



**Worldwide country
situation analysis:**
response to
antimicrobial resistance

Summary

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Summary

Antimicrobial resistance has been detected in all parts of the world; it is one of the greatest challenges to global public health today, and the problem is increasing. Although development of antimicrobial resistance is a natural phenomenon, its development and spread is being accelerated by misuse of antimicrobial medicines, inadequate or non-existent programmes for infection prevention and control, poor-quality medicines, weak laboratory capacity, inadequate surveillance and insufficient regulation of the use of antimicrobial medicines. A strong, collaborative approach will be required to combat antimicrobial resistance, involving countries in all regions and actors in many sectors.

Although widely recognized as an urgent problem by many international organizations and ministries of health, not all countries have a response plan to tackle antimicrobial resistance. Some regions face other, more pressing, problems and many low- to middle-income countries do not have the resources to implement response mechanisms.

Over a 2-year period, from 2013 to 2014, WHO undertook an initial “country situation analysis” in order to determine the extent to which effective practices and structures to address antimicrobial resistance have been put in place and where gaps remain. A survey was conducted in countries in all six WHO regions and focused on the building blocks that are considered prerequisites to combat antimicrobial resistance: a comprehensive national plan, laboratory capacity to undertake surveillance for resistant microorganisms, access to safe, effective antimicrobial medicines, control of the misuse of these medicines, awareness and understanding among the general public and effective infection prevention and control programmes.

Country authorities were asked to complete a questionnaire on their existing strategies, systems and activities. The questionnaires were completed either by the authorities themselves through self-assessment or at an interview with a WHO officer on the occasion of a country visit. A total of 133 of the 194 WHO Member States provided information.

A full report is now available that presents the overall findings of the survey. The report provides an analysis, by region and globally, of the initiatives under way to address antimicrobial resistance and identifies areas in which more work is needed. This summary document provides an overview of the findings contained in the full report.

Since the survey was conducted, some countries have made further advances and additional initiatives have been launched. No reference therefore is made to individual countries, and the results reflect the situation at the time the questionnaires were completed.

Key findings from the Country Situation Analysis 2015

National plans and other strategies

Comprehensive national plans, based on a multisectoral approach and with sustainable financing, are regarded as one of the main ways to fight antimicrobial resistance globally; however, few countries reported having such a plan.

Other national mechanisms, such as a national focal point and a central coordination mechanism, were generally more common than plans. Many countries reported having a national policy or strategy, but few had published a progress report within the previous 5 years.

The findings from the survey indicate that progress in this area is needed in all regions, including in countries with strong health-care systems.

Surveillance and laboratory capacity

A national surveillance mechanism, based on well-equipped laboratories with well-trained staff that report regularly to functioning surveillance systems, allows the detection and tracking of antimicrobial-resistant microorganisms and enables prompt notification to the relevant authorities when an outbreak occurs. Surveillance can reveal the presence of patterns of resistant microorganisms and identify trends and outbreaks. Data from surveillance also allow policy-makers to introduce evidence-based standards and regulations and health care managers to make decisions on appropriate care.

The extent of surveillance of antimicrobial resistance reported in the survey varied by type of resistance and by country in all WHO regions. Regional networks support surveillance in many countries; however, none includes all the countries in its respective region.

Typically, countries cited a lack of laboratories with sufficient competent technical staff, weak infrastructure, poor data management and lack of standards as impediments to effective laboratory surveillance. Although laboratory capacity varied by country in all regions, at least one country in each of the six regions had a national reference laboratory capable of testing for antibiotic sensitivity and subject to external quality assessment. The same countries also reported monitoring of antimicrobial resistance in humans.

Access to quality-assured antimicrobial medicines

Regions in which there are many high-income countries, such as the European and the Western Pacific regions, reported higher rates of access to high-quality medicines than other regions.

Ready access to quality-assured antimicrobial medicines is important for preventing the appearance of new antimicrobial-resistant microorganisms. Poor-quality medicines may not contain the correct amount of active ingredient, resulting in sub-optimal dosing. This can be overcome with strong national regulations on medicine production and by strengthening the ability of authorities to regulate the industry.

Counterfeit medicines have been reported to be a problem in many regions. The situation stems from weak regulatory systems and inability to enforce laws. The survey revealed that the wide availability of medicines for direct sale to patients—for example, on the Internet—remained a problem for all regions.

Use of antimicrobial medicines

Both overuse and misuse of antimicrobial medicines accelerate the emergence of resistant microorganisms. Misuse can be due to poor prescribing practice, including prescribing antimicrobial medicines when not required, incorrect choice of medicine, or at an incorrect dosage; self-medication in countries in which antimicrobial medicines are freely available; failure to finish a course of antimicrobial medicines or taking them for too long; lack of regulations or standards for health care workers; and misuse and overuse in animal husbandry and agriculture.

Many countries in all regions reported that antimicrobial medicines were generally freely available. However, few countries reported a system for monitoring the use of antimicrobial medicines; tracking of prescribing patterns and over-the-counter sales is therefore a significant challenge. The sale of antimicrobial medicines without prescription was widespread, and many countries lacked standard treatment guidelines for health care workers. Thus, overuse of antimicrobial medicines by the public and by the medical profession was a potential problem in all regions.

Public awareness

At the time of the survey, public awareness appeared to be low in all regions. Even in some countries in which national public awareness campaigns had been conducted, there was still widespread belief that antibiotics are effective against viral infections. This situation is alarming, particularly in countries where antimicrobial medicines are readily available without a prescription.

Among professional groups, academics were generally more aware of the problem of antimicrobial resistance than others, including health care workers. The general lack of awareness in these sectors would indicate that antimicrobial resistance is likely to spread further. More education and collaborative awareness-raising campaigns in these sectors will be required. Without sufficient awareness, the appropriate regulations and standards will not be enacted, and other sectors will lack the information needed to implement them effectively.

Infection prevention and control programmes

Resistant microorganisms can spread rapidly across countries, regions and the world, facilitated by global trade, travel and tourism. Poor infection control in any setting can greatly increase the spread of drug-resistant infections, especially during outbreaks of disease. Infection prevention and control programmes are thus essential to curb the movement of antimicrobial-resistant organisms, starting with good basic hygiene, which limits the spread of all infections, including those that are resistant to antimicrobial medicines.

Half the Member States in the European, South-East Asia and Western Pacific regions that responded to the survey reported having a national infection prevention and control programme; however fewer had corresponding programmes in place in all tertiary hospitals.

Overall, the findings of this survey reveal that much is under way and indicate that countries are committed to addressing this complex problem. Some countries already have a number of activities in place, while others are embarking on the work and face challenges. Nevertheless, increased efforts are needed in all regions, including in countries with strong health-care systems.

Member States will review a draft global action plan on antimicrobial resistance at the Sixty-eighth World Health Assembly¹. The action plan sets out five strategic objectives: to improve awareness and understanding of antimicrobial resistance, to gain knowledge through surveillance and research, to reduce the incidence of infection, to optimize the use of antimicrobial medicines and to ensure sustainable investment in countering antimicrobial resistance.

It is anticipated that as countries continue to develop national action plans and to initiate effective practices and structure to address antimicrobial resistance, this initial country situation analysis will serve as a reference against which countries and WHO can monitor progress in meeting the challenge of antimicrobial resistance in coming years.

¹ Antimicrobial resistance: draft global action plan on antimicrobial resistance http://apps.who.int/gb/ebwha/pdf_files/WHA68/A68_20-en.pdf



**World Health
Organization**

World Health Organization
20 avenue Appia
1211 Geneva 27 - Switzerland
<http://www.who.int/drugresistance/en/>