

ECDC DIRECTOR'S PRESENTATION

EU action on Antimicrobial Resistance – European Antibiotic Awareness Day

EU Health Prize for Journalists 2011, 31 January 2012, Brussels

I would like to start by thanking the European Commission for inviting me to this media seminar.

I am pleased to be here among this audience of professional journalists from the whole of EU, devoted to health issues.

ECDC works within the area of prevention and control of infectious diseases – Here the media are very important.

Communication is one of the most important tools we have for protecting people from infections.

This is particularly true when we identify a new virus or bacterium.

I have been asked this afternoon to talk for some 15 minutes about antimicrobial resistance and the challenges we are facing in Europe,

Antimicrobial resistance is a major public health threat. Much of modern medicine is based on our ability to treat infections. Procedures such as hip and knee replacement operations or Chemotherapy of cancer patient make patients vulnerable to bacterial infections and rely on the availability of effective antibiotics.

A few decades ago, it was easy to use antibiotics to treat the infections that sometimes occur after such procedures. Now, though, bacteria are emerging that are resistant to multiple antibiotics.

Options for treating patients with such infections are limited to only a few antibiotics. All this leads to longer hospital stays, increased suffering, and even to death.

I am personally most concerned about healthcare-associated infections and the threats they pose to patient safety.

Antimicrobial resistance – A threat to patient safety



In 2009, ECDC and EMA estimated that each year 25,000 Europeans die as a direct consequence of a multidrug-resistant infection. Not only does antimicrobial resistance have a significant human impact, but it also has large economic consequences.

In the same joint report the **economic impact** was estimated at € 1.5 billion per year*. And we think the real costs of treating a patient with a multidrug-resistant infection are higher than this.

Human and economic impact of antimicrobial resistance

Human and economic impact of antimicrobial resistance*



Each year, in EU countries...

25,000 deaths directly attributable to multidrug-resistant infections				
Extra in-hospital costs	Extra outpatient costs	Productivity losses due to absence from work	Productivity losses due to patients who died from their infection	TOTAL
€ 927.8 million	€ 10 million	€ 150.4 million	€ 445.9 million	€ 1.5 billion

Source – *The bacterial challenge: time to react*, Joint Technical Report from ECDC and EMA, Stockholm, September 2009. Available online at: http://ecdc.europa.eu/en/publications/Publications/Forms/ECDC_DispForm.aspx?ID=444

**Estimates for 5 common multidrug-resistant bacteria (EU Member States, Norway and Iceland, 2007)*

ECDC works with the national public health institutes in the Member States to collect data on antibiotic-resistant bacteria.

Every year in November we publish a report showing the EU-wide trends.

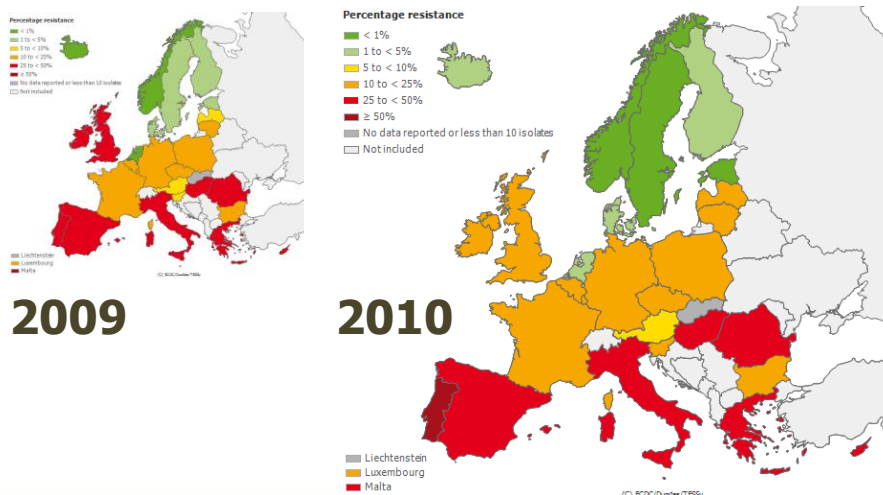
The two maps you see here show trends for methicillin-resistant *Staphylococcus aureus*, the so-called "hospital super-bug" MRSA. The greens and yellows show countries with lower rates of MRSA, the countries in red have much higher rates.

If you compare these two maps from 2009 and 2010, you can see that by 2010 some countries had managed to decrease their rates of MRSA. This means that it is indeed possible to change the trend. And this is good news.

However, for many bacteria, such as *Klebsiella pneumoniae*, the situation is still going in the wrong direction. This is the bad news.

Trends for methicillin-resistant *Staphylococcus aureus*, the so-called "hospital super-bug" MRSA

***Staphylococcus aureus*: proportion of invasive isolates resistant to methicillin (MRSA); EU/EEA, 2009–2010**



Source: EARS-Net, 2011

The next slide shows the emergence in the EU of an extensively drug-resistant strain of the *Klebsiella* bacteria. It is resistant even to carbapenems, one of the last-line classes of antibiotics.

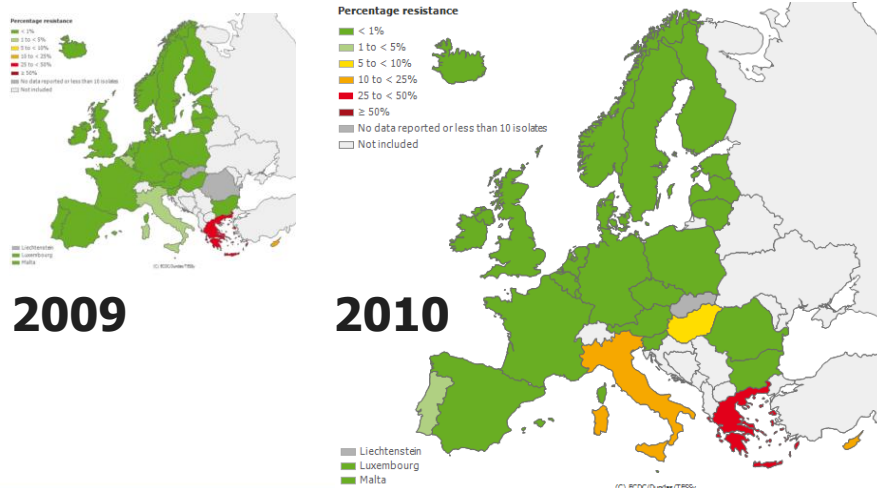
What we see from the data is that carbapenem-resistant *Klebsiella* is becoming established in several EU countries in 2011 compared to 2010. *Klebsiella* bacteria are often found in hospitals. They cause pneumonia and urinary tract infections.

Patients who go in to hospital and get infected with carbapenem-resistant *Klebsiella* are in a bad situation. There are very few treatment options available for them.

I could show you similar worrying trends for several other drug resistant bacteria. All of them are bad news for patients.

Emergence in the EU of carbapenem-resistant *Klebsiella* bacteria

Klebsiella pneumoniae: proportion of invasive isolates resistant to carbapenems; EU/EEA, 2009–2010



Source: EARS-Net, 2011

And there is one thing that we must not forget. There is always a patient and a personal story behind the statistics.

I would now like to share with you a film produced a few months ago by ECDC for Euronews that tells the story of Lill-Karin from Norway who was admitted to hospital with a variant of the bacterium *Klebsiella pneumoniae* in her urine. It also tells the story of Paolo from Italy, who developed a complicated urinary tract infection from an *E. coli* isolate while on holiday.

The whole film is about 8 minutes long, and can be seen on the ECDC web pages. I would like to show you the first couple of minutes of this film.



http://ecdc.europa.eu/en/healthtopics/antimicrobial_resistance/multimedia/Pages/videos.aspx

So what can we do to avoid situations such as the ones experienced by Lill-Karin and Paolo?
Prevention and control of antibiotic resistance relies on a few measures:

Firstly, prudent use of antibiotics. Antibiotics should be used only when they are needed.

As we saw in the case of Paolo from Italy, it is also important to treat patients with the right antibiotic. And an important message for patients to see a doctor and not to self medicate.

Secondly, resistance to antibiotics will not be brought under control without paying attention to infection control practices, and especially to hand hygiene in healthcare settings.

Thirdly, we would also need new antibiotics with a novel mechanism of action that are active on currently prevalent multidrug-resistant bacteria.

Main actions to prevent and control antibiotic resistance

Main actions to prevent and control antibiotic resistance



Prudent use of antibiotics
(only when needed, correct dose, dose intervals, duration)



Infection control
(hand hygiene, screening, isolation)



New antibiotics
(with a novel mechanism of action, research, development)



Last year on 17 November, during the Commission midday press briefing, Commissioner Dalli and Commissioner Geoghegan-Quinn launched an Action Plan on combating antimicrobial resistance. And I presented the latest EU wide data on antibiotic resistance and antibiotic consumption.

This was done on the occasion of the launch of the 4th European Antibiotic Awareness Day.

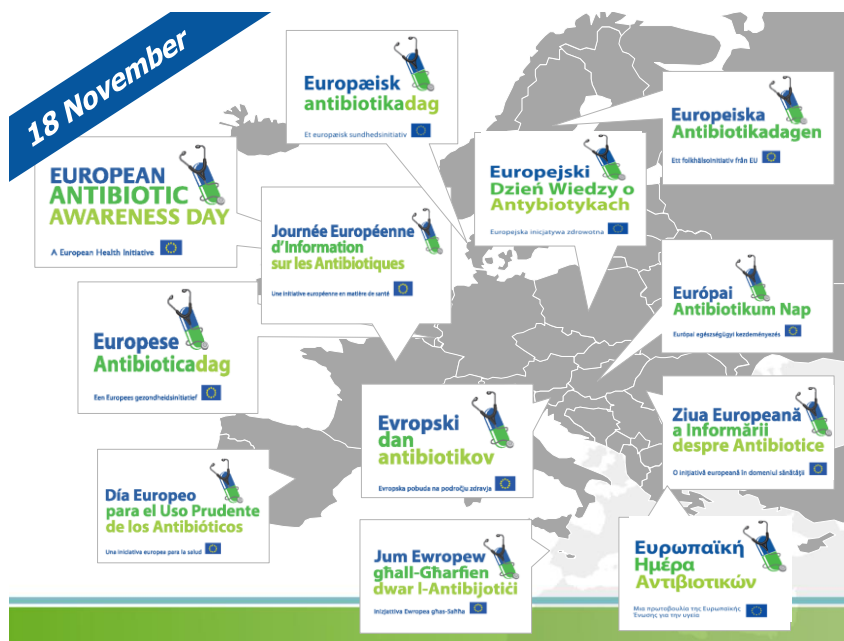
Launch of AMR Action Plan, Commission midday press briefing, 17 November 2011



The European Antibiotic Awareness Day is a European health initiative coordinated by ECDC. It is a recurrent event that takes place throughout Europe, on or around 18 November.

The aim of European Antibiotic Awareness Day is to provide a platform to the national campaigns on the prudent use of antibiotics. The strength of European Antibiotic Awareness Day is its partnership with the national campaigns. In 2011, 37 European countries organised activities for the 4th European Antibiotic Awareness Day.

European Antibiotic Awareness Day



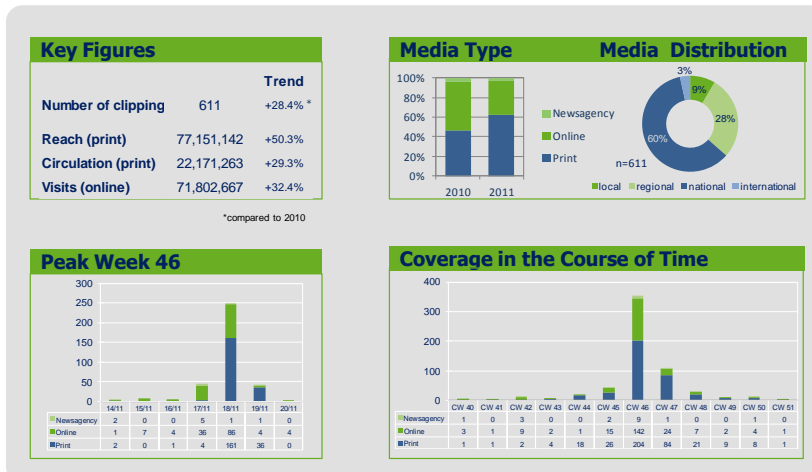
Your contribution has been extremely important to help highlight the issue of antimicrobial resistance and the need for prudent use of antibiotics.

This slide shows the media coverage for the 4th European Antibiotic Awareness Day last November. In total, 611 articles were published in printed or online media, and through

newswires. This was a 28% increase compared to 2010. Tens of millions of people in Europe were reached.

So you are certainly contributing to raising awareness when it comes to the problem of antimicrobial resistance – and also in highlighting the solution; prudent use of antibiotics; and good infection control practices, in particular hand hygiene.

EAAD 2011 | Media coverage report | Results at a Glance



My take home message for today is that antimicrobial resistance is one of the most serious public health challenges that we face in the EU.

Control of antimicrobial resistance including prudent use of antibiotics and hand hygiene is a responsibility for everybody – patients, doctors, nurses, veterinarians, policy makers, you and I ...

And you as journalists have made a huge contribution in highlighting this.

Thank you for your efforts over the years, and thank you for your attention today.

Images from national campaigns on prudent use of antibiotics

