



The Global Action Plan to combat AMR

WHO Approach to Antimicrobial Resistance



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**World Health
Organization**

Europe



BUREAU RÉGIONAL DE L'

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mondiale de la Santé**

Europe



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**Всемирная организация
здравоохранения**

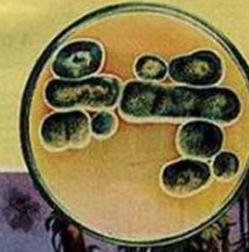
Европейское региональное бюро

Dr. Hilde Kruse

WHO Regional Office for Europe

Rome, 23 December 2014

Thanks to PENICILLIN ...He Will Come Home!



FROM ORDINARY MOLD—

*the Greatest Healing
Agent of this War!*

On the gray, green-and-yellow mold above, called *Penicillium notatum* in the laboratory, grows the miraculous substance first discovered by Professor Alexander Fleming in 1928. Named penicillin by its discoverer, it is the most potent weapon ever developed against many of the deadliest infections known to man. Because research on molds was already a part of Schenley's enterprise, Schenley Laboratories were well able to meet the problem of large-scale production of penicillin, when the great need for it arose.

When the thunderous battles of this war have subsided to pages of silent print in a history book, the greatest news event of World War II may well be the discovery and development — not of some vicious secret weapon that destroys — but of a weapon that saves lives. That weapon, of course, is penicillin.

Every day, penicillin is performing some unbelievable act of healing on some far battlefield. Thousands of men will return home who otherwise would not have had a chance. Better still, more and more of this precious drug is now available for civilian use... to save the lives of patients of every age.

A year ago, production of penicillin was difficult, costly. Today, due to specially-devised methods of mass-production, in use by Schenley Laboratories, Inc. and the 20 other firms designated by the government to make penicillin, it is available in ever-increasing quantity, at progressively lower cost.

Listen to "THE DOCTOR FIGHTS" starring RAYMOND MASSEY. Tuesday evening, 8:30 P.M. See your paper for time and station.

SCHENLEY LABORATORIES, INC.

Greenburgh, Indiana

Producers of PENICILLIN-Schenley



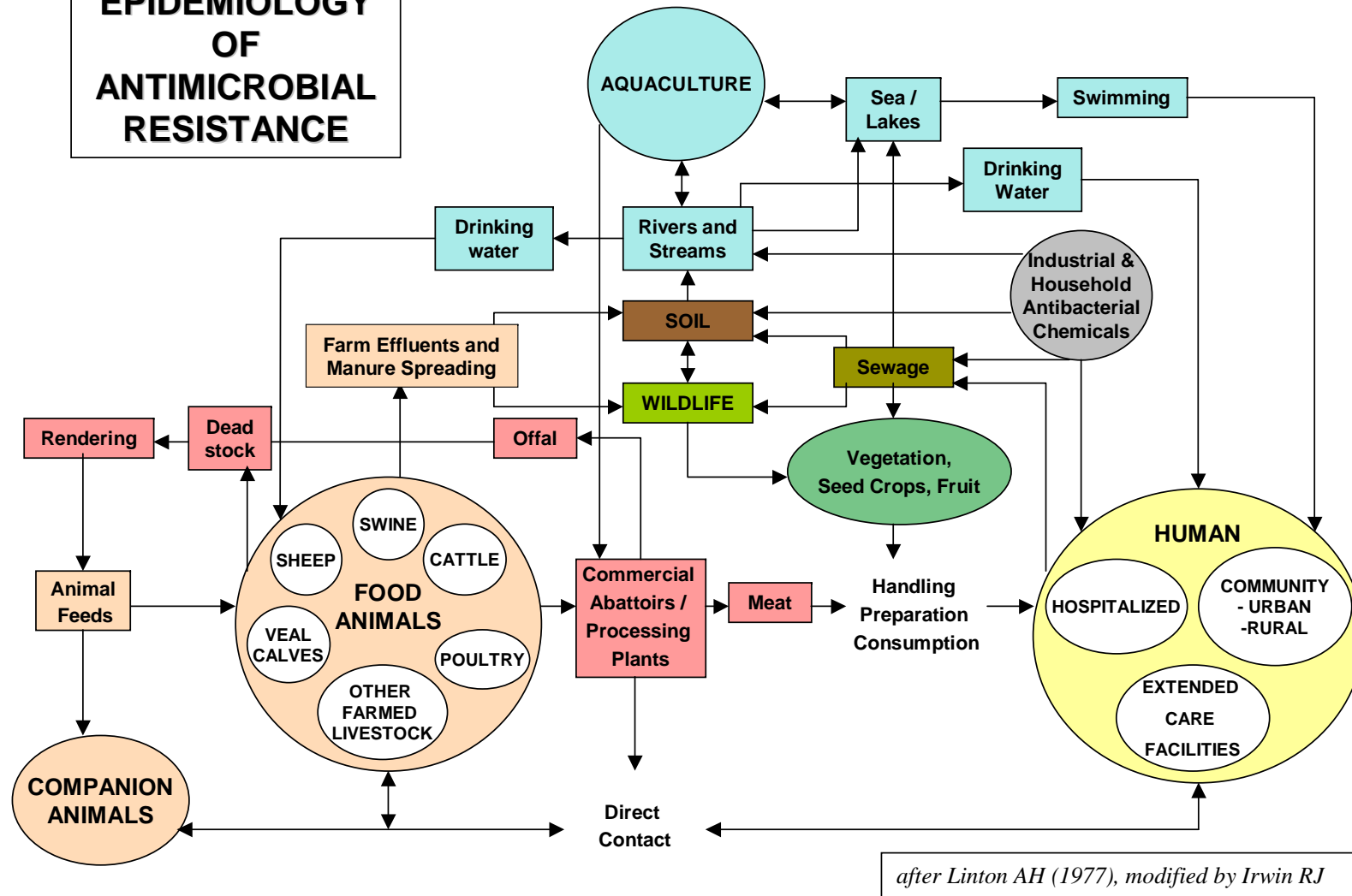
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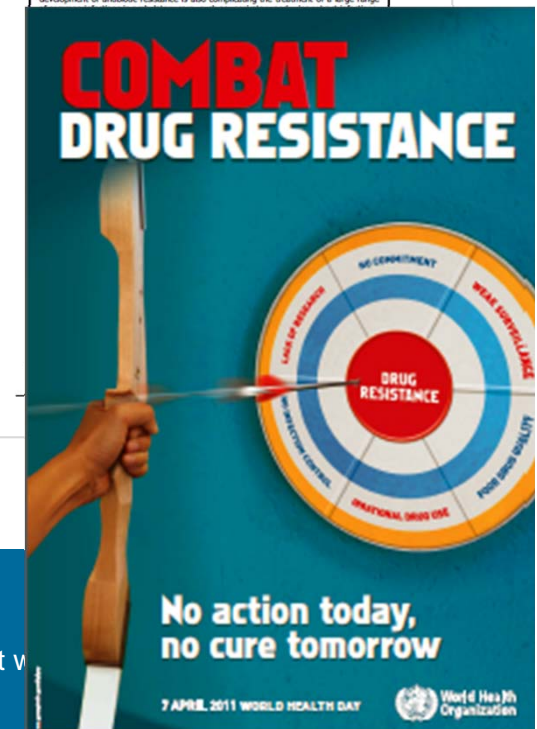
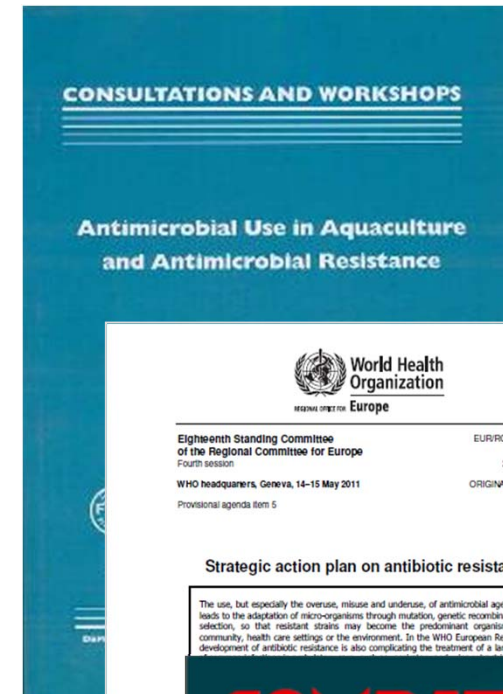
Fighting Antimicrobial Resistance:
smart weapons against smart microorganism
Rome 23 December 2014

EPIDEMIOLOGY OF ANTIMICROBIAL RESISTANCE



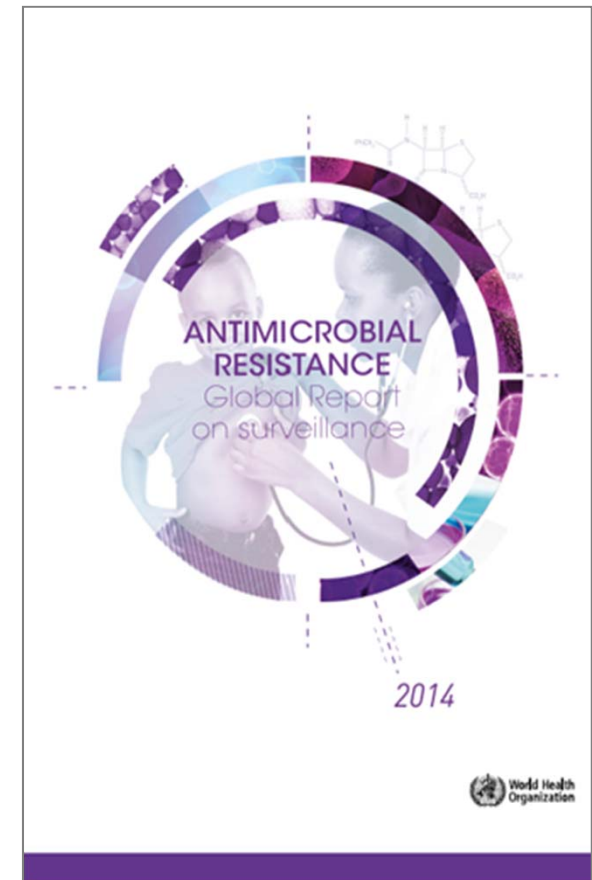
AMR: a WHO priority

- Major global public health threat
- International collaboration established
 - FAO, OIE, EU
- Theme of the World Health Day 2011
- European Strategic Action Plan of Antibiotic Resistance, 2011-16
- Draft Global Action Plan
 - WHA May 2015

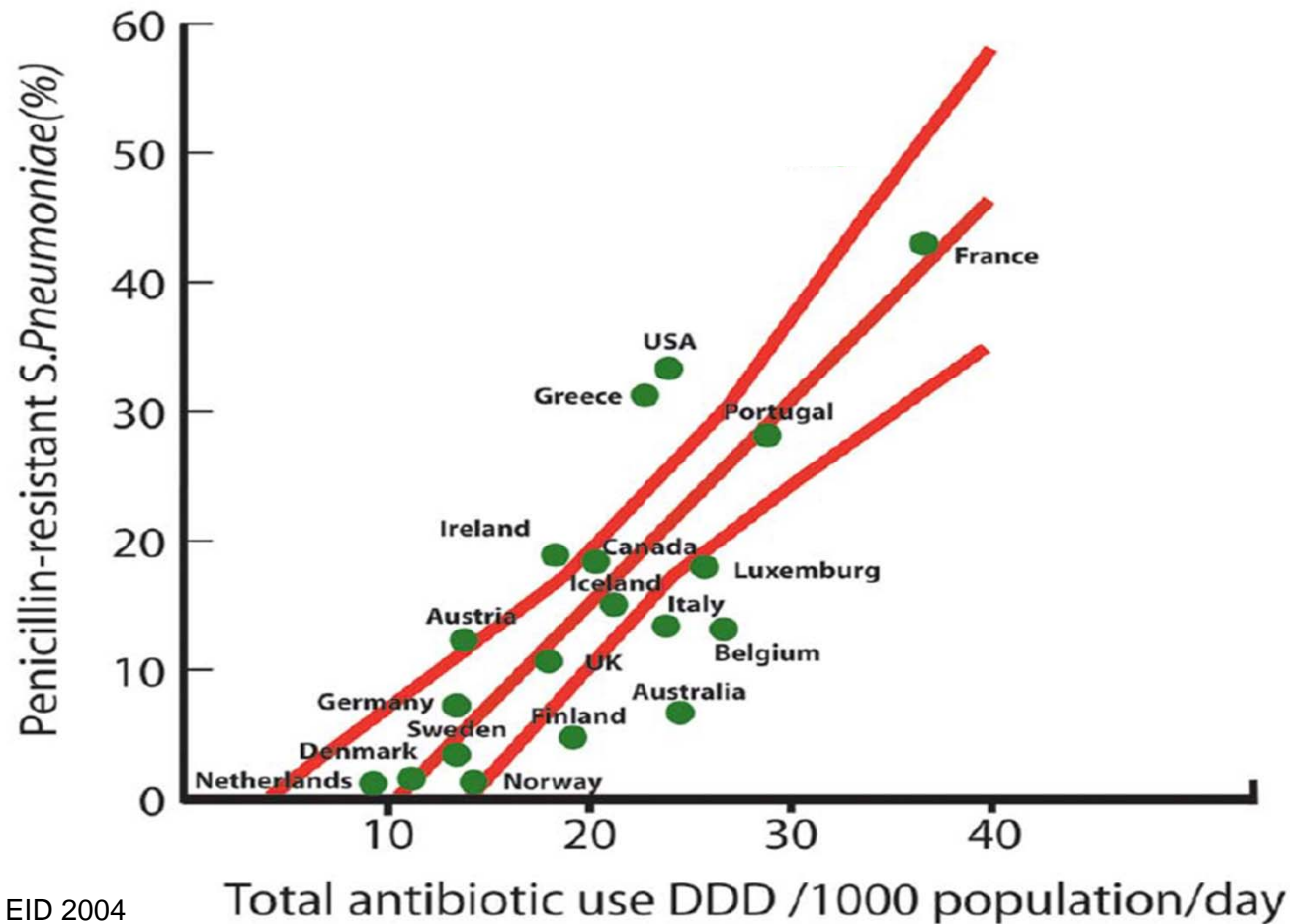


WHO: Antimicrobial Resistance Global Report on Surveillance 2014

1. High proportions of resistance to common treatments reported in all regions
2. Negative effect on patient outcomes and health expenditures
3. Running out of treatment options for common infections



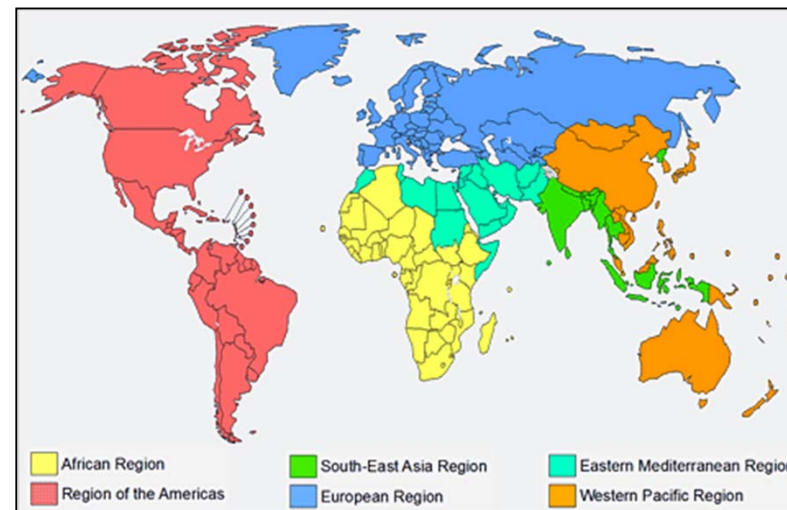
“The more we use them, the more we lose them”



From Albrich et al EID 2004

Regional initiatives for addressing AMR

- **African region**
 - Building integrated AMR surveillance capacity
- **Region of the Americas**
 - Regional integrated AMR surveillance networks, national programmes on AMR
- **Eastern Mediterranean region**
 - Increased attention, promotion of rational use and infection control
- **South-East Asian region**
 - One health approach emphasized
- **Western Pacific region**
 - AMR surveillance in the health sector



European strategic action plan on antibiotic resistance 2011–2016

World Health
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EUR/RC61/R6
15 September 2011 112562
ORIGINAL: ENGLISH
Regional Committee for Europe
Sixty-first session
Baku, Azerbaijan, 12–15 September 2011

Resolution European strategic action plan on antibiotic resistance

The Regional Committee,

Recalling World Health Assembly resolutions WHA51.17 on Emerging and re-emerging communicable diseases, antimicrobial resistance, WHA58.27 on Improving the control of antimicrobial resistance and WHA62.15 on Prevention and control of multidrug-resistant tuberculosis;

Acknowledging Member States' existing commitments and the WHO Global Strategy for Containment of Antimicrobial Resistance, and the force and informal networks at global and regional levels are addressing the challenges posed by antimicrobial resistance (rational use of antimicrobials, etc.);

Concerned by the increasing emergence of resistance to antimicrobials such as carbapenems, and the potential for the use of antimicrobials;

Further concerned that the development of resistance in health care and societal costs;

Taking into consideration the need for rational use of antimicrobials and the close link between antimicrobial resistance and the stewardship of antimicrobials; call for an integrated approach to the management of antimicrobial resistance;

WORLD HEALTH ORGANIZATION REGIONAL OFFICE FOR EUROPE
Sønderborg 8, DK-2300 Copenhagen S, Denmark. Telephone: +45 79 22 11 11 Fax: +45 79 22 11 12
E-mail: reg@who.int Web: <http://www.euro.who.int>

World Health
Organization
REGIONAL OFFICE FOR
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Eighteenth Standing Committee
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Fourth session
WHO headquarters, Geneva, 14–16 May 2011
Provisional agenda item 5

Strategic action plan on antibiotic resistance

The use, but especially the overuse, misuse and underuse, of antimicrobial agents often leads to the adaptation of microorganisms through mutations, genetic recombination and selection, so that resistant strains may become the predominant organisms in the development of antibiotic resistance in the environment. In the WHO European Region, the development of antibiotic resistance is also considered in the treatment of a large range of commonly transmitted infections in ambulatory care, such as respiratory and urinary tract infections, the use of antibiotics in the veterinary, food and waterborne sectors. In some countries, the use of antibiotics in human and further adds to the emergence of resistant bacteria, which can easily spread between people, animals, products and the environment.

In 29 countries of the Region, an estimated 25 000 people die every year because of infections related to antibiotic resistance, most of them contracted in health care settings. They give rise to considerable health costs as a result of longer hospital stays and more expensive treatments, as well as direct and indirect costs to society. Moreover, bacterial multidrug resistance is increasingly threatening the outcome of many common medical interventions and diagnostic procedures that until recently were considered safe or low-risk.

Although microbial resistance to other antimicrobial agents such as antiparasitic and antiviral drugs is occurring and is important, the focus on antibiotic resistance in the European Region is justified by its extensive prevalence and especially its rapid development against a number of last-resort antibiotics used to treat life-threatening infections in health care settings, a situation that may soon lead to potentially untreatable infections.

A number of key strategic actions are proposed to mitigate, prevent, and control antibiotic resistance. These include providing rational coordination to implement national strategic plans of action and develop regulatory functions and guidance systems to monitor the use of antibiotics across many sectors; strengthening surveillance systems to monitor the use of antibiotics and resistant sectors; creating awareness of the prudent use of antibiotics and the fact that new antibiotic drugs are not coming onto the market soon.

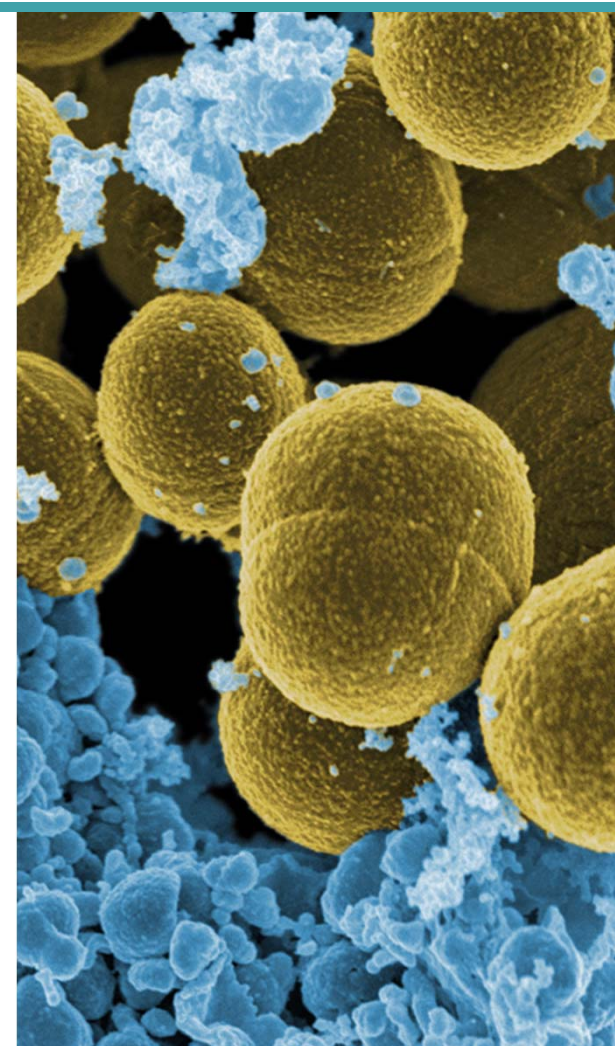
The resistance developed by mycobacteria, such as is seen in multidrug- and extensively drug-resistant tuberculosis (MDR-TB), is presented in a separate strategy paper, using similar concepts integrated within the tuberculosis control programme.

WORLD HEALTH ORGANIZATION REGIONAL OFFICE FOR EUROPE
Sønderborg 8, DK-2300 Copenhagen S, Denmark. Telephone: +45 79 22 11 11 Fax: +45 79 22 11 12
E-mail: reg@who.int Web: <http://www.euro.who.int>

WHO European Strategic Action Plan

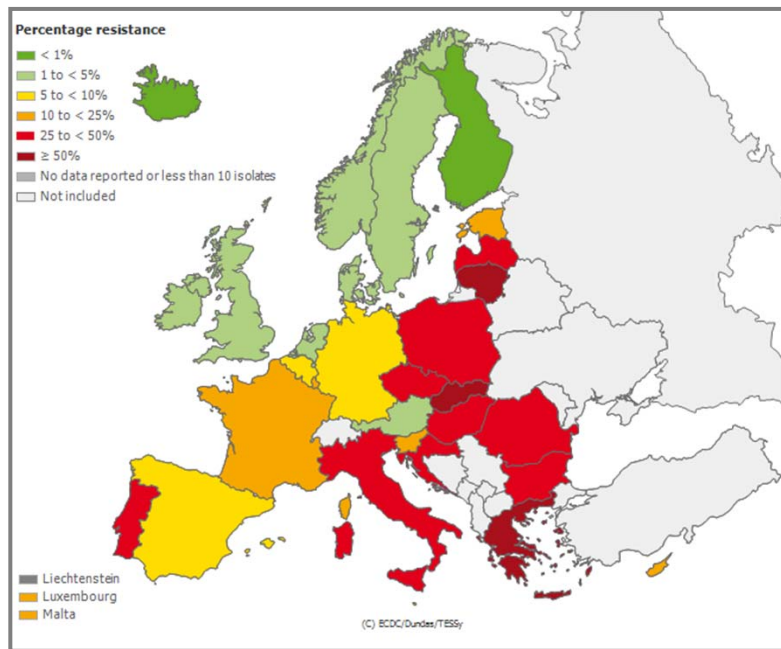
Seven action areas:

1. Promote national coordination.
2. Strengthen surveillance.
3. Promote rational use of antibiotics, including surveillance of antibiotic consumption.
4. Improve infection control and stewardship of antibiotic use in health care settings.
5. Promote surveillance, prevention and control of antibiotic resistance in the food chain.
6. Promote research and innovation on new antibiotics.
7. Improve awareness on antibiotic use and risk of increasing resistance.

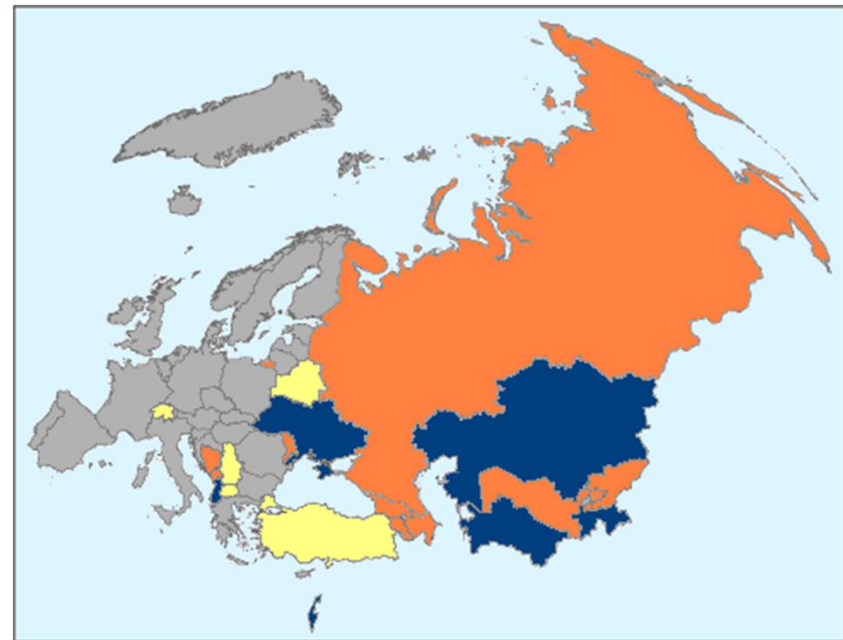


Expanding AMR surveillance throughout Europe

- European Antimicrobial Resistance Surveillance Network (EARS-Net)
- Central Asian and eastern European Surveillance of Antimicrobial Resistance (CAESAR)

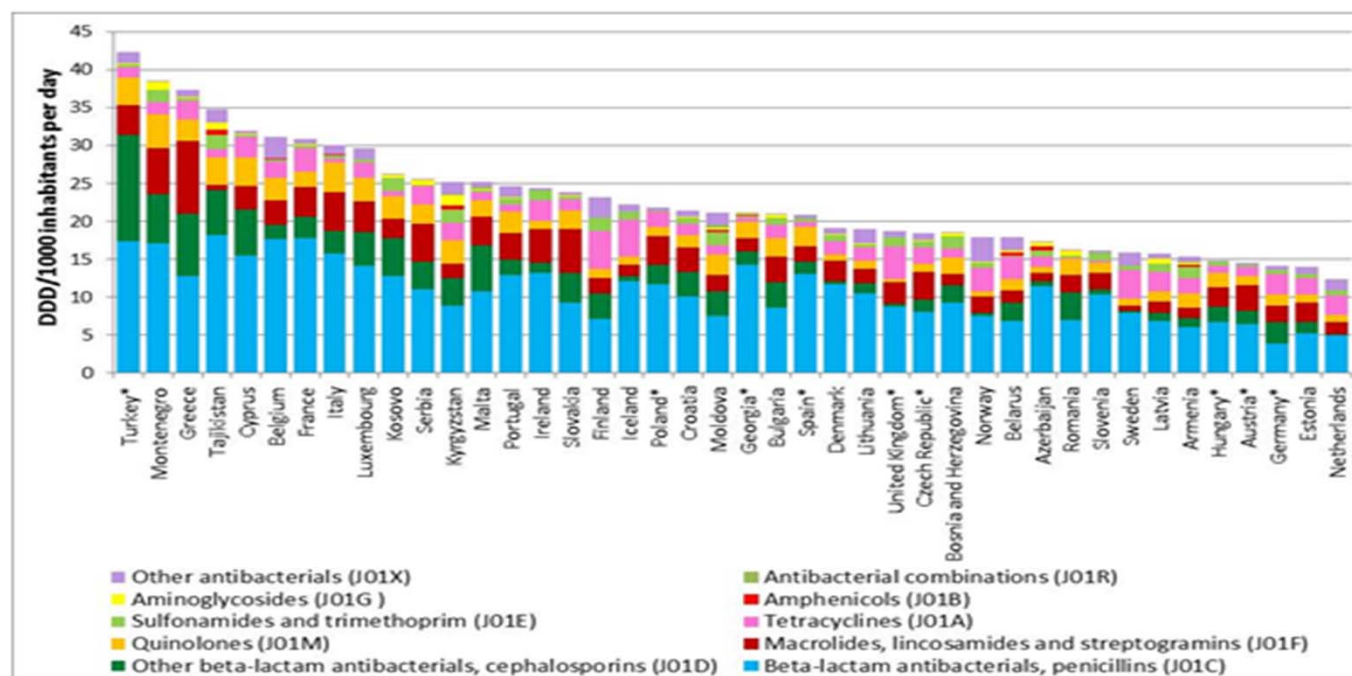


European Centre for Disease Prevention and Control



World Health Organization Regional Office for Europe

Expanding antibiotic consumption surveillance



Use methodology compatible with ESAC-Net

Enable data comparison in the European Region

Total antibiotic use in 2011, expressed in number of DDD per 1000 inhabitants per day in 12 European countries and Kosovo as compared to 29 ESAC-Net countries.

The category (ATC subgroup) 'Other beta-lactam antibacterials, cephalosporins' includes carbapenems and monobactams; 'Other antibacterials' includes glycopeptide antibacterials, polymyxins, fusidic acid, imidazole derivatives, nitrofurantoin derivatives and other antibacterials.

*Countries reporting only outpatient antibiotic use

Romania and Spain provided reimbursement data

"Kosovo (in accordance with UN Security Council resolution 1244 (1999))"

Antibiotic use in the Veterinary/Agriculture Sectors

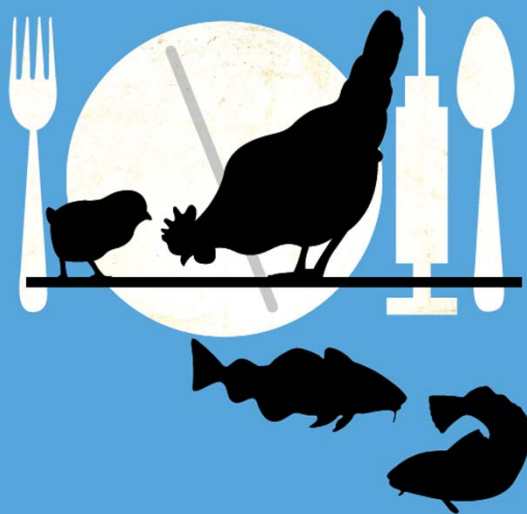
- Prudent use policies encouraged in the EU
- EU (2006): Withdrawal of the use of antibiotics as growth promoters
- Zoonosis Directive in the EU
 - Integrated surveillance of AMR
- ESVAC project in the EU
 - European surveillance of veterinary antibiotic consumption



AMR and Food Safety: Key Messages for Countries



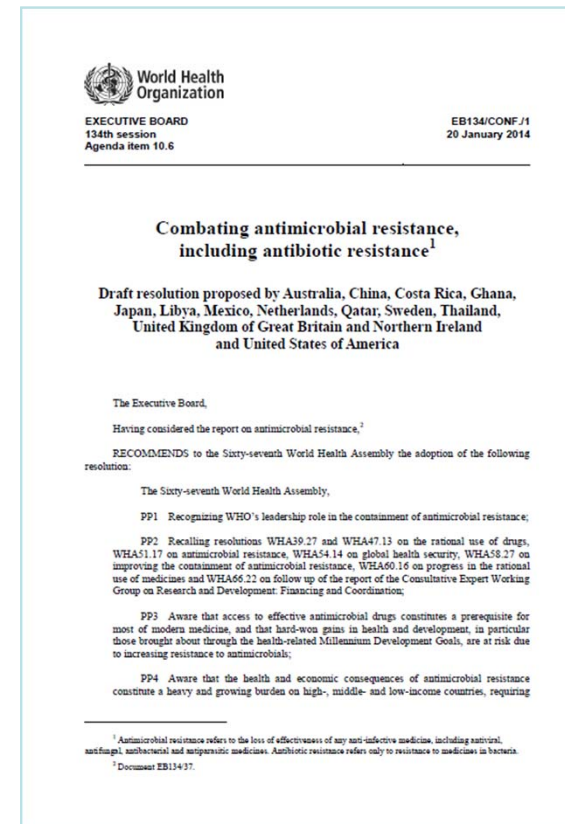
Tackling antibiotic resistance from a food safety perspective in Europe



1. Improve overall coordination
2. Improve regulatory framework
3. Reduce the need for and promote prudent use of antibiotics
4. Improve surveillance
5. Advocate and communicate
6. Build capacity and provide training
7. Address knowledge gaps and research needs

Global AMR Action Plan

- Resolution adopted at 67th World Health Assembly (May 2014)
- Call for Global Action Plan by WHA 2015
- Stakeholder and public engagement
- Technical consultations
 - AMR surveillance (December 2012, March 2014)
 - Strategic and Technical Advisory Group (September 2013, April 2014)
- High-level ministerial meetings
 - Netherlands (June 2014), Norway (Nov 2014), Sweden (Dec 2014)



The Way Forward: Guiding Principles

- Whole-of-society engagement
- Prevention first
- Access not excess
- Sustainability
- Incremental targets for implementation

Support country action

Goal and Strategic Objectives

Goal: “...ensure, for as long as possible, continuity of the ability to **treat and prevent infectious diseases with effective and safe medicines** that are quality-assured, used in a responsible way, and accessible to all who need them. It is expected that countries will develop their own national action plans on antimicrobial resistance in line with the global plan.”

Strategic Objectives:

1. Improve awareness and understanding
2. Strengthen knowledge through surveillance and research
3. Reduce the incidence of infection
4. Optimize the use of antimicrobial agents
5. Ensure sustainable investment in countering antimicrobial resistance

Take Home Messages

- AMR: a global health threat that affects everyone with impacts extending beyond the health sector
- Global collective action is needed
- **The Global Action Plan:**
 - **reflects commitment, perspectives and roles of all relevant stakeholders**
 - **outlines clear and shared ownership and responsibilities**
- All countries and stakeholders to progress towards implementation of the Global Action Plan through a process of targets appropriate for differing priorities and capacities

Acknowledgements

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Thank you for your attention !

