



European Surveillance of Antimicrobial Consumption (ESAC)

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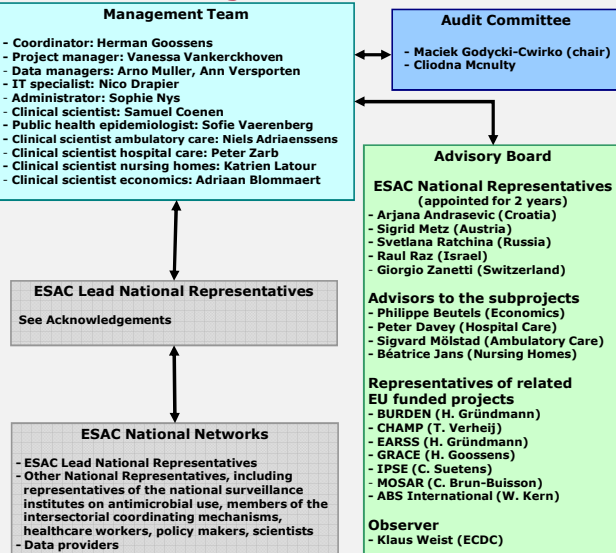
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Outpatient and hospital antimicrobial use in Europe in 2009

Background

The European Surveillance of Antimicrobial Consumption (ESAC) project, launched in 2001, is currently funded by the European Centre for Disease Prevention and Control (ECDC) to continue the collection of antimicrobial use data in Europe from September 2007 until June 2011.

The ESAC Management Structure anno 2011



Methods

Data on systemic antimicrobial use in 2009, aggregated at the level of the active substance were collected using the ATC/DDD methodology (version 2010) and expressed in DDD per 1000 inhabitants per day (DID) from the 35 participating countries (27 member states, 3 applicant countries and 5 others). The ESAC methodology is described in detail in the Br J Clin Pharmacol 2004;58:419-28.

Results

Outpatient use

- Antibiotics

Outpatient and total antibiotic (ATC J01) use data were provided by 29 and 2 countries, respectively. Use varied with a factor of 3.7 between the countries with the highest (38.6 DID in Greece) and lowest (10.2 DID in Romania) use (fig.1,2). The median use [interquartile range] was 19.0 [15.1-23.1] DID, respectively. The proportion of penicillin use ranged from 28.7% in Germany to 66.0% in Slovenia.

- Antivirals

Outpatient and/or hospital direct acting antivirals for systemic use (J05A) data were reported by 24 countries (fig.3). Use varied with a factor 10.2 between the country with the highest (4.8 DID in Latvia) and lowest (0.47 DID in Malta) use. A high variation in use is observed within and between the different chemical subgroups of J05A. This is consistent with results found for previous years. Use of oseltamivir (J05AH02) in Europe increased from a median of 0.001 (maximum of 0.357) DID in 2008 to 0.104 (0.980) DID in 2009, the year of the A/H1N1 pandemic, respectively.

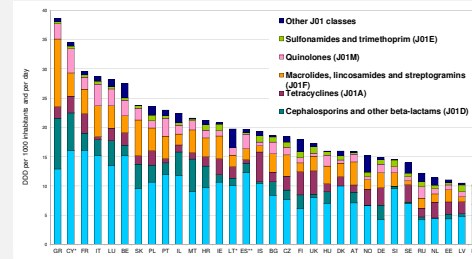


Figure 1: Outpatient antibiotic use in 2009 in 32 European countries
* Total care (outpatient + hospital settings)
** Reimbursement data without DTC sales

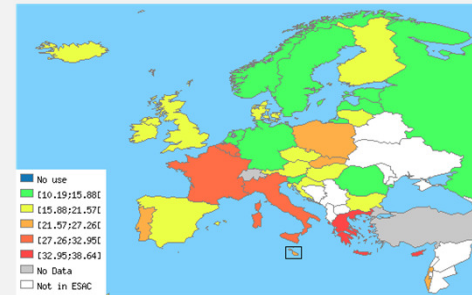


Figure 2: Outpatient antibiotic use in 2009 in Europe

Hospital Use

- Antibiotics

Hospital antibiotic consumption data were provided by 19 countries. During the ESAC surveillance, the number of countries reporting antibacterials for systemic use in hospital settings increased. Hospital use varied with a factor of 2.6 between the countries with the highest (3.3 DID in Greece) and lowest (1.3 DID in Hungary) use (fig.5). The country specific proportions of penicillin's and cephalosporin's use ranged from 19.7% in the Russian Federation to 55.7% in France; and 9.0% in Ireland to 44.5% in Bulgaria respectively.

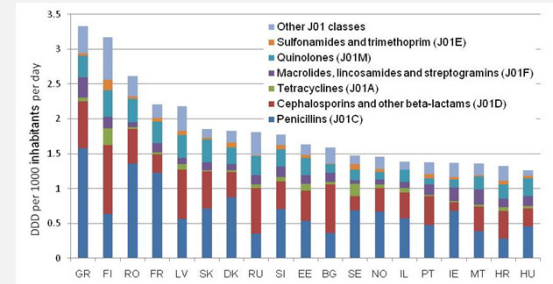


Figure 5: Hospital antibiotic use in 2009 in 19 European countries

- Antimycotics and Antifungals

Outpatient antimycotic and antifungal (ATC J02 & D01B) use data were provided by 27 (fig.4). Use varied with a factor 9.8 between the country with the highest (3.24 DID in Belgium) and lowest (0.33 DID in Romania) use. Out of 25 countries reporting terbinafine (D01BA02), its use represented more than 50% of the total antimycotic and antifungal use in 19 and more than 75% in 5 countries.

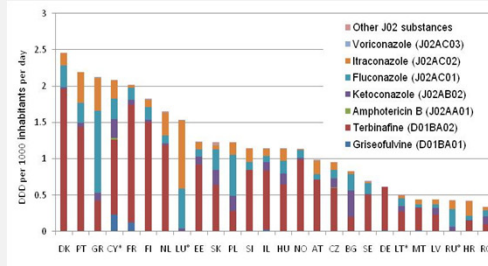


Figure 4: Outpatient antimycotic and antifungal use in 2009 in 26 European countries
* Total care (outpatient + hospital settings)
* no D01B data available

Conclusions

The ESAC database is completed with 2009 data on antibiotic, antimycotic/antifungal and antiviral use in Europe. Antimicrobial use in Europe in DID seems to be increasing. More and more countries have implemented or continue to implement actions to control antimicrobial resistance through rational use of antibiotics. The impact of these actions will be monitored, using DID and other indicators of antibiotic use.

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The ESAC interactive database

A new, easier to use interactive ESAC database containing antibiotic use data for the participating European countries is available on our website. You can explore the database in 3 ways:

1. By comparing countries for one year
2. By comparing yearly trends for one country
3. By visualising maps of Europe
4. New: drug-specific quality indicators

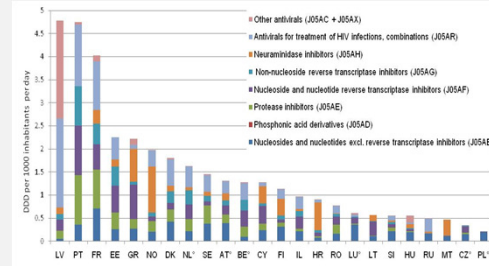
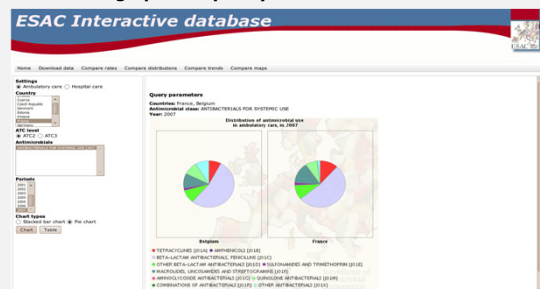


Figure 3: Total antiviral use (outpatient + hospital care) in 2009 in 24 European countries.
* AC use only

For more information please consult the ESAC website: www.esac.ua.ac.be

