

MADRID, 18 DE NOVIEMBRE DE 2014

Día Europeo para Uso Prudente de los Antibióticos (2014)
“El buen uso de los antibióticos: una prioridad mundial de salud”

José Campos

ECDC-Punto Focal “Antimicrobial Resistance-Antimicrobial consumption”

Laboratorio de Referencia de Antibióticos
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Madrid



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18 de Noviembre de 2014

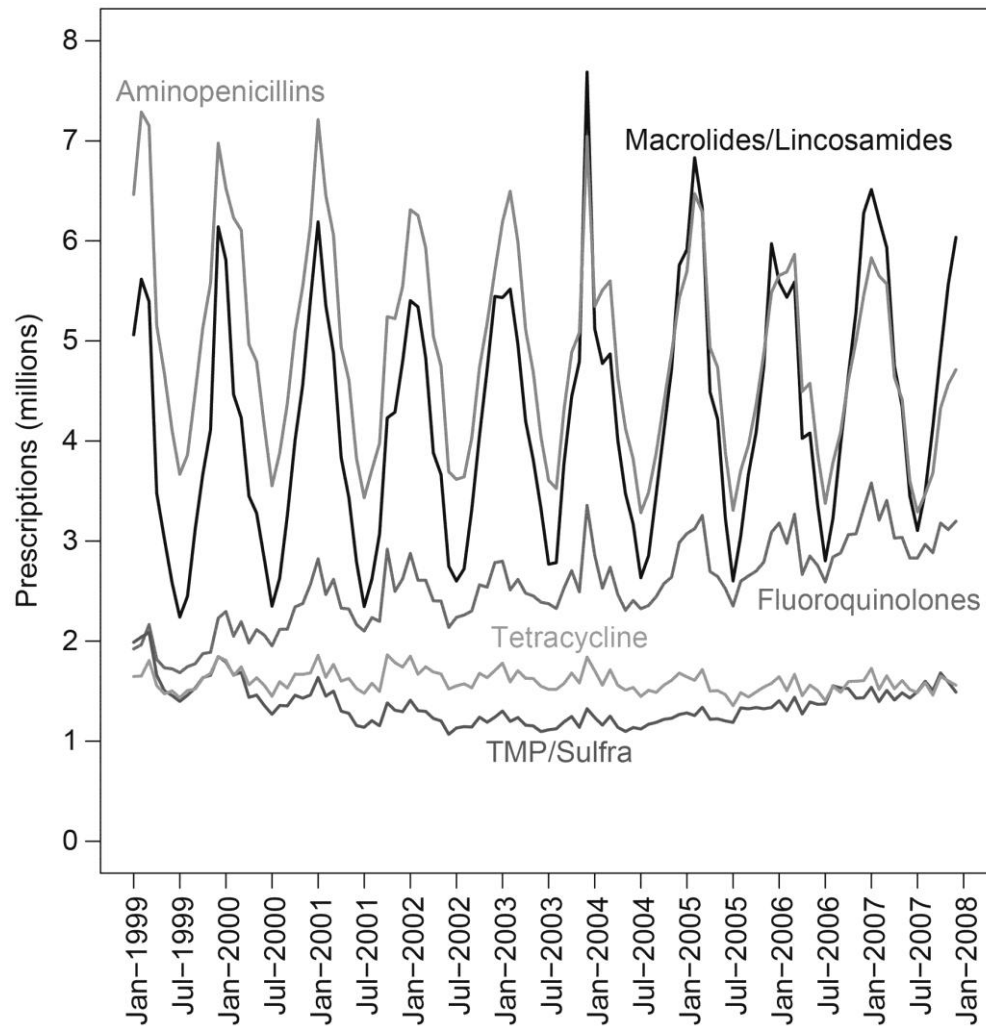
Día Europeo para el Uso Prudente de los Antibióticos



Una iniciativa europea para la salud



Number of prescriptions for antibiotic drug classes, by month.



Sun L et al. Clin Infect Dis. 2012;55:687-694



Un 40%
de los europeos creen
erróneamente que los
antibióticos funcionan contra
los resfriados y la gripe.

Antibióticos.

Úselos con prudencia:
nunca contra los
resfriados ni la gripe.



**DÍA EUROPEO
PARA EL USO PRUDENTE
DE LOS ANTIBIÓTICOS**

 UNA INICIATIVA EUROPEA
PARA LA SALUD



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Antibióticos.

Consulte a su farmacéutico:
otros medicamentos pueden
ayudarte a aliviar los síntomas.



**DÍA EUROPEO
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1. Los antibióticos solo puede recetárselos un médico

Muchas enfermedades invernales pueden tener los mismos síntomas, pero tal vez no requieran el mismo tratamiento. Si le han recetado un antibiótico para una enfermedad anterior y se ha recuperado bien, puede ser tentador utilizar el mismo antibiótico cuando se presentan síntomas similares. Sin embargo, solo un médico que le haya atendido puede determinar si una enfermedad invernal requiere tratamiento con antibióticos.

- No intente comprar antibióticos sin receta.
- No guarde antibióticos para usarlos más adelante.
- No tome antibióticos sobrantes de tratamientos previos.
- No comparta los antibióticos sobrantes con otras personas.

No guarde los tratamientos antibióticos sobrantes [8]. Si recibe más dosis (p. ej., comprimidos o cápsulas) de antibióticos de las que le han recetado, pregunte a su farmacéutico cómo deshacerse de las dosis sobrantes.

Ver también: <http://ecdc.europa.eu/es/eaad/antibiotics/Pages/messagesForPublic.aspx>

2. Los antibióticos no son analgésicos y no pueden curar todas las enfermedades

Los antibióticos no actúan como analgésicos y no alivian el dolor de cabeza, el malestar o la fiebre.

- Los antibióticos solo son eficaces contra las infecciones bacterianas y no le ayudarán a recuperarse de infecciones causadas por virus, como el resfriado común o la gripe [9–12, 14].
- Hasta el 80 % de las infecciones invernales que afectan a la nariz, los oídos, la garganta y los pulmones son de origen vírico, por lo que tomar antibióticos no hará que se encuentre mejor [11, 12].

3. La toma de antibióticos por motivos equivocados, como combatir los resfriados y la gripe, no hará que se recupere antes y podría tener efectos adversos

La toma de antibióticos para combatir los resfriados y la gripe no le beneficiará: sencillamente, los antibióticos no son eficaces en las infecciones víricas [9-12]. Además, los antibióticos pueden provocar desagradables reacciones adversas como diarrea, náuseas o erupción cutánea [9, 10, 13-15].

Tomar antibióticos para combatir infecciones bacterianas leves, como rinosinusitis, dolor de garganta, bronquitis o dolor de oídos es, a menudo, innecesario [15-19] ya que en la mayoría de los casos nuestro sistema inmunitario es capaz de vencer tales infecciones.

La mayor parte de los síntomas pueden aliviarse con otros medicamentos que pueden adquirirse sin receta. Tomar antibióticos no reducirá la intensidad de sus síntomas ni le ayudará encontrarse mejor antes [10, 12, 15, 17].

Si los síntomas persisten o ante cualquier duda, es importante que consulte a su médico. Si realmente tiene una infección grave, como una neumonía bacteriana, el médico le receta antibióticos. Solicite ayuda en caso de que:

- sea una persona mayor de 65 años;
- padezca asma o diabetes;
- sufra alguna enfermedad pulmonar (p. ej., bronquitis crónica, enfisema, enfermedad pulmonar obstructiva crónica);
- tenga problemas cardíacos (p. ej., infarto de miocardio previo, angina de pecho, insuficiencia cardíaca crónica);
- tenga algún problema médico que le cause inmunosupresión, o
- esté tomando medicamentos que supriman el sistema inmunitario (p. ej., esteroides, quimioterapia para el cáncer o ciertos fármacos utilizados para suprimir las funciones de la glándula tiroides).

Lista adaptada de «Genomics to combat resistance against antibiotics in community-acquired LRTI in Europe» (Genómica para combatir la resistencia a los antibióticos en las infecciones respiratorias inferiores adquiridas en la comunidad en Europa), un proyecto creado por la Dirección General de Investigación e Innovación de la Comisión Europea.

4. Espere un tiempo para ver si mejora

Atender a las exigencias de la vida diaria mientras se está enfermo puede ser motivo de estrés, especialmente si experimenta determinados síntomas por primera vez. Encontrar el momento adecuado para acudir al médico puede ser difícil y la consulta puede retrasarle en sus obligaciones. Saber cómo actuar ante los síntomas puede ayudarle a afrontar mejor enfermedad. Aprenda a cuidar de sí mismo sin necesidad de tomar antibióticos.

La mayor parte de las enfermedades invernales mejoran al cabo de dos semanas.

5. Consulte a su farmacéutico: otros medicamentos pueden ayudarle a aliviar los síntomas

Su farmacéutico puede recomendarle medicamentos de venta sin receta que le ayudarán a aliviar sus síntomas.

Pida siempre consejo, en especial si está tomando medicamentos para otra enfermedad.

- Los analgésicos alivian el malestar, el dolor y la fiebre.
- Los antiinflamatorios, como las pastillas o aerosoles para la garganta, permiten tragar con más facilidad.
- Los expectorantes orales ayudan a expulsar las secreciones de las vías respiratorias.
- Los aerosoles y descongestivos nasales ayudan a respirar con más comodidad.
- Los antihistamínicos alivian los estornudos y el picor y la obstrucción nasales.

Beber líquidos en abundancia y hacer algo de reposo ayudarán a mejorar cualquier enfermedad invernal.

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PRESS RELEASE

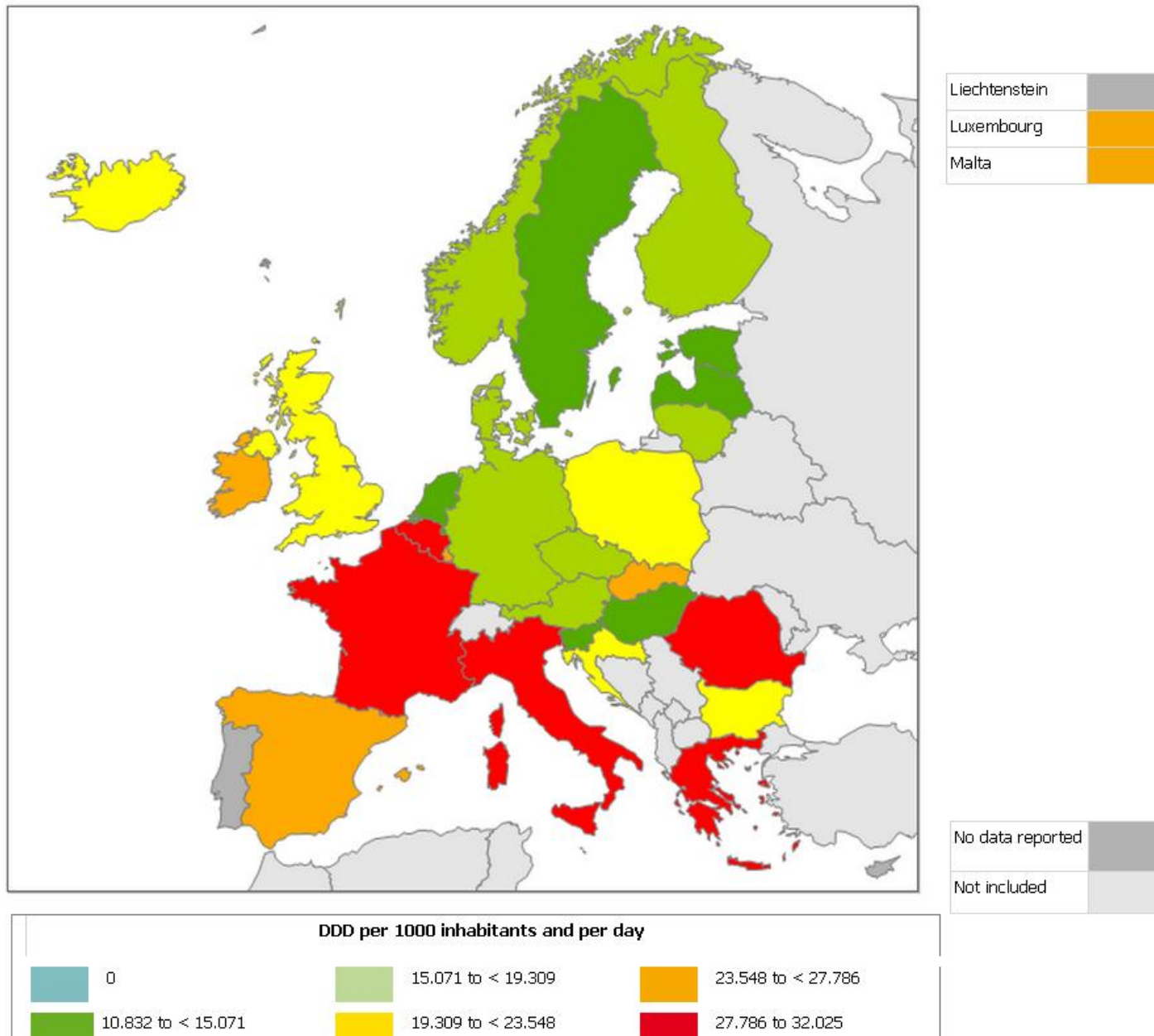
Resistance to last-line antibiotics continues to cause concern in Europe

Stockholm, 17 November 2014

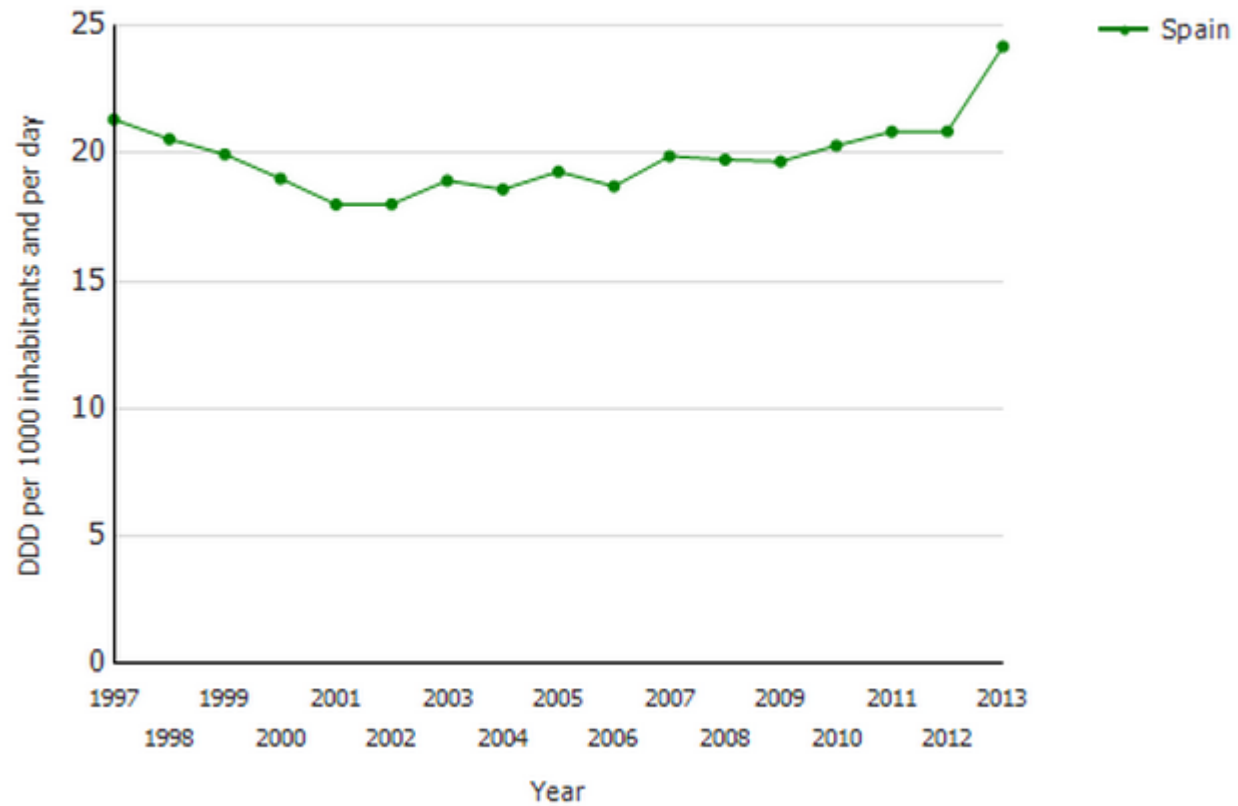
Summary of the latest data on antibiotic resistance in the European Union

- Antibiotic resistance is a serious threat to public health in Europe, leading to increased healthcare costs, prolonged hospital stays, treatment failures and sometimes death.
- Over the last four years (2010 to 2013), the percentages of *K. pneumoniae* resistant to fluoroquinolones, third-generation cephalosporins and aminoglycosides, as well as combined resistance to all three antibiotic groups has increased significantly at EU/EEA level.
- During the same period, resistance to third-generation cephalosporins increased significantly at EU/EEA level for *E. coli*.
- Carbapenems are an important group of last-line antibiotics for treatment of infections involving multidrug-resistant Gram-negative bacteria such as *K. pneumoniae* and *E. coli*. Although carbapenem resistance remains at relatively low levels for most countries, the significant increase of the population-weighted EU/EEA mean percentage of carbapenem resistance in *K. pneumoniae* is a cause for serious concern and a threat to patient safety in Europe.
- In countries with high levels of multi-drug resistance, including resistance to carbapenems, only a few therapeutic options are available, among these are polymyxins. In these countries, presence of resistance to polymyxins is an important warning that options for the treatment of infected patients are becoming even more limited.
- For the second year running, antibiotic resistance data for *Acinetobacter* species are available through EARS-Net. Data for 2013 show large inter-country variations in Europe. High percentages (>25%) of isolates with combined resistance to fluoroquinolones, aminoglycosides and carbapenems were reported from southern and south-eastern Europe.
- The percentage of methicillin-resistant *Staphylococcus aureus* (MRSA) showed a significant decreasing trend at EU/EEA level for the period 2010 to 2013, but the decrease was less pronounced compared to the previous four-year period. Although the continuous decreasing trend at EU/EEA level gives reason for optimism, MRSA remains a public health problem in Europe. In 2013, the EU/EEA population-weighted mean MRSA percentage remained high, and seven out of 30 reporting countries had MRSA percentages above 25%.

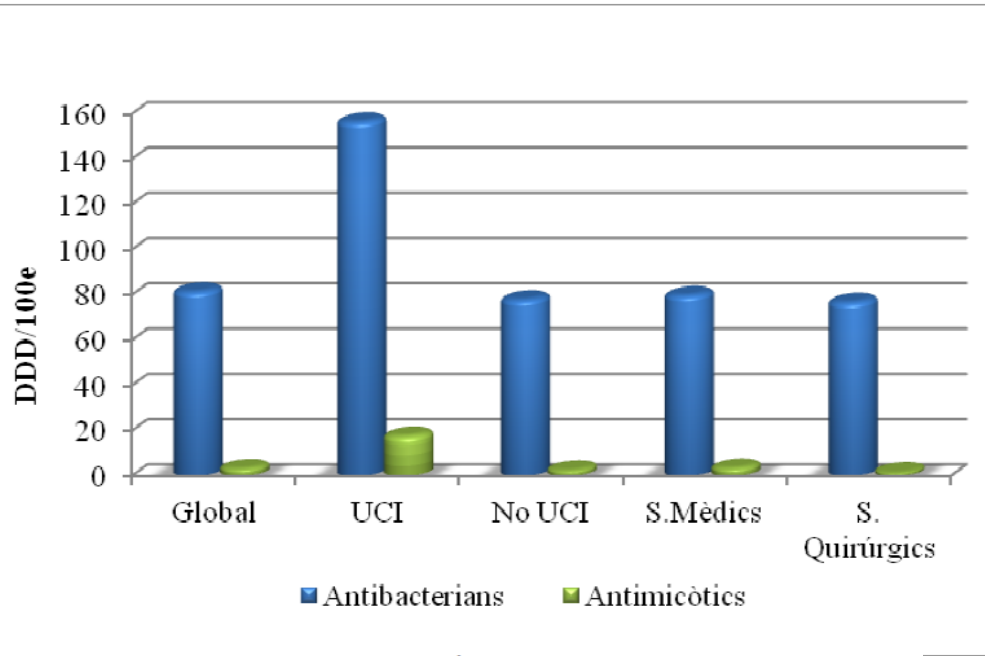
Antimicrobial consumption of Antibacterials For Systemic Use (ATC group J01) in the community (primary care sector) in Europe, reporting year 2013



Trend of the consumption of antimicrobials in ATC group J01 (antibacterials for systemic use) in the community (primary care sector) in Spain from 1997 to 2013

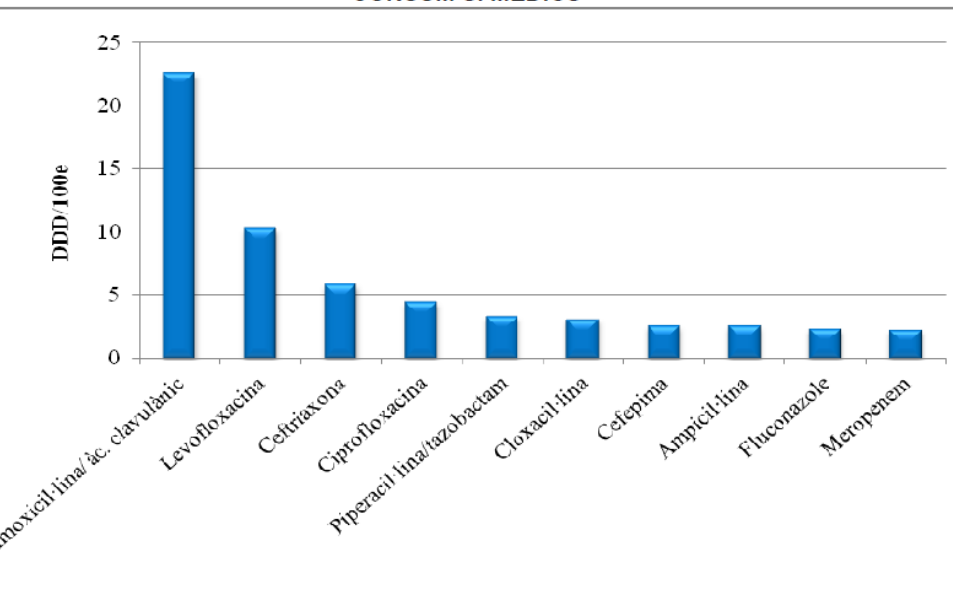


CONSUM TOTAL ANTIMICROBIANS

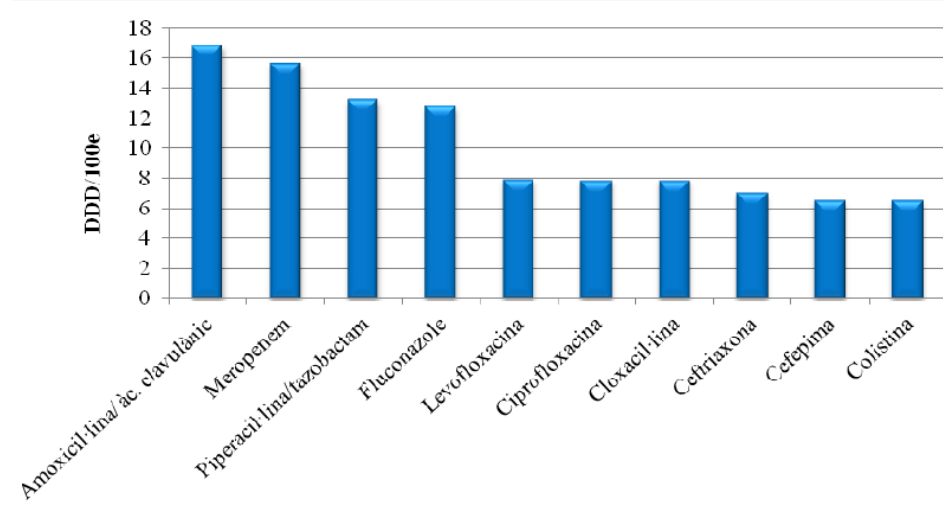


Fuente: VINCAT, 2012

CONSUM S. MÈDICS



CONSUM UCI

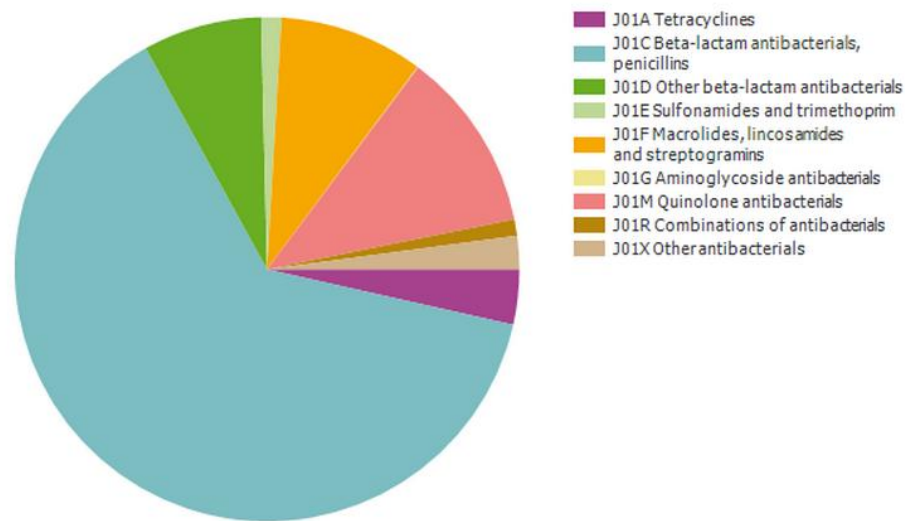


Distribution of antimicrobial consumption of Antibacterials For Systemic Use (ATC group J01) in the community (primary care sector) in Spain, reporting year 2013

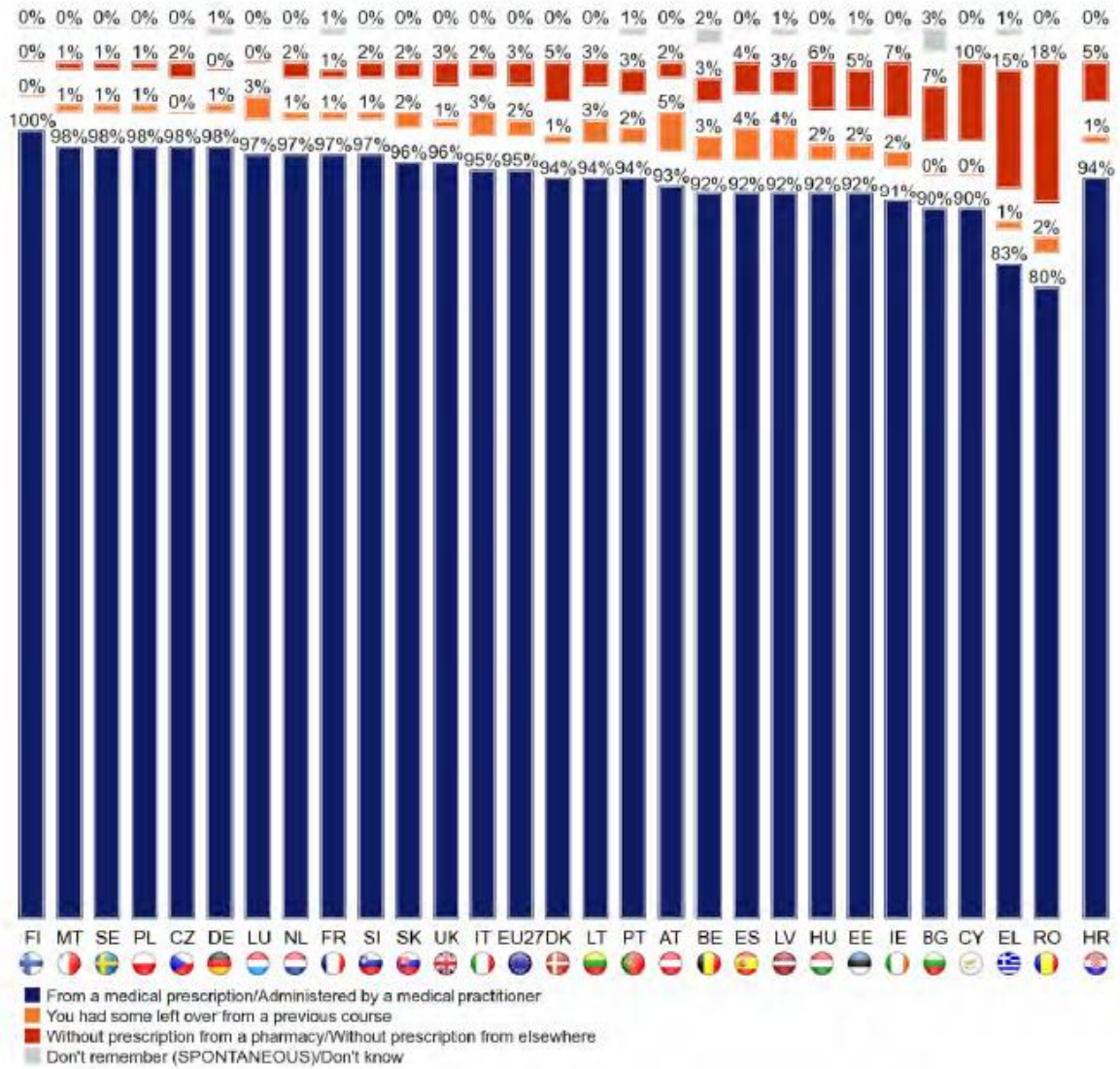
Distribution of antimicrobial consumption of Antibacterials For Systemic Use (ATC group J01) in the community (primary care sector) in Spain, reporting year 2013

Antimicrobial class		DDD per 1000 inhabitants and per day	Percent
ATC Code	Name		
J01A	Tetracyclines	0.9	3.5%
J01B	Amphenicols	0.0	0.0%
J01C	Beta-lactam antibacterials, penicillins	15.4	63.5%
J01D	Other beta-lactam antibacterials	1.8	7.6%
J01E	Sulfonamides and trimethoprim	0.3	1.3%
J01F	Macrolides, lincosamides and streptogramins	2.2	9.3%
J01G	Aminoglycoside antibacterials	0.0	<0.1%
J01M	Quinolone antibacterials	2.8	11.6%
J01R	Combinations of antibacterials	0.3	1.1%
J01X	Other antibacterials	0.5	2.1%
Total		24.2	100.0%

Distribution of antimicrobial consumption of Antibacterials For Systemic Use (ATC group J01) in the community (primary care sector) in Spain, reporting year 2013

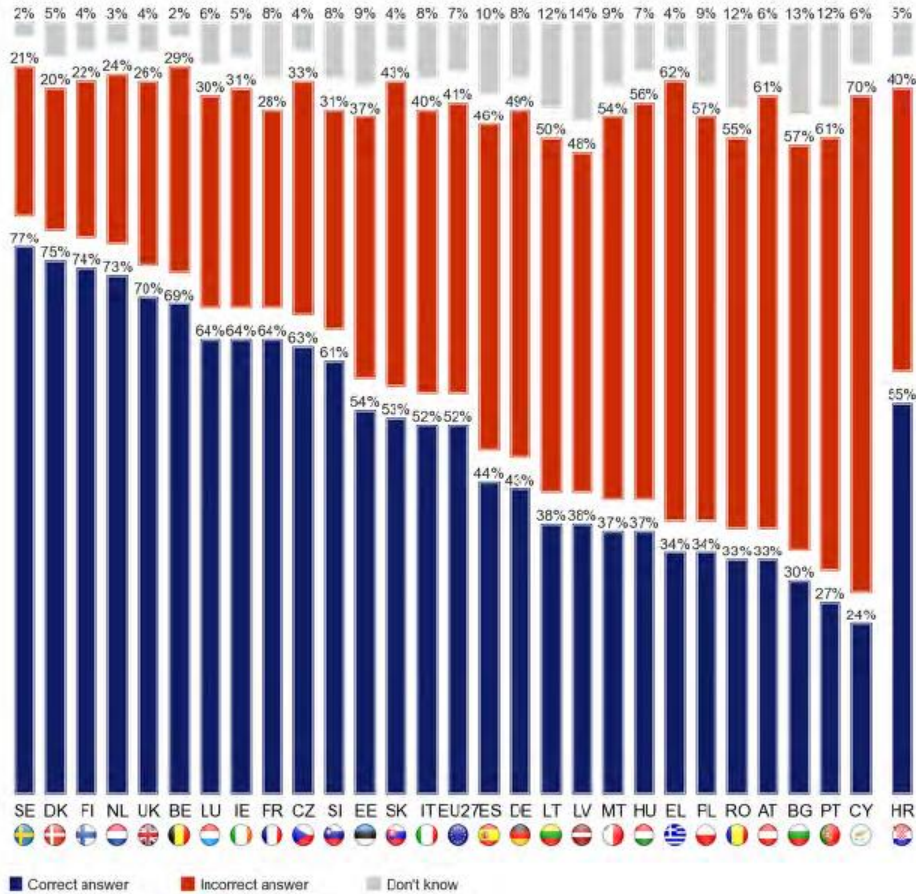


QE1b. How did you obtain the last course of antibiotics that you used?



QE2a.2. For each of the following statements, please tell me whether you think it is true or false.

Antibiotics are effective against cold and flu



SE	50%	+12
NL	22%	+7
IE	36%	+5
LT	32%	+4
LU	59%	+3
UK	51%	+3
DE	34%	+2
BE	52%	+1
EE	22%	+1
CZ	26%	-1
AT	22%	-1
PT	12%	-1
FR	65%	-2
HU	17%	-2
MT	31%	-3
IT	28%	-3
EU27	33%	-4
RO	29%	-4
CY	27%	-4
DK	42%	-5
LV	23%	-5
EL	28%	-7
SK	32%	-11
PL	23%	-11
SI	37%	-13
BG	24%	-16
FI	43%	-17
ES	20%	-31

Question: QE3a In the last 12 months, do you remember getting any information about not taking any antibiotics in case of cold or flu? example, messages about not taking antibiotics in case of cold or flu?

Answers: Yes

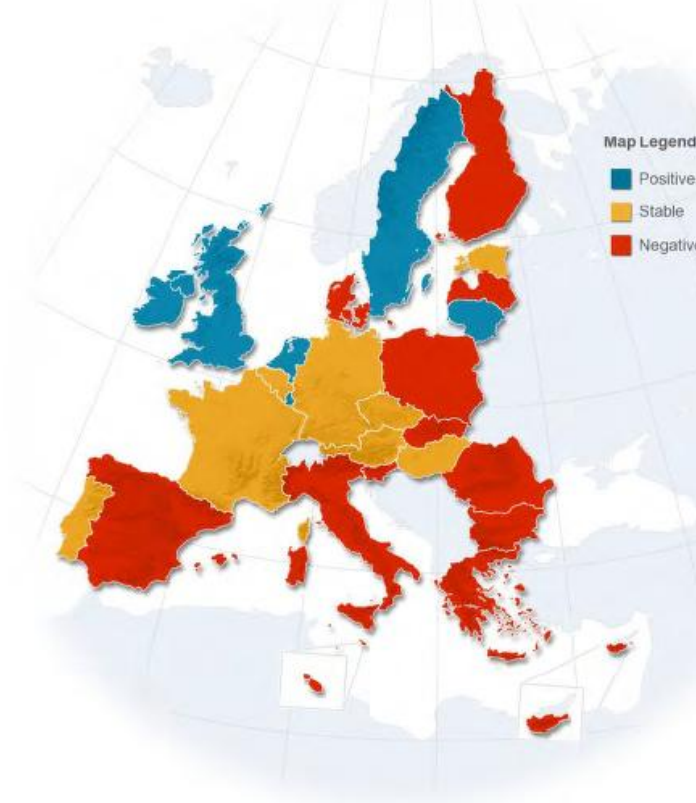


Figure 1. Consumption of antibiotics for systemic use in the community by antibiotic group in 30 EU/EEA countries, 2013 (expressed in DDD per 1 000 inhabitants and per day)

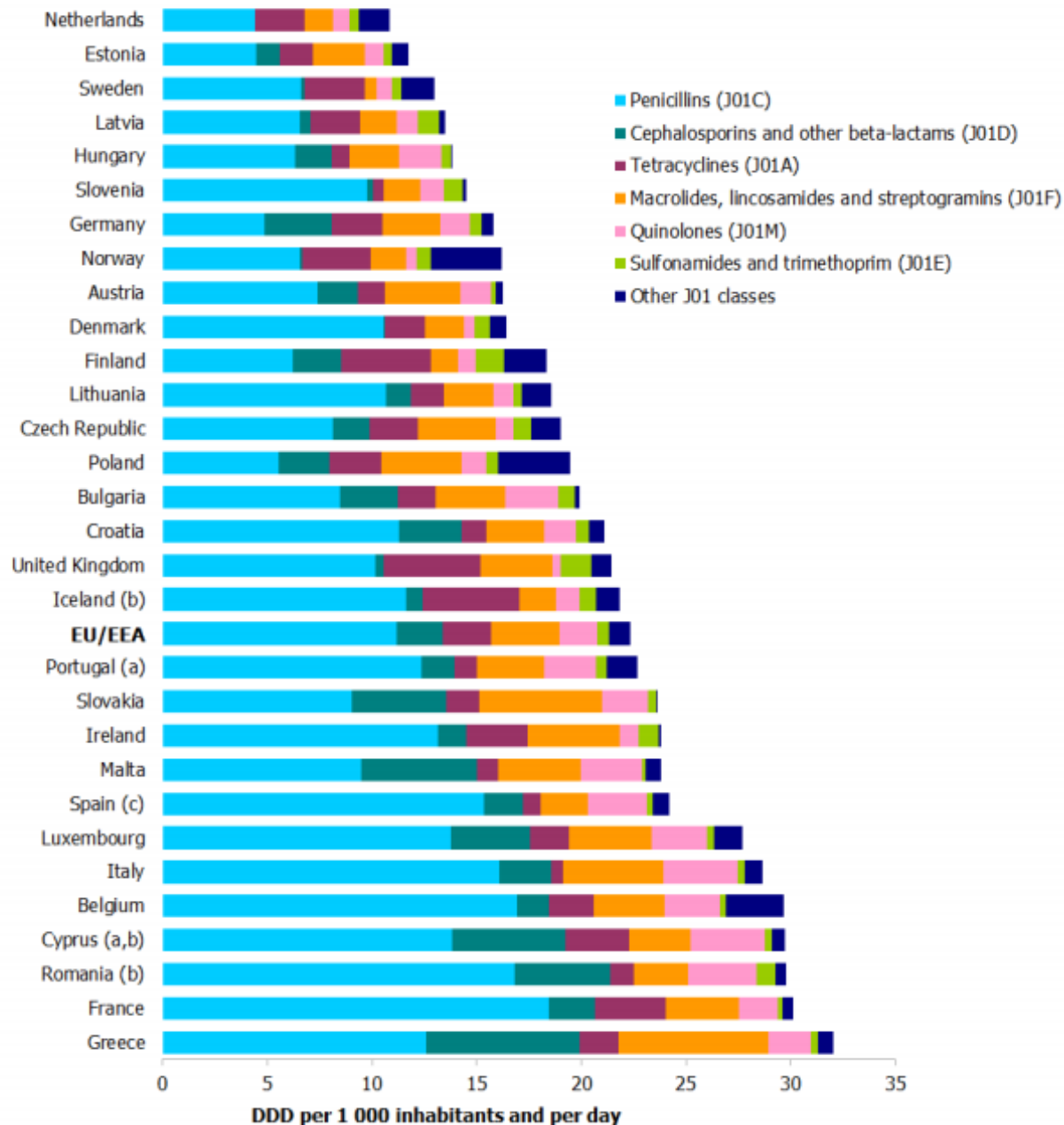


Figure 1. *Klebsiella pneumoniae*: percentage of invasive isolates with combined resistance to third-generation cephalosporins, fluoroquinolones and aminoglycosides, EU/EEA, 2010 (top), 2013 (bottom)

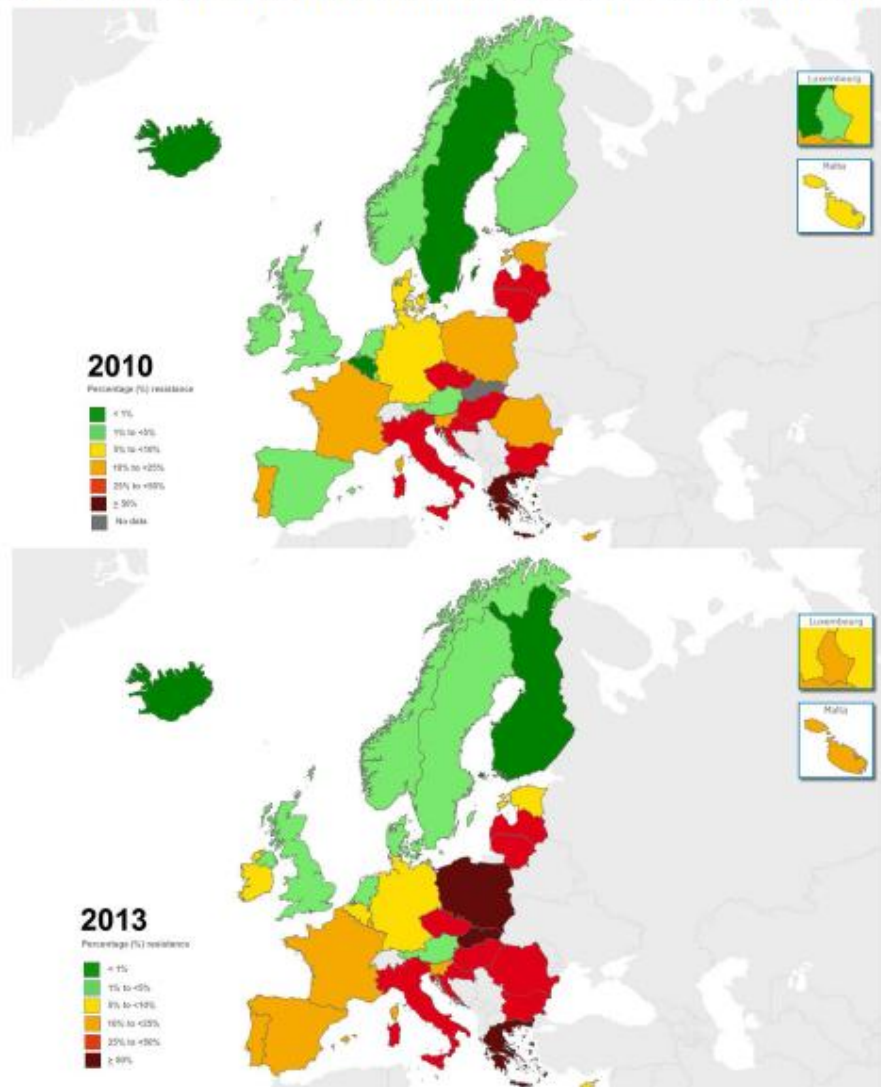


Figure 2. *Klebsiella pneumoniae*: percentage of invasive isolates with resistance to carbapenems, EU/EEA, 2010 (top), 2013 (bottom)

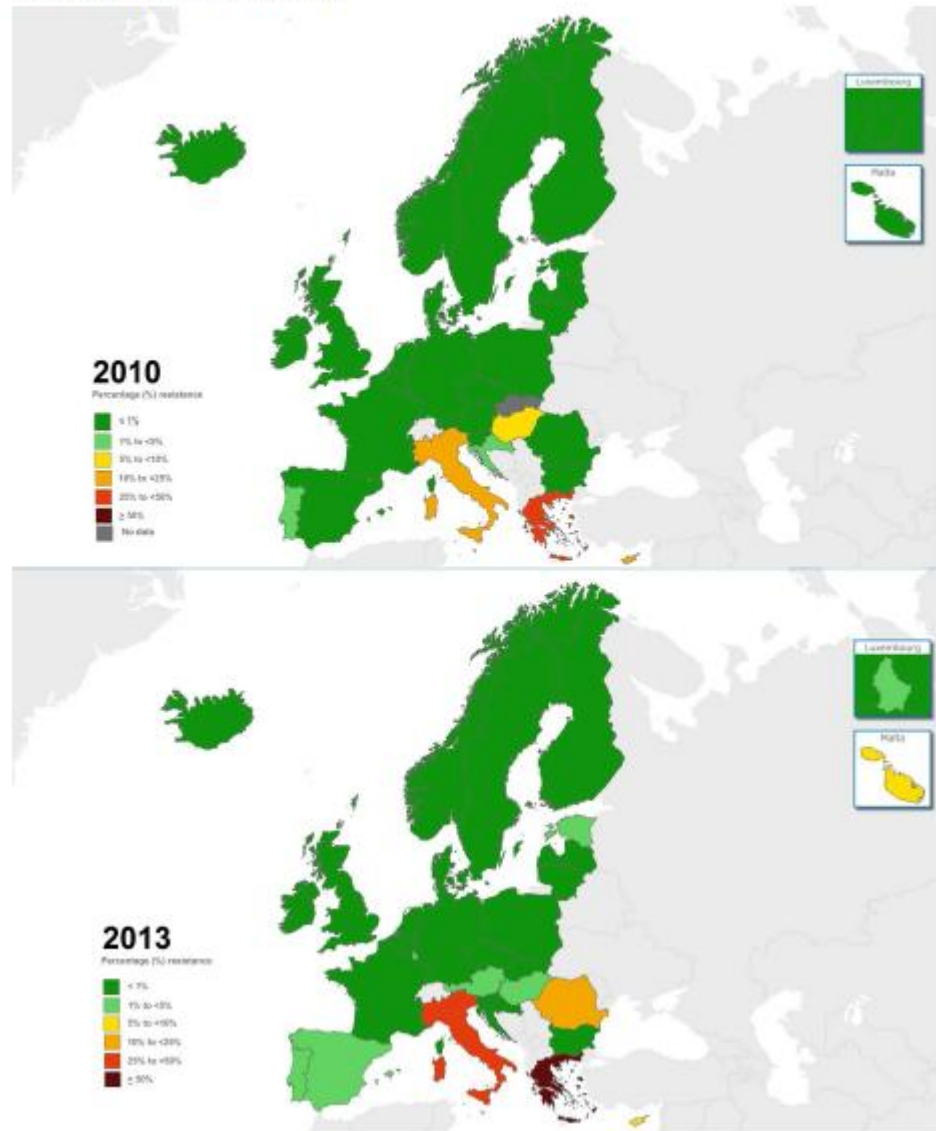


Figure 3. *Escherichia coli*: percentage of invasive isolates with resistance to third-generation cephalosporins, EU/EEA, 2010 (top), 2013 (bottom)

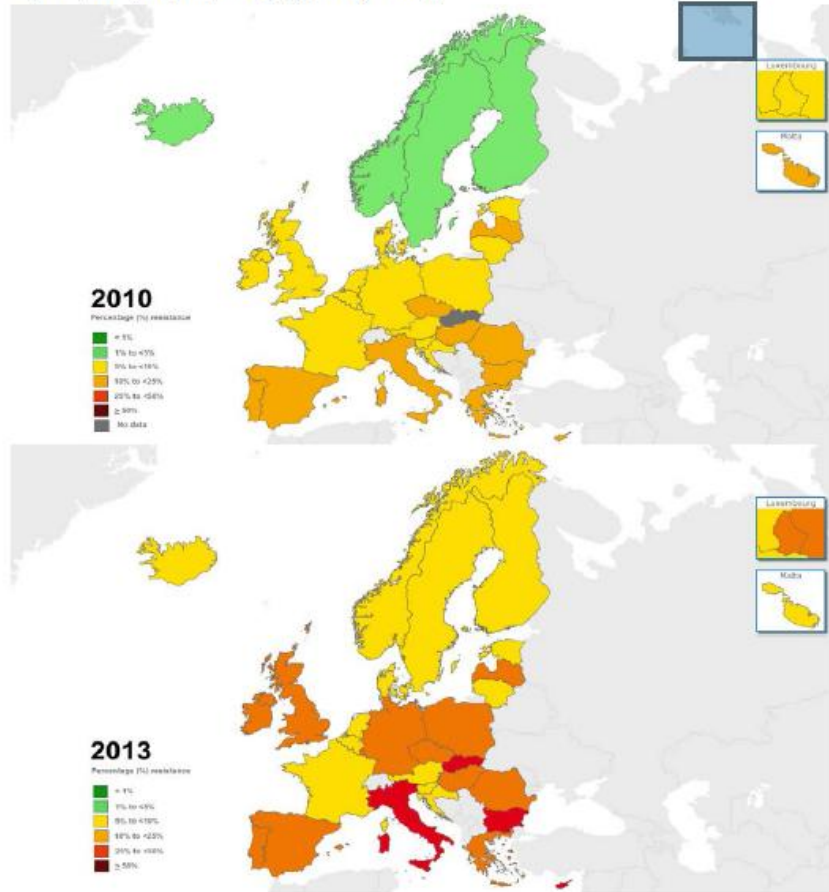
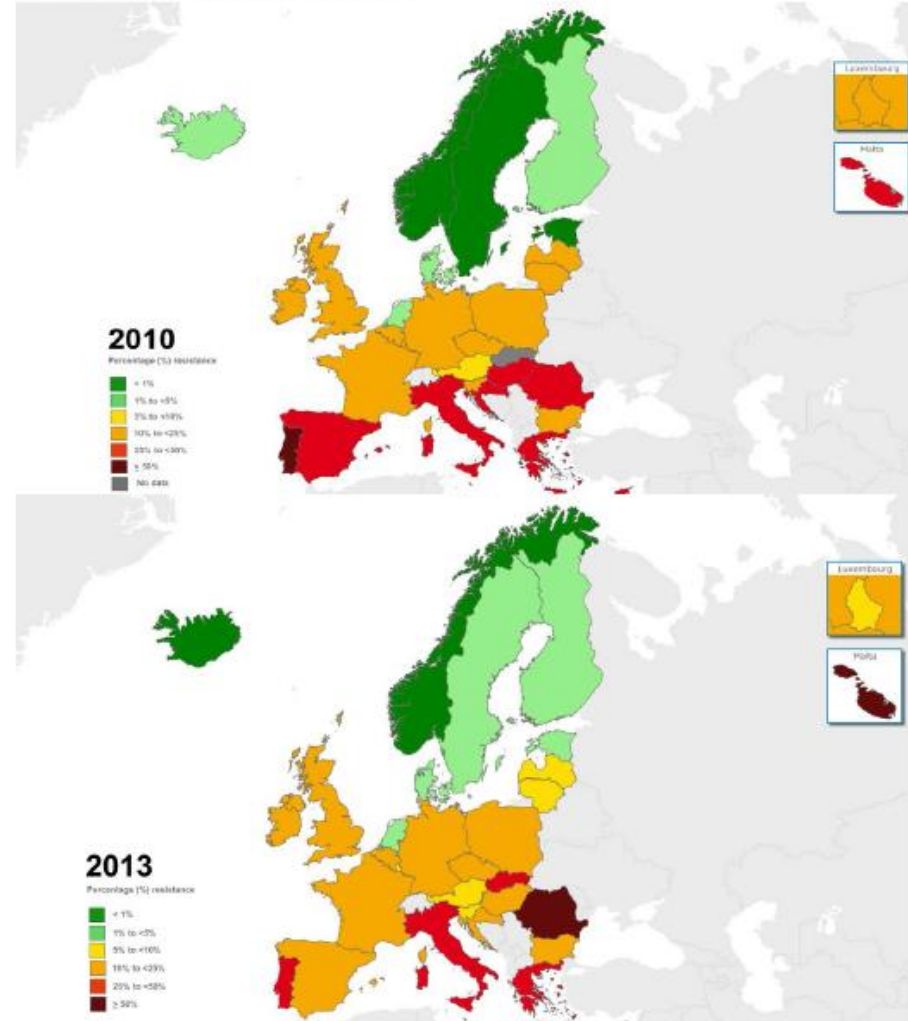


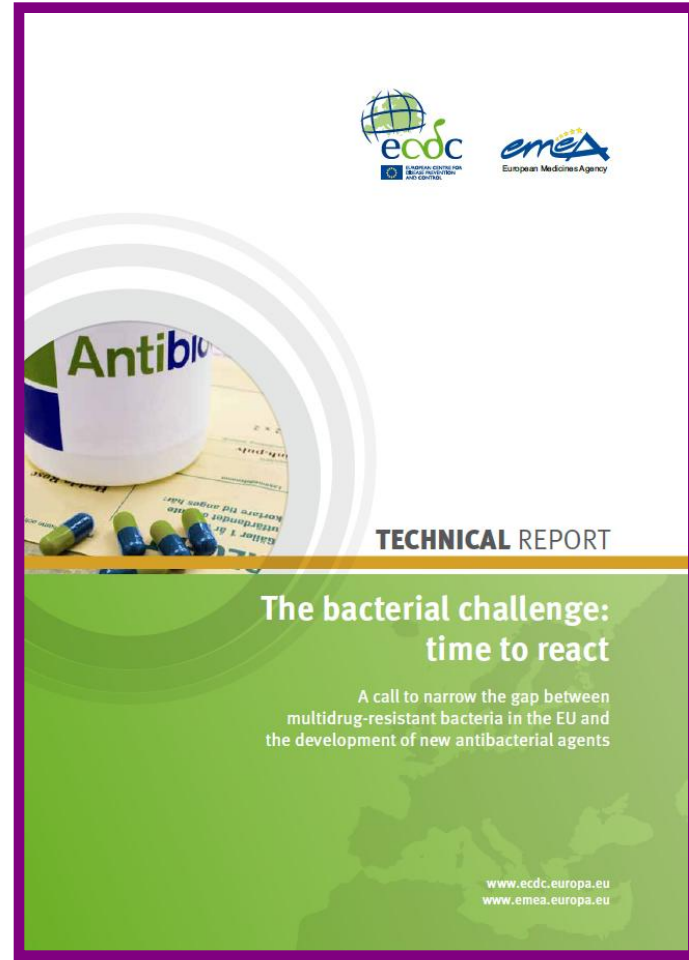
Figure 6. *Staphylococcus aureus*: percentage of invasive isolates with resistance to meticillin (MRSA), EU/EEA, 2010 (top), 2013 (bottom)



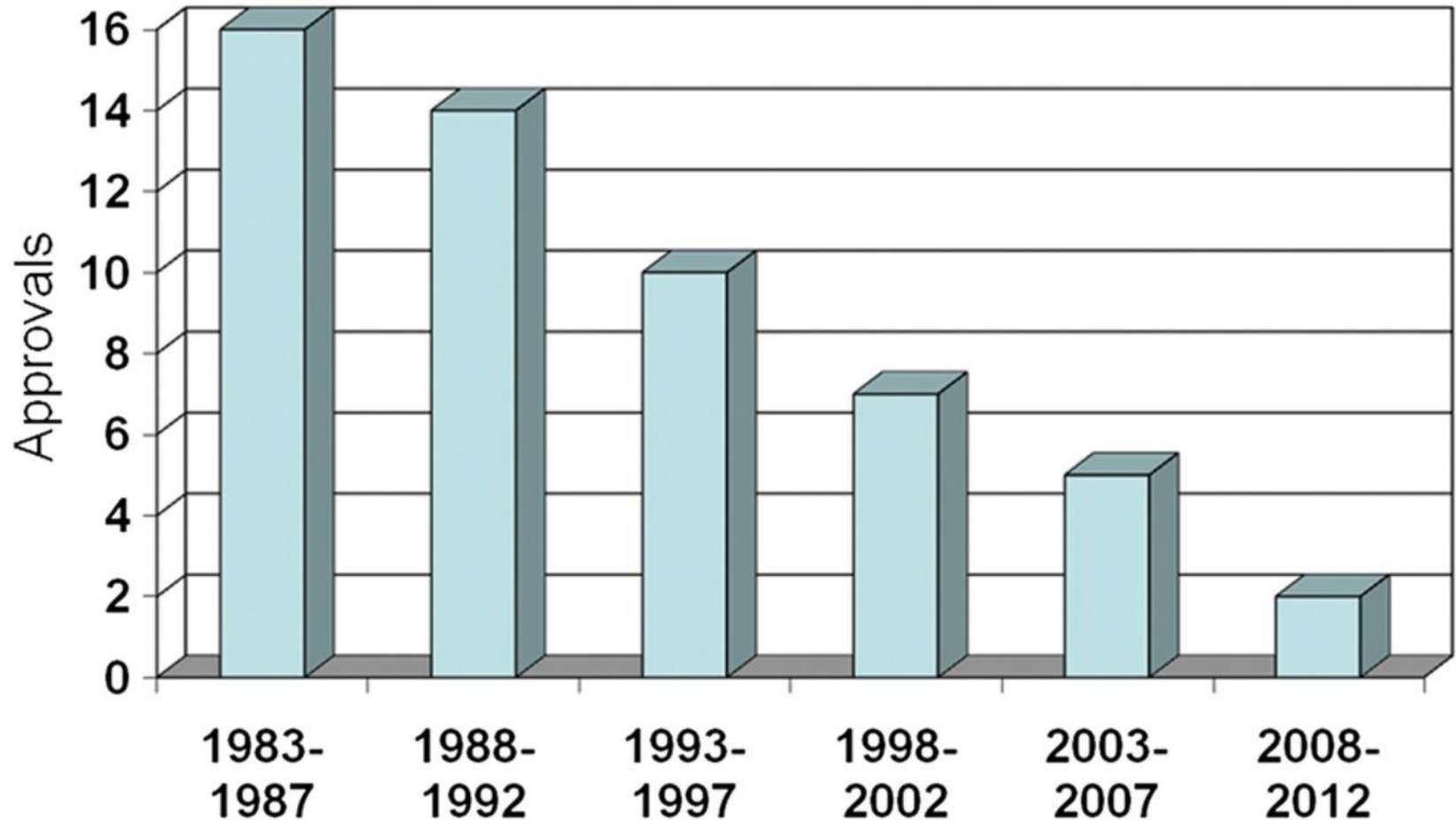
ECDC/EMA Joint Technical Report

“The bacterial challenge: time to react”

- There is a gap between the burden of infections due to MDR bacteria and the development of new antibiotics to tackle this problem.
- There is a particular lack of new agents to treat infections due to MDR bacteria, in particular MDR Gram-negative bacteria
- A European and global strategy to address this gap is urgently needed



New systemic antibacterial agents approved by the US Food and Drug Administration per 5-year period, through 2012.



Boucher H W et al. Clin Infect Dis. 2013;56:1685-1694

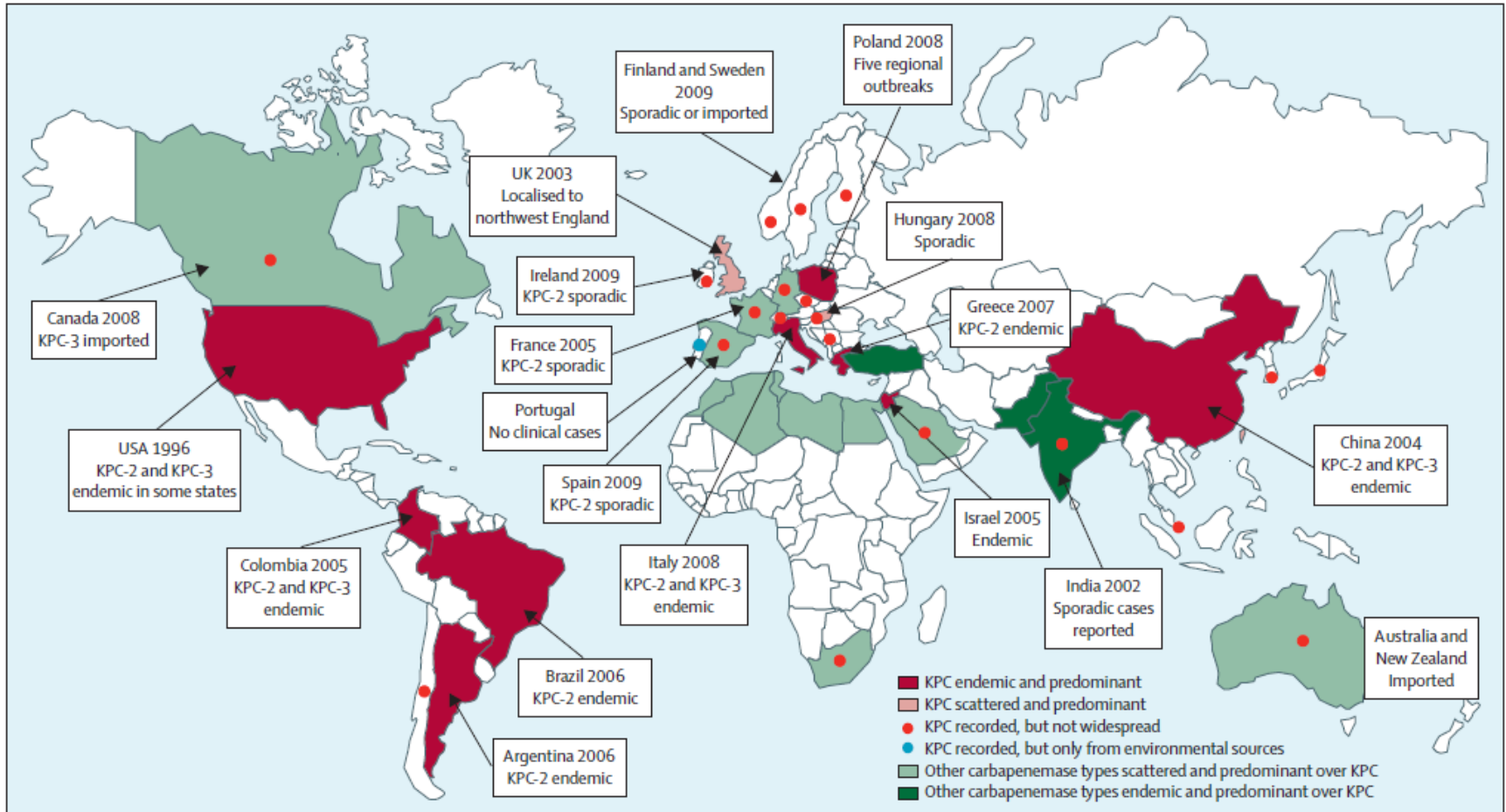
Main Beta-lactamases produced by Gram-Negative bacteria.

Summary of Clinically Important β -Lactamases Produced by Select Gram-Negative Organisms

Ambler Classification	Representative Enzymes	Some Notable Organisms
Class A	ESBLs (TEM, SHV, CTX-M-type groups) Carbapenemases (KPC ^a)	<i>Escherichia coli</i> , <i>Klebsiella</i> spp, <i>Proteus mirabilis</i> <i>Klebsiella pneumoniae</i> , <i>E. coli</i> , <i>Klebsiella oxytoca</i> , <i>Serratia marcescens</i> , <i>Enterobacter</i> spp, <i>Citrobacter freundii</i>
Class B	Carbapenemases; metallo- β -lactamases (VIM, IMP, NDM-1)	<i>K. pneumoniae</i> , <i>E. coli</i> , <i>K. oxytoca</i> <i>S. marcescens</i> , <i>Enterobacter</i> spp, <i>C. freundii</i>
Class C	Cephalosporinases (AmpC)	Inducible chromosomal AmpCs: <i>Enterobacter</i> spp, <i>C. freundii</i> , <i>S. marcescens</i> , <i>Morganella morganii</i> , <i>Providencia stuartii</i> Plasmid-mediated AmpCs: <i>K. pneumoniae</i> , <i>E. coli</i> , <i>Salmonella enteritidis</i>
Class D	Carbapenemases (OXA)	<i>Acinetobacter baumannii</i> , <i>Pseudomonas aeruginosa</i> , <i>E. coli</i> , <i>K. pneumoniae</i> , <i>P. mirabilis</i> , <i>C. freundii</i>

Abbreviations: AmpC, AmpC β -lactamase; ESBL, extended-spectrum β -lactamase.

^a Although *Klebsiella pneumoniae* carbapenemases are the most commonly described carbapenem-resistant Enterobacteriaceae in the United States, this resistance mechanism is found in a number of other Enterobacteriaceae.

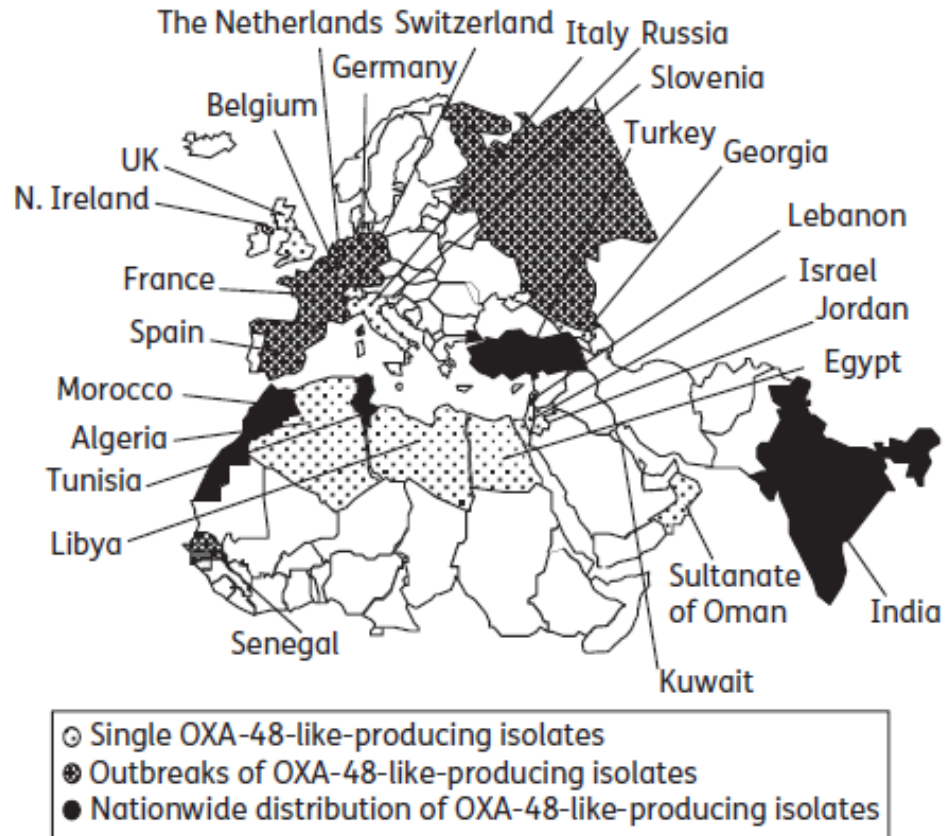




OXA-48-like carbapenemases: the phantom menace

Laurent Poirel*, Anaïs Potron and Patrice Nordmann

Recientemente,
diseminación de OXA-48
entre diferentes
clones de *K. pneumoniae*
y *E. coli* en toda Europa



¡¡DISEMINACIÓN EXPLOSIVA!!

Colistin resistance superimposed to endemic carbapenem-resistant *Klebsiella pneumoniae*: a rapidly evolving problem in Italy, November 2013 to April 2014

M. Monaco^{1,2}, T. Gianì^{2,3}, M. Raffone^{1,4}, F. Arena³, A. Garcia-Fernandez¹, S. Pollini³, Network EuSCAPE-Italy⁵, H. Grundmann⁶, A. Pantosti (annalisa.pantosti@iss.it)¹, G. M. Rossolini^{3,7,8}

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2. MM and TG have equally contributed to this work

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4. Federico II University Hospital, Naples, Italy

5. The network EuSCAPE-Italy participants are listed at the end of this article

6. Department of Medical Microbiology, University of Groningen, University Medical Center Groningen, the Netherlands

7. Department of Experimental and Clinical Medicine, University of Florence, Florence, Italy

8. Clinical Microbiology and Virology Unit, Florence Careggi University Hospital, Florence, Italy

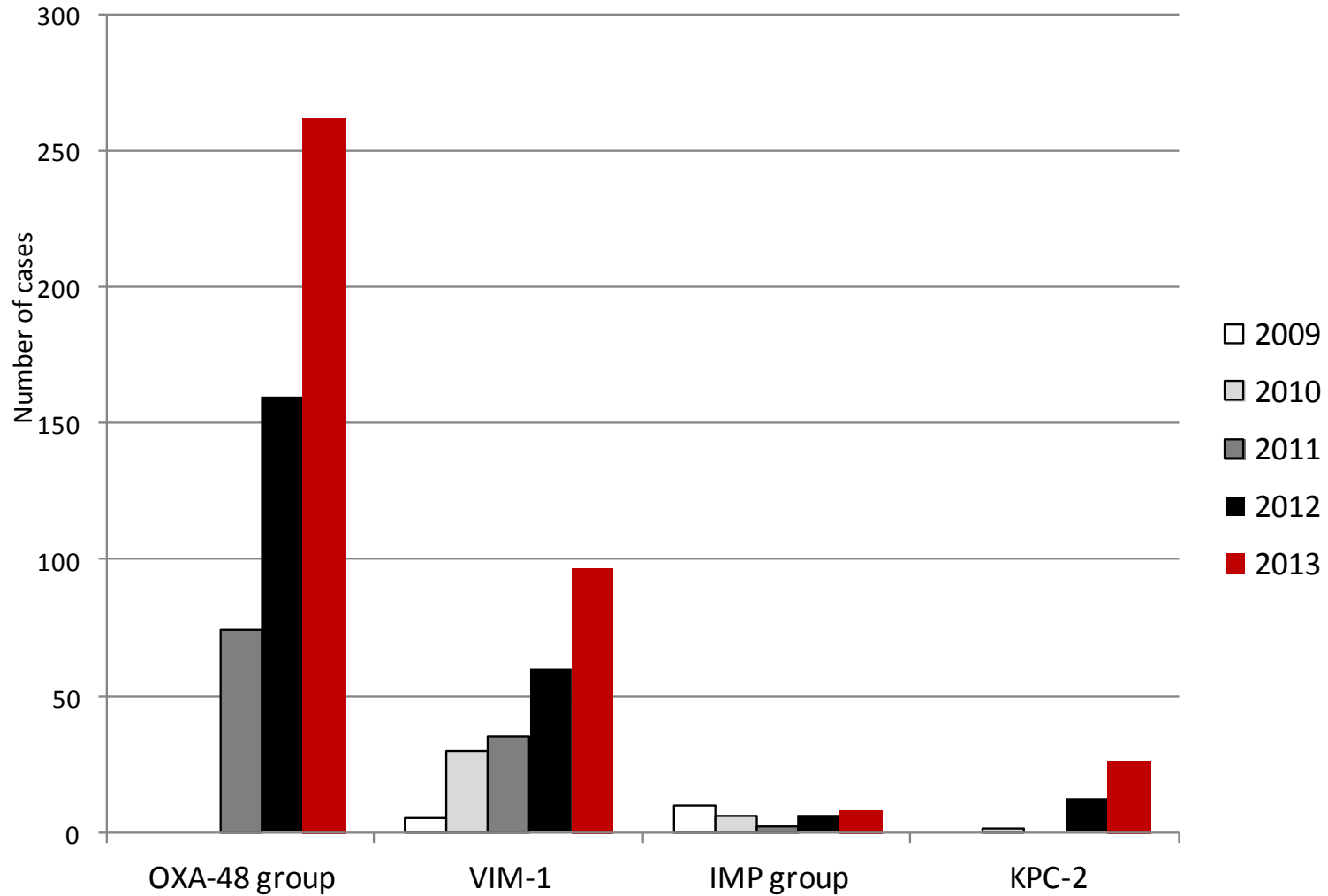
Citation style for this article:

Monaco M, Gianì T, Raffone M, Arena F, Garcia-Fernandez A, Pollini S, Network EuSCAPE-Italy, Grundmann H, Pantosti A, Rossolini GM. Colistin resistance superimposed to endemic carbapenem-resistant *Klebsiella pneumoniae*: a rapidly evolving problem in Italy, November 2013 to April 2014. Euro Surveill. 2014;19(42):pii=20939. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20939>

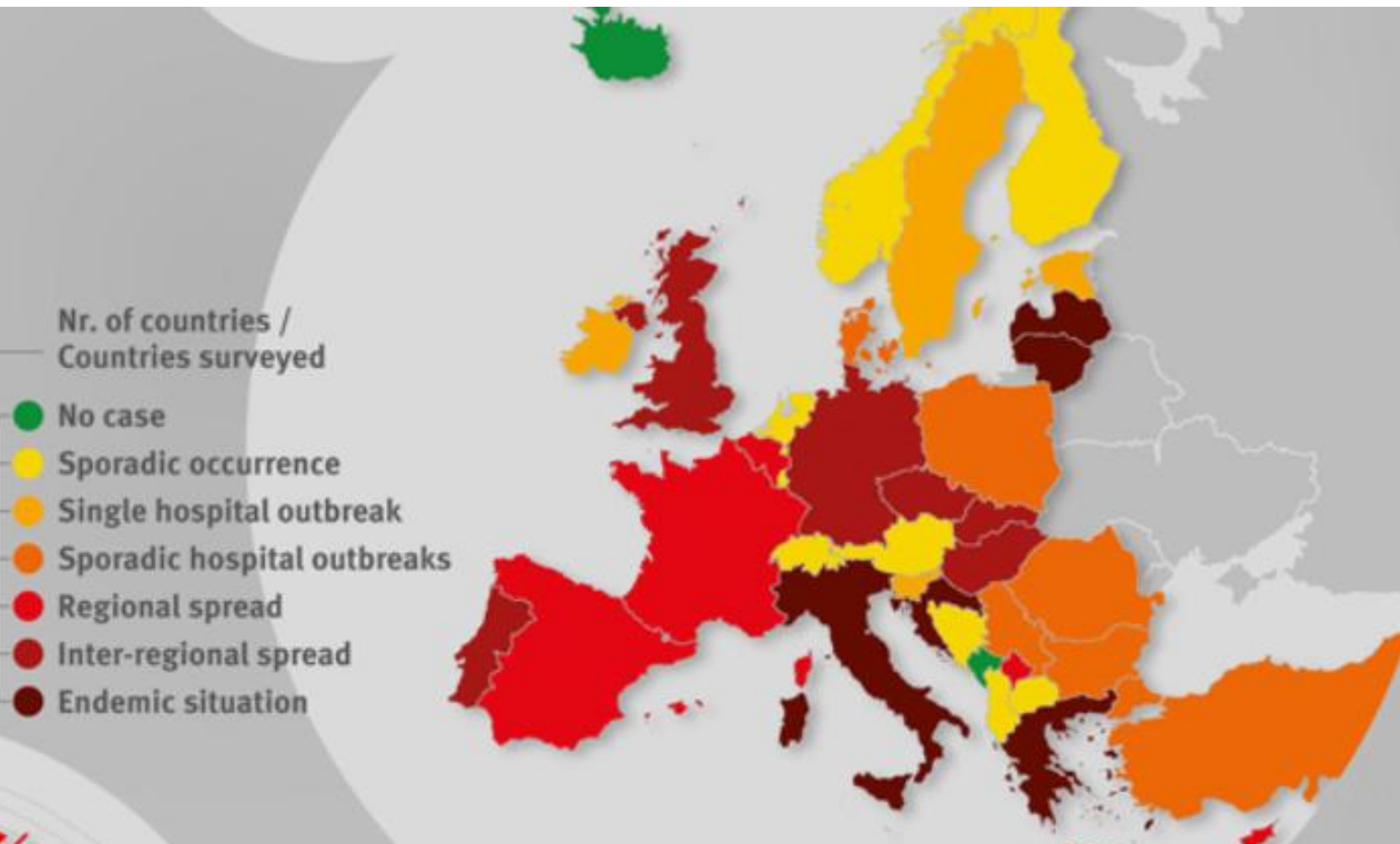
Consecutive non-replicate clinical isolates (n=191) of carbapenem non-susceptible Enterobacteriaceae were collected from 21 hospital laboratories across Italy from November 2013 to April 2014 as part of the European Survey on Carbapenemase-producing Enterobacteriaceae (EuSCAPE) project. *Klebsiella pneumoniae* carbapenemase-producing *K. pneumoniae* (KPC-KP) represented 178 (93%) isolates with 76 (43%) respectively resistant to colistin, a key drug for treating carbapenemase-producing Enterobacteriaceae. KPC-KP colistin-resistant isolates were detected in all participating laboratories. This underscores a concerning evolution of colistin resistance in a setting of high KPC-KP endemicity.

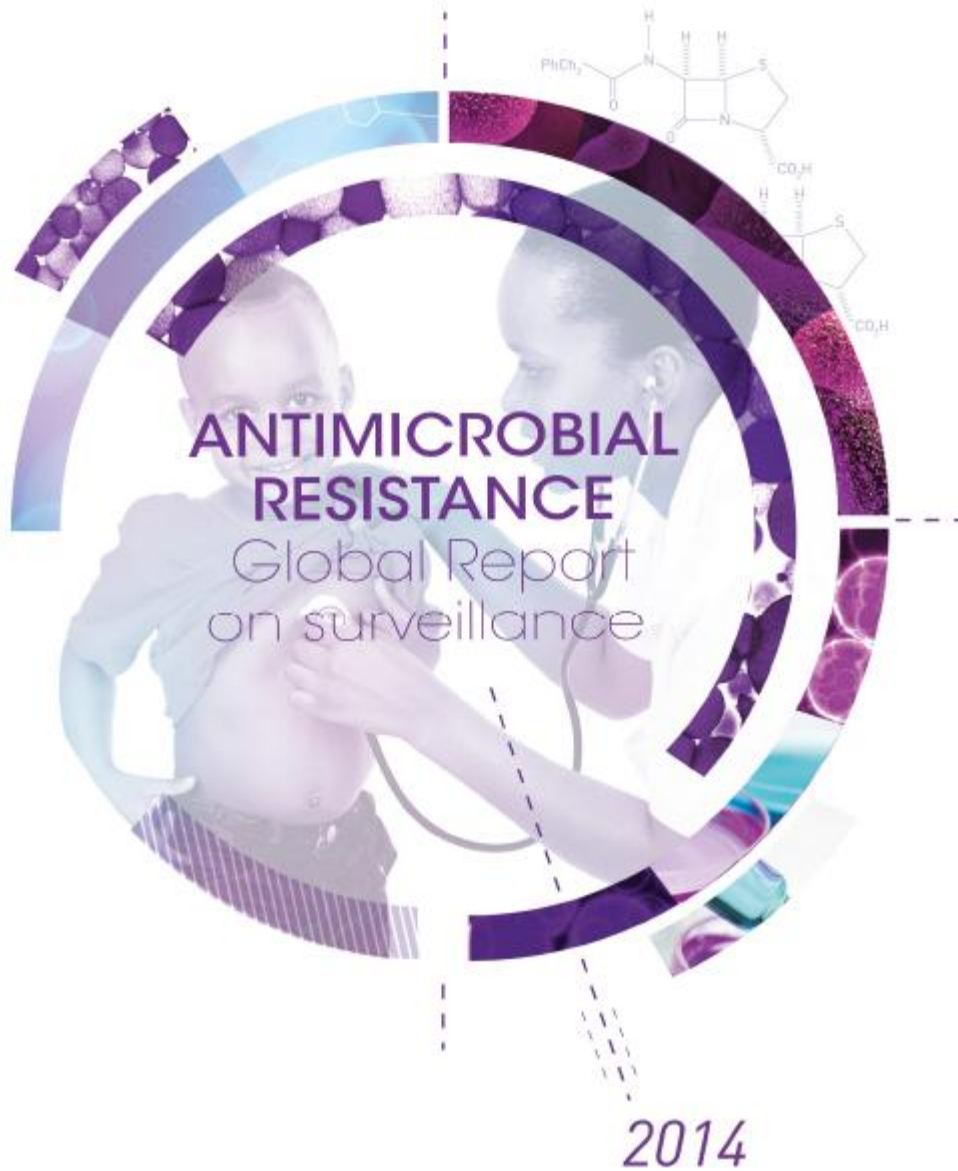


Evolución de casos de enterobacterias productoras de carbapenemasas estudiados en el Programa de Vigilancia de la Resistencia a Antibióticos del CNM (2009-2013)



Diseminación de enterobacterias productoras de carbapenemasas en Europa, ECDC, 2013

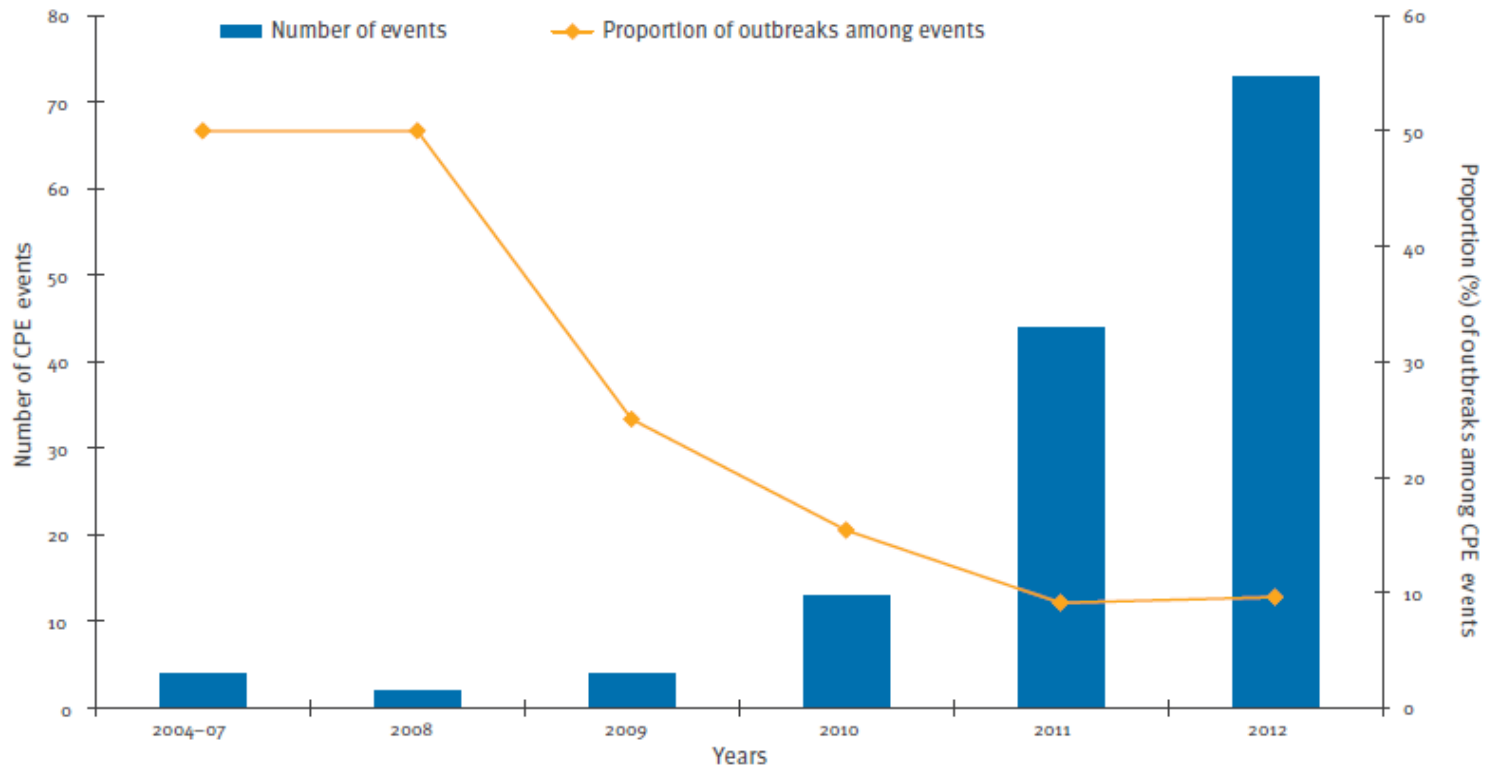




	CDC threat level	Population	Attributable deaths
Carbapenem-resistant Enterobacteriaceae, or CRE	URGENT	About 9,000 drug-resistant infections per year	About 600 per year
Multidrug-resistant <i>Acinetobacter</i>	SERIOUS	About 7,300 multidrug-resistant infections per year	About 500 per year
Multidrug-resistant <i>Pseudomonas aeruginosa</i>	SERIOUS	About 6,700 multidrug-resistant infections per year	About 440 per year

Fournier et al. Long-term control of carbapenemase-producing Enterobacteriaceae at the scale of a large French multihospital institution: a nine-year experience, France, 2004 to 2012. Euro Surveill. 2014 May 15;19(19).

Number of carbapenemase-producing Enterobacteriaceae (CPE) events (n=140) and proportion of outbreaks among these events at Assistance Publique-Hôpitaux de Paris, France, 2004–2012



A CPE event was defined as one index case (respectively defined as infected or colonised with CPE), followed or not by secondary case(s).

GAIN Act



GENERATING ANTIBIOTICS INCENTIVES NOW (GAIN) ACT

On July 9th, 2012, President Barack Obama signed into law the Food and Drug Administration Safety and Innovation Act and with it the Generating Antibiotics Incentives Now (GAIN) Act, which includes provisions to incentivize research and development of antibiotics. The Hartford Courant – citing Dr. Jeffrey Townsend, a professor in the Department of Ecology and Evolutionary Biology at Yale, described the GAIN Act as “brilliant.” In June of 2012, described GAIN as “...a Holy Cow provision.” Because of the dearth of antibiotics coming to market to treat a growing list of antibiotic-resistant infections, the antibiotic pipeline is running dry and, in turn, placing the public health at risk. Through the GAIN Act, Congress has addressed the issue of antibiotic resistance at a critical juncture: according to CDC data, more than 1.7 million people acquire bacterial infections in U.S. hospitals each year — and 99,000 people die as a result of these bacterial infections, of which up to 70 percent are resistant to at least one drug.

TITLE VIII – GENERATING ANTIBIOTIC INCENTIVES NOW (GAIN)

Incentives are provided under Title VIII of the new Generating Antibiotic Incentives Now (GAIN) statute,

Antimicrobial Resistance: An Epic Story of Burden and Progress.



One year in, the GAIN Act spurs innovation in antibiotic development. See it [here](#)

Transatlantic Taskforce on Antimicrobial

Salvar vidas...



...está en tus manos

La medicina moderna no es posible
sin antibióticos efectivos.

Día Europeo
para el Uso Prudente
de los Antibióticos



Una iniciativa europea para la salud 





Summary of the latest data on antibiotic resistance in the European Union

- Prudent antibiotic use and comprehensive infection control strategies targeting all healthcare sectors (acute care hospitals, long-term care facilities and ambulatory care) are the cornerstones of effective interventions to prevent selection and transmission of antibiotic-resistant bacteria.