Objectives of the Meeting

Technical Consultation on Innovative Models for New Antibiotics’ Development and Preservation

Zafar Mirza
13 May 2014
WHO, Geneva

Health Systems and Innovation (HIS) Cluster
"If current trends continue unabated, the future is easy to predict. Some experts say we are moving back to the pre-antibiotic era. No. This will be a post-antibiotic era. In terms of new replacement antibiotics, the pipeline is virtually dry, especially for gram-negative bacteria. The cupboard is nearly bare."

"A post-antibiotic era means, in effect, an end to modern medicine as we know it. Things as common as strep throat or a child’s scratched knee could once again kill."

Keynote address at the conference on Combating antimicrobial resistance: time for action, Copenhagen, Denmark, 14 March 2012
ANTIMICROBIAL RESISTANCE
Global Report on surveillance 2014

What you need to know
WHO's first global report on antimicrobial resistance, with a focus on antibiotic resistance, reveals that it is no longer a prediction for the future. Antibiotic resistance - when bacteria change and antibiotics fail - is happening right now, across the world.

The report is the most comprehensive picture to date, with data provided by 114 countries.

Looking at 7 common bacteria that cause serious diseases from bloodstream infections to gonorrhoea.

High levels of resistance found in all regions of the world.

Significant gaps exist in tracking of antibiotic resistance.

Over the last 30 years, no major new types of antibiotics have been developed.
Recommendations for intervention

6.1 Encourage cooperation between industry, government bodies and academic institutions in the search for new drugs and vaccines.

6.2 Encourage drug development programmes which seek to optimize treatment regimens with regard to safety, efficacy and the risk of selecting resistant organisms.

6.3 Provide incentives for industry to invest in the research and development of new antimicrobials.
The evolving threat of antimicrobial resistance
Options for action

Chapter 6.
Fostering innovation to combat antimicrobial resistance

* Penicillins were the first beta-lactams. This class included cephalosporins and carbapenems, developed in the 1980s and 1990s, respectively.
Source: Reproduced with data from [1]. Modified with permission from Thomson Reuters (Professional) Ltd.
CEWG on R&D for Antibiotics

- "A serious market failure"
- "the spread of resistance to antibiotics is detrimental to public health and necessitates further R&D which is insufficiently incentivised and scientifically challenging."
- "a particular cause for concern currently is the low level of investment in R&D on antibiotics."
Combating antimicrobial resistance, including antibiotic resistance (EB134.R13)

• URGES MEMBER STATES:

(8) to encourage and support research and development, including by academia and through new collaborative and financial models, to combat antimicrobial resistance and promote responsible use of antimicrobials, develop practical and feasible approaches for extending the lifespan of antimicrobial drugs and encourage the development of novel diagnostics and antimicrobial drugs;

• REQUESTS THE DIRECTOR GENERAL:

(5) to develop a draft global action plan to combat antimicrobial resistance, including antibiotic resistance, which addresses the need to ensure that all countries,…;

… (f) foster innovation and research and development for new tools;
The Context of this Technical Consultation

- WHO's ongoing work in the follow-up of CEWG report on exploring innovative approaches for financing and coordination for R&D for those health technologies which suffer from market failure.

Objectives of this Technical Consultation

1. To be informed by the state-of-the-art thinking and proposed models for financing, developing and preserving new antibiotics.

2. To have critical review of these models by the leading experts.

3. To present WHO current thinking on R&D and preservation of new antibiotics.

4. To enrich and improve WHO proposed model through discussions with the leading exerts.