
Progress report on implementation of the global action plan on antimicrobial resistance

Introduction

1. In May 2015, the World Health Assembly endorsed resolution WHA68.7 adopting the global action plan on antimicrobial resistance. The resolution urged Member States to adapt the global action plan to their national priorities, and to have national action plans on antimicrobial resistance.

2. The global action plan identifies five strategic objectives: 1) improve awareness and understanding of antimicrobial resistance through effective communication, education and training; 2) strengthen the knowledge and evidence base through surveillance and research; 3) reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures; 4) optimize the use of antimicrobial medicines in human and animal health; and 5) develop the economic case for sustainable investment that takes account of the needs of all countries, and increase investment in new medicines, diagnostic tools, vaccines and other interventions.

3. In September 2016, at the United Nations high-level meeting on antimicrobial resistance, in resolution A/RES/71/3, the General Assembly endorsed a political declaration on antimicrobial resistance. The declaration included commitments by Heads of States to develop their multisectoral national action plans in line with the One Health approach, mobilize funding for the implementation of these plans, and increase awareness about antimicrobial resistance.

4. In October 2017, the 64th session of the Regional Committee endorsed resolution EM/RC64/R.5 on antimicrobial resistance in the Eastern Mediterranean Region. The resolution urged Member States to: a) develop and endorse national action plans for antimicrobial resistance and allocate adequate resources for their implementation; b) establish a multisectoral high-level coordinating mechanism; c) develop and enforce policies and regulations to prevent purchase of antimicrobials without prescription; d) establish antimicrobial resistance surveillance at the national level and join the Global Antimicrobial Resistance Surveillance System (GLASS); e) establish national infection prevention and control programmes in line with resolution EM/RC57/R.6; and f) establish antimicrobial stewardship programmes in the human and animal sectors.

Progress update

5. This report summarizes the progress made by WHO and Member States in implementation of the global action plan and regional resolution EM/RC64/R.5 on antimicrobial resistance in the Eastern Mediterranean Region.

National action plans on antimicrobial resistance

6. Twelve countries in the Region (Oman, Saudi Arabia, Afghanistan, Jordan, Lebanon, Pakistan, Sudan, Islamic Republic of Iran, Libya, Egypt, Bahrain and Iraq, in order of reporting) have endorsed and submitted their antimicrobial resistance national action plans to WHO. In addition, five countries (Morocco, Qatar, Syrian Arab Republic, Tunisia and United Arab Emirates) have completed their national plans and are awaiting official endorsement.

National coordination and governance mechanisms

7. Seventeen countries in the Region have established multisectoral coordination groups in the form of national antimicrobial resistance committees. This includes Afghanistan, Bahrain, Egypt, Iran (Islamic

Republic of), Iraq, Jordan, Kuwait, Libya, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia and United Arab Emirates. There are variations in the structure, membership, roles and responsibilities of these structures across the countries of the Region. In 2019, WHO supported Morocco to conduct a national consultation to operationalize effective antimicrobial resistance governance coordination mechanisms.

Improving awareness and understanding of antimicrobial resistance

8. WHO supported several countries in the Region to celebrate World Antibiotic Awareness Week in 2017, and held a regional launch of the week that gathered more than 100 participants, with online contribution from country offices and the ministries of health of Egypt, Jordan and Pakistan. WHO also developed four radio spots in five languages (Arabic, English, Farsi, French, and Urdu), including five Arabic dialects (Egyptian, Gulf, Iraqi, Levantine, and Moroccan), and a real-life story testimonial video in Arabic that was subtitled in English, Farsi, French and Urdu.

9. World Antibiotic Awareness Week 2018 was celebrated by 18 out of 22 countries in the Region, with activities targeting the media, health providers and the public. Qatar and Pakistan had press coverage on antibiotic use and antimicrobial resistance during the week, while Iraq, Lebanon and Sudan had television and radio coverage, and Morocco, Pakistan and Palestine held high-level advocacy meetings. WHO developed and disseminated a social media tool kit, including a calendar, posters and cards.

10. The Video for Change initiative was launched in 2018 in Egypt, Jordan and Sudan, to encourage young people to use technology to promote behaviour change to combat antimicrobial resistance, and a WHO project to tailor national antimicrobial resistance programmes to support behaviour change is currently being piloted in the same countries.

Strengthening knowledge and the evidence base through surveillance

11. Fourteen countries, including Afghanistan, Bahrain, Egypt, Iran (Islamic Republic of), Iraq, Jordan, Lebanon, Libya, Oman, Pakistan, Saudi Arabia, Sudan, Tunisia and United Arab Emirates, have enrolled in GLASS, with 12 reporting data in 2018. A regional workshop was held to train countries on the use of the WHONET software programme for antimicrobial resistance data entry, analysis, aggregation and reporting to the GLASS platform, and another workshop trained national teams from six countries (Bahrain, Egypt, Libya, Morocco, Pakistan and Tunisia) to draft national antimicrobial resistance surveillance plans.

12. The Tricycle Project was launched in 2018 to develop a global harmonized protocol on integrated antimicrobial resistance surveillance of extended-spectrum B-lactamase-producing *Escherichia coli* in humans, animals and the environment. The project is being implemented in Egypt, Islamic Republic of Iran, Jordan, Morocco, Pakistan and Sudan, and a capacity-building workshop was held for national teams to support its implementation.

13. WHO has supported Jordan, Pakistan, Sudan and Tunisia to assess the capacity of their national microbiology reference laboratories for antimicrobial resistance surveillance and corrective actions are being implemented. A regional workshop was held to build country capacity to implement laboratory quality management systems, and WHO has supported Iraq, Jordan and Sudan to set up internal laboratory quality control systems by providing quality control strains for antimicrobial-resistant pathogens.

14. With the support of WHO and partners, Jordan is strengthening its national antimicrobial resistance surveillance programme. Intensive multisectoral capacity-building activities have been conducted for those engaged in antimicrobial resistance surveillance, and surveillance sites have started reporting data on a monthly basis to the national coordinating centre.

Reducing the incidence of infection

15. The status of infection prevention and control programmes at the national level has been assessed in 18 countries. National infection prevention and control guidelines exist in Bahrain, Egypt, Jordan, Kuwait,

Oman, Saudi Arabia and Sudan, and there are national training programmes for infection prevention and control professionals in Jordan, Oman and Saudi Arabia. Surveillance of health care-associated infections exists in Egypt, Jordan and Kuwait, and there are national infection prevention and control monitoring and evaluation tools in Egypt, Kuwait and Saudi Arabia.

16. Pakistan has recently designated a national infection prevention and control focal point and a national steering committee. WHO, in collaboration with King Abdulaziz Medical City Hospital, Riyadh, Saudi Arabia, a WHO collaborating centre, supported the first national infection prevention and control training in Pakistan for participants from 15 tertiary care hospitals.

17. Pakistan and Tunisia have established national working groups and assigned consultants to develop national guidelines on infection prevention and control.

18. WHO held an expert consultation in February 2019 to develop best practices in how to design and implement national health care-associated infection surveillance programmes in countries with limited resources, leading to a set of recommendations for implementation later in the year.

Optimizing the use of antimicrobial medicines in human and animal health

19. National teams from Afghanistan, Egypt, Islamic Republic of Iran, Jordan, Lebanon, Morocco, Oman, Pakistan, Sudan and Tunisia have been trained on the WHO methodology for collecting national antimicrobial consumption data. Data from Jordan, Islamic Republic of Iran and Sudan were included in the global *WHO report on surveillance of antibiotic consumption* (2018). The WHO methodology for monitoring antimicrobial consumption in hospitals has been piloted in Jordan to obtain reliable data on antimicrobial use at hospital and health facility levels.

20. Point prevalence surveys of antibiotic use and health care-associated infections have been undertaken in Iraq, Jordan, Pakistan, Sudan and Tunisia. Data collection has concluded and analysis of the data is ongoing, with the final reports expected later in 2019.

21. A national workshop on medicines supply-chain management was conducted in Syrian Arab Republic to strengthen pharmaceutical procurement and supply chain management and promote the rational use of antimicrobials.

22. A special session on addressing antimicrobial resistance was convened during the biennial Eastern Mediterranean Drug Regulatory Authorities Conference in 2018. The role of regulators in promoting the rational use of medicines and taking legal action against dispensing antibiotics without prescriptions was discussed, and the WHO methodology on monitoring antimicrobial consumption was introduced to participants from 17 countries.

Challenges

23. Despite high-level political commitments, the infrastructure and human resources for containment of antimicrobial resistance are still inadequate in the Region. There are several fragile countries experiencing crisis situations, resulting in displaced populations and refugees, and it remains a challenge to sustain political buy-in in those countries for tackling antimicrobial resistance.

24. There is limited cross-organizational collaboration for advocacy, communication and monitoring, slowing progress in combatting antimicrobial resistance, particularly in implementing the One Health approach in the non-human sectors.

25. Civil society, private sector and stakeholder engagement is still weak, with no specific activities or platforms to encourage their full participation.

26. Antimicrobial resistance is not a component of professional pre- or postgraduate training across the health sector in almost all countries of the Region. There are limited national capacities and human

resources in the disciplines of surveillance, behaviour change, information technology, data management and research, hindering progress in addressing antimicrobial resistance in the Region.

27. The available capacities in microbiology laboratories for antimicrobial resistance surveillance are limited in the Region. National reference laboratories, where they exist, lack the necessary capacity and resources to mentor, coordinate and monitor other clinical and public health laboratories.

28. Most countries in the Region do not have effective and well-coordinated national and facility-level infection prevention and control programmes. This limited capacity in the majority of countries is contributing to the spread of antimicrobial resistance at health care facility level, with potential for the spread of pathogens to local communities.

Way forward

29. Member States, with support from WHO and partners, should move forward with the implementation of their antimicrobial resistance national action plans, together with adequate national budget allocations.

30. Member States should provide the required political support and leadership to enhance national governance mechanisms and coordination to combat antimicrobial resistance, particularly for collaboration between the health, animal, environment and other related sectors.

31. Member States, WHO and partners should continue to build the capacities of national laboratory systems to detect and diagnose emerging and re-emerging resistant organisms, including through the implementation of laboratory quality management systems.

32. Member States, with support from WHO and partners, should move forward in establishing and strengthening national infection prevention and control programmes that adopt the core components of WHO guidelines.

33. Member States, WHO and partners, should identify and address the challenges to the responsible prescription and use of antimicrobials in human and animal health through guidelines, training and policy enforcement.