

# Quelle politique antibiotique pour l'Europe ?

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## Resistance to antibiotics as a threat to public health



**Opinion of the Section for  
Protection of the Environment,  
Public Health and Consumer Affairs  
of the Economic & Social Committee  
of the European Communities on  
*Resistance to Antibiotics  
as a Threat to Public Health*  
(own initiative opinion)**

July 1998



Ministry of Health  
Ministry of Food,  
Agriculture and Fisheries  
Denmark



## **The Copenhagen Recommendations**

*Report  
from the Invitational EU Conference on*

## **The Microbial Threat**

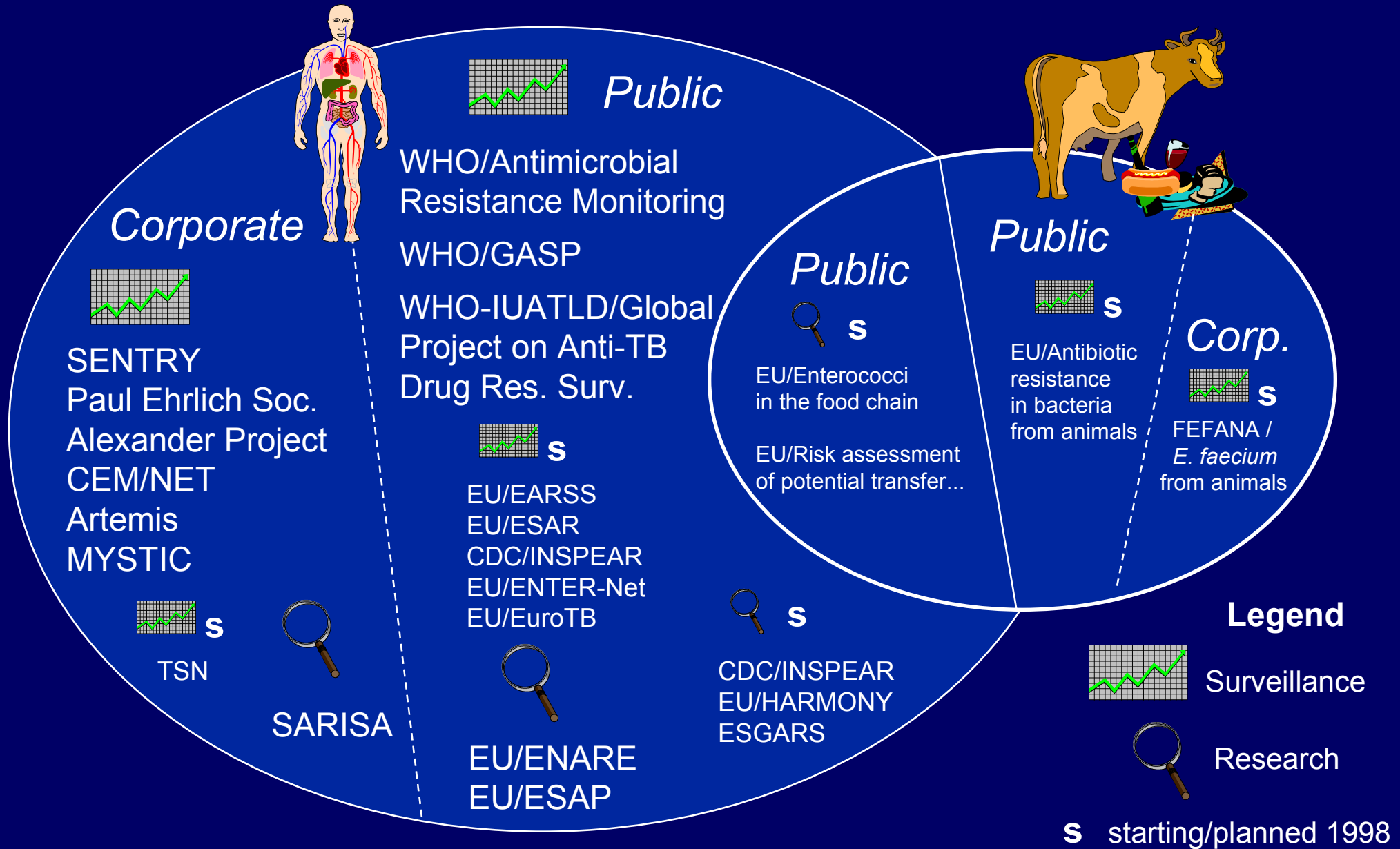
*Copenhagen, Denmark  
September 1998*

*Health of the population:  
Strategies to prevent and control the emergence and  
spread of antimicrobial-resistant micro-organisms*

## **EU Conference on the Microbial Threat, Copenhagen**

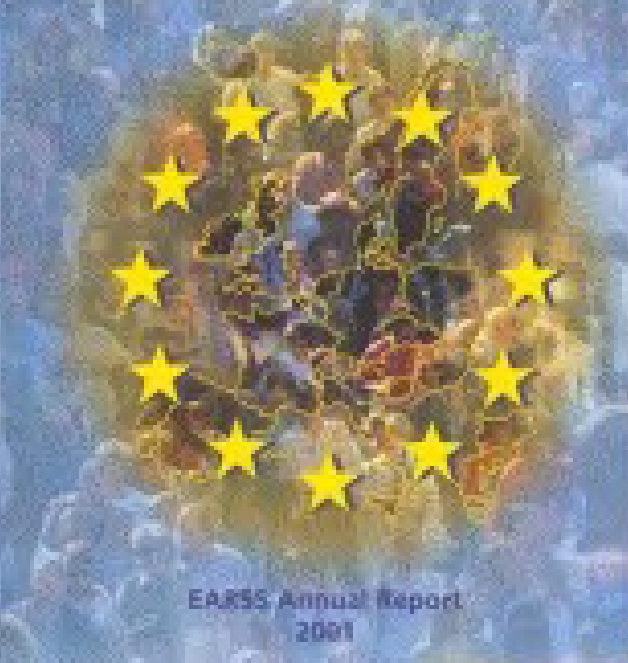
September 1998

# Surveillance of Antimicrobial Resistance in Europe, 1998





European Antimicrobial Use and Surveillance System



EARSS Annual Report  
2001

EARSS



# European Surveillance of Antimicrobial Consumption

November 2001 - November 2002

## INTERIM REPORT



# European Surveillance of Antimicrobial Consumption

Results of the  
Retrospective Data Collection

1997-2001

Posters presented  
at ECCMID,  
Glasgow, 2002



ESAC



## ANTIMICROBIAL RESISTANCE RESEARCH

1999 - 2002

novel and extended spectra



SCIENTIFIC REPORTS

## Antimicrobial resistance research



Quality of life and resistance in using antibiotics

Annual Report  
EARSS - 2000

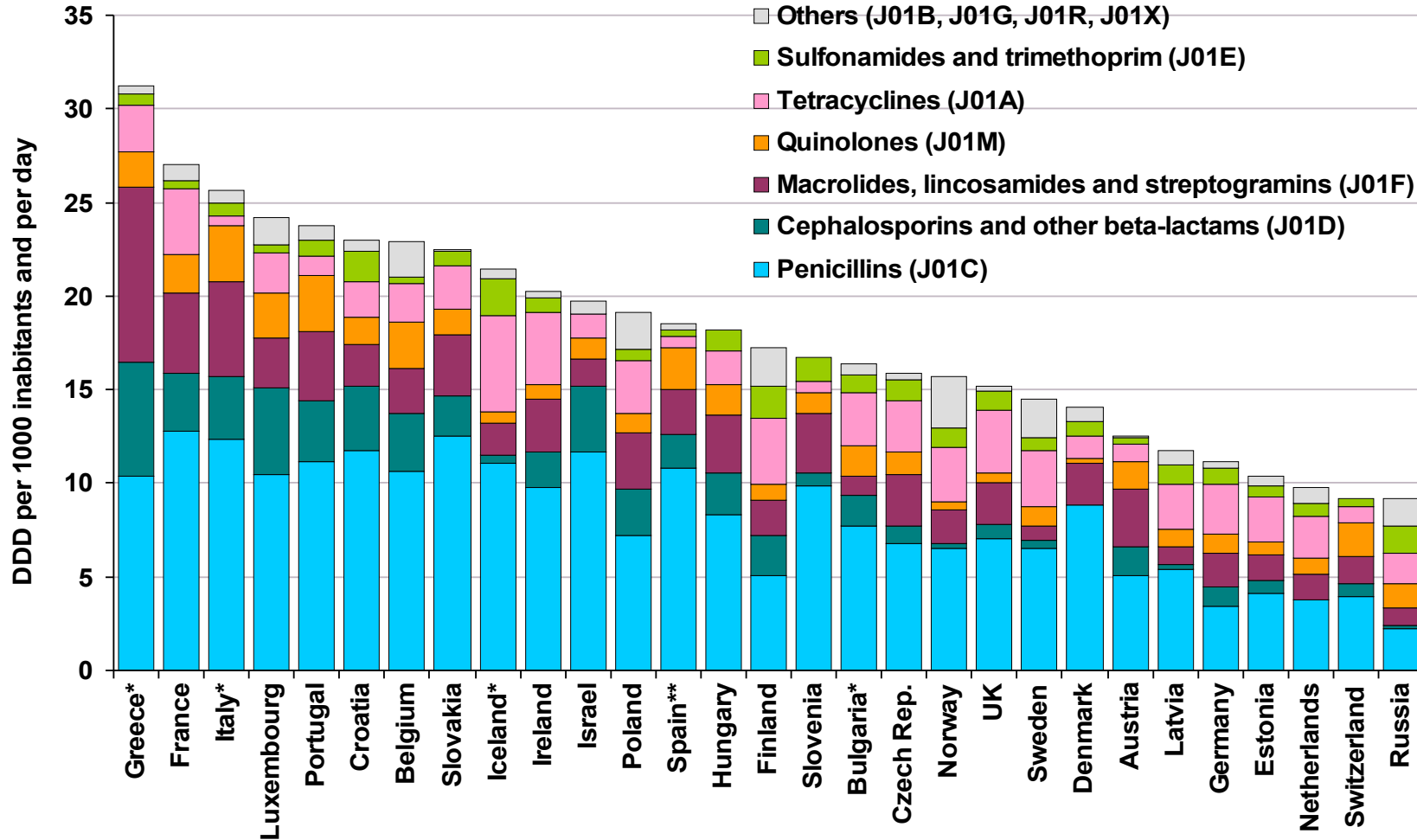
Edited by the European Commission (DG SANCO)

EARSS

www.eurosurveillance.org



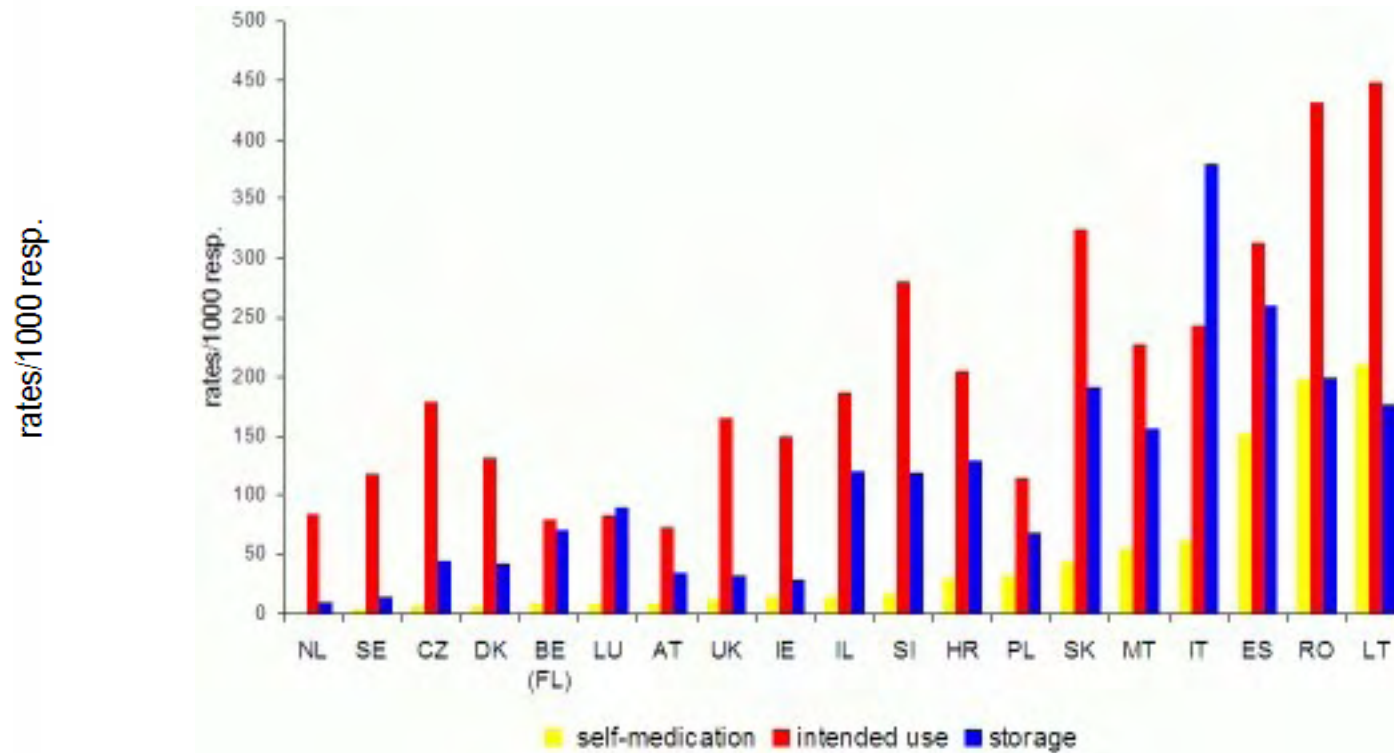
# TOTAL OUTPATIENT ANTIBIOTIC USE (ATC J01) IN 29 EUROPEAN COUNTRIES, 2004



\*Total use for Iceland and Bulgaria, 2003 data for Greece and Italy.

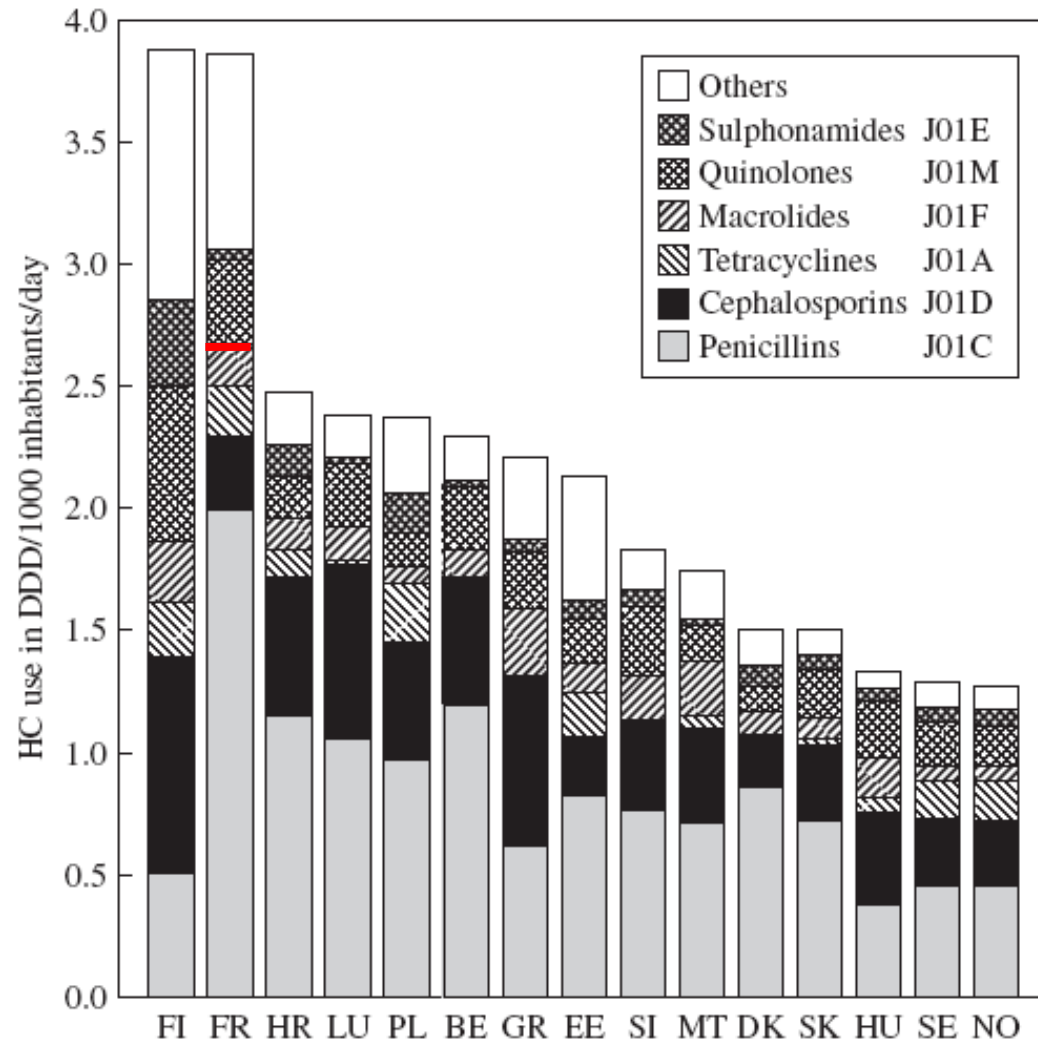
\*\*Reimbursement data, which do not include over-the-counter sales without a prescription.

# Actual and 'At Risk' Self-medication With Antibiotics in 19 European Countries



Adapted from: Grigoryan L, et al. Emerg Infect Dis 2006;12:452-9.

# TOTAL HOSPITAL ANTIBIOTIC USE (ATC J01) IN 15 EUROPEAN COUNTRIES, 2002



- For Finland:
  - Data include primary care centres and nursing homes
- For France:
  - IV amoxicillin-clavulanic acid was calculated with the oral DDD (1g) instead of the parenteral DDD (3g)...
  - Oral metronidazole (not in ATC J01) was included...
  - When corrected, total hospital use was only 2.67 DDD/1000 inhab.-days (**red line**)





DA

DANMAP  
2003

A Report on Swedish  
Antibiotic Utilization  
and Resistance in  
Human Medicine

SWEDRES  
2003

2003

**NORM  
NORM-VET**

Usage of Antimicrobial  
Agents and Occurrence of  
Antimicrobial Resistance  
in Norway

**NETHMAP  
2004**

Consumption of antimicrobial agents and  
antimicrobial resistance  
among medically important bacteria  
in the Netherlands

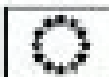
rivm

rivm

ORFID

# Steps Towards a European Antibiotic Policy

- July 1998: "Opinion of the Economic & Social Committee on Resistance to Antibiotics as a Threat to Public Health"
- May 1999: "Opinion of the Scientific Steering Committee on Antimicrobial Resistance"
- June 1999: European Council of Ministers adopted a resolution on Antimicrobial Resistance "The Strategy Against the Microbial Threat"  
[http://europa.eu.int/eur-lex/pri/en/oj/dat/1999/c\\_195/c\\_19519990713en00010003.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/1999/c_195/c_19519990713en00010003.pdf)
- June 2001: European Commission proposed a "Community Strategy Against Antimicrobial Resistance"
- **November 2001: European Council of Ministers adopted a "Recommendation on the Prudent Use of Antimicrobial Agents in Human Medicine"** [http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l\\_034/l\\_03420020205en00130016.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l_034/l_03420020205en00130016.pdf)
- **EU Public Health Programme (2003-2008):** activities should support the "European Community Strategy Against Antimicrobial Resistance"



Brussels, 20.06.  
C(1988)2041/10

VOLUME I

COMMUNICATION FROM THE COMMISSION  
ON A COMMUNITY STRATEGY AGAINST ANTIBIOTIC RESISTANCE

THE COUNCIL OF THE EUROPEAN COMMUNITIES

1. CONSIDERING that antibiotic resistance is a major public health problem;

2. RECOGNISING that a high level of action is to be required in the field of antibiotic resistance in order to protect the health of the Community's citizens and animals;

3. CONSIDERING that antibiotic resistance is a major public health problem and that the Commission should take the necessary steps to ensure that the health of the Community's citizens and animals is protected;

4. DECIDING that the Commission should be empowered to take the necessary steps to ensure that the health of the Community's citizens and animals is protected;

5. DECIDING that the Commission should be empowered to take the necessary steps to ensure that the health of the Community's citizens and animals is protected;

6. DECIDING that the Commission should be empowered to take the necessary steps to ensure that the health of the Community's citizens and animals is protected;

7. DECIDING that the Commission should be empowered to take the necessary steps to ensure that the health of the Community's citizens and animals is protected;

8. DECIDING that the Commission should be empowered to take the necessary steps to ensure that the health of the Community's citizens and animals is protected;

9. DECIDING that the Commission should be empowered to take the necessary steps to ensure that the health of the Community's citizens and animals is protected;

I

(Act which pertains to the subject)

COUNCIL

COMES RECOMMENDING

of 13 November 1988

on the problem of antibiotic resistance in human medicine  
and the role of the Commission

(1988/1774)

THE COUNCIL OF THE EUROPEAN COMMUNITIES

Noting that antibiotic resistance is a major public health problem and that the Commission should take the necessary steps to ensure that the health of the Community's citizens and animals is protected;

Having regard to the Treaty establishing the European Community, and in particular Article 117(1) thereof;

Having regard to the proposal from the Commission;

4. The Commission's opinion of the Economic and Social Committee on the Commission's initiative to set up a public health centre for antibiotic resistance and action that should be taken in the field of antibiotic resistance to address the problem of antibiotic resistance.

Whereas

1) antibiotic resistance is a major public health problem and that the Commission should take the necessary steps to ensure that the health of the Community's citizens and animals is protected;

5. There is an association between the growing use of antibiotics and the increasing incidence of antibiotic resistance in human medicine. This is a major public health problem and the Commission should take the necessary steps to ensure that the health of the Community's citizens and animals is protected.

2) The use of antibiotics has greatly contributed to improvements in public health. Antibiotic agents have been instrumental for decades in curing and preventing disease and increasing longevity. They are the most important of all drugs in the treatment of infectious diseases. The use of antibiotics has also contributed to the control of infectious diseases in human medicine and farm animals and aquatic stocks.

6. To develop strategies for prevention of antibiotic resistance in human medicine, it is necessary to ensure that the use of antibiotics is controlled and that the development of antibiotic resistance is prevented.

3) The Council of the European Communities has adopted a resolution on antibiotic resistance in human medicine and the Commission should take the necessary steps to ensure that the health of the Community's citizens and animals is protected.

# European Centre for Disease Prevention and Control

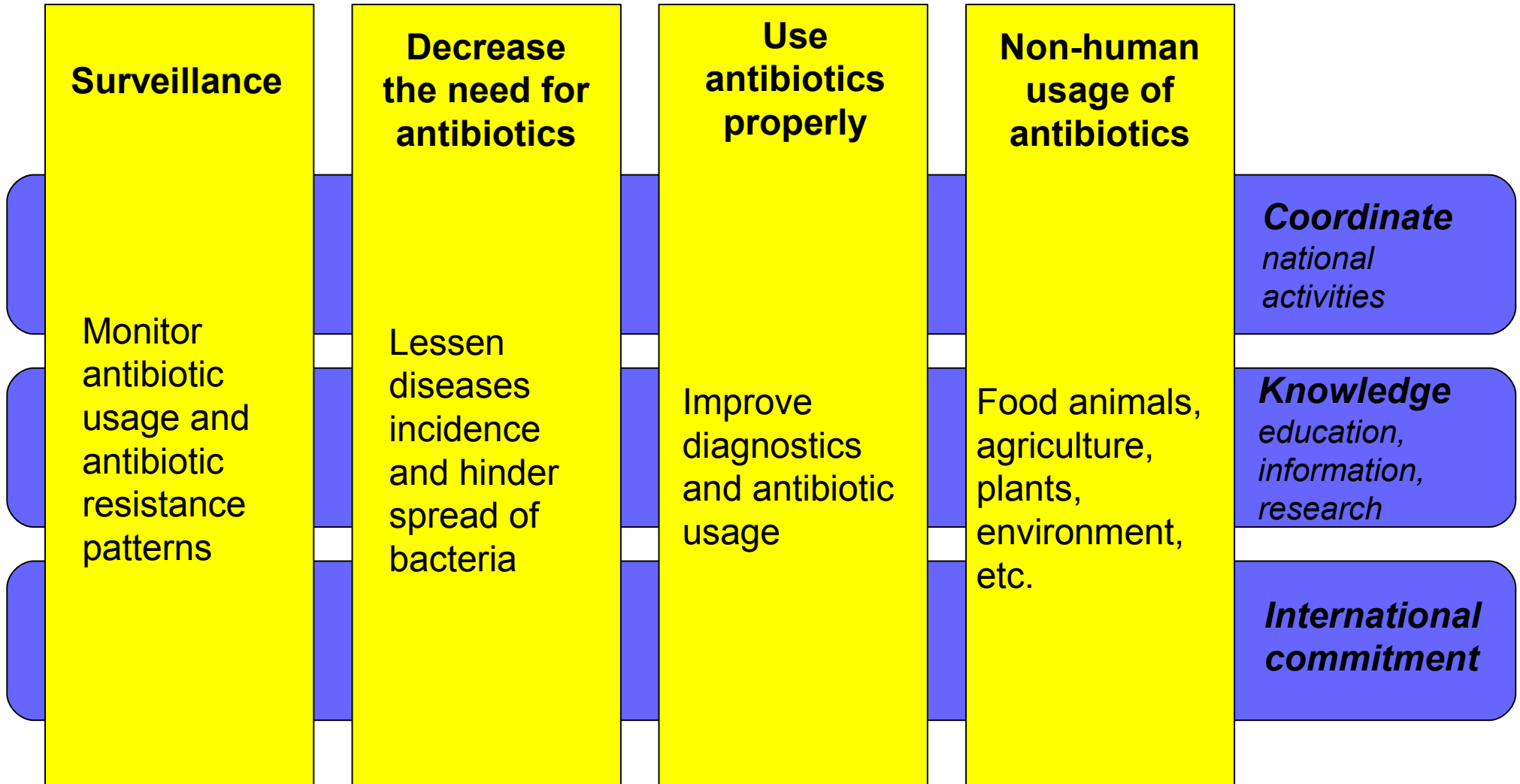


[www.ecdc.europa.eu](http://www.ecdc.europa.eu)

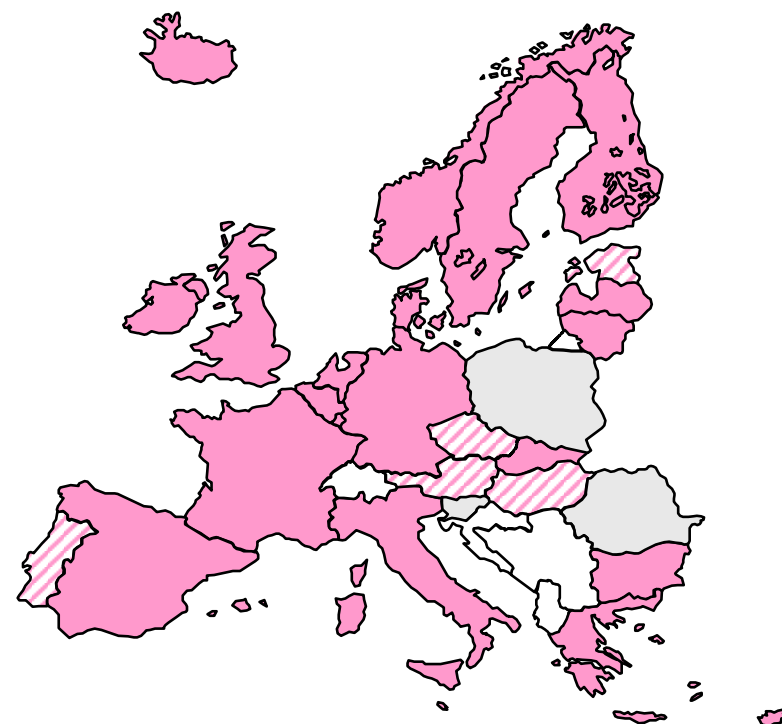
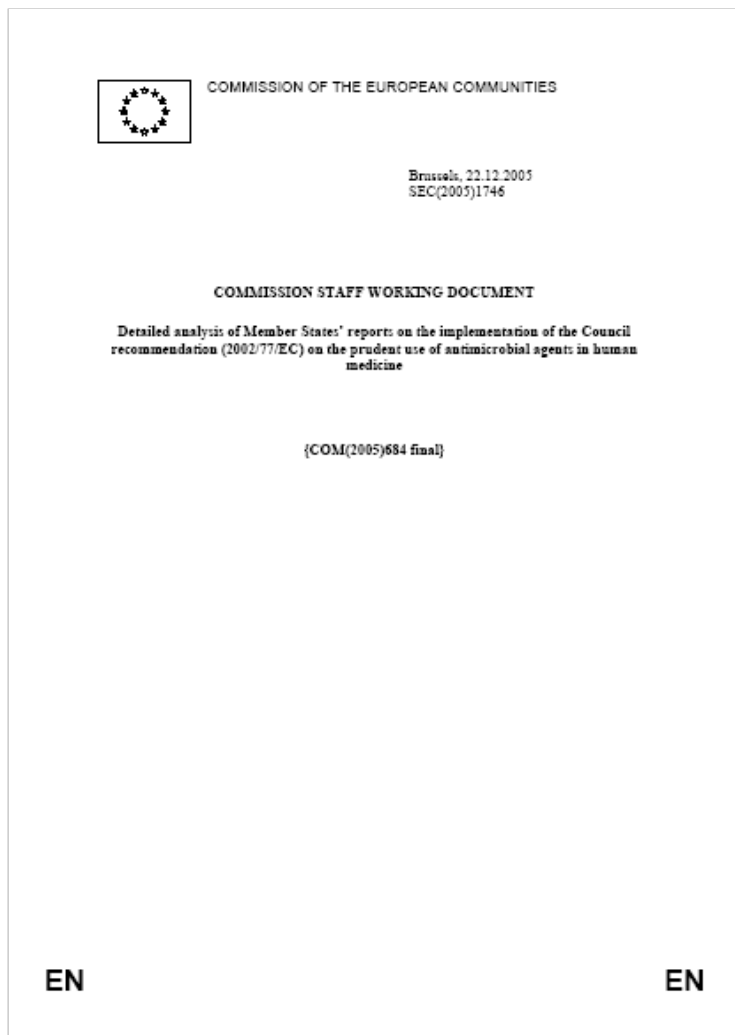
- **July 2003:** Proposal from the European Commission to establish an ECDC
- **December 2003:** Council Decision that Sweden will host the ECDC
- **April 2004:** Regulation 851 establishing the ECDC  
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32004R0851:EN:NOT>
- **May 2005:** ECDC operational
- **October 2005:** Move to own facilities at Tomtebodan
- **2007:** Evaluation of the possible need to extend the scope of ECDC's mission



# Basic Principles of AMR Prevention and Control



# Intersectoral Co-ordinating Mechanism (as of 2003)



# National Action Plan on AMR (as of 2003)



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 22.12.2005  
SEC(2005)1746

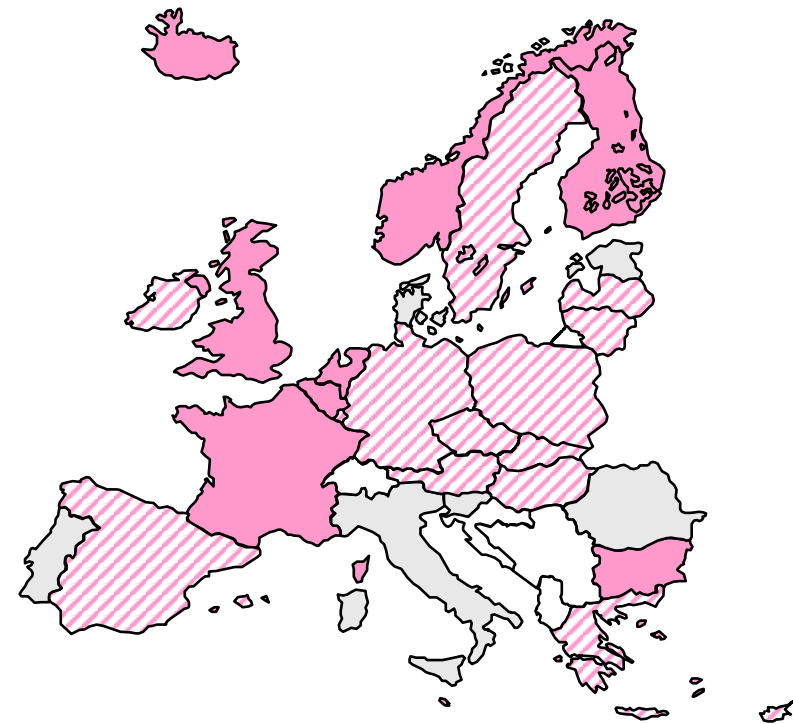
COMMISSION STAFF WORKING DOCUMENT

Detailed analysis of Member States' reports on the implementation of the Council recommendation (2002/77/EC) on the prudent use of antimicrobial agents in human medicine

{COM(2005)684 final}

EN

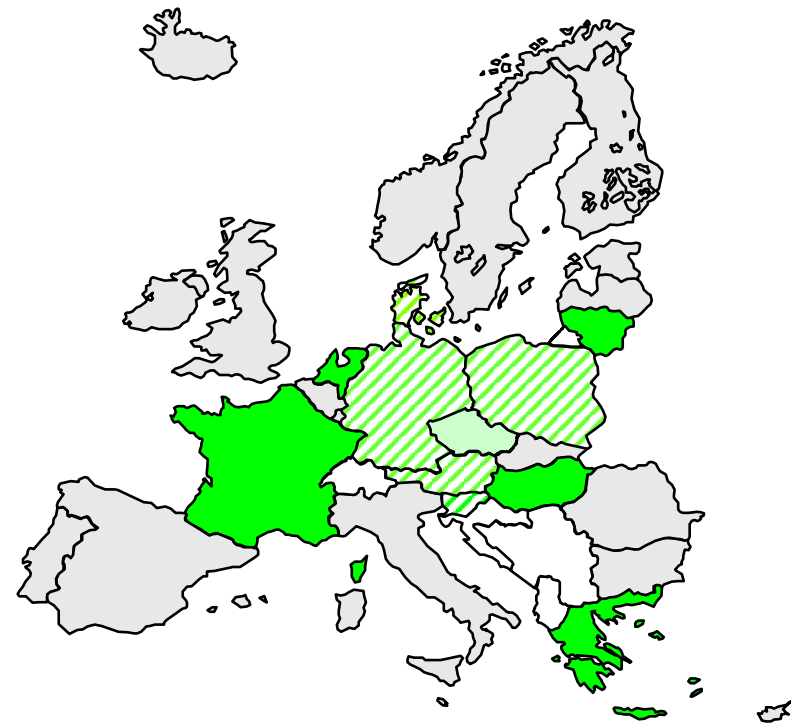
EN





# AMR country visits

1. Development of a Member State Coordinating Group
2. Organized multidisciplinary and multisectoral collab. on local level
3. Laboratory capacity
4. Monitoring of antibiotic resistance
5. Monitoring of antibiotic usage
6. Antibiotic utilization and treatment guidance
7. Infection control
8. Educational programs on AMR
9. Public information related to AMR
10. Marketing related issues



# First European Communicable Disease Epidemiological Report



## The First European Communicable Disease Epidemiological Report

Editors:  
Andrew Amato-Gauci and  
Andrea Ammon

Stockholm, 7 June 2007

European Centre  
for Disease Prevention and  
Control

The European Communicable Disease Epidemiological Report is also available as an Executive Summary and a Highlights version. As updates have been received up to the 5 June 2007, this full version is the authoritative final version.

[www.ecdc.europa.eu](http://www.ecdc.europa.eu)

# Global Patient Safety Challenge 2005-2006

## European countries committed to address HCAI





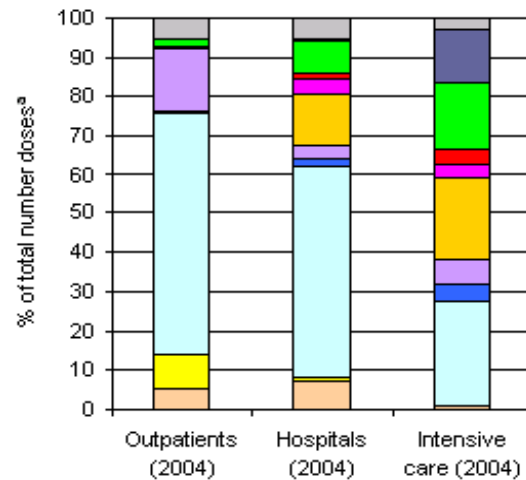
# A Plausible Scenario for... DoomDay 01/01/2015?

- ✂➤ use of quinolones in the community (RTI, UTI)
- ✂➤ use of new cephalosporins to treat community MRSA
- ✂➤ cephalosporin resistance (e.g. ESBL) in community GNB
- ✂➤ use of oral carbapenems in the community
- ✂➤ carbapenem resistance in community GNB
- **What will be left for hospitalized patients?**

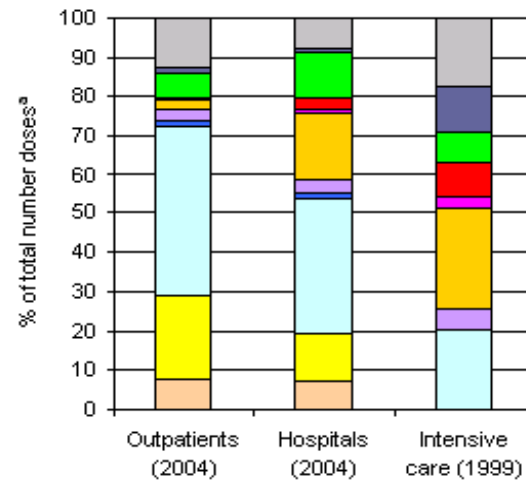


# Distribution of Antibacterial-Drug Use in the Different Compartments of Health Care in 4 European Countries

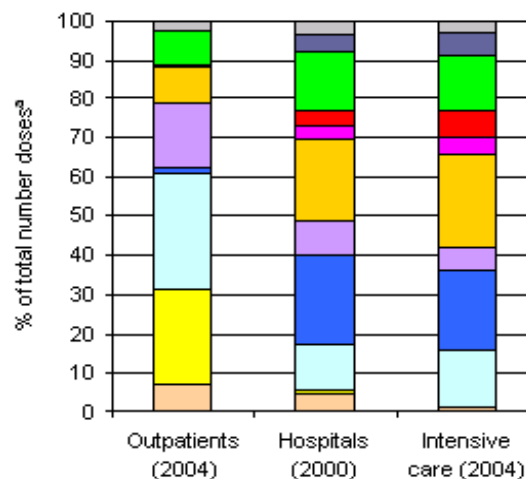
a. Denmark



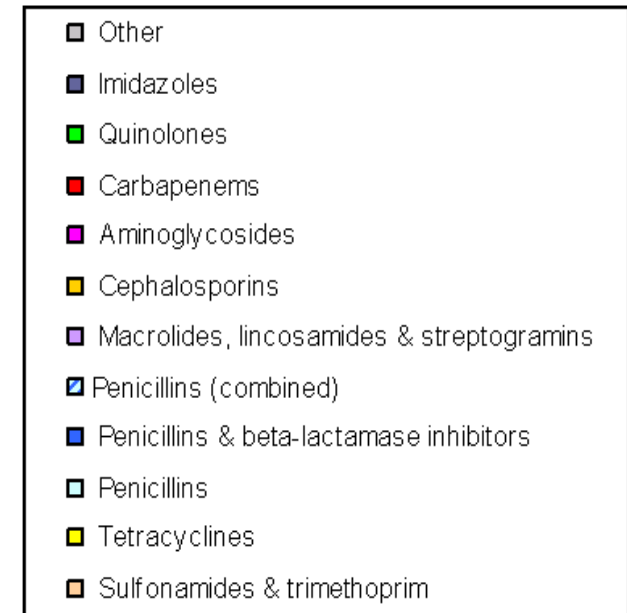
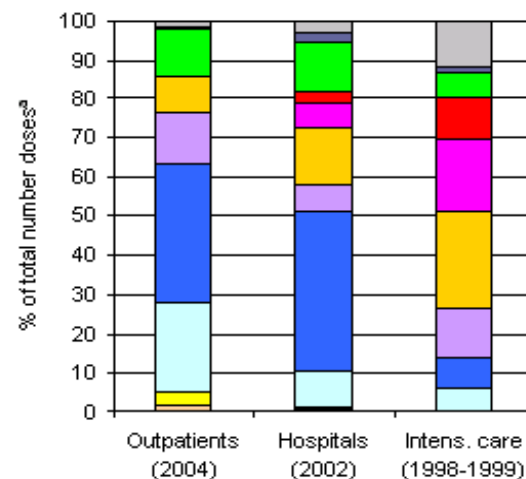
b. Sweden



c. Germany



d. Spain



aWHO-Defined Daily Doses  
except Spain, intensive care:  
Days of Therapy



Outpatients

H

Op.  
Room

Wards

ICU

Therapy C-A SSTI

Surgical  
prophylaxis

Therapy C-A sepsis

Ther. CAP

Therapy sepsis (non-ICU)

Therapy post-op.  
SSI

Therapy sepsis (ICU)

Therapy C-A RTI

Ther. CAP

Ther. VAP

Therapy C-A UTI

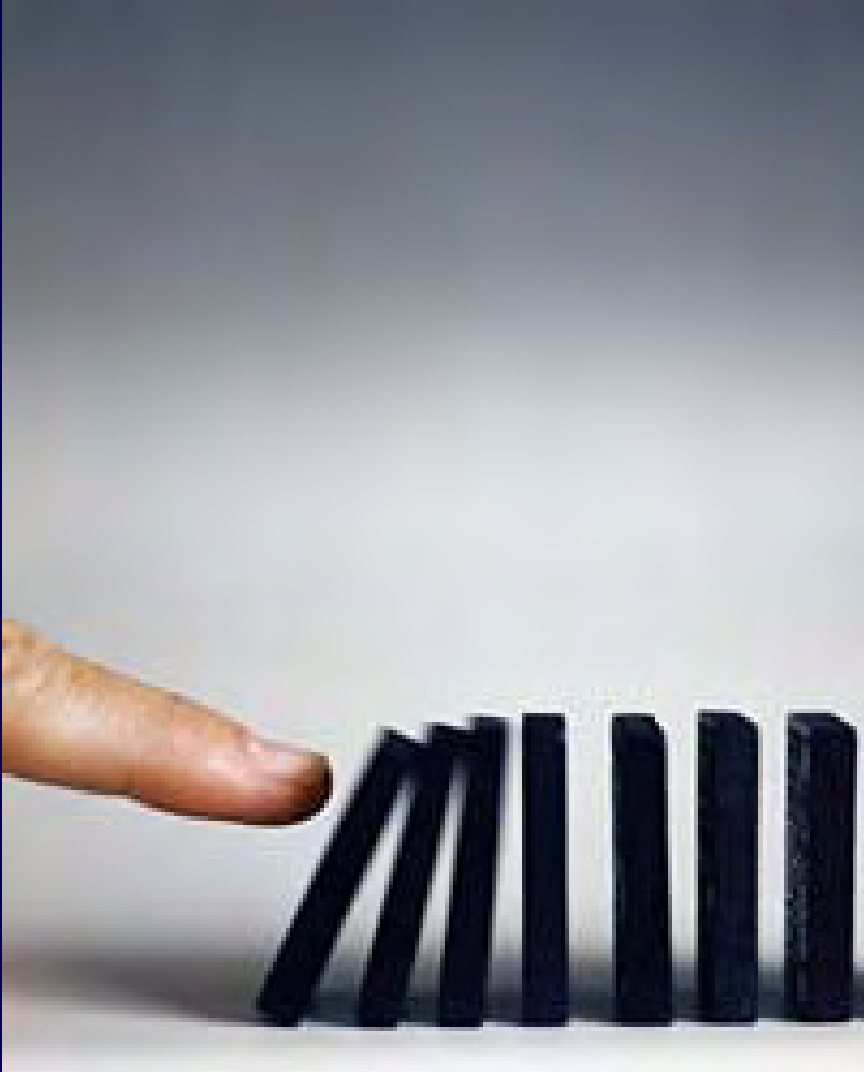
Ther. H-A  
UTI

Ther. ICU-A  
UTI

Ther. KT-A bacteremia

Therapy STD

# Domino Effect?



- ✂ ↘ unnecessary use and narrow spectrum of antibiotics used in the community
- ✂ ↗ vaccination coverage
- ✂ ↘ resistance in *S. pneumoniae*
- ✂ ↘ need for 3rd-generation cephalosporins for treatment of, e.g. CAP in hospitals
- The most potent antibiotics can then be reserved for the most severe patients