

Strategies on Control of MDRO in Europe

Herman Goossens

Vaccine & Infectious Disease Institute

University of Antwerp

Belgium

Chair of the Technical Advisory Committee of
the EAAD

ECDC, Stockholm

Sweden



Outline



- Problems of antibiotic (ab)use and resistance in Europe
- Towards a European antibiotic policy
 - First steps
 - Member States initiatives
- National and European campaigns
 - On prudent antibiotic use
 - On hand hygiene in hospitals
- Towards a Global policy
 - Transatlantic Task Force for Antimicrobial Resistance (TATFAR)
 - World Health Day, April 7th 2011



**"If you cannot
measure it,
you cannot
improve it"**

**Lord Kelvin,
1824-1907**



ESAC: European Surveillance of Antimicrobial Consumption

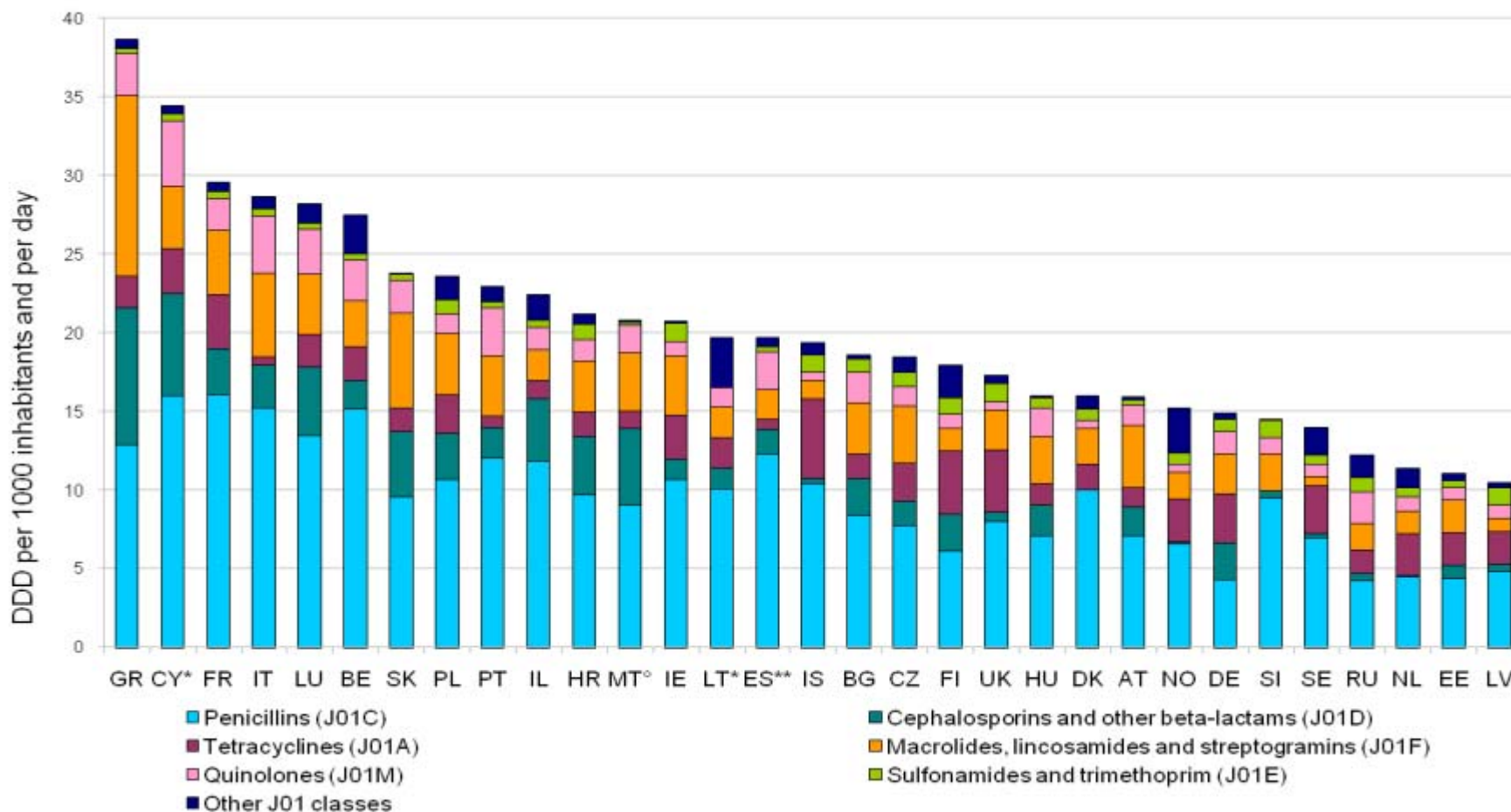


- Launched in November 2001 (Belgian EU Presidency)
- ESAC is an international network of surveillance systems, aiming to maintain a continuous, comprehensive and comparable database on antimicrobial consumption for all Member States candidate countries and EFTA-EEA countries
- Coordinator: Herman Goossens (UA)
- Funding organisation: DG SANCO of EC (2001-2007) and ECDC (2007-2011)
- Transfer to ECDC (Stockholm) in July 2011





Total outpatient antibiotic use in DID in 31 European countries in 2009

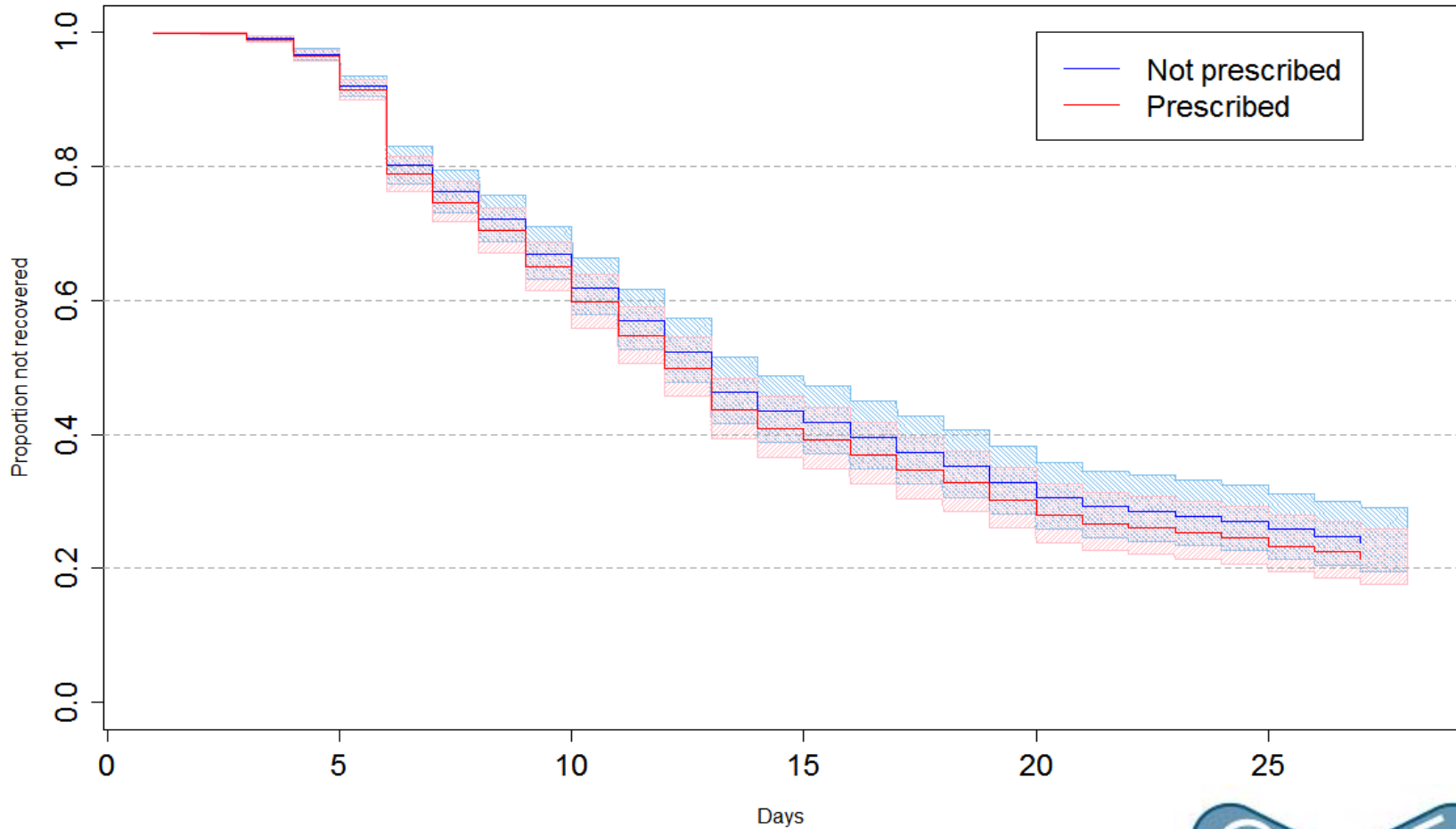


* Total care : LT, CY
 ° MT : 2008 data

Source: ESAC



No statistical Differences in Recovery between those Prescribed Antibiotics and Those Not Prescribed Antibiotics CA-LRTI (survival analysis)



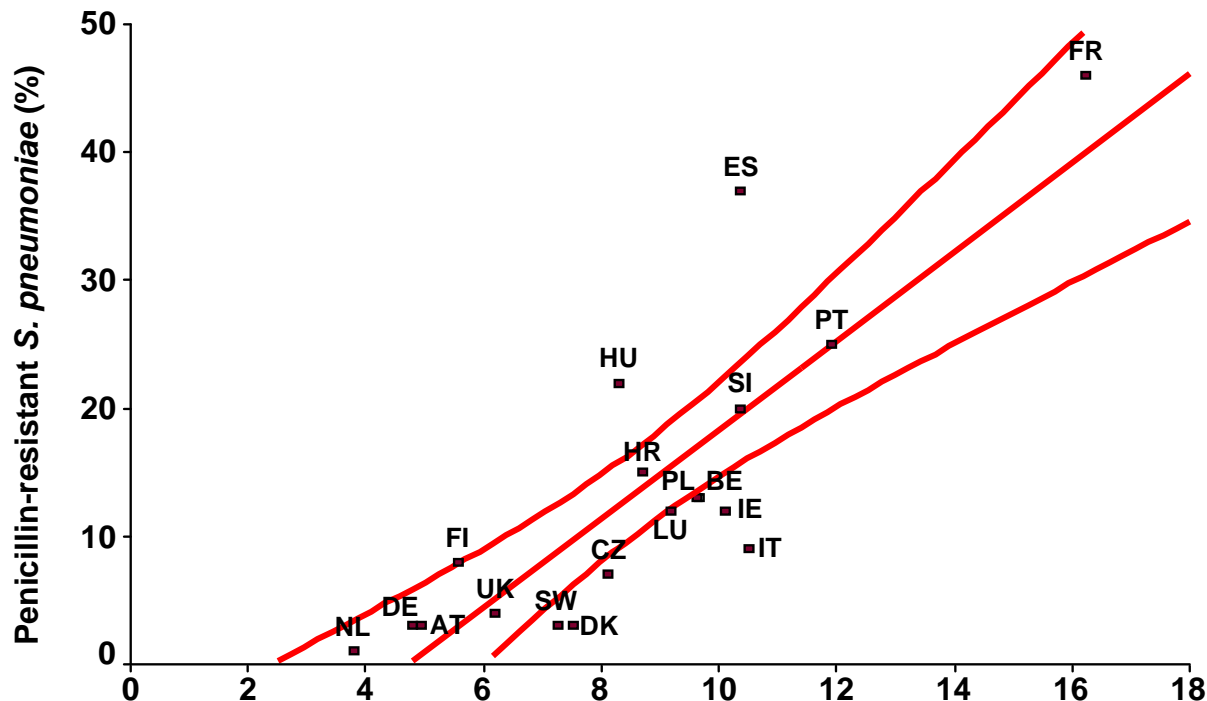
Butler et al., BMJ 2009



Genomics to combat Resistance against Antibiotics in Community-acquired LRTI in Europe



Correlation Between Penicillin Use and Prevalence of Penicillin-resistant *S. pneumoniae*

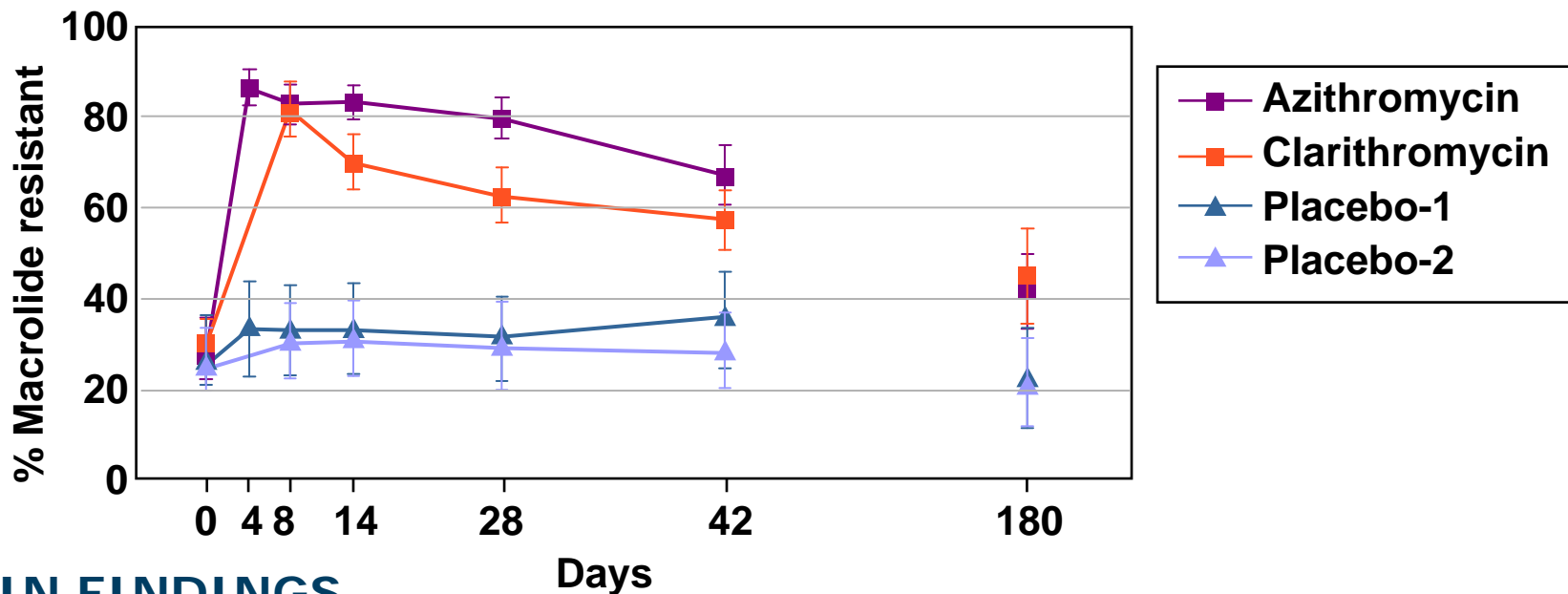


Consumption of Penicillin (J01C) in DID, AC 2000

Organism year of isolation [source of information]	Antibiotic resistance	Antibiotic use - ATC group (year of data)	No. of countries	Spearman correlation (r) (confidence interval)	P-value
<i>S. pneumoniae</i> 2001 [7]	Penicillin	Penicillin – J01C (2000)	19	0.84 (0.62-0.94)	<0.001



Temporal Changes in Proportion of Macrolide-resistant Oral Streptococci

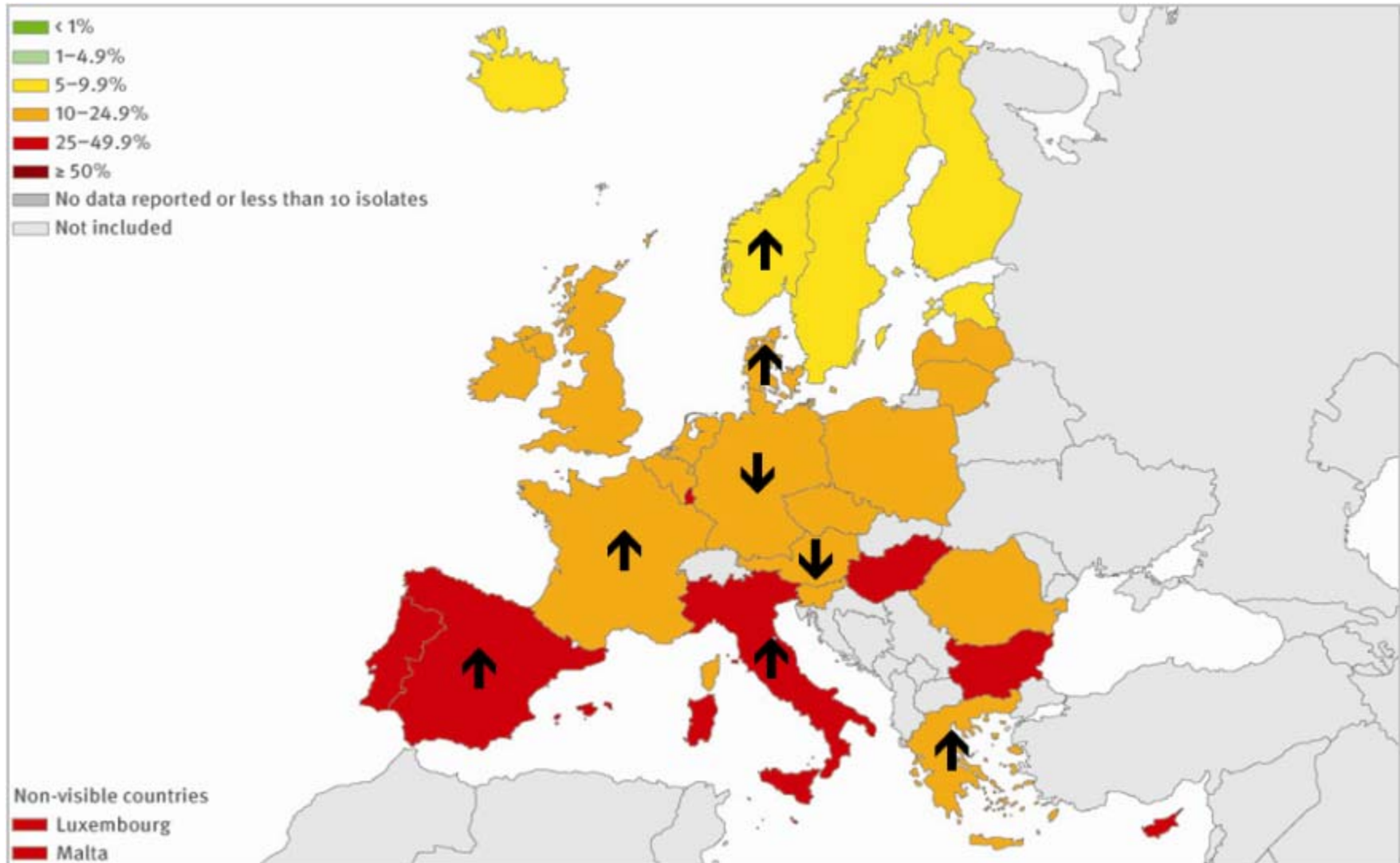


MAIN FINDINGS

- Mean pre-antibiotic (Day 0) carriage of macrolide-resistant streptococci was 28%
- Use of both macrolides resulted in a huge increase in resistant streptococci, which persisted for at least 6 months ($P \leq 0.01$)
- In the azithromycin group, resistance remained at a higher level than in the clarithromycin group during mid-time points ($P \leq 0.001$)



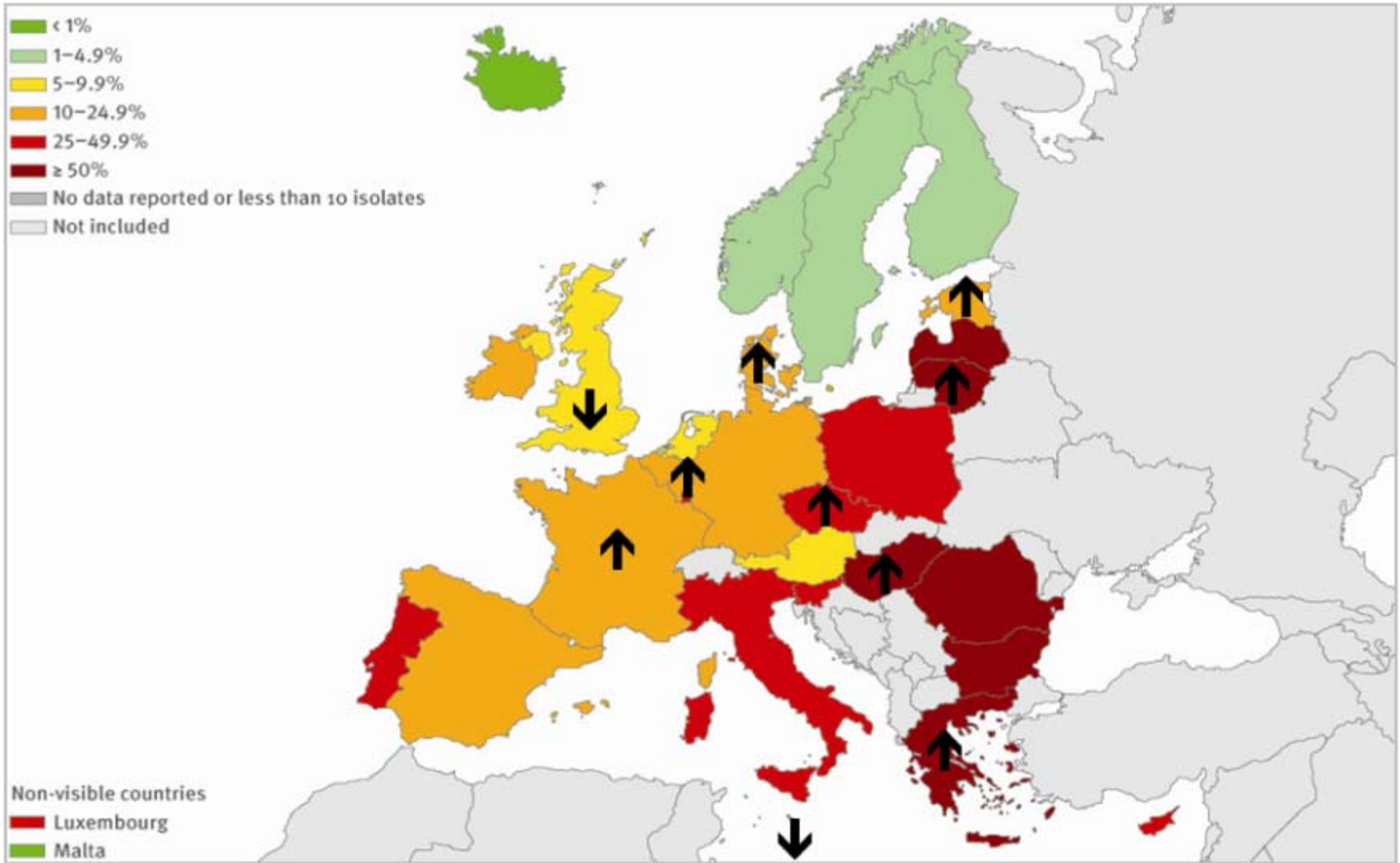
E. coli: Proportion of Invasive FQ Resistant Isolates, 2009



The symbols ↑ and ↓ indicate a significant increasing or decreasing trend for the period 2006-2009.



K.pneumoniae: Proportion of Invasive Cephalo-3 Resistant Isolates, 2009



The symbols ↑ and ↓ indicate a significant increasing or decreasing trend for the period 2006-2009

VD *K.pneumoniae*: Proportion of Invasive Carbapenem Resistant Isolates, 2009





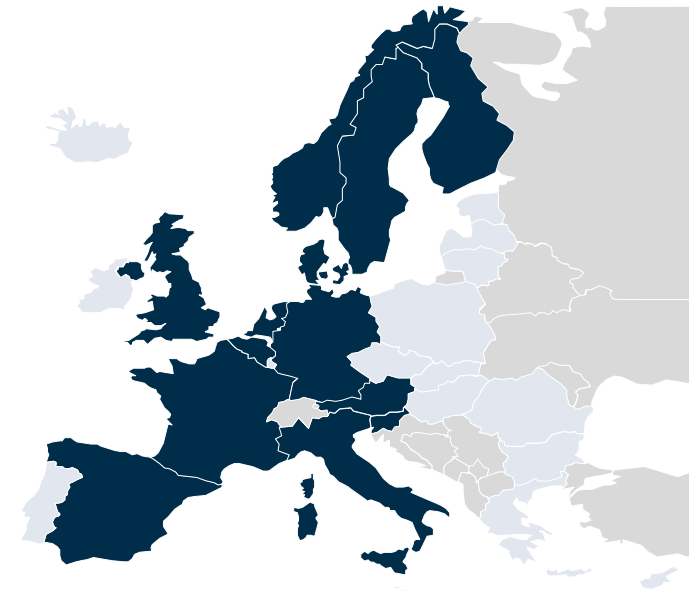
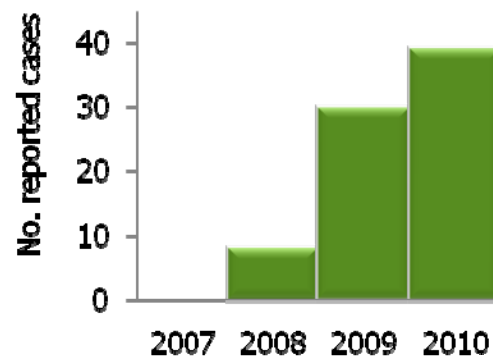
Emergence of NDM-1 Producing *Enterobacteriaceae* in Europe



- ECDC conducted a questionnaire survey in all EU Member States, Iceland and Norway
- By 4 October 2010, a total of 77 cases were reported from 13 countries in 2008-2010

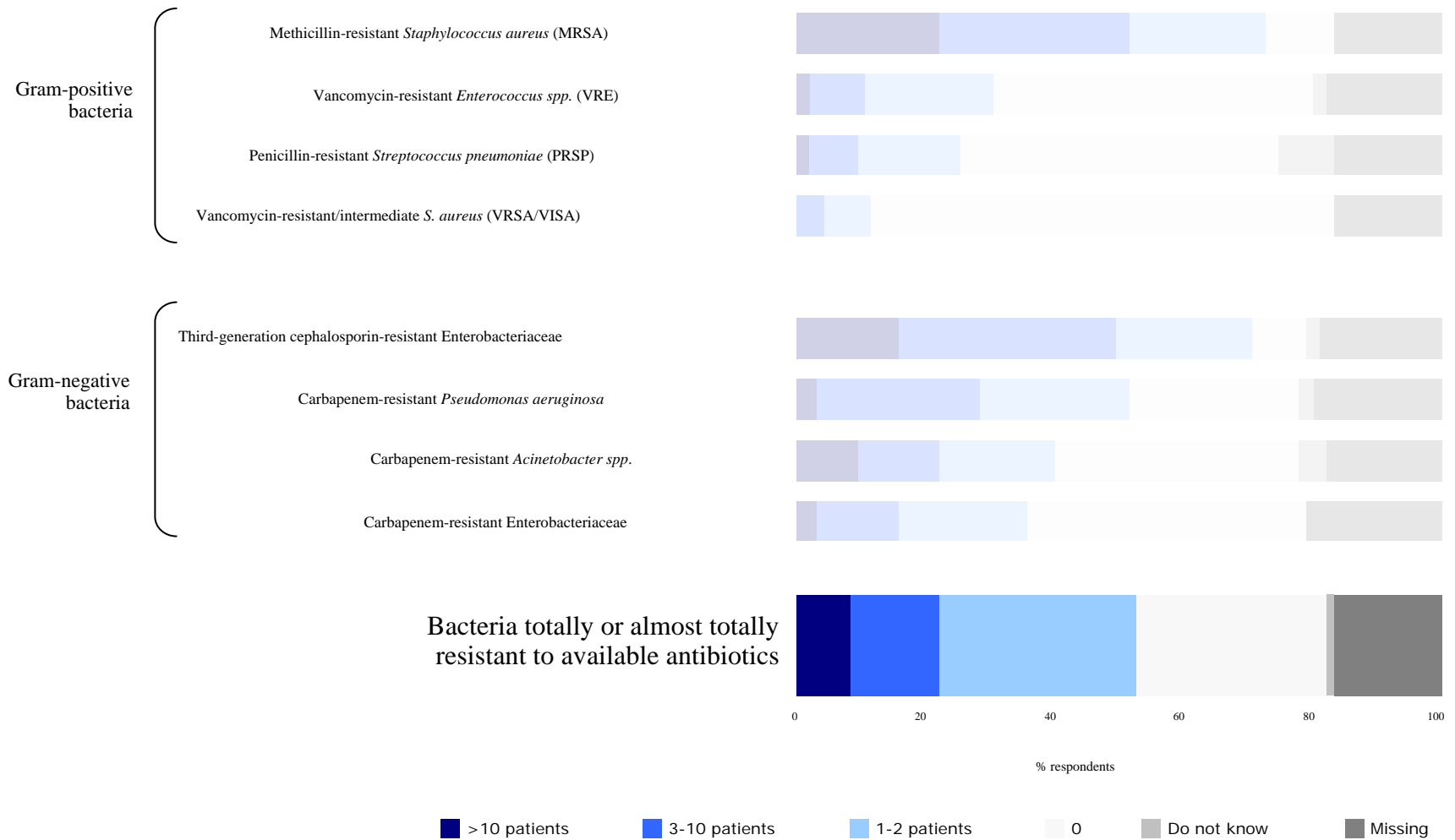
NDM-1-producing *Enterobacteriaceae* cases reported (as of 4 October 2010):

- Yes
- No
- Not covered by survey



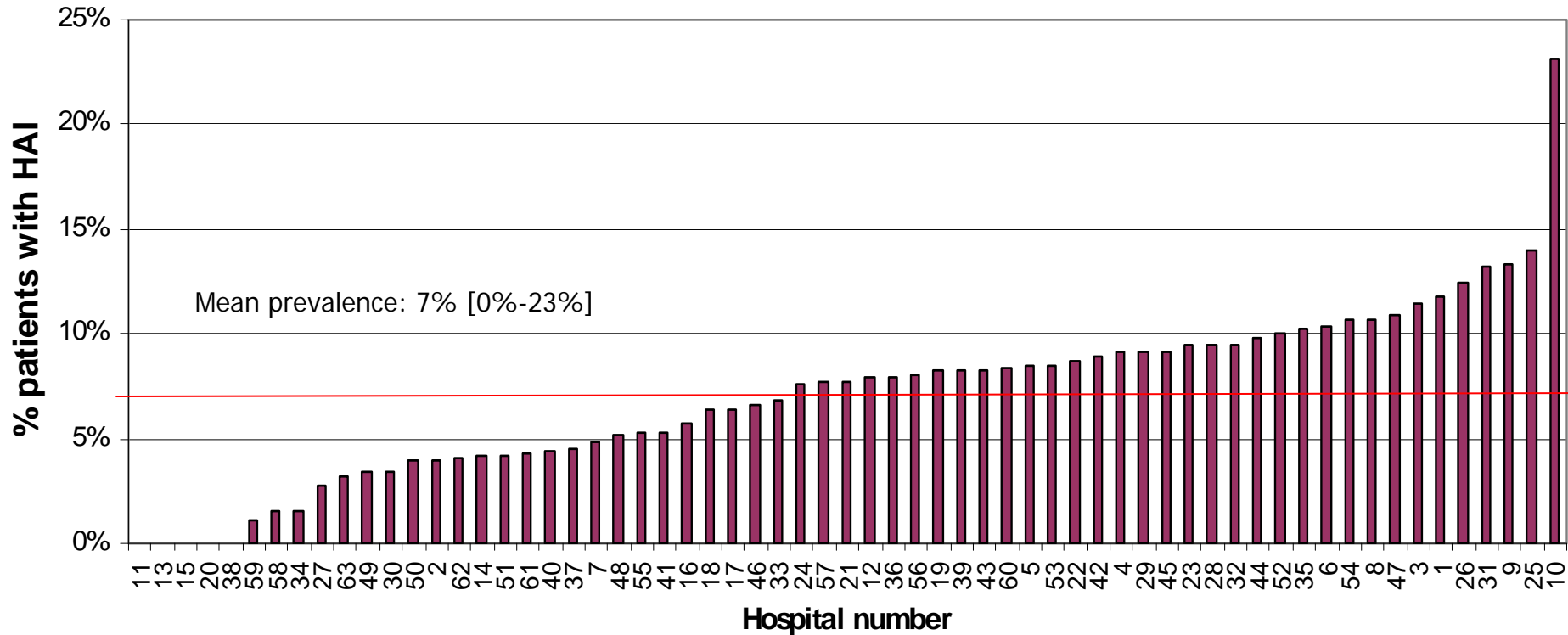


Survey Results on ICU Patients Infected with Resistant Bacteria



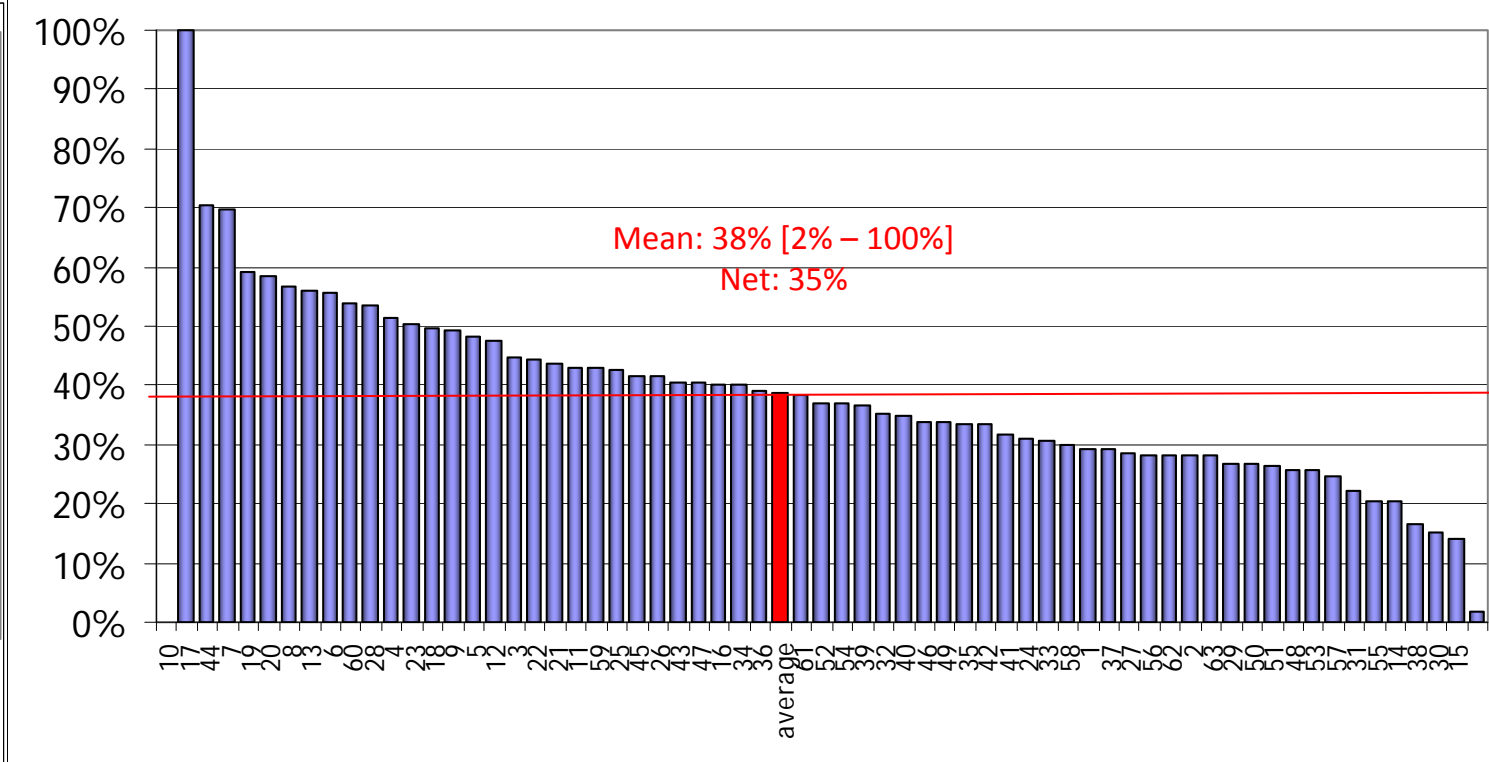
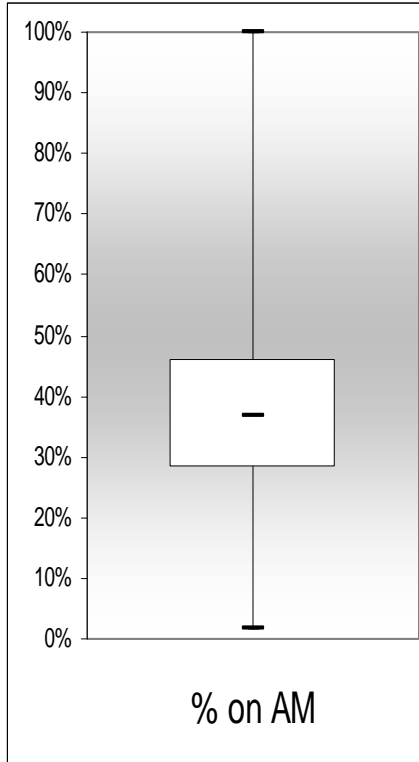


Prevalence of HAI by Hospital





Prevalence of AM Use by Hospital





Society's Failure



- Antibiotic sales in the community represent $> 90\%$ of all antibiotic use and is, therefore, an important component in the selection pressure
- The largest use of these antibiotics is towards minor respiratory tract infections which are often self-limiting and self-healing and for which AB real usefulness is dubious
 - pharyngitis
 - bronchitis
 - flu-like syndrome, ...
- Antibiotic use will select for antibiotic resistance

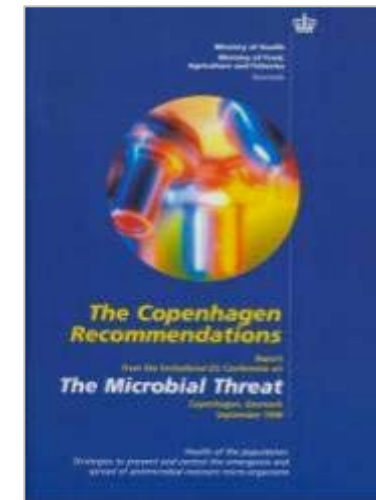


Outline



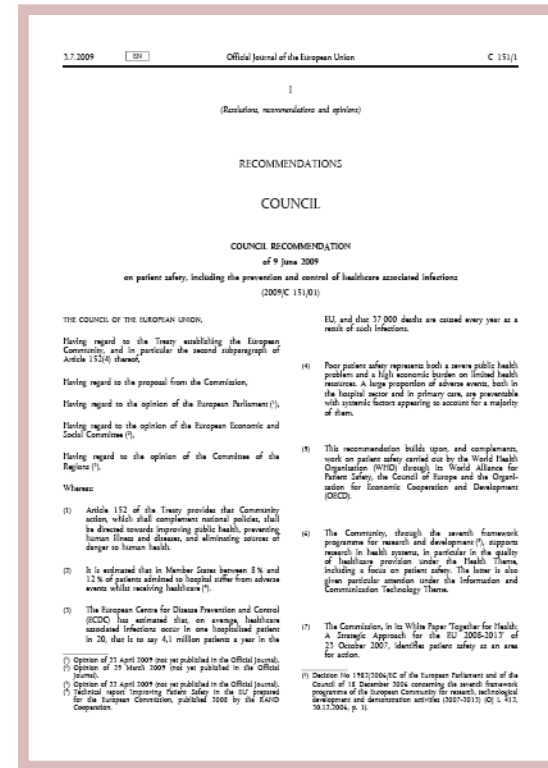
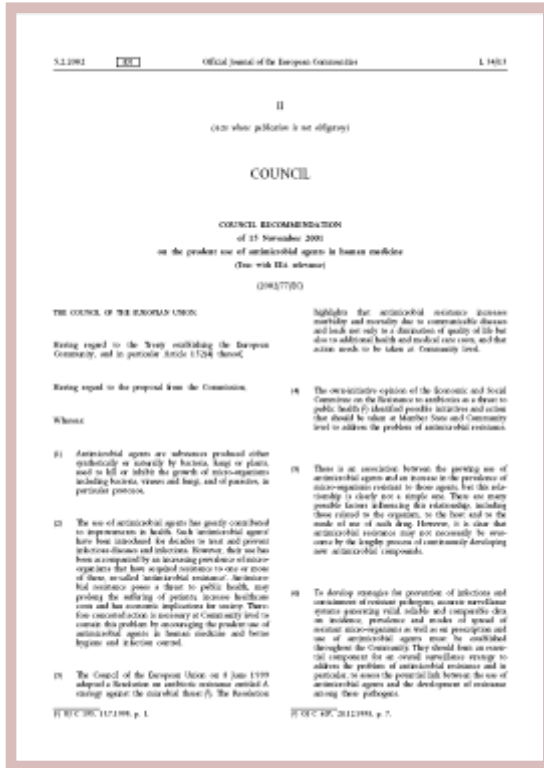
- Problems of antibiotic (ab)use and resistance in Europe
- Towards a European antibiotic policy
 - First steps
 - Member States initiatives
- National and European campaigns
 - On prudent antibiotic use
 - On hand hygiene in hospitals
- Towards a Global policy
 - Transatlantic Task Force for Antimicrobial Resistance (TATFAR)
 - World Health Day, April 7th 2011

- July 1998: "Opinion of the Economic & Social Committee on Resistance to Antibiotics as a Threat to Public Health"
- September 1998: EU Conference on the Microbial Threat, Copenhagen & "**Copenhagen Recommendations**"
<http://www.im.dk/publikationer/micro98/index.htm>
- May 1999: "Opinion of the Scientific Steering Committee on Antimicrobial Resistance"





Council Recommendations on the prudent use of antimicrobial agents (2001), and on healthcare associated infections (2009)

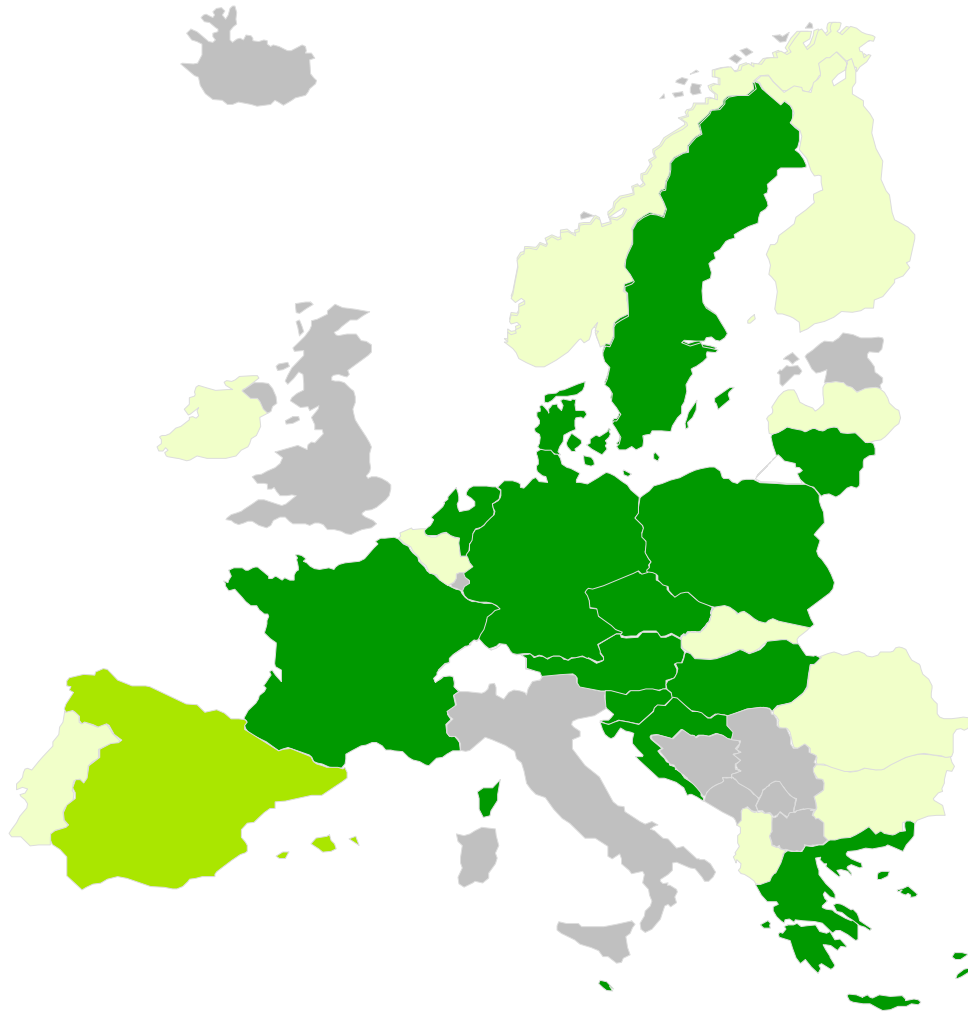


Council Recommendation of 15 November 2001 on the prudent use of antimicrobial agents in human medicine (2002/77/EC)

Council Recommendation of 9 June 2009 on patient safety, including the prevention and control of healthcare associated infections (2009/C 151/01)



Country Visits Organised by ECDC to Discuss Implementation of Council Recommendations, 2006-2011



Country visits
to discuss AMR issues
(as of February 2011)

Based on Council Recommendation of
15 November 2001 on the prudent
use of antimicrobial agents in
human medicine (2002/77/EC)

Reports (observations, conclusions,
suggestions, examples of best
practice

14 initial visits (see map)

5 follow-up visits (Czech Rep., Greece
x 2 and Hungary x 2)

5 visits budgeted for 2011



Outline



- Problems of antibiotic (ab)use and resistance in Europe
- Towards a European antibiotic policy
 - First steps
 - Member States initiatives
- National and European campaigns
 - On prudent antibiotic use
 - On hand hygiene in hospitals
- Towards a Global policy
 - Transatlantic Task Force for Antimicrobial Resistance (TATFAR)
 - World Health Day, April 7th 2011



Belgian National Public Campaigns

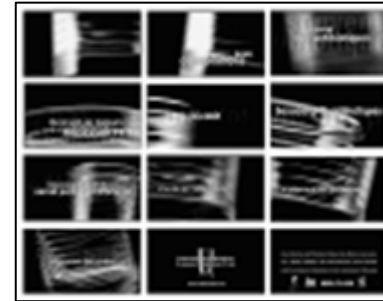


- **When:** since November 2000, annually during winter season
- **Organised by:** BAPCOC (Belgian Antibiotic Policy Coordination Committee)
- **Budget:**
 - 400,000 EUR/annual campaign
- **Interventions targeting the public:**
 - Ads on TV, radio and newspaper
 - Information booklets
 - Folders
 - Posters
 - Internet campaigns: www.antibiotics-info.be

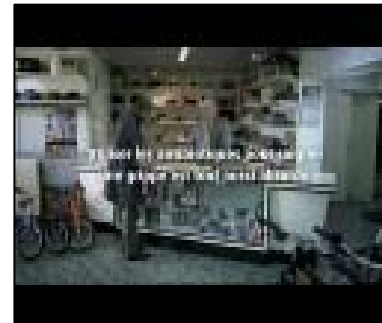
BAPCOOC Organised Three Different Awareness Campaigns



2000 – 2003 (3 winters)



2004 – 2008 (4 winters)



2008 – ... (launched 18.11.08)



OPGELET VOOR DE NEVENWERKINGEN

Als je antibiotica gebruikt, kunnen er ook bijwerkingen optreden. Antibiotica vullen namelijk niet alleen de schadelijke bacteriën aan. Ook de nuttige moeten eraan geloven. Saaopleg je arts indien je klachten blijven duren.

- Allergische reacties**
 Een allergische reactie op antibiotica kan jeuk of huiduitslag veroorzaken. Gelukkig komen ernstige gevallen zelden voor.
- Diarree**
 Antibiotica kunnen het normale evenwicht verstoren in je darmen. Met diarree als gevolg.
- Maaglast**
 Tijdens de behandeling met antibiotica kan je last hebben van een zwaar gevoel in de maag. Mogelijk verlies je ook je eetlust of is je smaakzin verstoord.
- Schimmelinfecties**
 Een behandeling met antibiotica verhoogt ook de kans op schimmelinfecties van huid en slijmvliezen. Niet wieteries bij vrouwen of wit beslag in de mond als gevolg.
- Risicogroepen**
 Sommige mensen moeten extra voorzichtig zijn wanneer ze antibiotica nemen. Denk maar aan zwangere vrouwen of vrouwen die borstvoeding geven. Ook mensen met een nierziekte of een leverziekte moeten extra opletten. Behoor je tot deze risicogroepen, meld het dan beslist aan je arts.

PRAAT EROVER MET JE ARTS OF APOTHEKER.

Als je ziek bent, vraag je advies aan je arts of apotheker. Niet meer dan correct. Maar in deze folder lees je dat antibiotica niet altijd de correcte oplossing zijn bij winterkwalen. Stel je daarom beslist deze vragen bij je doktersbezoek.

- Wat schrijft mijn arts voor? Zijn het antibiotica?
- Gaan antibiotica effect hebben op mijn klachten?
- Welke dosissen en tijdstippen moet ik respecteren?

Coördinatie en wetenschappelijk ondersteuning:
 Belgische Commissie voor de Coördinatie van het Antibioticabeleid | bapec@health.fgov.be

Een initiatief van de Federale Overheidsdienst Volksgezondheid, Veiligheid van de Voedselketen en Leefmilieu. Met de steun van het RIZIV.



OPGELET: ALLEEN GEBRUIKEN INDIEN NODIG.

ANTIBIOTICA HEBBEN GEEN ZIN BIJ

OPGELET: ALLEEN GEBRUIKEN INDIEN NODIG.

ANTIBIOTICA HEBBEN GEEN ZIN BIJ GRIEP, BRONCHITIS OF EEN VERKOUDHEID.

BAAT HET NIET, DAN SCHAADT HET WEL

Tijd geneest

Antibiotica zijn een mooie uitvinding. Tenminste als ze correct gebruikt worden. Zo helpen ze niet bij griep, verkoudheid, acute bronchitis en de meeste vormen van keel- en oorontsteking. Deze infecties worden veroorzaakt door virussen en/of we genezen er spontaan van na enkele dagen. Hiervoor antibiotica gebruiken, heeft overwaal zin als de hele dag met zwembandjes rondlopen.

Wanneer zijn antibiotica dan wel nodig?

Antibiotica zijn enkel nodig als we ernstig ziek zijn door bacteriën. Bacteriën zijn minuscule kleine levende wezens die zich zeer snel kunnen vermenvijldigen. Niet alle bacteriën zijn schadelijk voor de mens; sommige zijn zelfs nuttig. Bacteriën kunnen echter ook onder andere longontsteking, hersenvliesontsteking, wondinfecties en enkele ernstige vormen van keel- en oorontsteking veroorzaken. Dan is een behandeling met antibiotica nodig om ons afweersysteem te helpen deze schadelijke bacteriën te vernietigen.

“ Infecties zoals griep, bronchitis of een verkoudheid genezen spontaan.

Hebben kinderen vaker antibiotica nodig dan volwassenen?

Ja en nee. Kinderen zijn vaker ziek, dus ook wat vaker ernstig ziek. Maar ook bij kinderen helpen antibiotica niet bij griep, verkoudheid, acute bronchitis en de meeste vormen van keel- en oorontsteking. Bovendien ontbren je kinderen de kans om hun eigen afweersysteem op te bouwen en aan te scherpen door onnodig antibiotica te geven.

ANTIBIOTICA OF NIET? EN WAT DAN WEL?

Je arts is de geschikte persoon om de juiste behandeling in te stellen. Soms moet eerst een bloedtaaf of uitstrijking van de keel onderzocht worden.

Antibiotica doen niets aan virale infecties en hebben nauwelijks effect op gewone bacteriële infecties. Deze genezen spontaan. De symptomen kunnen wel toedreden worden zodat de ziekte zich beter voelt. Bij ernstige infecties veroorzaakt door bacteriën is een behandeling met antibiotica wel noodzakelijk.

ZIEKTE	GENEESMIDDELEN	AANBEVELINGEN
Griep	Rijstbier, koortswerende middelen	Rust, vacatie ter preventie
Struikel	Rijstbier, koortswerende middelen	Stomen met warm water
Diarree	Soms antibiawerende middelen	Voldoende drinken, goede hygiëne
Verkoedheid	Rijstbier	Takel vermijden
Acute bronchitis	Rijstbier	Takel vermijden
Keelontsteking	Rijstbier	Takel vermijden
Oorontsteking	Rijstbier, koortswerende middelen	Rust
Longontsteking	Antibiotica	Ernstig, goed op te volgen door arts, name opname in ziekenhuis
Bacteriële hersenvliesontsteking	Antibiotica	Ernstig, goed op te volgen door arts, opname in ziekenhuis

BELANGRIJK: GEBRUIK ANTIBIOTICA ALTIJD CORRECT

Als je arts antibiotica voorschrijft, is het belangrijk dat je de voorgeschreven behandeling nauwkeurig volgt. Alleen zo ben je zeker dat alle bacteriën vernietigd zullen worden en vermij je de selectie van resistente bacteriën (peristent).

Volstrege

- 1 **Respecteer de dosissen en de tijdstippen.**
 Sta nooit een innams over en gebruik de voorgeschreven hoeveelheden.
- 2 **Stop niet vroeger dan voorgeschreven.**
 Maak je antibioticaкурс volledig af. Ook als je na een paar dagen al beter voelt. Dit is nodig omdat de bacteriën slechts geleidelijk worden vernietigd.
- 3 **Bewaar ze niet.**
 Hou nooit restjes antibiotica bij voor een volgende keer. Bring ze naar je apotheker.

WAT IS RESISTENTIE?

Door het niet correct gebruik van antibiotica, neemt het aandeel toe van bacteriën die weerstand kunnen bieden tegen antibiotica. Deze bacteriën zijn niet anders worden resistant of ongewoel voor antibiotica. Zo kunnen ernstige ziektes niet meer even snel en doeltreffend behandeld worden als voorheen. Ook heelkundige ingrepen van wondzorg tot transplantaties worden risicovol als antibiotica niet meer werken.

OPGELET: ALLEEN GEBRUIKEN INDIEN NODIG.

ANTIBIOTICA HEBBEN GEEN ZIN BIJ GRIEP, BRONCHITIS OF EEN VERKOUDHEID

PRAAT EROVER MET JE ARTS OF APOTHEKER

Wanneer heb ik antibiotica nodig? Het is belangrijk om te weten dat antibiotica alleen nodig zijn bij bacteriële infecties. Bij griep, verkoudheid, acute bronchitis en de meeste vormen van keel- en oorontsteking worden veroorzaakt door virussen en/of we genezen er spontaan van na enkele dagen. Hiervoor antibiotica gebruiken, heeft overwaal zin als de hele dag met zwembandjes rondlopen.



**OPGELET:
ALLEEN GEBRUIKEN
INDIEN NODIG**

Gebruik antibiotica ook alleen als het nodig is

www.gebruikantibioticacorrect.be



18 November
Europese Antibioticadag

Een Europees gezondheidsinitiatief



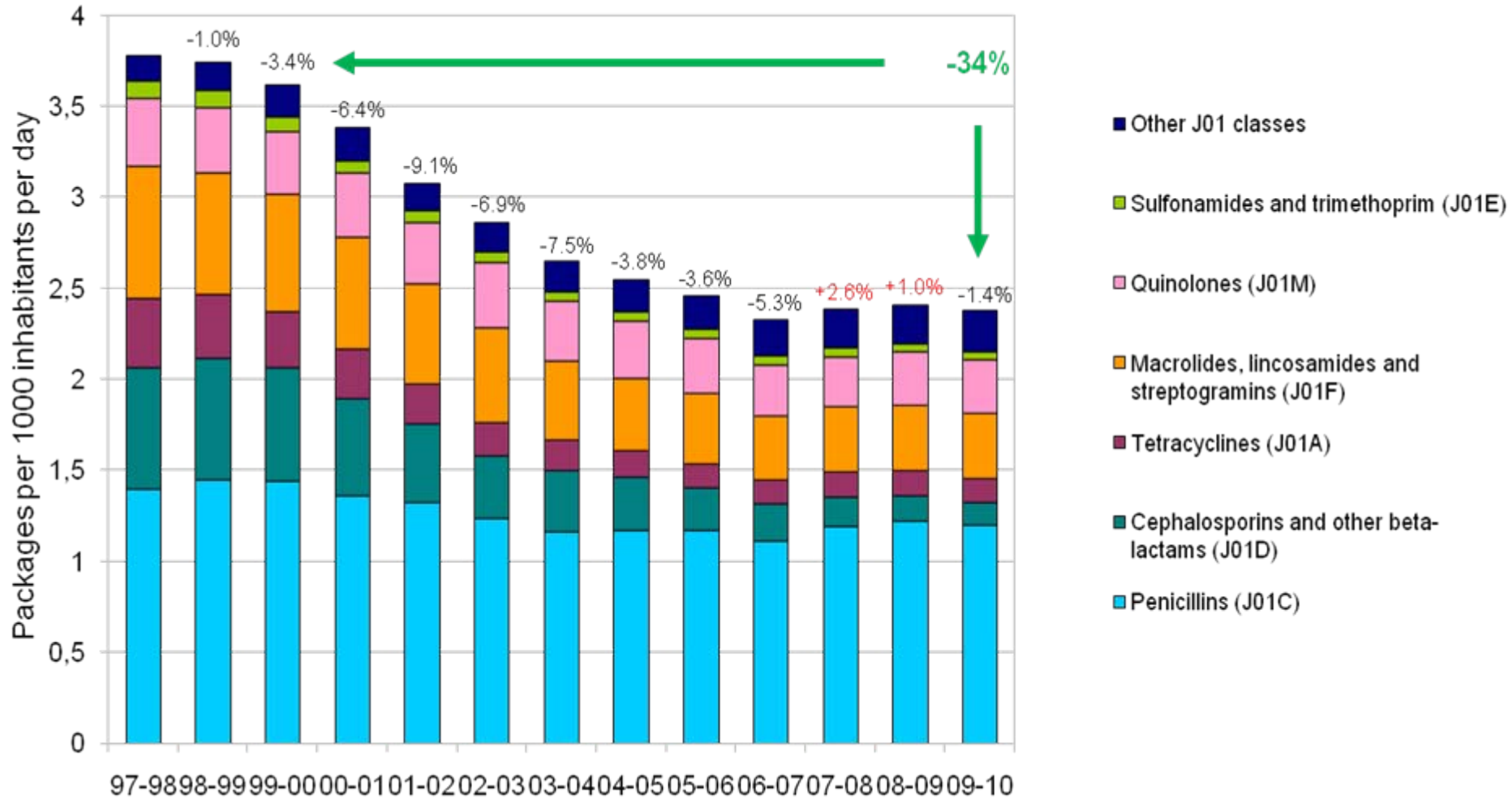
PLEASE NOTE: ONLY USE WHEN NECESSARY.
ANTIBIOTICS DON'T HELP WITH THE FLU, BRONCHITIS OR A COLD.





Belgian Campaigns 2002-2010

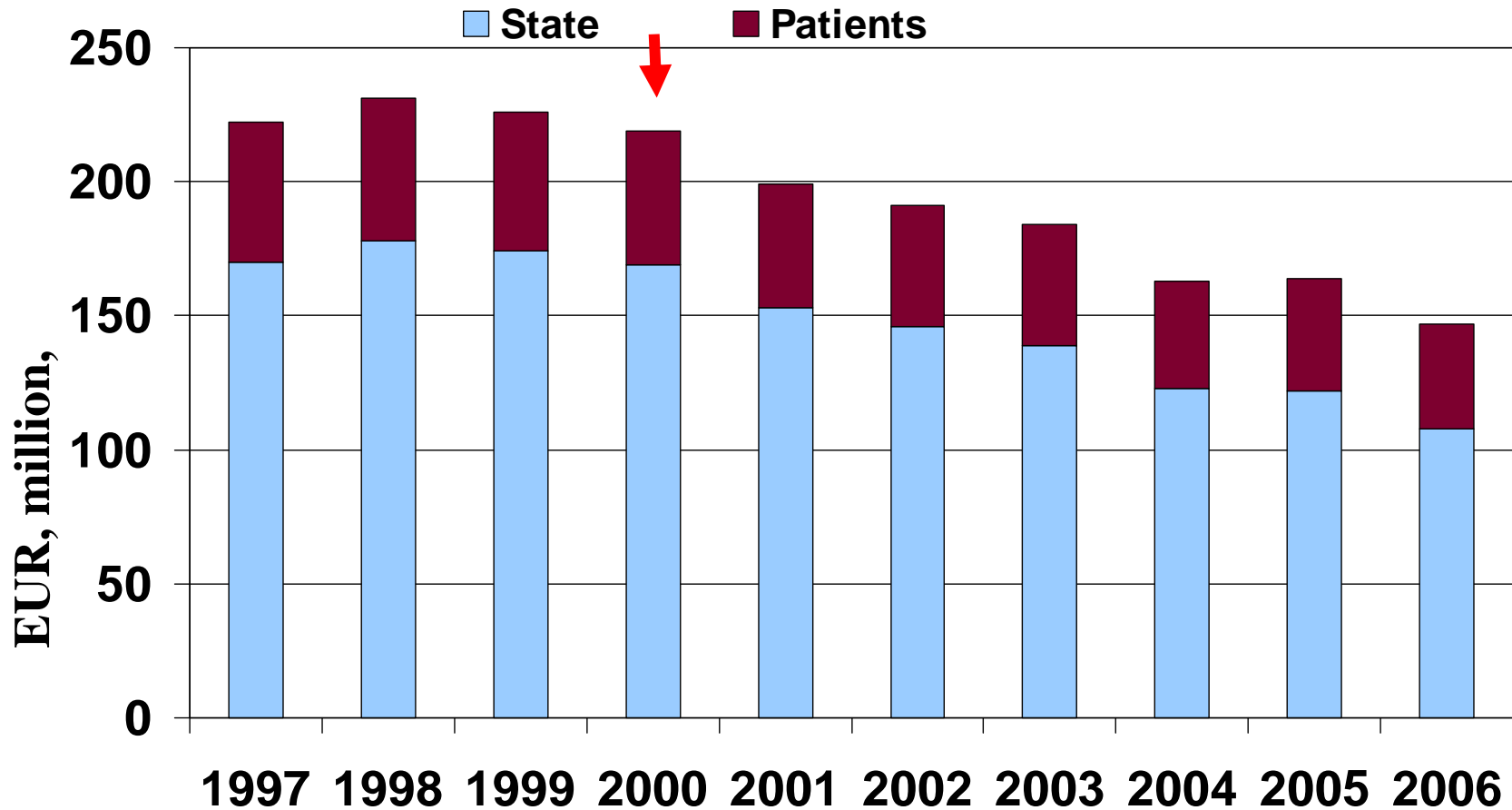
Outpatient antibiotic use in Belgium in packages per 1,000 inhabitants per day – July - June





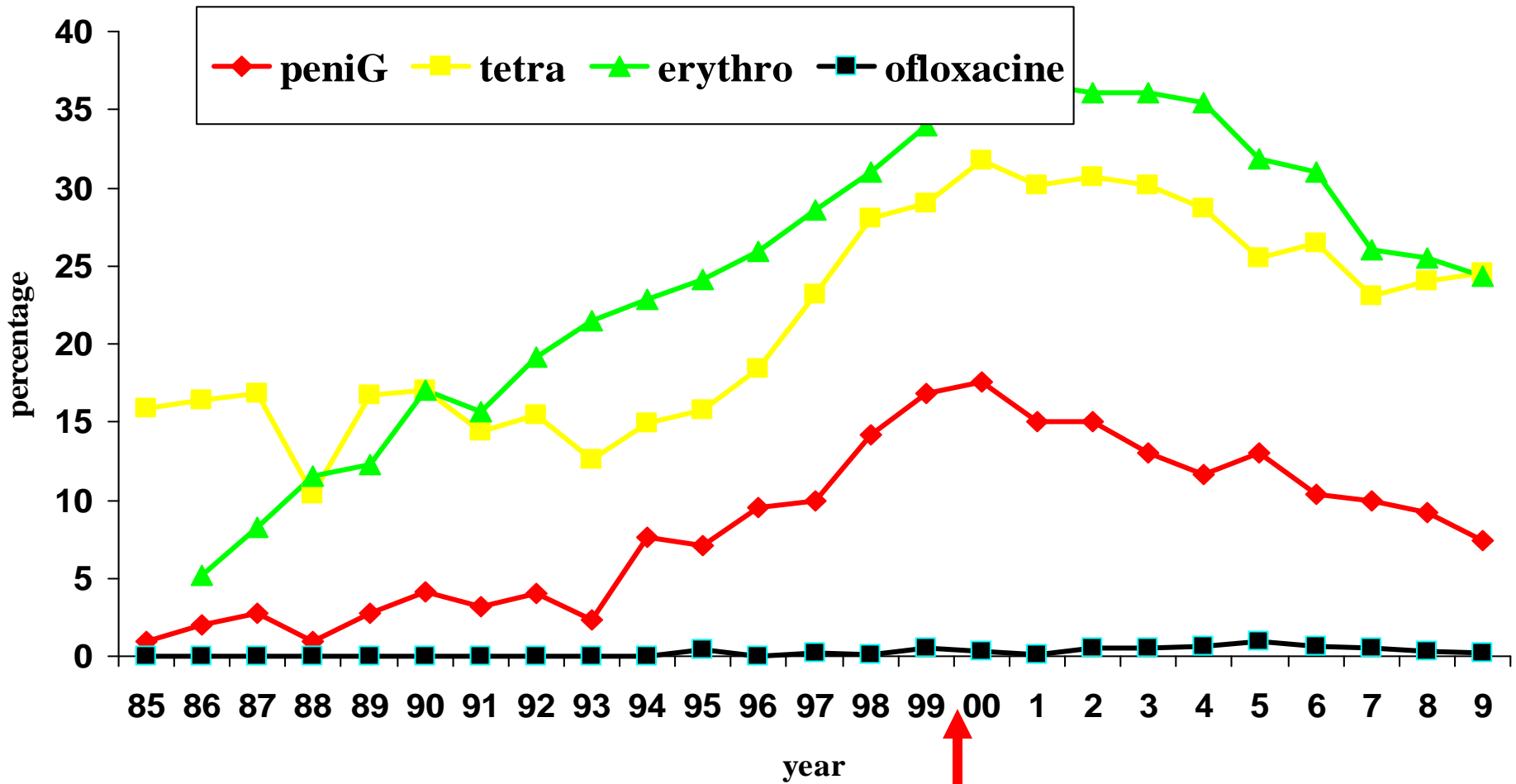
Belgian Campaigns 2002-2007

Outpatient antibiotic Use in Belgium in EUR,
January - December





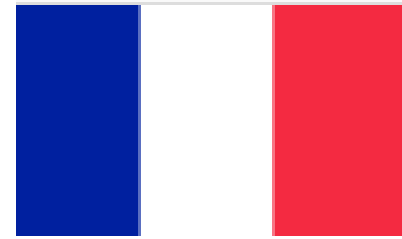
Antibiotic Resistance of *S. pneumoniae* in Belgium 1985 - 2009



National Reference Centre *S. pneumoniae* (University Leuven)



French Awareness Campaigns

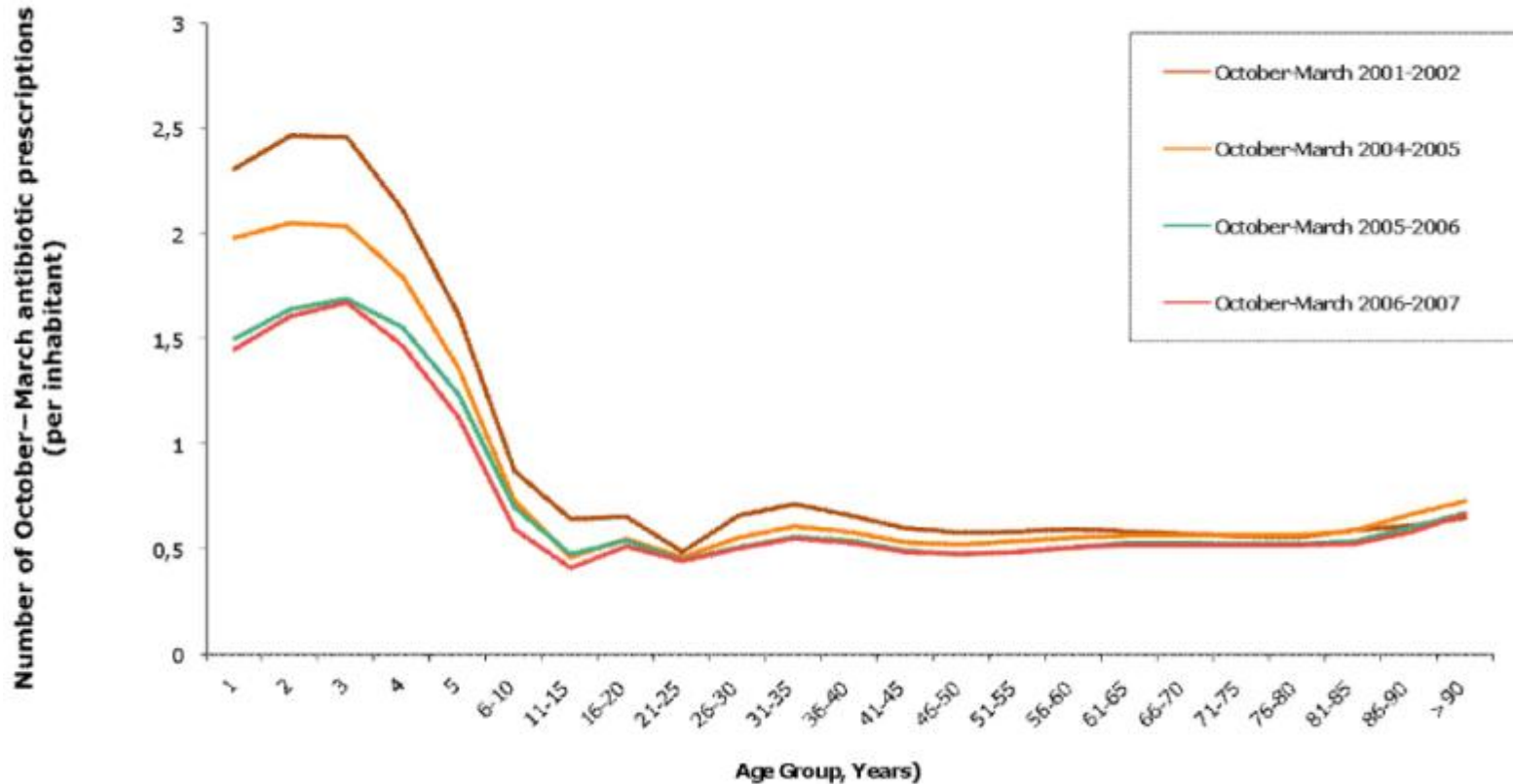


- **When:** since November 2002, annually during winter season
- **Organised by:** French Social Insurance System
- **Budget:**
 - 4 million EUR/annual campaign
- **Interventions targeting the public:**
 - Ads on TV, radio and newspaper
 - Information leaflets
 - Folders
 - Travelling exhibition around France
 - Internet campaigns:
www.antibiotiquespasautomatiques.com



French Campaigns 2002-2007

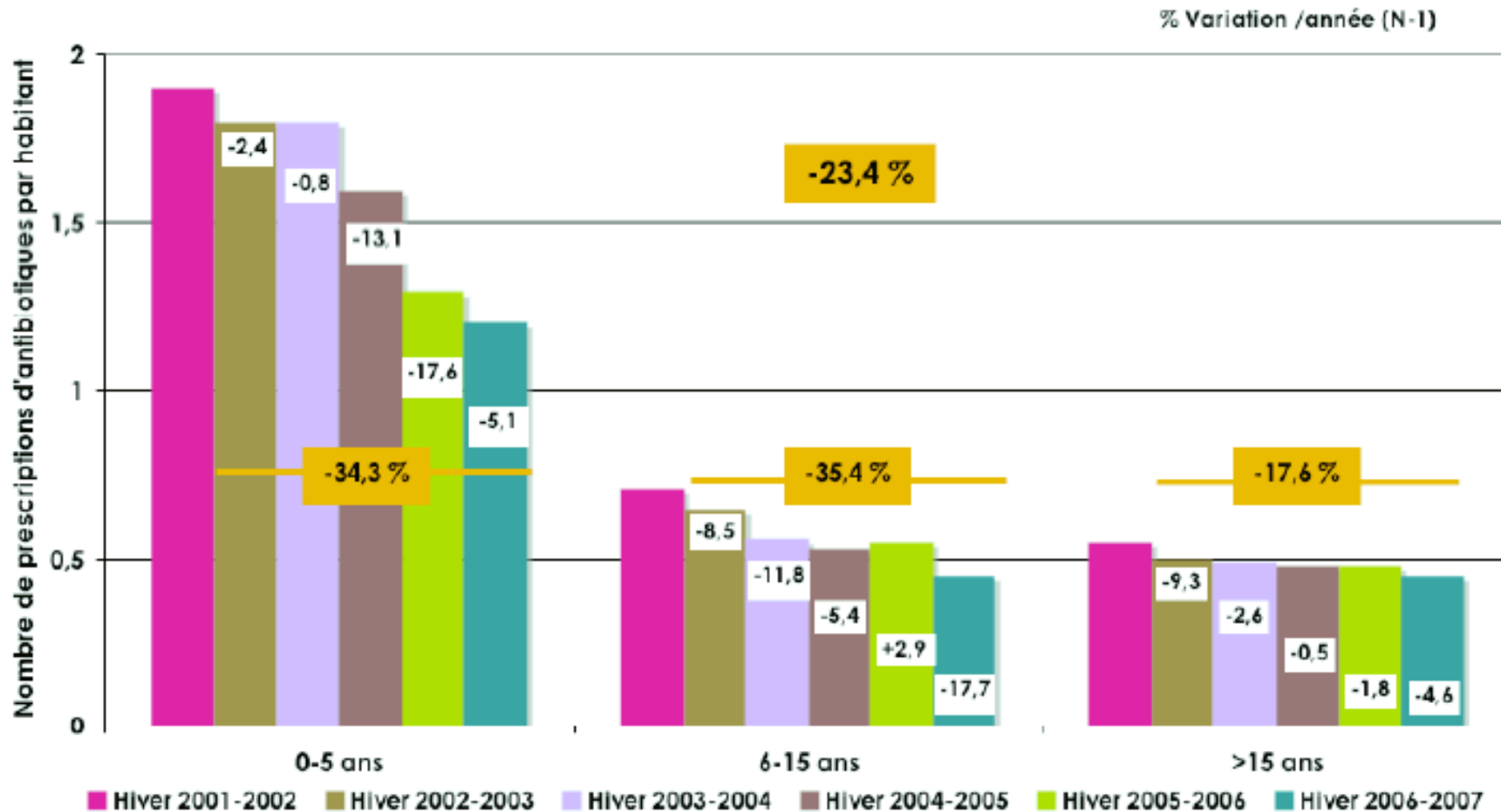
Outpatient antibiotic use in France in prescriptions per inhabitant – October to March



Sabuncu et al., PloS Medicine; June 2009



Antibiotic Use by Age Group in France



http://www.ameli.fr/fileadmin/user_upload/documents/DP_Antibiotiques_10-01-2008.pdf



Conclusions



- National public campaigns have been very successful to reduce antibiotic use and resistance in Belgium and France
- Huge cost savings: for 1 € invested, about 8 were saved
 - Belgium: 250 million EUR 2000-2010
 - France: 845 million EUR 2002-2010
- Decrease of antibiotic use amplified by the effect of the 7 valent conjugated pneumococcal vaccine
- In both countries actions were also directed towards the prescribers:
 - academic detailing
 - distribution of guidelines
 - individual feed-back of antibiotic prescriptions
 - promotion of streptococcal antigen tests (only France)

The burden of antibiotic resistance warrants a multifaceted approach

18 November 2008

EUROPEAN ANTIBIOTIC AWARENESS DAY



A European Health Initiative





European Antibiotic Awareness Day, 18 November 2008



- Establishment of Technical Advisory Committee (national experts, Commission, WHO EURO, CPME, ESCMID)
- Focus on awareness raising amongst general public about not using antibiotics when not necessary, e.g. for colds and flu
- Based on successful national campaigns (Belgium and France)

Slogans & logos

**COLD? FLU?
TAKE CARE
NOT ANTIBIOTICS**



A European Health Initiative 

**COLD? FLU?
GET WELL
WITHOUT ANTIBIOTICS**



A European Health Initiative 

**COLD? FLU?
TAKE CARE
NOT ANTIBIOTICS**



A European Health Initiative 



Europæisk antibiotikadag



Et europæisk sundhedsinitiativ



EUROPEAN ANTIBIOTIC AWARENESS DAY



A European Health Initiative



Europese Antibioticadag



Een Europees gezondheidsinitiatief



Día Europeo para el Uso Prudente de los Antibióticos



Una iniciativa europea para la salud



Journée Européenne d'Information sur les Antibiotiques



Une initiative européenne en matière de santé



Jum Ewropew għall-Għarfien dwar l-Antibijotiċi



Inizjattiva Ewropea għas-Saħħa



Ευρωπαϊκή Ημέρα Αντιβιοτικών



Μια πρωτοβουλία της Ευρωπαϊκής Ένωσης για την υγεία



Europeiska Antibiotikadagen



Ett folkhälsoinitiativ från EU



Europejski Dzień Wiedzy o Antybiotykach



Europejska inicjatywa zdrowotna



Európai Antibiotikum Nap



Európai egészségügyi kezdeményezés



Evropski dan antibiotikov



Evropska pobuda na področju zdravja



Ziua Europeană a Informării despre Antibiotice



O inițiativă europeană în domeniul sănătății





Images from National Campaigns on Prudent Use of Antibiotics





Images from National Campaigns: Belgium, Cyprus, Poland, England, Luxembourg, Greece



Ευρωπαϊκή Ημέρα Αντιβιοτικών
18 Νοεμβρίου

ΚΡΥΟΛΟΓΗ ΦΡΟΝΤΙΣΕ ΤΟ ΧΩΡΙΣ ΑΝΤΙΒΙΟΤΙΚΑ

- Παιρνοντας αντιβιοτικά δεν γίνονται ανθεκτικά στις αντιβιοτικές αφέλιμα μικρόβια και συχνά οργανισμό σου όπως διάρροια.
- Πάρε αντιβιοτικά μόνο όταν γιατρό σου και ακολουθήσε τις που θα το πάρεις για να βρεις περισσότερα αποτελεσματικά.

PRZEZIĘBIENIE? LECZ SIĘ BEZ ANTYBIOTYKÓW

EUROPEAN ANTIBIOTIC AWARENESS DAY

Europejski Dzień Wiedzy o Antybiotykach

Antybiotyki nie działają na wirusy. Wirusy są odpowiedzialne za ostre zapalenie oskrzeli, większość przyczyn kaszlu i wiele innych infekcji. Antybiotyki nie pomagają.

Leczenie zwykłego przeziębienia antybiotykami nie przynosi korzyści. Niewłaściwe stosowanie antybiotyków może spowodować skuteczną i nie pomaga wtedy, kiedy naprawdę będą potrzebne. Antybiotyki nie zapobiegają przeniesieniu grypy na inną osobę.

Nie namawiaj lekarza, żeby przepisał Ci antybiotyki – on jest bez szans antybiotyk – przyjmuj go dokładnie tak, jak nawet wtedy, kiedy ustąpią objawy choroby. Pamiętaj! Jeśli przyjmujesz antybiotyki rób to zgodnie z zaleceniami lekarza, a dzieki temu przedłużysz ich skuteczność.

Rhume ou grippe? Pas d'antibiotiques!

En utilisant mal les antibiotiques, elle développe de nouvelles bactéries plus résistantes. Arrêtons cette progression en apprenant à utiliser les antibiotiques à bon escient.

LE GOUVERNEMENT DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de la Santé
Direction de la Santé Publique

TA ANTIBIOTIKA DEN EINI KAPIMEZ.

REMEMBER, ANTIBIOTICS WON'T HELP YOUR DEFENCES AGAINST A COLD.

The best way to treat most colds, coughs or sore throats is plenty of fluids and rest. For more advice talk to your pharmacist or doctor.

COLD? FLU?



**GET WELL
WITHOUT
ANTIBIOTICS**

18 November
2009

For more information, visit
antibiotic.ecdc.europa.eu

EUROPEAN
ANTIBIOTIC
AWARENESS DAY

A European Health Initiative



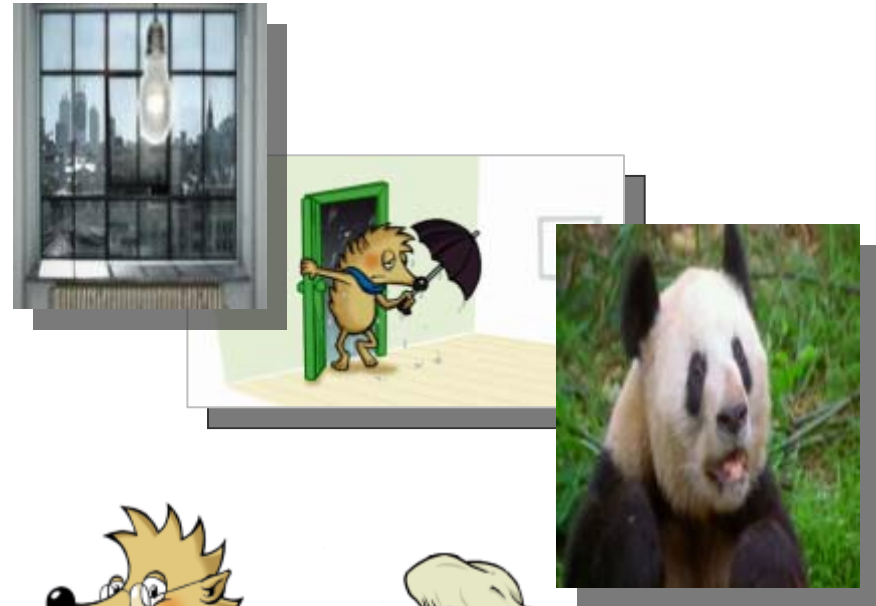
2008

Materials for general public
32 countries participated



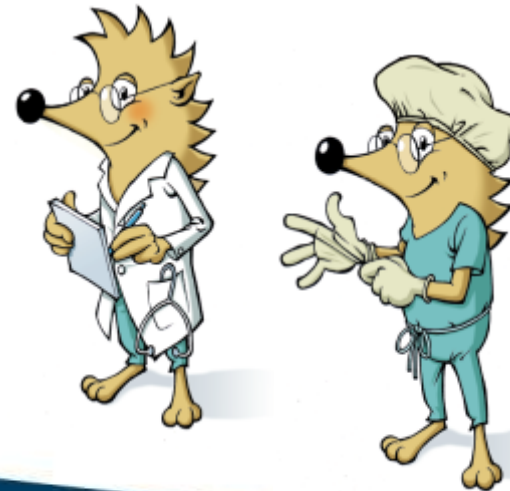
2009

- Article in Eurosurveillance
- Materials for primary care prescribers
- Website translated in all EU languages, three TV spots developed
- 34 countries participated



2010

- 36 countries participated
- Materials for hospital prescribers
- Matched Get Smart week in the United States and the campaign in Canada

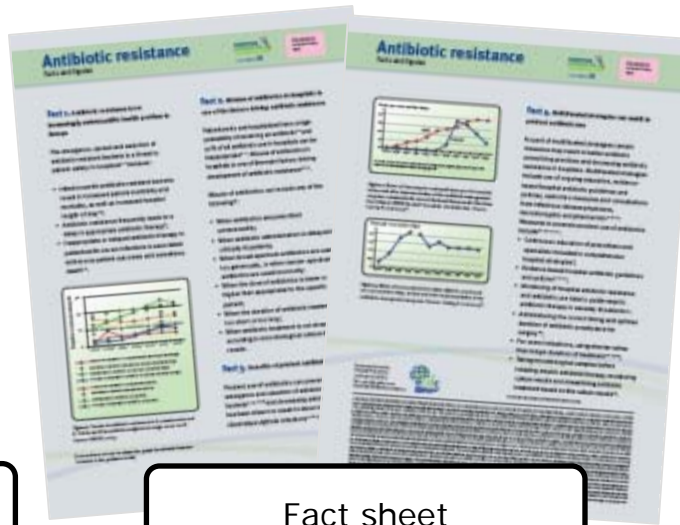




Toolkit for Hospital Prescribers



Advertorial



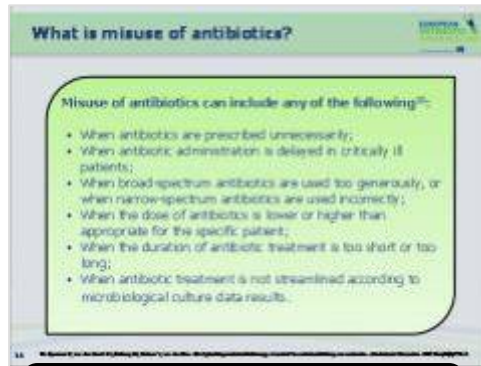
Fact sheet



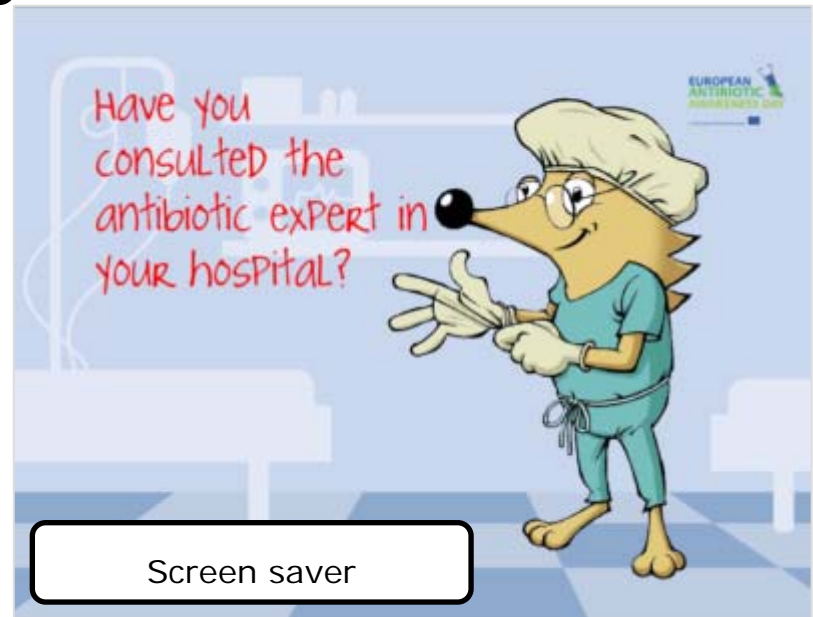
Web banner



Check list



PPT Presentation

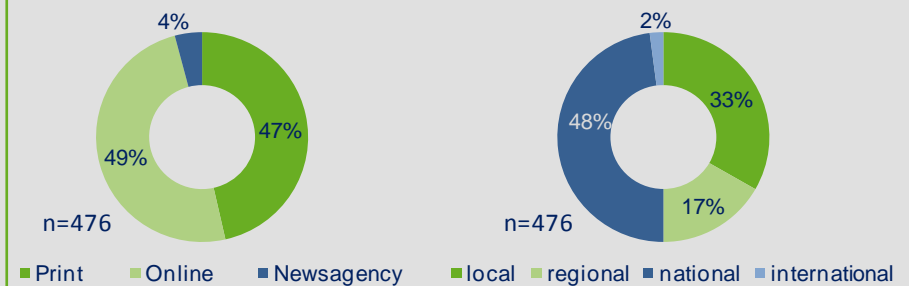


Screen saver

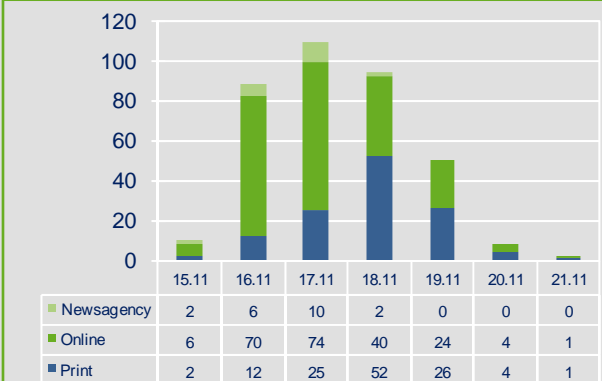
Key Figures

- Number of clippings 476
- Reach (print) 51,334,208
- Circulation (print) 17,152,770
- Visits (online) 54,241,600

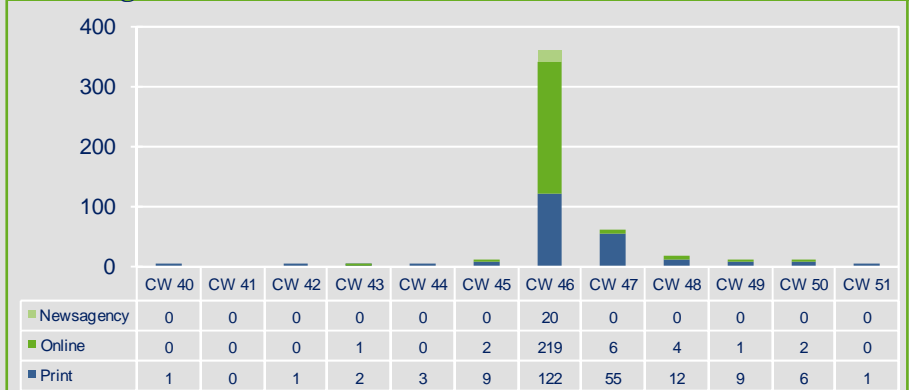
Media Type Media Distribution



Peak Week 46



Coverage in the Course of Time

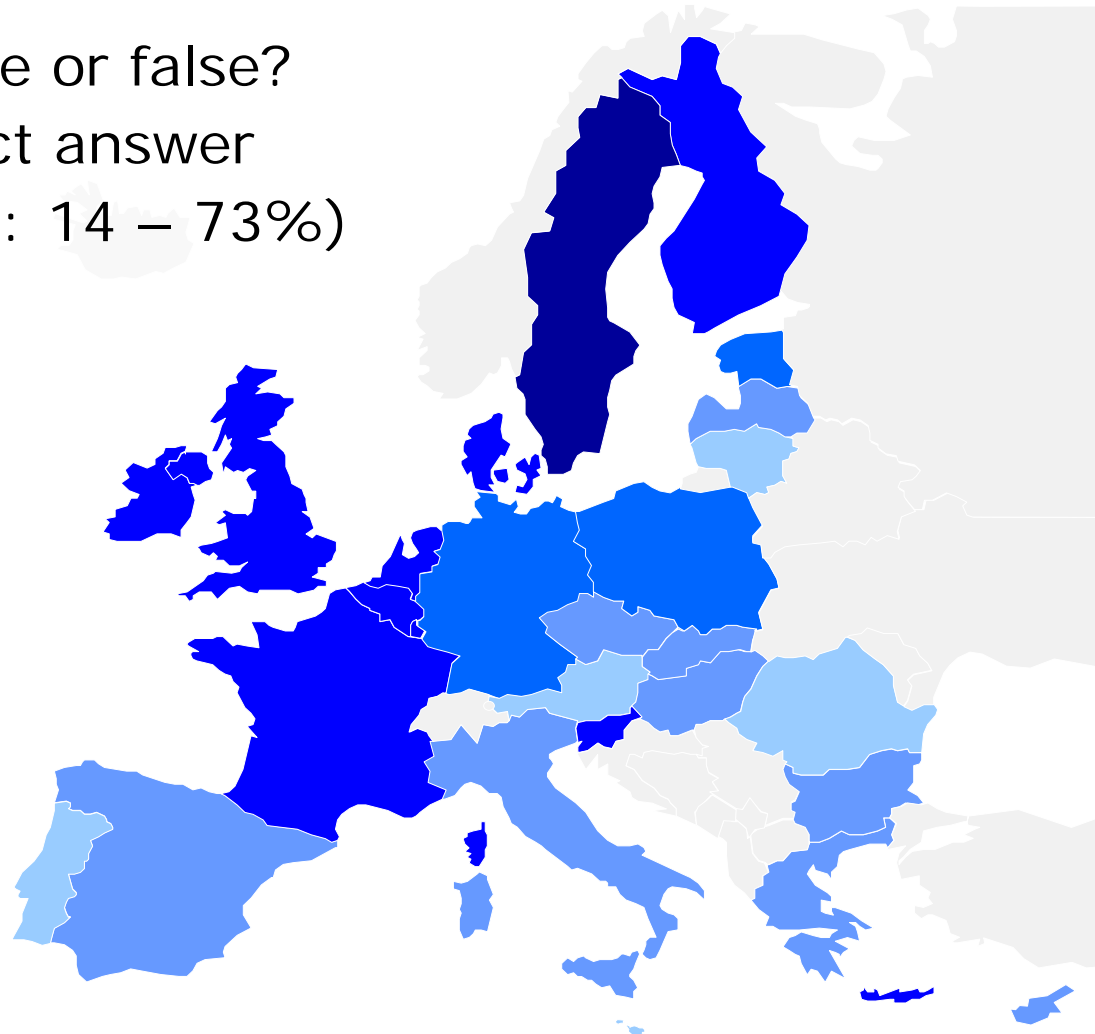
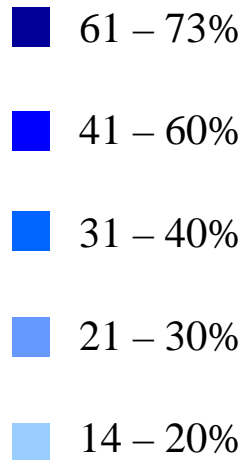




Eurobarometer Opinion Poll, November-December 2009



Antibiotics kill viruses. True or false?
% respondents with correct answer
(i.e., "false"): 36% (range: 14 – 73%)





Why is the EAAD so successful ?



- Strong upfront political support and commitment at European and national level;
- Planning well ahead;
- Building on existing success stories of countries;
- Early establishment of a Technical Advisory Committee with dedicated experts;
- Briefing of national communications contact points prior to the campaign and sharing contact information;
- Initiation of a broad stakeholder contact programme to inform interest groups and invite contributions;
- Good support from professional organisations,
- Development of campaign key messages and visuals with the support of experts in social marketing.



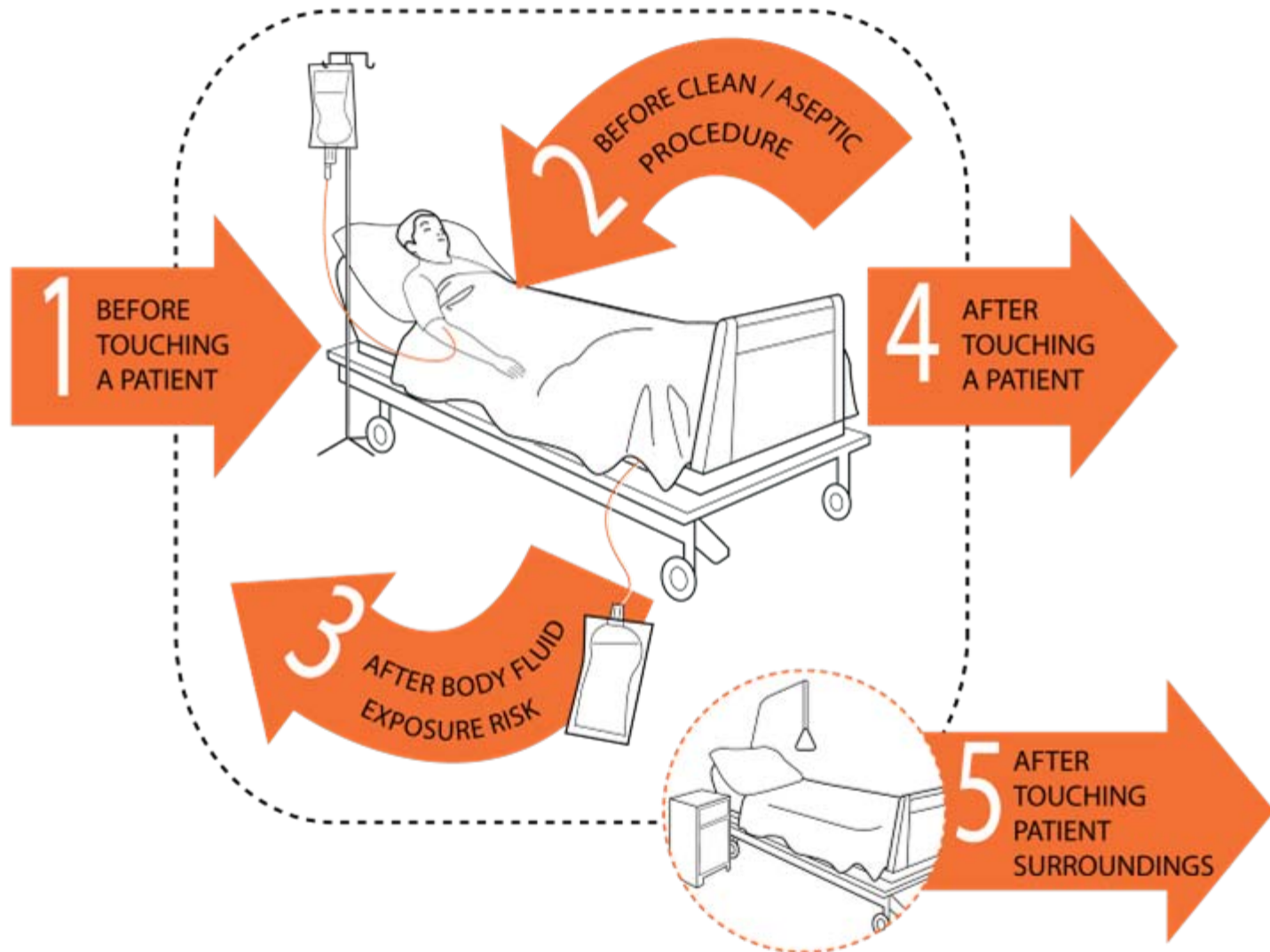
World Alliance for Patient Safety



FIRST GLOBAL PATIENT SAFETY CHALLENGE



To reduce
health care-associated infections
Hand hygiene as the cornerstone



Quand ?

Les 5 indications



AVANT contact patient



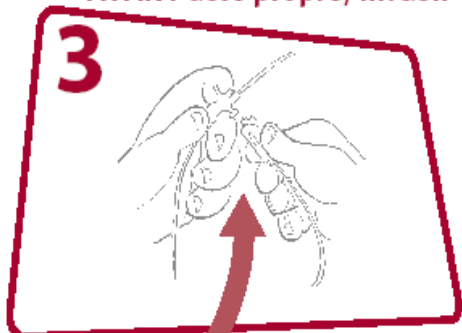
1
 Avant tout contact direct avec un patient
 Un contact social court (par ex. serrer la main)
 est probablement associé à un risque de transmission
 moindre

APRES contact patient



2
 En quittant un patient après un ou des contacts directs

AVANT acte propre/invasif



3
 Immédiatement avant un soin propre
 Immédiatement avant un geste invasif

► *Port de gants si risque d'exposition à des
 liquides biologiques ou des muqueuses*

APRES exposition aux liquides biologiques



4
 Après un acte comportant un risque
 d'exposition à des liquides biologiques qui
 normalement s'anticipe par le port de gants

► *En cas d'exposition accidentelle à des liquides biologiques
 ou des muqueuses, lavage des mains suivi d'une
 friction à la solution hydro-alcoolique*

APRES contact avec l'environnement du patient



5
 Après avoir touché des objets ou des surfaces
 à proximité immédiate du patient

► *L'environnement peut avoir été contaminé par
 le patient ou lors d'un soin précédent*

*En cas de souillures visibles,
 se laver les mains, les sécher
 puis les désinfecter
 avec la solution hydro-alcoolique*





Nation-wide campaign:

- **2004:** preparation of first campaign by working group of federal platform of hospital hygiene with the financial support of the ministry of Health
- **Objective:** Raising awareness on good hand hygiene practices and promote use of alcohol handrubs
- **Target population:**
 - **HCW** having contact with patients in hospitals
 - And hospitalised **patients**
 - In acute, chronic and psychiatric hospitals



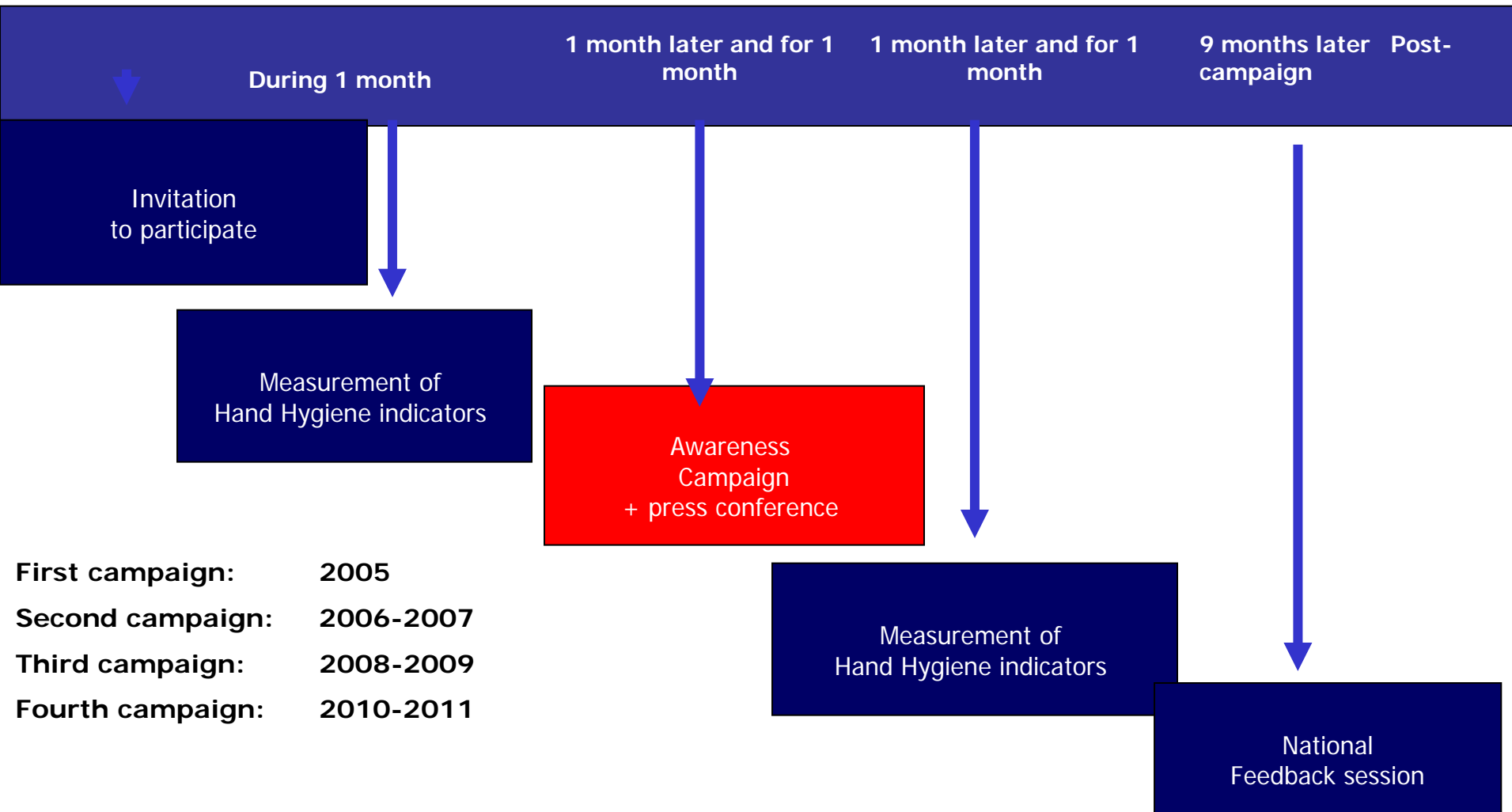
Methodology: Two components



1. **Awareness campaign** with standardised material to improve Hand Hygiene compliance distributed to participating institutions
2. **Measuring** impact of the campaign
 - Hand Hygiene compliance (soap and/or alcohol / Hand Hygiene opportunities)
 - Alcohol rub consumption (liters alcohol rub / 10,000 patient days)
 - Respect of basic hygiene conditions (optional, only 3rd campaign)



Planning of Campaigns



VD Awareness Campaigns: Multi Modal



- Reminders (posters) in accordance with the WHO guidelines
- Education of Healthcare workers
 - Standardised powerpoint presentation
 - Interactive quiz
- Distribution of gadgets for Healthcare workers or patients
- Promotion of hand rub (posters, black light)
- Implication of patients (leaflets, gadget)
- Feedback of measurement results before and after campaign



Campaign Messages and Targets Varied!



- **First campaign:**
 - Hand hygiene, just do it ... and with alcohol rubs
- **Second campaign:**
 - Hand hygiene, do it correctly
- **Third campaign:**
 - Do not wear jewellery or artificial nails and keep your nails clean
 - Use gloves correctly
- **Fourth campaign:**
 - Patient empowerment: “Did you disinfect your hands” to increase the compliance before patient contact and to try to exceed the 70% compliance after campaign



Distribution of Average Hand Hygiene Compliance



N hop

n=148

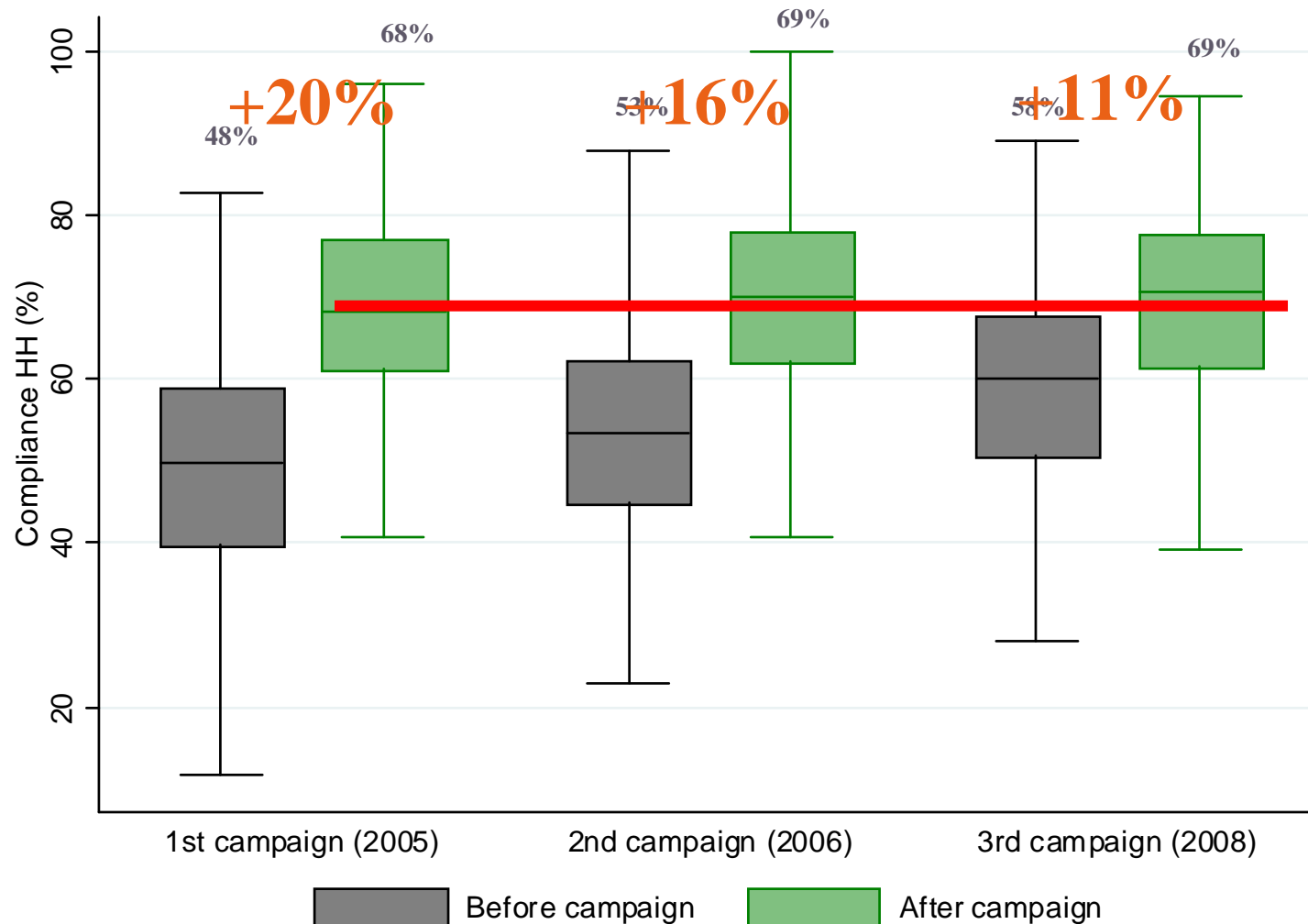
n=127

n=178

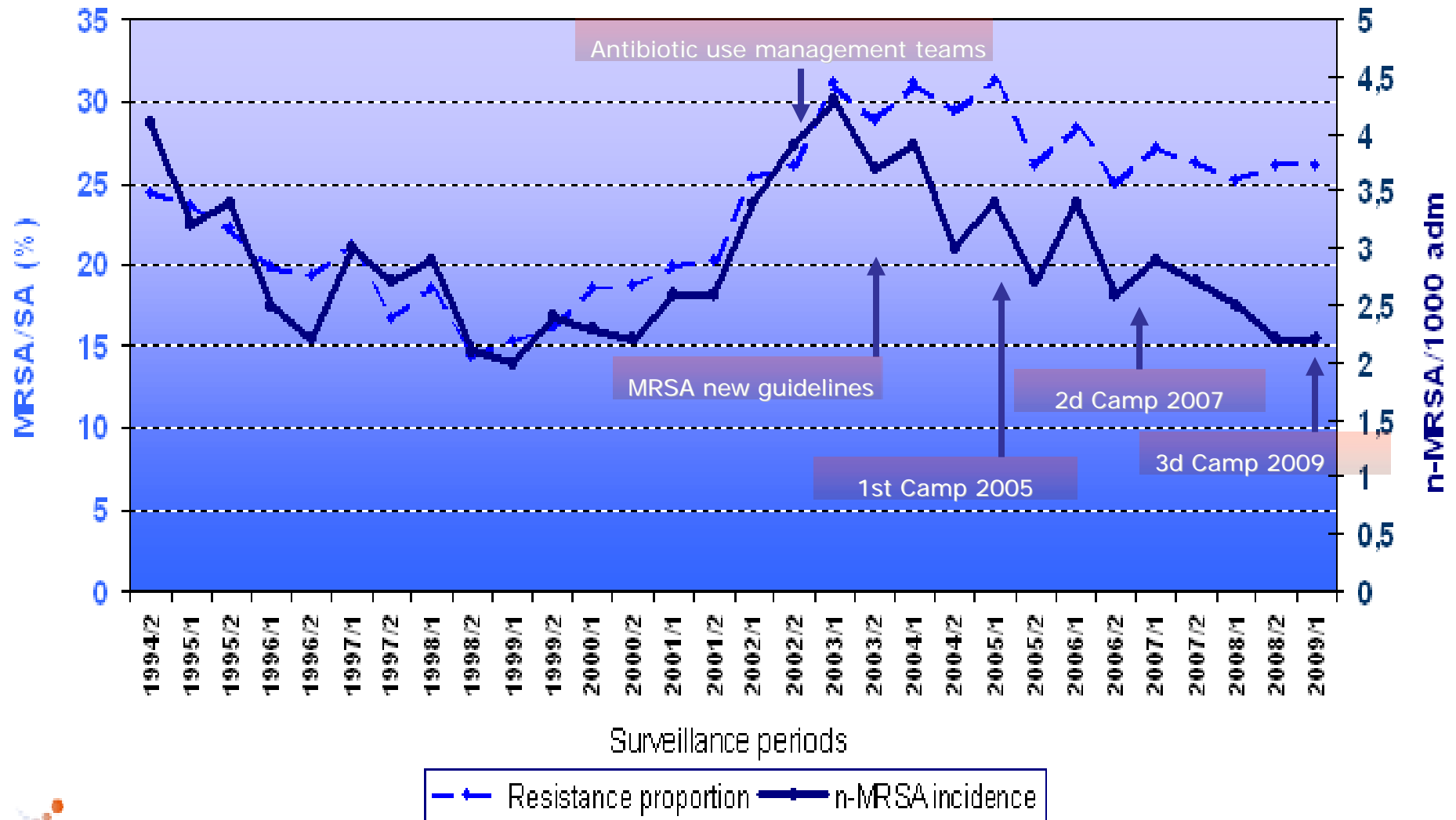
n=158

n=168

n=145



MRSA in Belgian acute care hospitals: proportion of *S.aureus* clinical isolates and incidence of nosocomial acquisition 1994 - 2009





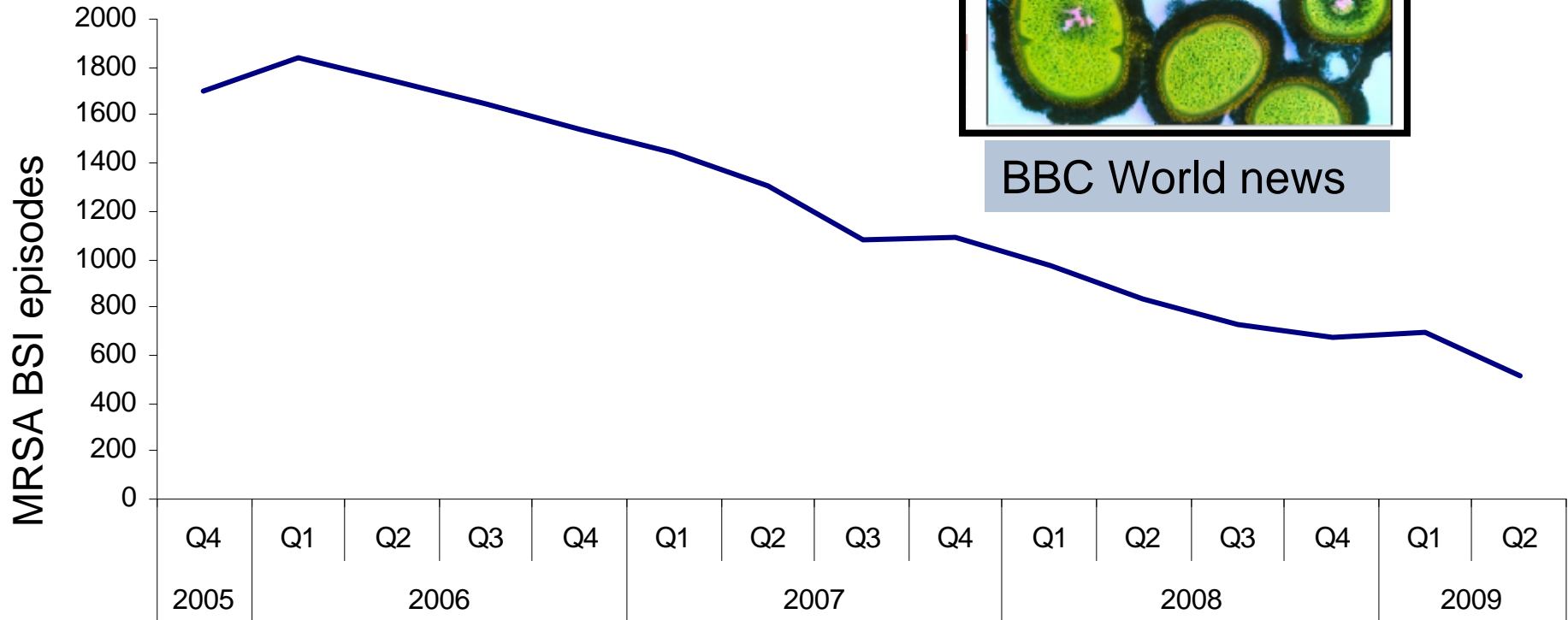
Conclusion: Campaigns Were Successful



- High participation rate
 - Increase of Hand Hygiene compliance at short and long term
 - Alcohol rub widely used
- ➔ Key factors for success:
- Multi modal awareness campaign
 - Repetition of campaign
 - National implication
 - Political and financial support



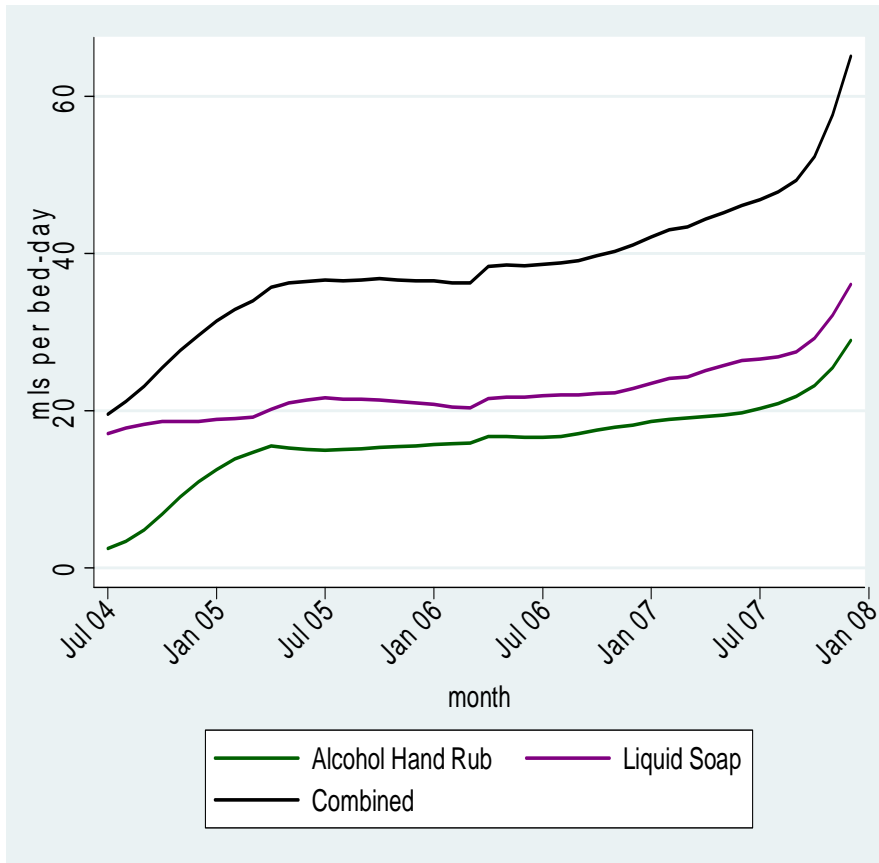
Counts of MRSA Bacteraemia Oct 2005 to June 2009



A. Pearson and colleagues (HPA, Sept 2009)



Estimated average procurement of Alcohol Hand Rub and Liquid Soap in mls per bed-day July 2004-December 2007 in 148 acute NHS Trusts

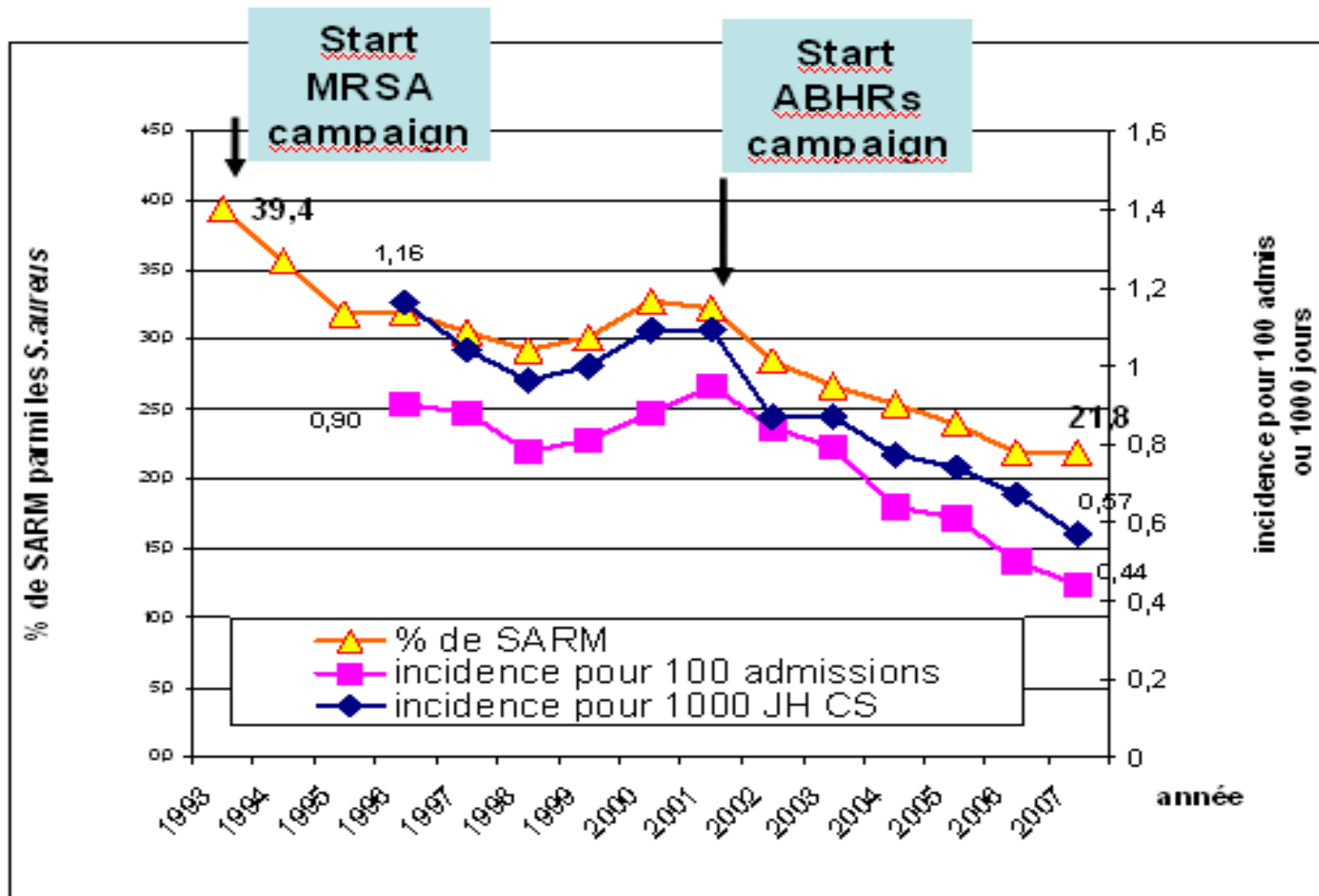
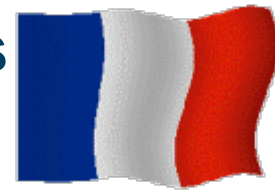


- 3-fold increase in combined use to 60 mls per pt-day
- Analysis shows highly significant association between each ml of AHR used and 1% drop fall in MRSA BSI

Stone S et al. ECCMID 2009 (abstract O140)



% MRSA and incidence per 100 admissions or 1000 days of hospitalisation. Univ. hospitals of Paris (n=39) 1993-2007

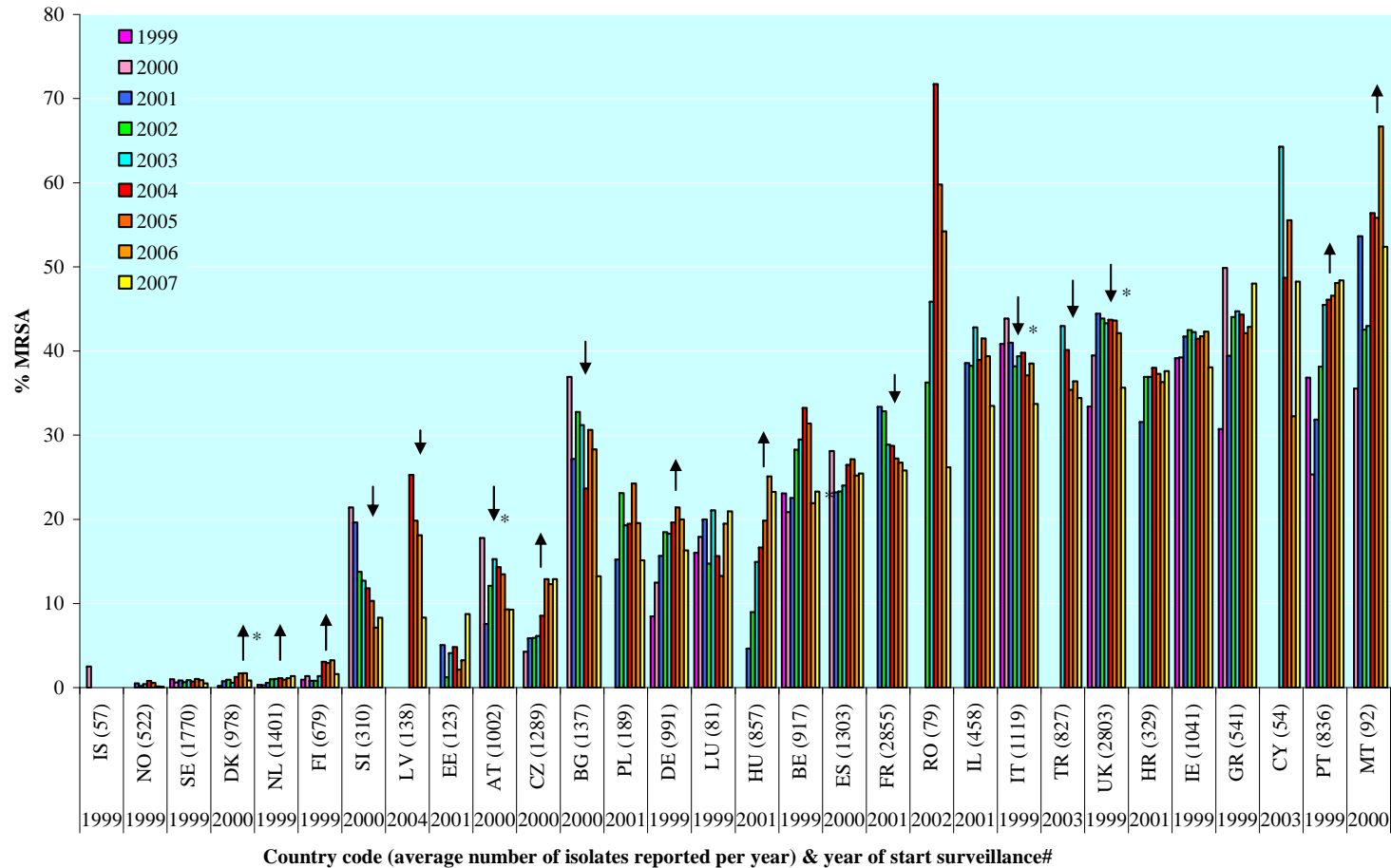




Many Success Stories in Europe:



MRSA Bacteraemia Trends in Europe, 2007



Courtesy: Grundmann et al. (EARSS)



Expert-Proposed European Strategies to Monitor and control Infection, Antibiotic Use and Resistance in Health-care Facilities



- Initiate or continue hand hygiene campaigns and use hand hygiene as a quality indicator
- Collection and monitoring of structure-of-care quality indicators and indicators of good practice (e.g. consumption of alcohol solution)
- ECDC Point Prevalence Surveys on HAI and AB Use (completed in all Member States by November 2012; repeated at least once every 5 years)
- National LTCF resident safety programmes, external audits of LTCF and monitoring

Goossens, Lancet Infect Dis 2011, April 7th



Outline



- Problems of antibiotic (ab)use and resistance in Europe
- Towards a European antibiotic policy
 - First steps
 - Member States initiatives
- National and European campaigns
 - On prudent antibiotic use
 - On hand hygiene in hospitals
- Towards a Global policy
 - Transatlantic Task Force for Antimicrobial Resistance (TATFAR)
 - World Health Day, April 7th 2011



Trans Atlantic Task Force on Antimicrobial Resistance - TATFAR



EU-US Summit Declaration – Washington 3 November 2009



The EU-US Summit Declaration called for the establishment of “...a transatlantic task force on urgent antimicrobial resistance issues focused on appropriate therapeutic use of antimicrobial drugs in the medical and veterinary communities, prevention of both healthcare- and community-associated drug-resistant infections, and strategies for improving the pipeline of new antimicrobial drugs, which could be better addressed by intensified cooperation between us”.



Organisations - US



United States Department of Health and Human Services:



➤ Office of Global Health Affairs (OGHA)



➤ Centers for Disease Control and Prevention (CDC)



➤ Food and Drug Administration (FDA)



➤ National Institutes of Health, National Institute of Allergy and Infectious Diseases (NIAID/NIH)



Organisations - EU



European Commission:

EC-Directorate General for Health and Consumers

EC-Directorate General for Research

European Centre for Disease Prevention and Control (ECDC)

European Medicines Agency (EMA)

European Food Safety Authority (EFSA)



Council of the European Union:

Represented by the TRIO Presidency (Spain, Belgium, Hungary)





TATFAR Outcome and Timeline



The expected outcome of the TATFAR is a review of ongoing and planned activities and a proposal with suggestions for areas of future collaboration between the EU and the US.

September

Launch of EU interaction with third parties based on Commission website consultation

December

Interim draft reports from working groups (including input from public consultations)

31 March Final report

2010

2011

June
TATFAR face to face meeting, US

October - November
U.S. stakeholder meeting

January
Final draft reports from working groups

March
Face to face meeting, EU



And Now....



World Health Day, 7 April, 2011

COMBAT DRUG RESISTANCE

**No action today,
no cure tomorrow**





Conclusion



“We have watched too passively as the treasury of drugs that has served us well has been stripped of its value. We urge our colleagues worldwide to take responsibility for the protection of this precious resource. There is no longer time for silence and complacency”.

Carlet J, Collignon P, Goldman D, Goossens H, Gyssens I, Harbarth S, Jarlier V, Levy S, N'Doye B, Pittet D, Richtmann R, Seto W, van der Meer J and Voss A. Lancet, 2011; April 7th



Acknowledgement



Anne Simon and many other colleagues of the Belgian Antibiotic Policy Coordination Committee (BAPCOC)

Belgian Chief Medical Officer, Christiaan Decoster

Belgian Ministers of Public Health (Frank Vandebroucke, Magda Aelvoet, Rudy Demotte and Laurette Onkelinx)

Dominique Monnet and Sarah Earnshaw of ECDC, Stockholm