicrobial Resistance (CAESAR) network in 2012. The network assists countries and areas in setting up and/or strengthening their AMR surveillance systems, in order to complete the regional overview of antibiotic resistance.

18. The CAESAR network currently includes Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Montenegro, Republic of Moldova, Russian Federation, Serbia, Switzerland, Tajikistan, the former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Ukraine and Uzbekistan, as well as Kosovo.<sup>1</sup>

19. Since the establishment of CAESAR, annual meetings have been organized to discuss issues that are relevant to the national AMR focal points of the network. In 2018 the CAESAR network meeting will be part of a joint ECDC–Regional Office meeting of the Antimicrobial Resistance, Healthcare-Associated Infections and Antimicrobial Medicines Consumption (ARHAI) networks of the European Region. The meeting will provide updates on developments across surveillance networks in Europe. It will also enable the sharing of experience and good practices, and discussions of future collaboration and joint activities at the regional and global levels.

20. The CAESAR network continues to provide support for the building of surveillance capacity. Much effort has gone into strengthening national AMR reference laboratories to prepare them for their role in strengthening and maintaining national laboratory networks, ensuring the quality of the work of such networks, providing reference testing services, and

---

<sup>1</sup> In accordance with United Nations Security Council resolution 1244 (1999).

collecting data centrally for surveillance purposes. In February 2016, nine AMR laboratory experts were trained on how to mentor laboratories for quality management implementation. Support was then provided to the AMR reference laboratories in Armenia and Uzbekistan in the implementation of their quality management systems. A mentor specialized in ISO 15189 has visited these laboratories every three months since September 2017. Laboratory training was delivered in eight countries. In 2016 and 2017, the Secretariat provided financial support to 11 countries to organize national AMR surveillance meetings, to enable discussion of challenges and capacity-building needs with regard to strengthening national AMR surveillance system networks.

21. The first proof-of-principle (PoP) project designed to introduce sustainable routine sampling practice into a country to improve patient treatment (antibiotic stewardship) and enable national AMR surveillance was carried out in Georgia and was completed in December 2016. Following the PoP project, a meeting was organized to discuss with the participating hospitals the data obtained, the lessons learned and the next steps needed at the hospital and national levels to ensure sustainable implementation. The project demonstrated the value of standardization of blood testing for effective treatment and that communication between clinicians, epidemiologists and microbiologists had greatly improved as a result of the project. These efforts also enabled Georgia to provide data for the CAESAR annual report for the first time in 2017. Armenia is currently taking part in a PoP project and more projects are being prepared in Tajikistan and Uzbekistan.

22. In the 2016 annual CAESAR report, AMR data from the European Antimicrobial Resistance Surveillance Network coordinated by ECDC and the CAESAR network were displayed jointly on maps covering the whole WHO European Region for the first time. In 2017 joint AMR surveillance maps were included in a new AMR section in the European Health Information Gateway.

23. Between 2016 and 2017: four additional countries provided national surveillance data for the first time to CAESAR (Bosnia and Herzegovina and the Russian Federation in 2016, Georgia and Montenegro in 2017) and area-specific data were provided by Kosovo<sup>2</sup> in 2016; two more national reference laboratories were established; Bosnia and Herzegovina and Serbia improved their data quality from level B to A in 2017; *Salmonella* was added as a pathogen under surveillance in the CAESAR network; and 123 more laboratories participated in the CAESAR external quality assessment, resulting in a total of 254 laboratories in 18 countries and areas. More countries are now preparing for a PoP project to stimulate routine sampling and build the foundation for AMR surveillance.

24. The work of the CAESAR network has provided valuable input and experience for the development of the Global AMR Surveillance System as well as inspiration for capacity-building efforts in other WHO regions. The Regional Office and partners will continue to work towards including all remaining countries in the network, because a harmonized, coordinated surveillance network in all countries of the Region is crucial to protecting the population from emerging cross-border AMR threats.

---

<sup>2</sup> In accordance with United Nations Security Council resolution 1244 (1999).

***Strategic objective 3: promote strategies for rational use of antibiotics and strengthen surveillance of antibiotic consumption***

25. Work to consolidate data collection on antimicrobial medicines consumption has continued in Member States in the European Region. Seventeen non-European Union Member States (Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Montenegro, Republic of Moldova, Russian Federation, Serbia, Tajikistan, the former Yugoslav Republic of Macedonia, Turkey, Ukraine and Uzbekistan) as well as Kosovo<sup>3</sup> provided annual data for the years 2011 to 2016, with analyses of the data conducted by the Secretariat. In May 2017 WHO published a report on antimicrobial medicines consumption data collected in 12 non-EU countries and areas from 2011 to 2014 by national focal points from sources including import and customs records, sales records and estimates of local manufacturing. The report indicates that consumption across the countries and areas surveyed varies widely and that this variation is unlikely to be explained by population health problems alone.

26. The Secretariat has worked to support the Antimicrobial Medicines Consumption (AMC) network through annual meetings at the country level and at network meetings in all participating countries and areas. The most recent meeting was held in Copenhagen, Denmark, in July 2017, and brought together national antimicrobial consumption focal points and national and international clinical experts in the use of antimicrobial medicines. In addition to reviewing the 2015 AMC data, discussions centred on promoting utilization of their data to support responsible use of antimicrobials. Areas of focus were communicating data to clinicians with examples of national and local level activities undertaken in Slovenia and the United Kingdom of Great Britain and Northern Ireland (England), and aligning work on the consumption of medicines with national action plans on AMR. Participants were also updated on important changes to the antibacterials section of the WHO Model List of Essential Medicines in 2017 and the creation of the ACCESS, WATCH and RESERVE classification of groups of antibiotics. The next AMC network meeting is scheduled for June 2018 and will be held in conjunction with the annual CAESAR meeting and the aforementioned joint ARHAI meeting with ECDC.

27. Ensuring visibility of the work on AMC is crucial to sustaining the network and increasing the use of data at country level. The Secretariat is supporting publication of the results of the analyses of AMC data by AMC focal points and country colleagues in peer-reviewed journals and presentations at major scientific meetings. In addition, the Secretariat is working with countries and areas to facilitate dissemination workshops where the antimicrobial consumption data are shared with decision-makers and interested stakeholders.

28. The collection of data on AMC is a key commitment under the Global Action Plan on AMR. The work of the European Region's AMC network is being used to inform global models for data collection. The Secretariat has participated in meetings convened by WHO headquarters to discuss data collection tools, present the results of AMC network activities and share experiences with staff of other WHO regional offices in developing sustainable regional networks.

---

<sup>3</sup> In accordance with United Nations Security Council resolution 1244 (1999).

29. Quantitative data on consumption provide a starting-point for better understanding of the use of antibacterials in clinical practice; they should be supported by further quantitative and qualitative studies in the primary care and hospital sectors. Trends in consumption data must be interpreted with an understanding of local contexts, such as changes in regulations over time (including enforcement of prescription-only status), data sources used to generate consumption estimates, local resistance patterns, and the potential impact of interventions directed at health care professionals and consumers with a view to changing behaviour. In addition, qualitative studies are needed on the reasons for health care professionals recommending certain antimicrobials and on consumers' and patients' understanding of the role of these medicines in managing their health. The Secretariat has facilitated collaboration between researchers at the University of Copenhagen and several national focal points of the AMC network, who are using interview studies to better understand the use of antimicrobials by doctors, pharmacists and patients.

30. The Secretariat has supported the development of a new database that will simplify the analysis of antimicrobial consumption data collected by AMC members in order to facilitate timely utilization of such data. Based on the Secretariat's experience of the AMC network, a collaboration for analysis of AMC data has been established with the WHO Regional Office for South-East Asia.

31. The Secretariat continues to support countries and areas in activities relating to responsible use of antimicrobials. Evidence generated by AMC network activities and other studies underpins work on the development of interventions to improve the responsible use of these agents.

#### ***Strategic objective 4: strengthen infection control and surveillance of antibiotic resistance in health care settings***

32. Defective infection prevention and control (IPC) practices during day-to-day health care delivery cause harm to hundreds of millions of patients worldwide every year. Health care-associated infections (HAIs) are among the most common complications of hospital stays. No country or health system, even the most developed or sophisticated, can claim to be free of HAIs. On any given day, about 80 000 patients (one in 18 patients) in European hospitals have at least one HAI.

33. In September 2017 the Secretariat hosted a multicountry workshop to facilitate expert discussions and to identify good IPC practices and the most effective interventions in containing AMR. Participants included national IPC focal points from 11 countries. The Secretariat introduced new WHO guidelines on core components of IPC programmes at the national and acute health care facility level. During the meeting an anonymous survey was conducted among IPC focal points from the participating countries to assess how IPC programmes are established at national level. The survey showed that 80% of countries do not have IPC programmes in place, 20% have an IPC programme with the authority to implement IPC in the field, 35% have established a national HAI surveillance programme and network of facilities, and 50% have a national curriculum available for postgraduate courses.

34. During 2017 the Secretariat provided financial support to national authorities from Armenia, Georgia and Kyrgyzstan to attend the International Conference on Prevention and Infection Control and responded to requests for assistance from Armenia and Georgia in

revising their national IPC strategies. Technical support for further implementation of IPC core components in other countries in the Region is being provided by the Secretariat.

35. In 2017 the Secretariat contributed to: the development of global guidance on IPC, including an infographic and posters on the importance of IPC in preventing antimicrobial resistance; WHO guidelines for the prevention and control of resistant bacteria in health care facilities; and a paper published in *The Lancet Global Health* entitled “Global infection prevention and control priorities 2018–22: a call for action”.

36. When health care-associated outbreaks occur, instead of serving as points where disease is controlled, health care facilities become dangerous places for outbreak amplification among staff and patients and transmission back to communities. The Secretariat continues to advocate for strengthening IPC capacities at national and local levels, and for positioning effective IPC as a key strategy for dealing with AMR prevention and control.

***Strategic objective 5: prevent and control the development and spread of antibiotic resistance in the veterinary and agricultural sectors***

37. The Secretariat continues to advocate for AMR to be addressed from a One Health perspective, including in relation to food safety, and conducts activities at both the regional and country levels.

38. At the 30th session of the Codex Alimentarius Coordinating Committee for Europe (CCEURO), held in October 2016 in Astana, Kazakhstan, delegations indicated during an session dedicated to AMR that: good animal husbandry practices and farm biosecurity are the basis for containment of AMR and there are shared responsibilities among producers, users and regulators in ensuring such good practices; environmental issues, including those related to manure, are critical aspects that should be taken into account when considering measures to address AMR; the cost of AMR in animal husbandry cannot currently be fully measured; and phasing out the use of antibiotics as growth promoters should be considered a matter of urgency. CCEURO members noted the importance of fighting AMR as a matter of priority in the Region, and expressed their willingness to cooperate with Codex Members and international organizations guided by a One Health approach to combat this global threat. They agreed to actively engage in Codex work on AMR to ensure that the views, needs and concerns of the Region are taken into account.

39. In November 2016 a subregional intersectoral training course was held in Ashgabat, Turkmenistan, for the central Asian countries. The aim was to address surveillance, prevention and control of foodborne and zoonotic diseases. The five-day course was attended by 70 participants from food safety, public and animal health agencies. Interactive sessions were provided on AMR in the context of One Health, as well as the findings of AMR profiles of *Salmonellae* and *Campylobacter* isolates of human and animal origin in the Region. Participants with a laboratory background engaged in a hands-on session on *Salmonellae* and *Campylobacter* isolation in various substrates. In parallel, sessions on improving surveillance for these pathogens were attended by other participants.



### ***Strategic objective 6: promote innovation and research on new drugs and technology***

40. In 2017 WHO issued a list of global priority antibiotic-resistant bacterial pathogens for which new medicines are most urgently needed. The primary objective of the list is to guide the prioritization of incentives and funding, help align research and development priorities with public health needs, and support global coordination in the fight against antibiotic-resistant bacteria. *Mycobacteria* (including *Mycobacterium tuberculosis*, the cause of human tuberculosis) was not subjected to review for inclusion in the prioritization exercise as it is already a globally established priority for which innovative new treatments are urgently needed.

41. The Global Antibiotic Research and Development Partnership, to which WHO is providing technical support, is a new facility for antibiotic development focusing on new products with global application for gonorrhoea and neonatal sepsis, and on opportunities for new combinations of medicines and adjustments of current formulations for greater efficacy.

### ***Strategic objective 7: improve awareness, patient safety and partnerships***

42. In November 2015, the first ever World Antibiotic Awareness Week (WAAW) was held. This WHO-led campaign received a great deal of attention worldwide and reached millions of people. In the European Region, WAAW built on the success of European Antibiotic Awareness Day and the long-standing collaboration between ECDC and the Regional Office.

43. WAAW 2016 was successfully marked in the European Region, with 47 out of 53 Member States of the Region participating. All WHO country offices supported countries by providing financial support and sharing campaign materials provided by the Regional Office and headquarters, attending or co-hosting events, giving interviews and so on. Many external partners joined these efforts. The Regional Office provided financial support to 20 countries, and the Regional Office website contained personal stories of health-care workers, videos, and a web statement from Her Royal Highness Crown Princess Mary of Denmark, Patron of the Regional Office.

44. WAAW 2017 surpassed the success of previous years. The global campaign focused on informing the public of the importance of seeking advice from health care professionals. The campaign in the European Region focused on raising awareness of IPC among health-care workers, and on reinforcing the “Save Lives: Clean Your Hands” global campaign held annually on 5 May, which focused on AMR. The Regional Office and ECDC launched a joint toolkit which is available to all 53 Member States of the Region. In addition to technical support, the Regional Office provided financial support to 24 countries.

45. Based on the successful publication of a guide to tailoring immunization programmes, the Secretariat is preparing a guide to tailoring AMR programmes, which will provide Member States with tools to identify the actors who play significant roles in AMR issues, and design targeted strategies to bring about behaviour change, such as prudent use of antimicrobial medicines and effective IPC programmes. Pilot behaviour change projects have been performed in Sweden and the United Kingdom to gain experience in the application of

such guidance, and projects are currently ongoing in Hungary, Kazakhstan and the former Yugoslav Republic of Macedonia.

= = =