Quelle politique antibiotique pour l’Europe ?

Dominique L. Monnet
National Center for Antimicrobials & Infection Control
Statens Serum Institut, Copenhagen, Denmark
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
EU Conference on the Microbial Threat, Copenhagen

September 1998

http://www.im.dk/publikationer/micro98/index.htm
Surveillance of Antimicrobial Resistance in Europe, 1998

Corporate

- SENTRY
- Paul Ehrlich Soc.
- Alexander Project
- Artemis
- MYSTIC

Public

- WHO/Antimicrobial Resistance Monitoring
- WHO/GASP
- WHO-IUATLD/Global Project on Anti-TB Drug Res. Surv.

Public

- EU/Enterococci in the food chain
- EU/Risk assessment of potential transfer...

Public

- EU/Antibiotic resistance in bacteria from animals
- FEFANA / E. faecium from animals

Legend

- Surveillance
- Research
- S starting/planned 1998
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

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)
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"
- 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"
- EU Public Health Programme (2003-2008): activities should support the "European Community Strategy Against Antimicrobial Resistance"
European Centre for Disease Prevention and Control

- **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

- **May 2005**: ECDC operational

- **October 2005**: Move to own facilities at Tomteboda

- **2007**: Evaluation of the possible need to extend the scope of ECDC’s mission
Basic Principles of AMR Prevention and Control

**Surveillance**
- Monitor antibiotic usage and antibiotic resistance patterns

**Decrease the need for antibiotics**
- Lessen diseases incidence and hinder spread of bacteria

**Use antibiotics properly**
- Improve diagnostics and antibiotic usage

**Non-human usage of antibiotics**
- Food animals, agriculture, plants, environment, etc.

---

Coordinate national activities

Knowledge education, information, research

International commitment
Intersectoral Co-ordinating Mechanism (as of 2003)

Commission of the European Communities

Brussels, 20.11.2001
SEC(2003)1746

Commission Staff Working Document

Detailed analysis of Member States' reports on the implementation of the Council recommendation (2001/979/EC) on the prudent use of veterinary drugs in livestock

[COM(2003)684 final]
National Action Plan on AMR
(as of 2003)
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
The First European Communicable Disease Epidemiological Report

Editors: Andrew Amato-Gaubi and Andrea Ammon

Stockholm, 7 June 2007

European Centre for Disease Prevention and Control

www.ecdc.europa.eu
European countries committed to address HCAI
<table>
<thead>
<tr>
<th>Category</th>
<th>Task</th>
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</thead>
<tbody>
<tr>
<td><strong>Surveillance</strong></td>
<td>Consolidate existing surveillance systems (EARSS, ESAC, HELICS), incl. case definitions</td>
</tr>
<tr>
<td><strong>Ad-hoc studies</strong></td>
<td>Eff. reduc. use (Eurobarometer)</td>
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<tr>
<td></td>
<td>Extent of pan-R micr.</td>
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<tr>
<td><strong>Capacity building</strong></td>
<td>National focal point meetings (2 / year)</td>
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<tr>
<td></td>
<td>Country visits (5-10 / year)</td>
</tr>
<tr>
<td><strong>Communic.</strong></td>
<td>European AMR Awareness Day</td>
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<td>Pat. safety (WHO)</td>
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<tr>
<td><strong>Training</strong></td>
<td>EU training program on control of MDR microorganisms (start with curriculum)</td>
</tr>
<tr>
<td><strong>Guidelines &amp; reports</strong></td>
<td>CA-MRSA Guid. AST OTC</td>
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<td></td>
<td>Need for new antimicrob.</td>
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<tr>
<td><strong>Regulatory</strong></td>
<td></td>
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<tr>
<td><strong>Technical solutions</strong></td>
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</tbody>
</table>
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

- Other
- Imidazoles
- Quinolones
- Carbapenems
- Aminoglycosides
- Cephalosporins
- Macrolides, lincosamides & streptogramins
- Penicillins (combined)
- Penicillins & beta-lactamase inhibitors
- Pencillins
- Tetracyclines
- Sulfonamides & trimethoprim

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