

# Response to the Public Health threat of AMR in Lebanon: the Global Plan of action



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Irrational use of medicines particularly of antibiotics, both in human and animal health is a major problem worldwide and is adding significantly to the problem of drug resistance. Anti Microbial Resistance (AMR) creates one of the greatest challenges to global public health today. The World is progressively losing the ability to effectively treat & cure many infections such as Pneumonia, Sepsis, UTI, skin, STIs, TB, HIV, Malaria... AMR is nowadays considered an extraordinary long-term danger to health with major implications & consequences for modern medicine, health systems, development, economics, agriculture and several other sectors.

In fact, in terms of health systems implications, longer illnesses & more deaths in all age groups are already observed due to AMR. In Europe 25,000 deaths due to AMR are reported per year now; in Thailand 38,000 deaths per year (2012); Estimates suggest more deaths will be attributed to AMR than to Cancer by 2050. The AMR would prohibit major medical safety net for patients, particularly those requiring surgery, or with injuries, or those with chronic conditions like cancer (therapy) or diabetes. Many hospitals might close if AMR cannot be controlled. It is expected to observe global increases in healthcare costs that may range from \$300 billion to more than \$1 trillion per year by 2050. Some serious economic implications are also anticipated. For example, in the USA around 2 million infections and

at least 23,000 deaths from AMR are observed annually. This is equivalent to direct costs up to 20 billion USD per year and to indirect costs up to 35 billion USD per year. Estimates suggest USA GDP's could decrease 2-3.5% by 2050. Moreover, by 2050, annual global GDP would fall by 1.1% - 3.8% and Low-income countries would lose more exceeding 5% of GDP. The misuse of antibiotics in some countries as animal growth promoters, and on agriculture crops as spray to delay decay, is adding on the negative impact of AMR

to agriculture and trade. By 2050, the decline in global livestock production could range from a low of 2.6% to a high of 7.5% per year. The volume of global real exports would shrink by 1.1% in the low-case scenario, and by 3.8% in the high-case scenario. This would be detrimental to poverty levels, especially in poor countries, and would significantly halt development at global level. The first global alert to the danger of AMR was raised by WHO in 1998 whereby the World Health Assembly urged member states to:

- Develop measures to encourage appropriate and cost effective use of antimicrobials.
- Prohibit dispensing of antimicrobials without prescription of qualified health care professional.
- Improve the practices to prevent spread of infection and thereby the spread of resistant pathogens.
- Strengthen legislations to prevent manufacture, sale and distribution of counterfeit antimicrobials and the sale on the informal sector.
- Reduce the use of antimicrobials in food animal production.

As a response to the rising threat of AMR, in 2015 the WHO World Health Assembly proposed the Global action plan on antimicrobial resistance, followed in 2016 by the United Nations General Assembly Declaration: AMR is “a fundamental, long-term threat to human health, sustainable food production and development”



The **Global AMR plan** objectives are:

- Improve awareness and understanding of antimicrobial resistance through effective **communication, education and training**
- Strengthen the knowledge and evidence base through surveillance and research
- Reduce the incidence of infection through effective sanitation, hygiene and **infection prevention** measures
- **Optimize the use** of antimicrobial medicines in human and animal health
- 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

WHO recommends that governments adopt the following AMR plans guiding principles:

- Whole-of-society engagement including a one health approach.
- Prevention first.
- Access.
- Sustainability.
- Incremental targets for implementation.

In Lebanon, the threat of AMR is already a public health concern. There is evidence of “poly-pharmacy” among the general population up to 40%. Inappropriate use of antimicrobials, often in inadequate dosage, for **non-bacterial infections** is frequently observed. Over-use of **injections** when oral formulations would be more appropriate, more among lower socio economic groups is a common practice. **Failure** to prescribe in accordance with **clinical guidelines**, is reported up to **48%**; inappropriate **self-medication**, often of prescription-only medicines, is also observed up to **40%**; WHO support to the MOPH to reinforce its capacities to address AMR was first initiated in 2013, with a technical support mission that conducted a detailed situation assessment and recommended that the MOPH establishes a national AMR program that would focus on the following four main pillars:

- Commit to a comprehensive, financed national plan with accountability and civil society engagement.
- Strengthen surveillance and laboratory capacity.
- Regulate and promote rational use of medicines, including in animal husbandry and ensure proper patient

care.

- Enhance infection prevention and control.

Within the last five years, WHO support to the MOPH has resulted in the following achievements:

- A national multidisciplinary committee is established to oversee and facilitate the implementation of AMR interventions.
- Within the national 4 years plan for AMR elaborated in 2015, the following has been achieved:
  - o In terms of Laboratory capacity building
  - A national AMR reference lab has been designated at USJ- Research labs
  - Training on WHONET for labs is on going
  - Standard operating procedures for Antimicrobial testing have been proposed
  - Two hospitals are already reporting to the GLASS
  - o In terms of Surveillance
  - A collaborative research on AMR in Food poisoning is on going between MOPH/ ESU and AUB/ Microbiology research lab
  - A collaborative voluntary network of AMR surveillance and data sharing is on going with selected hospitals, and first set of data already published in 2016
  - o In terms of rational use of medications
  - A TV and radio awareness campaign was done twice in 2015 and 2017
  - A set of awareness on antibiotic use and misuse in farming was conducted by the MoAg in 2017, targeting small and medium farms
  - National recommendation for treatment of 5 groups

## Antibiotic Resistance

of diseases / conditions have been elaborated in collaboration with the society of Infectious Diseases

- A MOPH decree issued in 2017 restricting antibiotic dispensing at pharmacies only by medical prescription
- o In term of infection Control
- A national 5 years plan of action for health facility Infection control has been developed and roll out initiated in 2018
- A national guidebook on Infection control at health facility level has been developed

It is to note that WHO support to combat AMR in Lebanon has been possible for several enabling factors. The strong health system infrastructure, including large distribution of medical laboratories, the existence of a national steering committee on antibiotic use, the availability of ground assessments done by different stakeholders, a formulated communication strategy based on findings, some selected national laws in place for monitoring drug dispensing,

added to the good biosecurity standards for the farms, have all contributed to accelerating and facilitating WHO support. Perhaps the single most important factor is the engagement of motivated stakeholders, be it government or private sector.

Future challenges include:

- Updating and implementation of all components of the national AMR strategic plan.
- Enhancing interactions within and between sectors and stakeholders.
- Reinforcing the engagement of the civil society.
- Reinforcing and expanding the engagement of scientific and professional societies.
- Reinforcing AMR surveillance and integrated communicable disease surveillance and laboratories within the human health sector and between the human and animal health.
- Sustaining funding and other resources.

## News

### Dr. Iman Shankiti WHO Representative for Lebanon



Dr. Iman Shankiti was appointed WHO Representative for the WHO Lebanon country office effective 1 July 2018. She holds a BSc in pharmacy from Jordan University and a Master's Degree in health system management from the London School of Hygiene and Tropical Medicine.

readiness for emergencies, in addition to ensuring an effective response to natural disasters and conflict related emergencies.

In April 2017, Dr. Iman Shankiti was appointed as emergency operations manager in the new WHO Health Emergencies Programme, based in the Regional Office in Cairo. From April 2017 to May 2018, Dr Shankiti supported the regional response to 10 graded emergencies, including 4 Grade 3 emergencies, and managed the establishing of the Regional Emergency Operations Centre (EOC) that promotes leadership and coordination between departments to respond to ongoing emergencies in the Region. Dr .Shankiti also oversaw the roll-out of the regional Emergency Medical Team initiative in the Region that aims to develop a cadre of professional health staff for immediate deployment to countries in conflict. She also was a strong advocate for cross-departmental initiatives, including maternal and child health in emergencies, nutrition in emergencies, and the humanitarian development peace nexus.

Prior to joining WHO, Dr. Shankiti was a technical officer at the Jordanian Ministry of Health for 10 years.

She began her career with the organization as a technical officer in the Iraq country office, focusing on strengthening the country's Primary Health Care system and fostering partnerships in health. This was followed by her appointment as the Emergency Coordinator for Sudan for a period of five years. In 2014, she was reassigned as the Emergency Coordinator to Kabul. In both Sudan and Afghanistan, Dr. Shankiti focused on building national preparedness capacity and organizational



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