World Health Organization
REGIONAL OFFICE FOR Europe

Organisation mondiale de la Santé
BUREAU RÉGIONAL DE L' Europe

Weltgesundheitsorganisation
REGIONALBÜRO FÜR Europa

Всемирная организация здравоохранения
Европейское региональное бюро

WHO efforts to reduce the impact on public and animal health of antibiotic use in animals

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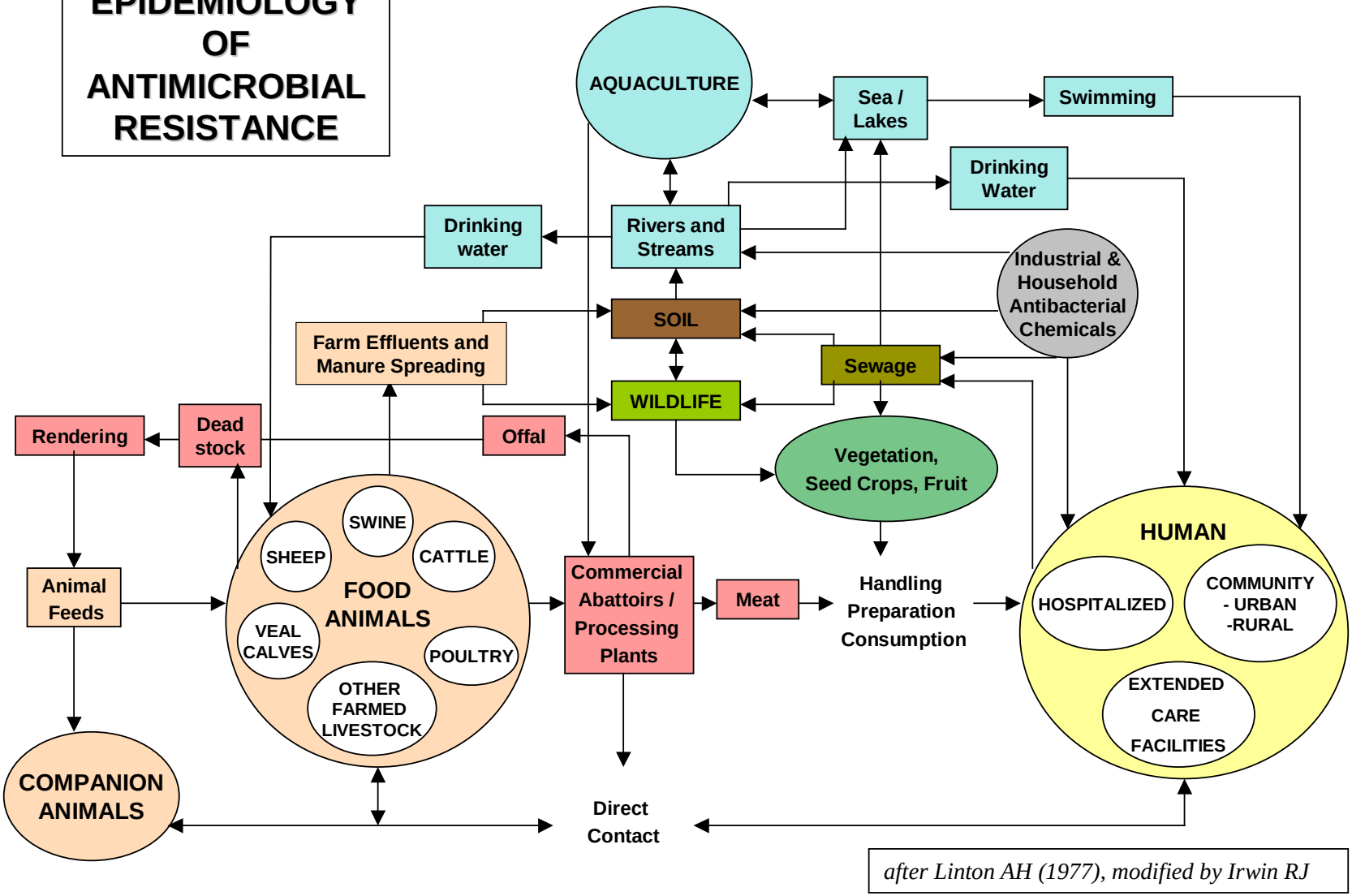
Antimicrobial resistance (AMR): a public and animal health issue

- Widespread use of antimicrobials in livestock production
- Same classes used in humans and food-producing animals
- Food chain an important route for emergence and spread of resistance between animals and humans
- Globalization calls for international action
- Resistance growing faster than development of new drugs

EPIDEMIOLOGY OF ANTIMICROBIAL RESISTANCE



after Linton AH (1977), modified by Irwin RJ

FAO/OIE/WHO Tripartite

- High-level Coordinating Forum – annual rotating meetings
- 19th Tripartite Executive Coordinating meeting (2013):
  - AMR one of 5 priority issues and flagship topic for One Health
  - Agreement to develop joint action plan on AMR, building on existing initiatives
  - One voice on the critical issue of AMR e.g. development of common messages on AMR

Advisory Group on Integrated Surveillance of Antimicrobial Resistance - AGISAR

Tackling foodborne AMR through integrated surveillance

- 31 Members, FAO, OIE
- 4 Subcommittees
  - Antimicrobial Usage Monitoring
  - Antimicrobial Resistance Surveillance
  - Capacity Building & Pilot Projects
  - Data Management and Communication

Advisory Group on Integrated Surveillance of Antimicrobial Resistance - AGISAR

Tackling foodborne AMR through integrated surveillance

- Technical support:
  - Monitoring Usage in Animals and Humans
  - Surveillance of AMR in animals, food and humans.
  - Data analysis/integration to support policy
- Maintain “Critically Important Antimicrobials” (CIA) list

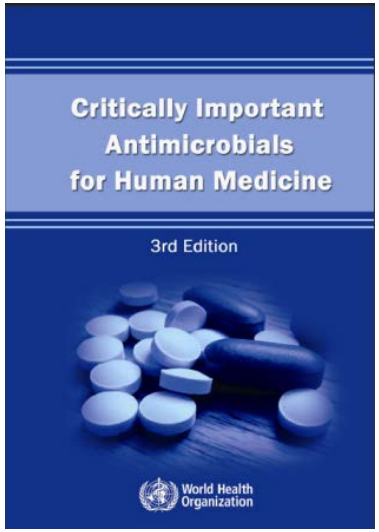
WHO list of Critically Important Antimicrobials (CIA)

- The World Health Organization (WHO) has developed and applied criteria to rank antimicrobials according to their relative importance in human medicine.

- Clinicians, regulatory agencies, policy-makers and other stakeholders can use this ranking when developing risk management strategies for the use of antimicrobials in food production animals.

History of the CIA list

- 1st WHO Expert Meeting on Critically Important Antimicrobials (CIA) 2005, Canberra, Australia
  - Considered 3 groups (critically important, highly important, important)
- 1st revision, 2007, Copenhagen, Denmark
  - Additional prioritization in “critical” category
- 2nd revision, 2009, Copenhagen, Denmark (formation of AGISAR)
- 3rd revision, 2011, Oslo, Norway



CIA criteria

- Criterion 1: SOLE THERAPY
  Antimicrobial agent used as sole therapy or one of few alternatives to treat serious human disease

- Criterion 2: NON-HUMAN SOURCE
  Antimicrobial agent is used to treat diseases caused by organisms that may be transmitted to man via non-human sources, or that may acquire resistance genes from non-human sources

CIA ranking

- ***Critically Important:*** those antimicrobials which meet both criteria 1 and 2
- ***Highly Important:*** those antimicrobials which meet either criterion 1 or 2
- ***Important:*** those antimicrobials which meet neither criterion 1 nor 2

CIA list 3rd revision

Critically important

Antimicrobial class	C1	C2
Aminoglycosides	Yes	Yes
Carbapenems and other penems	Yes	Yes
Cephalosporins (3rd and 4th generation)	Yes	Yes
Cyclic esters	Yes	Yes
Fluoro- and other quinolones	Yes	Yes
Glycopeptides	Yes	Yes
Glycylcyclines	Yes	Yes

CIA list 3rd revision

Critically important

Antimicrobial class	C1	C2
Lipopeptides	Yes	Yes
Macrolides and ketolides	Yes	Yes
Monobactams	Yes	Yes
Oxazolidinones	Yes	Yes
Penicillins (natural, aminopenicillins and antipseudomonal)	Yes	Yes
Polymixins	Yes	Yes
Rifamycins	Yes	Yes

+ drugs used solely to treat TB or other mycobacterial diseases

CIA list 3rd revision

Highly important

Antimicrobial class	C1	C2
Amdinopenicillins	No	Yes
Amphenicols	No	Yes
Cephalosporins (1st and 2nd generation) and cephamycins	No	Yes
Lincosamides	No	Yes
Penicillins (Antistaphylococcal)	No	Yes
Pleuromutilins	No	Yes
Pseudomonic acids	No	Yes

CIA list 3rd revision

Highly important

Antimicrobial class	C1	C2
Riminofenazines	Yes	No
Steroid antibacterials	No	Yes
Streptogramins	No	Yes
Sulfonamides, Dihydrofolate reductase inhibitors and combinations	No	Yes
Sulfones	Yes	No
Tetracyclines	Yes	No

CIA list 3rd revision

Important

Antimicrobial class	C1	C2
Aminocyclitols	No	No
Cyclic polypeptides	No	No
Nitrofurantoins	No	No
Nitroimidazoles	No	No

Next edition discussed at AGISAR annual meeting in Colombia, September 2013

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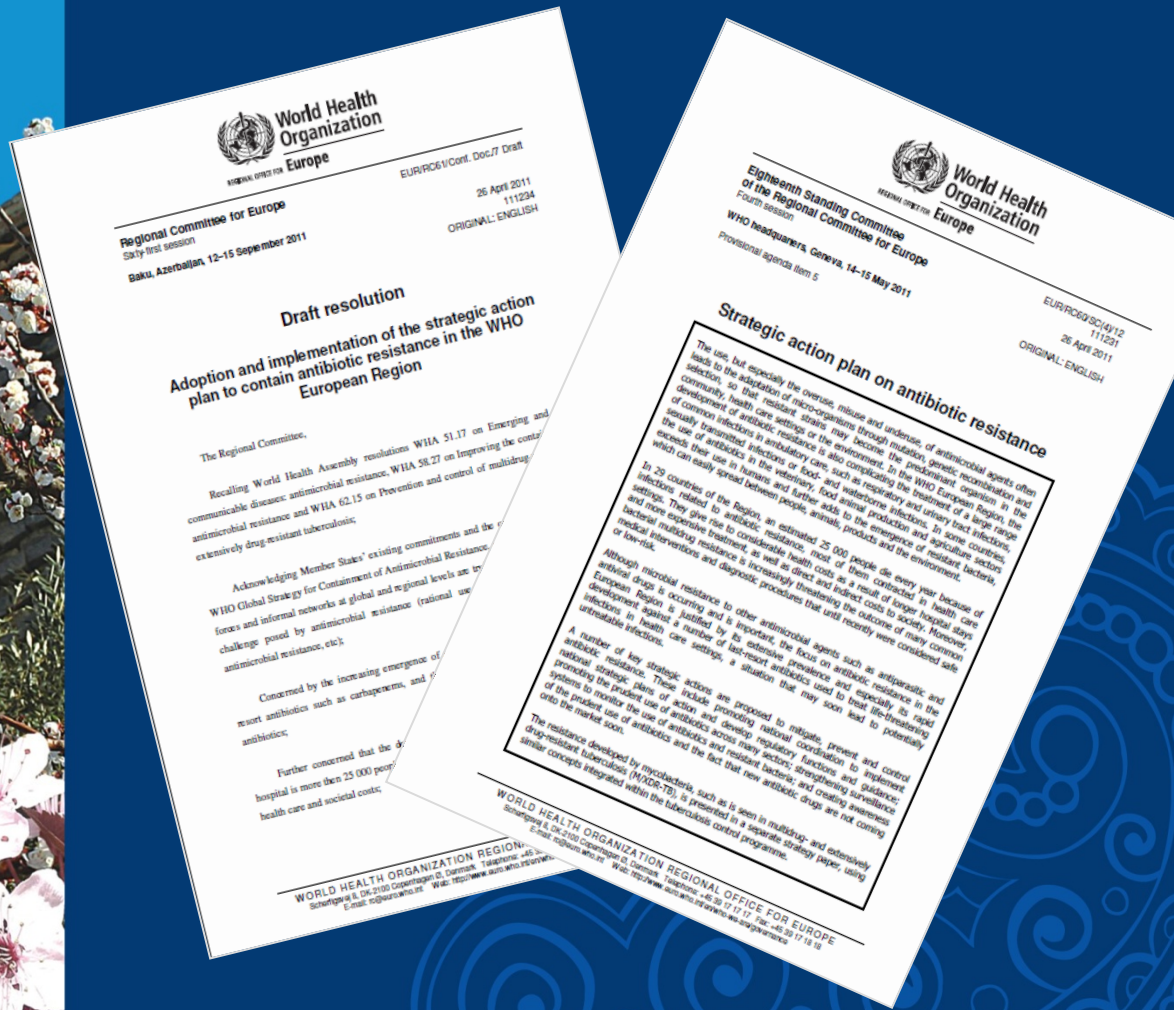
European strategic action plan on antibiotic resistance 2011–2016



World Health Organization
Europe

Regional Committee for Europe
Sixty-first session
Baku, Azerbaijan, 12–15 September 2011

EUR/RC61/Conf. Doc./7 Draft
26 April 2011
111234
ORIGINAL: ENGLISH

Draft resolution

Adoption and implementation of the strategic action plan to contain antibiotic resistance in the WHO European Region

The Regional Committee,

Recalling World Health Assembly resolutions WHA 51.17 on Emerging and communicable diseases: antimicrobial resistance, WHA 58.27 on Improving the containment of antimicrobial resistance and WHA 62.15 on Prevention and control of multidrug- extensively drug-resistant tuberculosis;

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

Concerned by the increasing emergence of resort antibiotics such as carbapenems, and antibiotics;

Further concerned that the hospital is more then 25 000 peo health care and societal costs;

World Health Organization
Europe

Eighteenth Standing Committee of the Regional Committee for Europe
Fourth session
WHO headquarters, Geneva, 14–15 May 2011

Provisional agenda item 5

EUR/RC60/SC/4/12
111231
26 April 2011
ORIGINAL: ENGLISH

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 mutation, genetic recombination and selection, so that resistant strains may become the predominant organism in the community, health care settings or the environment. In the WHO European Region, the development of antibiotic resistance is also complicating the treatment of a large range of common infections in ambulatory care, such as respiratory and urinary tract infections, sexually transmitted infections or food- and waterborne infections. In some countries, the use of antibiotics in the veterinary, food and animal production and agriculture sectors exceeds the use in humans 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 treatment 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 promoting national coordination to implement national strategic plans of action and develop regulatory functions and guidance; promoting the prudent use of antibiotics across many sectors; strengthening surveillance systems to monitor the use of antibiotics and resistant bacteria; and 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 (MXDR-TB), is presented in a separate strategy paper, using similar concepts integrated within the tuberculosis control programme.

WORLD HEALTH ORGANIZATION REGIONAL OFFICE FOR EUROPE

Action Plan Strategic Objectives

1. Strengthen intersectoral coordination
2. Strengthen surveillance of antibiotic resistance
3. Promote rational use and strengthen surveillance of antibiotic consumption
4. Strengthen infection control and surveillance in health care settings
5. Prevent emerging resistance in veterinary and food sectors
6. Promote innovation and research on new drugs
7. Improve awareness, patient safety, and partnership

CAESAR network

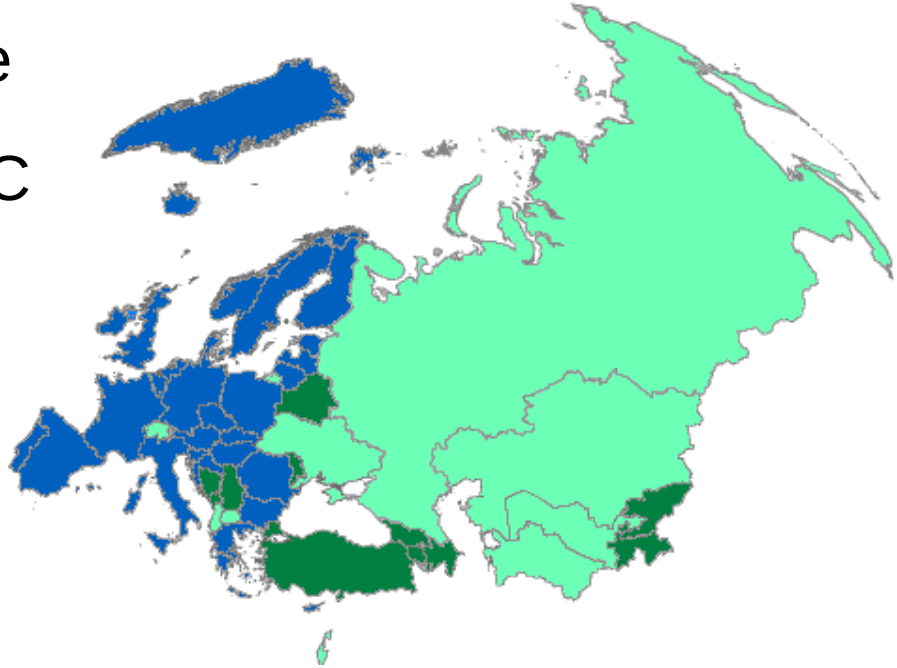
(**C**entral **A**sian and eastern **E**uropean **S**urveillance of **A**ntimicrobial **R**esistance)

- Network of national surveillance networks
- Compatible to EU surveillance
- Close collaboration with ECDC

- Status:
  - 13 non-EU countries engaged in activities
  - 4 countries submit data to WHO

WHO/Europe-ESAC project

- Technical support to analyze consumption data
- Compatible to EU surveillance
- Close collaboration with ECDC



- Status:
  - Lancet paper with data from 13 non-EU countries
  - Countries follow up with action

AMR in veterinary & food sector

- Booklet: AMR from a food safety perspective
- National workshops on integrated surveillance
  - Serbia, Montenegro, Albania, Tajikistan
- Subregional workshops
  - Balkans (Albania), Central Asia (Kazakhstan)
- Exploring collaboration
  - European Surveillance of Veterinary Antimicrobial Consumption (ESVAC)
  - Federation of Veterinarians of Europe

Thank you for your attention

More information at :
www.agisar.org
http://www.who.int/foodborne_disease/resistance/agisar/en