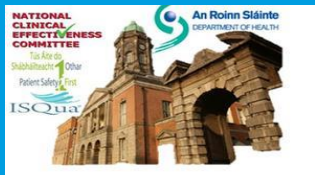


National Patient Safety Office Conference

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Prudent use of antimicrobial agents in the EU: lessons from the Commission survey, 2015

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Disclosure

- Work carried out under a service contract with the European Commission (SANCO/2014/C3-60)



- Information and views set out in the report and in this presentation are those of the author*

The image shows the cover of a report. At the top, there is a small European Commission logo. Below it is a photograph of several capsules, with one prominent red and white capsule in the foreground. The title of the report is written in bold black text. Below the title is a subtitle in smaller black text. At the bottom, the author's name and affiliation are listed, along with a small green logo for "Health and Food Safety".

Prudent use of antimicrobial agents in human medicine: third report on implementation of the Council recommendation

Analysis of countries' reports on the implementation of the Council recommendation of 15 November 2001 (2002/77/EC) on the prudent use of antimicrobial agents in human medicine

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Health and Food Safety

Background

Recommendations on the prudent use of antimicrobial agents in human medicine (2001)

- Organisation / Governance
 - Strategy, action plan, coordinating mechanism
 - Intersectoral implementation
- Surveillance of antimicrobial resistance and of use of antimicrobial agents
 - Reliable data at regional, national and EU levels
- Control and preventive measures
 - Use of antimicrobial agents
 - Hygiene and infection control standards
- Training, education, information of the general public and professionals
- Research

5.2.2002

EN

Official Journal of the European Communities

L 34/13

COUNCIL RECOMMENDATION

of 15 November 2001

on the prudent use of antimicrobial agents in human medicine

(Text with EEA relevance)

(2002/77/EC)

(2002/77/EC)

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 152(4) thereof,

Having regard to the proposal from the Commission,

Whereas:

(1) Antimicrobial agents are substances produced either synthetically or naturally by bacteria, fungi or plants, used to kill or inhibit the growth of micro-organisms including bacteria, viruses and fungi, and of parasites, in particular protozoa.

(2) The use of antimicrobial agents has greatly contributed to improvements in health. Such 'antimicrobial agents' have been introduced for decades to treat and prevent infectious diseases and infections. However, their use has been accompanied by an increasing prevalence of micro-organisms that have acquired resistance to one or more of these, so-called 'antimicrobial resistance'. Antimicrobial resistance poses a threat to public health, may prolong the suffering of patients, increase healthcare costs and has economic implications for society. Therefore concerted action is necessary at Community level to contain this problem by encouraging the prudent use of antimicrobial agents in human medicine and better hygiene and infection control.

(3) The Council of the European Union on 8 June 1999 adopted a Resolution on antibiotic resistance entitled A strategy against the microbial threat (1). The Resolution

highlights that antimicrobial resistance increases morbidity and mortality due to communicable diseases and leads not only to a diminution of quality of life but also to additional health and medical care costs, and that action needs to be taken at Community level.

(4) The own-initiative opinion of the Economic and Social Committee on the Resistance to antibiotics as a threat to public health (2) identified possible initiatives and action that should be taken at Member State and Community level to address the problem of antimicrobial resistance.

(5) There is an association between the growing use of antimicrobial agents and an increase in the prevalence of micro-organisms resistant to those agents, but this relationship is clearly not a simple one. There are many possible factors influencing this relationship, including those related to the organism, to the host and to the mode of use of each drug. However, it is clear that antimicrobial resistance may not necessarily be overcome by the lengthy process of continuously developing new antimicrobial compounds.

(6) To develop strategies for prevention of infections and containment of resistant pathogens, accurate surveillance systems generating valid, reliable and comparable data on incidence, prevalence and modes of spread of resistant micro-organisms as well as on prescription and use of antimicrobial agents must be established throughout the Community. They should form an essential component for an overall surveillance strategy to address the problem of antimicrobial resistance and in particular, to assess the potential link between the use of antimicrobial agents and the development of resistance among these pathogens.

(1) OJ C 195, 13.7.1999, p. 1.

(2) OJ C 407, 28.12.1998, p. 7.

Background

2001

- Prudent use of antimicrobial agents in human medicine
- Council Recommendation for Member States, 15 November 2001

2009

- Patient safety, including the prevention and control of healthcare associated infections
- Council Recommendation for Member States, 9 June 2009

2011

- Action plan against the rising threats from Antimicrobial Resistance
- Communication from the European Commission, 15 November 2011
 - *5-years action plan with 12 key actions reg. human and animal health*



Communication from the Commission to the European Parliament and the Council
Action plan against the rising threats from Antimicrobial Resistance



Objectives

- ❑ Assess the implementation, by Member States, of the Council Recommendation on the prudent use of antimicrobial agents in human medicine
 - Taking into account
 - Gaps underscored in previous reports
 - Publication of the Council Recommendation on patient safety
 - Current context – including EU Action Plan and international activities

Methods

- Questionnaire
 - Template based on
 - Provisions of the Council Recommendation
 - EU and Transatlantic Taskforce on Antimicrobial Resistance (TATFAR) activities
 - Emphasis on
 - Use of indicators to follow-up implementation of action plan and results
 - Control of multidrug-resistant (MDR) and extensively drug-resistant (XDR) bacteria
 - Antimicrobial stewardship activities in hospitals
 - Involvement of the nursing homes and other long-term care facilities (NH & LTCFs) sector

- Data collection
 - Questionnaire sent to the EU Health Security Committee: 31 EU/EEA countries (June-July 2015)

RESULTS

29 EU/EEA countries

Governance

□ National strategies and action plans

■ Strategy



■ Formal action plan in 21 countries

- Currently active action plan launched in 2014/15 in 12 countries

□ Intersectoral coordinating mechanism

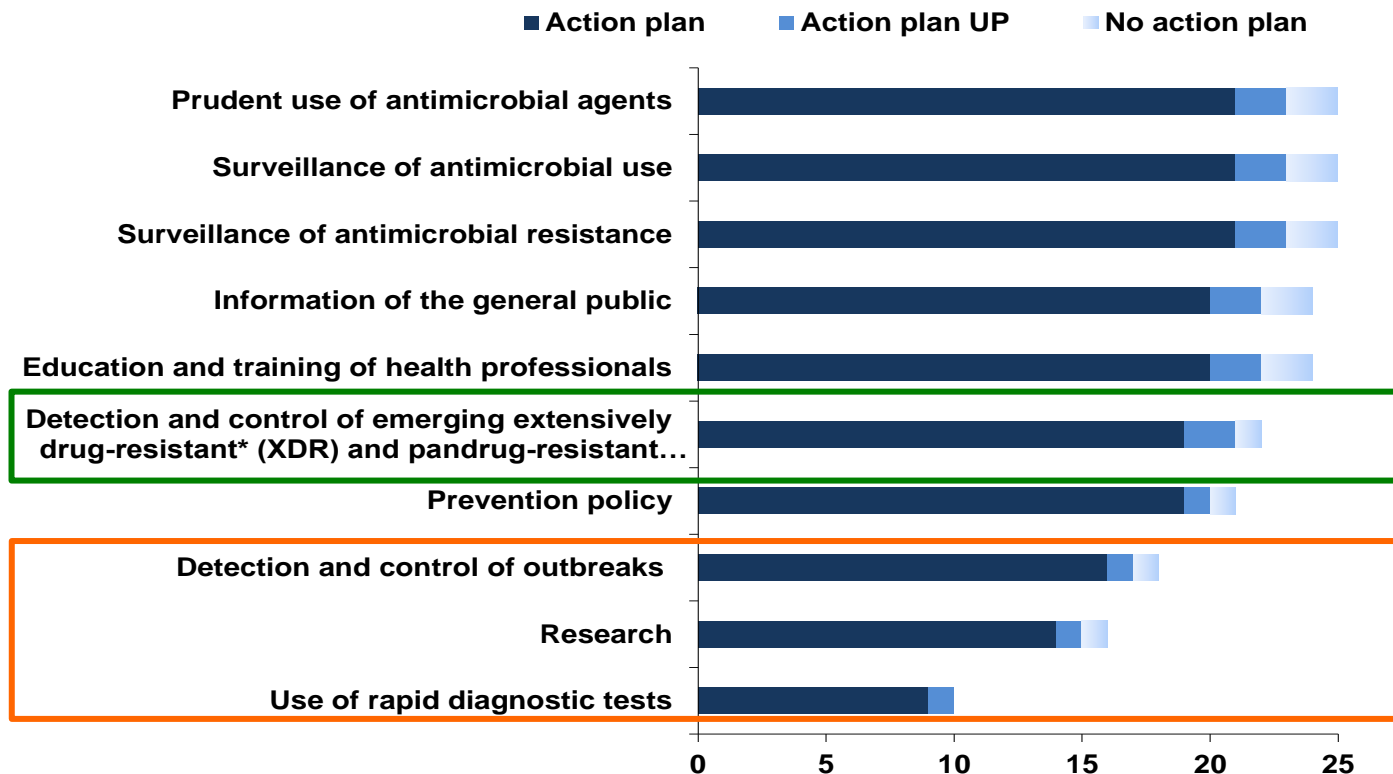
■ Composition



- Nursing homes (in 3 countries)
- Patient groups (4 and one under preparation)
- Nurses (9)

Governance: Action plan

- Content of the action plan/ activities in 25 countries



Surveillance of antimicrobial resistance

- ☑ European Antimicrobial Resistance Surveillance Network: All !
 - ☐ Additional national system in 26/29
 - Targets:
 - Carbapenem-resistant Enterobacteriaceae (CRE) in all 26
 - Extended-spectrum beta-lactamase-producing Enterobacteriaceae (ESBL-E) in 24/26
 - Scope:
 - Ambulatory care 20/26
 - Nursing homes and other long-term care facilities 13/26
 - ☐ Annual report: 22 countries
 - ☐ System for alert and early reporting
 - CRE in 19
 - Vancomycin-resistant enterococci (VRE) in 11

Surveillance of antimicrobial agents use

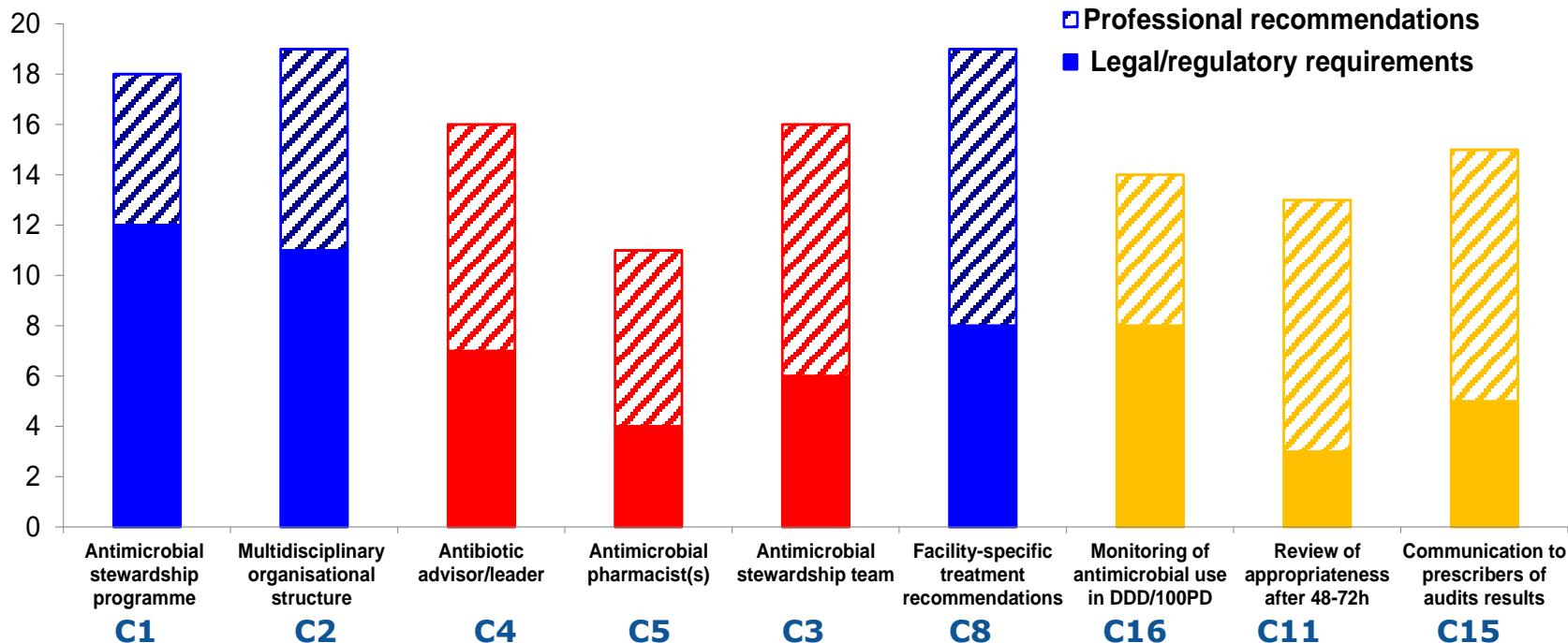
- ☑ European Surveillance of Antimicrobial Consumption Network: All !
- ☐ Additional national surveillance system: 19
 - Scope:
 - Hospital: 17
 - Ambulatory care: 17
 - Nursing homes and other long-term care facilities: 8
- ☐ Annual report: 18 countries
- ☒ Use of data
 - Prescribers: access to their individual data in 12 countries
 - Hospital data at hospital level (surveillance system) in 14 countries

Control and preventive measures

- ❑ Sales of antimicrobial agents without prescription
 - More than 1% in 8 countries
- ❑ Electronic prescriptions
 - Hospital sector: 14 countries – Ambulatory care: 13 countries
- ❑ Guidelines on prudent use of antimicrobial agents: 28/29
 - Endorsed by health authorities 22/28
 - Assessment of prescribers compliance 14/28
 - Assessment of impact on practices 8/28
 - Guidelines for NH<CFs 13/29
- ❑ Use of rapid diagnostic tests (RDT)
 - encouraged by the Government in 9 countries

Control and preventive measures

Antimicrobial stewardship in hospitals: 20 EU/EEA countries



Infection control

- ❑ Legal requirements or national recommendations for
 - Number of infection control nurses in hospitals: 19 countries
 - Number of infection control doctors in hospitals: 15 countries
 - Nursing homes: 2 for nurses; 1 for doctors

- ❑ Impact of infection control measures assessed
 - 13 countries in hospitals
 - 6 countries in nursing homes

Infection control

- ❑ Guidelines for the prevention and control of CRE in 18 countries (/26 with surveillance system)
 - Identification and screening of patients at risk: 18
 - Dedicated staff and cohorting: 18
 - Contact tracing: 17

- ❑ Communication on patient status / transfer
 - Required in 20 countries if intra-country transfer
 - Required in 11 countries if cross-border transfer

- ❑ Root-cause analysis of HAI: required in 14 countries
 - MDR infections/bacteraemia (5)
 - Outbreaks (3)
 - CPE/VRE infections/colonisations (2 each)

Public and healthcare professionals awareness

- Awareness raising campaigns 25/29
 - Positive impact of European Antibiotic Awareness Day (EAAD)
 - Design based on behavioural research: 7 countries
 - Professional audience
 - Medical doctors in 69%
 - Pharmacists in 48%
 - Dentists/nurses/midwives <20%
- Specific educational programme for school children: 9

Indicators

- ❑ Description of indicators used (or about to be used) by 18 countries to assess the implementation and/or the results of action plans
 - Indicators for hospitals: 18
 - Indicators for ambulatory care: 16
 - Indicators for NH<CFs: 9
- ❑ Indicators publicly available
 - At hospital level in 8 countries (+ UK: trust-level)
 - At NH<CFs level in 2 countries
- ❑ Specific targets defined in 8 countries

Indicators

Examples of indicators used in ambulatory care, in hospitals and in NH<CFs (N=18 countries)

Indicators	Ambulatory care sector (N=16)	Hospitals (N=18)	Nursing homes and other LTCFs (N=9)		
Outcome					
Antimicrobial resistance, MRSA bacteraemia, incidence	8	13	not publicly available at hospital level	2	not publicly available at facility level
		5	publicly available at hospital level	2	publicly available at facility level
Clostridium difficile infection, incidence	6	14	not publicly available at hospital level	5	not publicly available at facility level
		2	publicly available at hospital level	1	publicly available at facility level
Antimicrobial consumption	16	13	not publicly available at hospital level	3	not publicly available at facility level
		5	publicly available at hospital level	1	publicly available at facility level
Structure & Process					
Volume of alcohol hand rub used per year/ 1000 beds (or other denominator)	2	8	not publicly available at hospital level	1	not publicly available at facility level
		5	publicly available at hospital level	0	publicly available at facility level
Number of FTE of IC/HH professionals ^f / 1000 beds (or other denominator)		11	not publicly available at hospital level	1	not publicly available at facility level
		2	publicly available at hospital level	0	publicly available at facility level

Indicators

Examples of specific targets for indicators reported by eight countries

Sector	Indicator (current value where relevant)	Target	Timeline
Ambulatory care	Number of prescriptions/ 1000 inhabitants/ year (800 in 2015)	600 400	2020 2025
	Ratio amoxicillin to amoxicillin-clavulanic acid (50/50 in 2015)	80/20	2018
	Number of antibiotics prescribed by physician	Reduction $\geq 1\%$	2015/2016
Hospital	Duration of surgical prophylaxis < 24 hours	> 90% of cases	2015
	Percentage of treatments lasting more than 7 days without justification	< 10%	2016
	Total antibiotic use in number of DDD/ 1000 inhabitants/ day	25% reduction	2020
	Percentage of hospitals with antimicrobial stewardship reports	100%	2017
	Hand hygiene compliance by clinical staff	> 90%	2015
All sectors	Incorrectly prescribed antibiotics	50% reduction	2020

Discussion

□ Achievements

- Governance: strategy, action plan and implementation intersectoral / One Health approach
- Surveillance systems
- Awareness campaigns
- Integration of new concerns (CRE)

□ Room for improvement

- Governance and scope
 - Involvement of the general public and patient groups
 - NH & LTCFs sector
 - Coordination with HAI/patient safety programmes
- Evaluation of compliance AND effectiveness
- Alert and reporting
- Training of healthcare professionals other than medical doctors

❑ Need for new initiatives

- Variations among Member States
- High levels of antimicrobial resistance and of antimicrobial agents use in countries with comprehensive action plans
 - Best use of behavioural sciences (communication and implementation)
 - Research on effective implementation of antimicrobial stewardship activities

- Evaluation of EU action plan in 2016 ⇒ Next action plan 2017
 - Activities with EU-added value
 - *Support of Member States in the implementation and monitoring of their national action plans*
 - Increasing policy makers commitment to implement comprehensive strategies
 - Promotion of sharing experiences and best practices; provision of “ready-to-adapt” tools
 - Success of surveillance networks, EAAD, technical documents from the European centre for disease prevention and control (ECDC), TATFAR and ECDC indicators
 - EU guidelines on the prudent use of antimicrobials in human medicine to come (*ECDC, public consultation August 2016*)
 - *Innovation and research*
 - Rapid diagnostic tests, vaccines, alternatives to antimicrobials
 - Effectiveness of measures in different healthcare systems

Thank you for your attention

More information on DG Sante website, AMR pages



The screenshot shows the European Commission website's Antimicrobial Resistance (AMR) page. The page is titled "HEALTH AND FOOD SAFETY" and "Antimicrobial Resistance". The breadcrumb trail is "European Commission > DGs > Health and Food Safety > Antimicrobial Resistance". The "AMR" menu item is highlighted with a green circle. The page content includes a definition of AMR, its impact, and a list of latest news items.

European Commission > DGs > Health and Food Safety > Antimicrobial Resistance

HEALTH FOOD ANIMALS PLANTS **AMR**

ANTIMICROBIAL RESISTANCE

Action at EU Level

Action at a Global Level

Projects, Studies & Related Information

ALL TOPICS

TWITTER FEED

EU_Health @EU_Health

RT @EU_Brain: Very pleased to have Dr.Andrzej Rys @EU_Health #DGSanté contributions and conversations at today's board meeting <https://t.co/GkqQkqcc52>

6h

EU_Health @EU_Health

HEALTH AND FOOD SAFETY

Antimicrobial Resistance

Antimicrobial Resistance (AMR) is the ability of microorganisms to resist antimicrobial treatments, especially antibiotics. AMR not only has a **direct impact on human and animal health** - due to the failure in the treatment of infectious diseases - but also carries a heavy economic cost.

AMR is a natural phenomenon but an accumulation of factors, including **excessive and inappropriate use of antimicrobial medicines on humans and animals** and **poor infection control practices**, transformed AMR into a serious threat to public health worldwide.

This leads to:

- **increasing healthcare costs**
- **prolonged hospital stays**
- **treatment failures**
- **a significant number of deaths**

Global consumption of antibiotics in human medicine **rose by nearly 40% between 2000 and 2010** (UK Report).

In the US alone, "**more than two million people are sickened every year with antibiotic-resistant infections, with at least 23,000 dying as a result**" (data from [Health Care for the Community, 2014](#)).

LATEST NEWS

- ▶ [Health-EU Newsletter - Antimicrobial Resistance](#)
- ▶ [Leading the fight against Antimicrobial Resistance: New Action Plan to be launched in 2017](#)
- ▶ [Flash report - Audio conference of the Health Security Committee \(HSC\) \(27 October 2016\)](#)
- ▶ [Speech by EU Commissioner for Health and Food Safety Vytenis Andriukaitis at the 71st UN General Assembly, high-level meeting on antimicrobial resistance \(21 September 2016\)](#)
- ▶ [United Nations high-level meeting on antimicrobial resistance \(21 September 2016\)](#)

