

EDITORIAL

Global Antimicrobial Resistance; Where Are We? Toward National Antimicrobial Policy

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Editor-in-Chief

In April 2014, WHO has published its first report about antimicrobial resistance, including antibiotic resistance.¹ The concept is not new but the alarm is now very serious. The report reveals that this serious threat is no longer a prediction for the future, it is happening right now in every region of the world and has the potential to affect anyone, of any age, in any country.

The report, "Antimicrobial resistance: global report on surveillance", notes that resistance is occurring across many different infectious agents but it focuses on antibiotic resistance in seven different bacteria responsible for common, serious diseases such as bloodstream infections (sepsis), diarrhoea, pneumonia, urinary tract infections and gonorrhoea. The data provided by 114 countries, not surprisingly Iraq is not one of them, probably due to lack of validated data.

The report links the resistance to clinically important bacteria that causes significant diseases as follows:

1. *Escherichia coli*: resistance to third-generation cephalosporins, including resistance conferred by extended spectrum beta-lactamases (ESBLs), and to fluoroquinolones.
2. *Klebsiella pneumoniae*: resistance to third-generation cephalosporins, including resistance conferred by ESBLs, and to carbapenems.
3. *Staphylococcus aureus*: resistance to beta-lactam antibacterial drugs (methicillin, methicillin-resistant *S. aureus* [MRSA]).
4. *Streptococcus pneumoniae*: resistance or non-susceptibility to penicillin (or both).
5. Nontyphoidal *Salmonella* (NTS): resistance to fluoroquinolones.
6. *Shigella* species: resistance to fluoroquinolones.
7. *Neisseria gonorrhoeae*: decreased susceptibility to third-generation cephalosporins.

If we look to the list above one can conclude that it includes the most important and the prevalent human pathogenic microorganism. Also the resistance is not to one antimicrobial, but rather to the last resort one.

The report has identified the policy that all countries should adopt to tackle this potentially global devastating problem. The policy is simply based on coordinated efforts exercised by people, Health workers and pharmacists, policymakers, and drug industries. As follows:

People can help tackle resistance by:

1. Using antibiotics only when prescribed by a doctor.
2. Completing the full prescription, even if they feel better.
3. Never sharing antibiotics with others or using leftover prescriptions.

Health workers and pharmacists can help tackle resistance by:

1. Enhancing infection prevention and control.
2. Only prescribing and dispensing antibiotics when they are truly needed.
3. Prescribing and dispensing the right antibiotic(s) to treat the illness.

Policymakers can help tackle resistance by:

1. Strengthening resistance tracking and laboratory capacity;
2. Regulating and promoting appropriate use of medicines.

Policymakers and industry can help tackle resistance by:

1. Fostering innovation and research and development of new tools;

2. Promoting cooperation and information sharing among all stakeholders.

I want to remind everybody; people, health workers and policymakers that since 1987 no new category of antimicrobial was made. So we are exhausting our existed resources without any real efforts to replace it. Doing so has a simple expectation we are going to face a devastating condition of having infection responding to our antimicrobial. In other word we are going back nearly 100 years to the early years of last century.

Now what I want to raise here is where we are amid this dilemma?

In Iraq, although it is prohibited by law, but on the ground antimicrobials is nearly an over the counter without any prescription. Most of the time

the patient himself has already tried one or more antimicrobials before he asks the help of the doctor. The situation among health workers, doctors in particular, is not much different. Their usage of antimicrobials is not based, most of the time, on any guidelines. Culture and sensitivity is rarely used as a guide for the treatment of infections.

The question now should be addressed to the policymakers to activate the regulations and rules of judicious usage of antimicrobials, and to adopt as well as strictly implement a national policy for treatment of infections and scientific usage of antimicrobials.

The international bell was rung by the WHO report, is it going to stimulate ours?

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(1) WHO report "ANTIMICROBIAL RESISTANCE Global Report on surveillance" see the WHO website <http://www.who.int/en/>