

Current major event

Antimicrobial Resistance: A Global Problem

On 7 April 2011, the world celebrated the World Health Day with the theme of Combat Drug Resistance: No Action Today, No Cure Tomorrow. The emergence and increase in the Antimicrobial Resistance is a global challenge that if not addressed today, we shall expect epidemics with resistant strains of bacteria and viruses without any available medicine to control in the future.

Editorial note

The Antimicrobial Resistance (AMR) is defiance of a microorganism (bacteria, viruses and some parasites) to an antimicrobial medicine, to which it was previously sensitive. It is a complex problem and is caused by a series of interconnected factors.

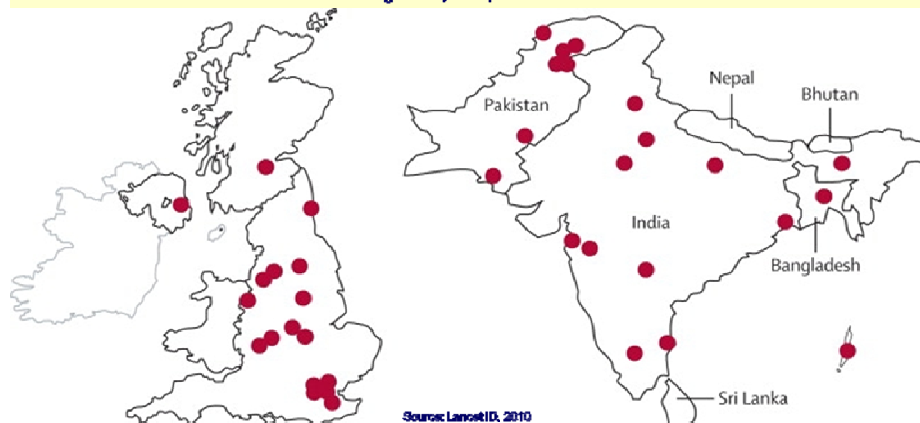
Annual emergence of 440 000 new cases of multidrug-resistant tuberculosis (MDR-TB), causing at least 150 000 deaths, extensively drug-resistant tuberculosis (XDR-TB) reported in 64 countries, widespread resistance to antimalarial medicines in most malaria-endemic countries, high percentage of hospital-acquired infections by highly resistant bacteria, emerging resistance of HIV infection to some of the ARVs, resistance of Shigella organisms to antibiotics, increasing prevalence of resistant *Neisseria gonorrhoeae* to the "last-line" oral cephalosporins, and the new beta-lactamase NDM-1, emerged among several gram-negative bacilli are challenging the world today.

The AMR will impose significant burden on vulnerable health care systems in developing world by reducing the effectiveness of treatment of infectious diseases, re-emergence of diseases due to resistant microbes and compromising the achievements of treatments such as organ transplantation. The AMR will also compromise global health security due to easy spread of resistant strains through globalized trade.

Inadequate national commitment to a comprehensive and coordinated response, ill-defined accountability and insufficient engagement of communities, weak or absent surveillance and monitoring systems, inadequate systems to ensure quality and uninterrupted supply of medicines, inappropriate and irrational use of medicines, including in animal husbandry, poor infection prevention and control practices; depleted arsenals of diagnostics, medicines and vaccines as well as

Distribution of NDM-1 producing *Enterobacteriaceae* strains

Strains in Bangladesh, India, Pakistan and UK



Source: Lancet ID, 2010

Core Actions for Strengthening AMR Surveillance

1. Establish AMR Surveillance and Monitoring Systems
2. Build laboratory capacity for rapid and reliable diagnosis
3. Engage in regional and Global Surveillance Networks

insufficient research and development on new products are among the drivers of the AMR.

Surveillance systems in the Member States should be closely linked to the Central Public Health Laboratories to be able to detect the resistant microorganisms, follow their spread, early detect, investigate and notify their outbreaks in the community. To overcome existing challenges of the surveillance the Member States are recommended to undertake "Core Actions" recommended by WHO.

WHO also recommends the Policy Package to combat antimicrobial resistance:

1. Commit to a comprehensive, financed national plan with accountability and civil society engagement
2. Strengthen surveillance and laboratory capacity
3. Ensure uninterrupted access to essential medicines of assured quality
4. Regulate and promote rational use of medicines, including in animal husbandry, and ensure proper patient care
5. Enhance infection prevention and control (IPC)
6. Foster innovations and research & development for new tools

For more information visit: www.who.int

Update on outbreaks

in the Eastern Mediterranean Region

Chikungunya in Yemen, Cutaneous Anthrax in S. Sudan, A(H5N1) in Egypt

Current public health events of international concern

[cumulative N° of cases (deaths), CFR %]

Avian influenza

Egypt	[141 (46), 32.6%]
Indonesia	[174 (144), 82.8 %]
Viet Nam	[119(59), 49.6%]
China	[40(26), 65%]
Global total	[547 (319), 58.3%]

Cholera

Haiti	[243197*(4626), 1.9 %]
Chad	[2508 (111), 4.4%]

Cutaneous Anthrax

S. Sudan	[19(0)]#
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Meningococcal disease

Chad	[923(57), 6.1 %]#
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Chikungunya fever

Yemen	[15000(104), 0.6 %]#
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Yellow fever

Uganda	[226(53), 23.4 %]
Sierra Leone	[2(0),]

CFR=Case-Fatality Rate; * Number of hospital visits; # Suspected cases only