

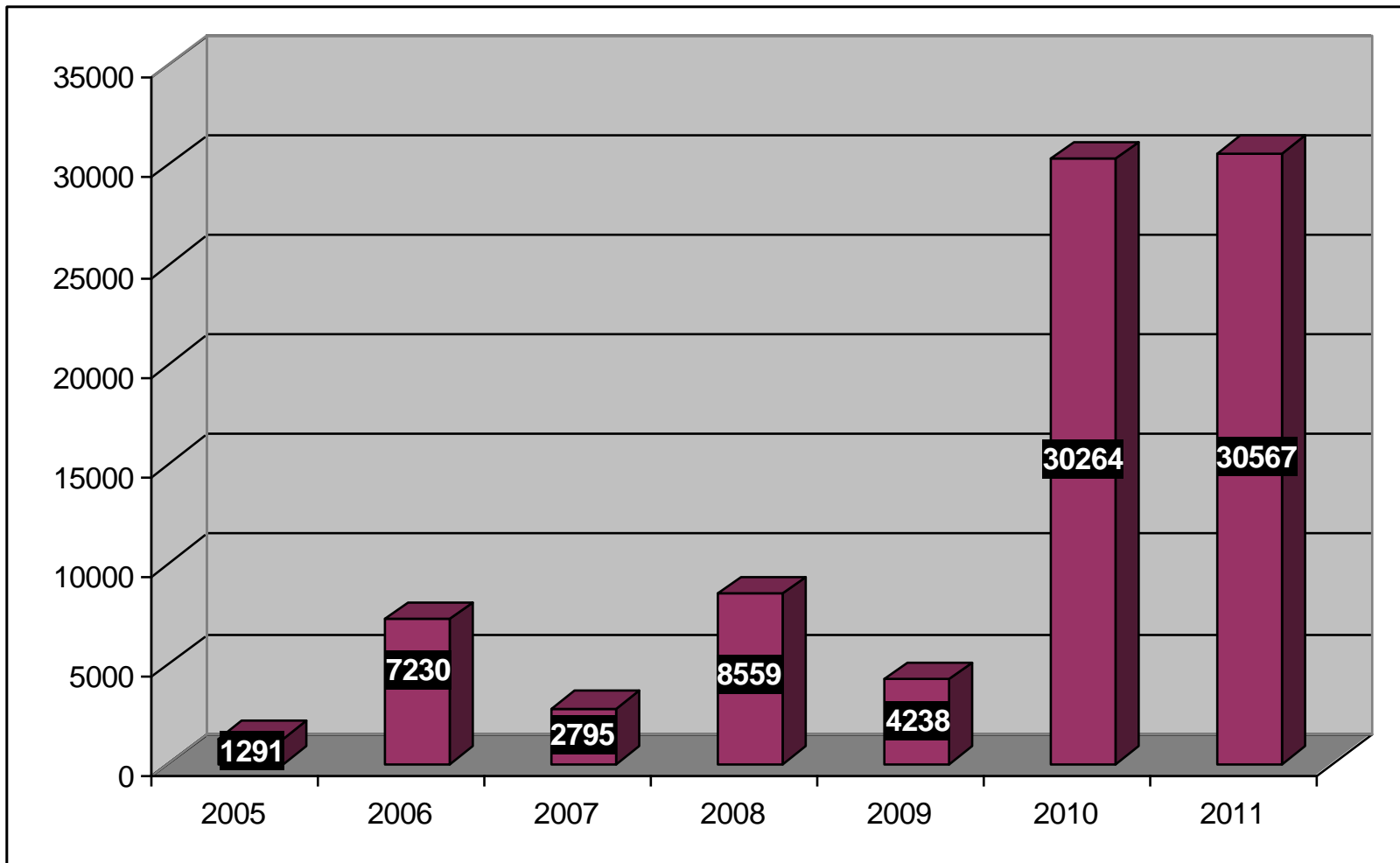


# Europe's got measles

**Dr. Antoon Gijsens**

**Unit SANCO C3 – Health threats  
DG Health & Consumers**

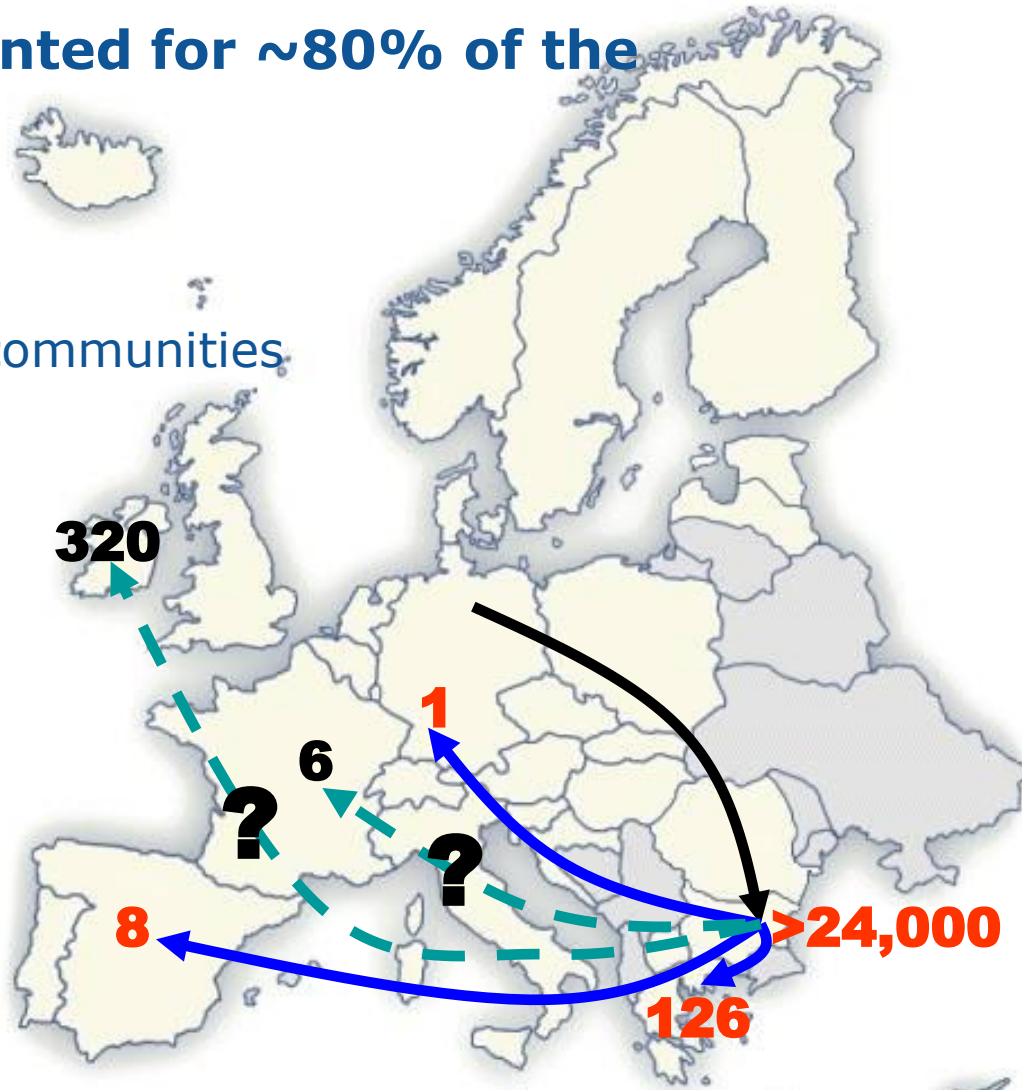
# Evolution of measles cases in the EU



# Measles in 2010

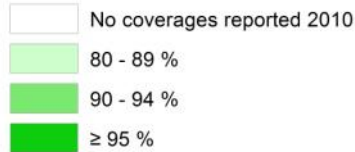
- Bulgaria accounted for ~80% of the cases:

- >24,000 cases
- 90% in Roma communities
- 25 deaths

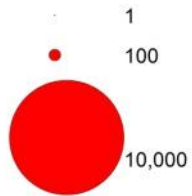


# Measles in 2011

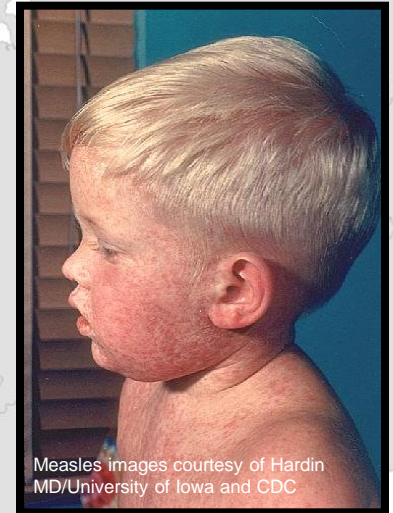
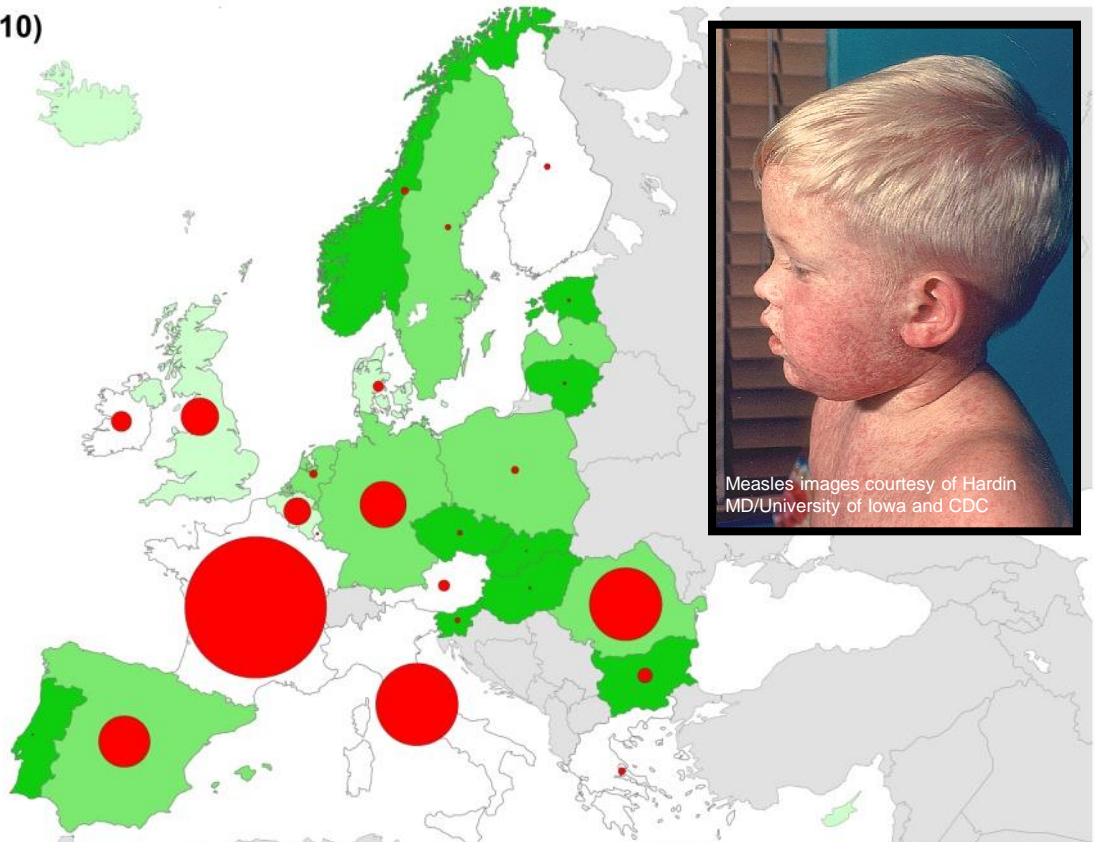
## Measles vaccine coverage (two doses, 2010)



## Number of cases



## Non visible countries



Measles images courtesy of Hardin MD/University of Iowa and CDC

Measles cases in the EU n. 30,567 (Jan-Dec 2011, ECDC) and vaccination coverage (2010, WHO)

TESSy / CISID

# Measles in 2012

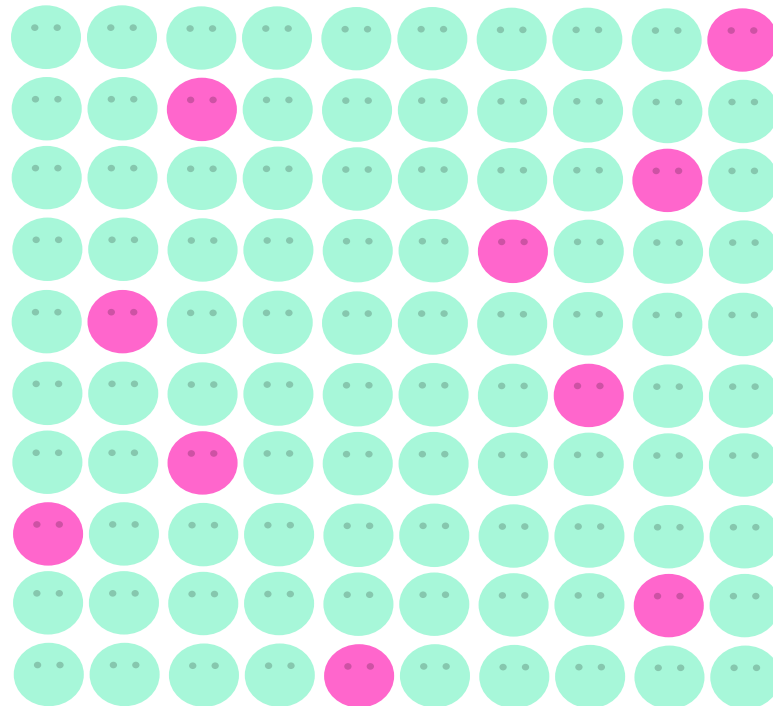
- **Ukraine: 8,341 cases** (as of 27 April). Risk for spread at EURO 2012 football championship!
- **EU:** substantially fewer cases in January - March 2012 (2,283) than in the same period of 2011 (11,386 cases)
- **Romania** accounts for 56% (1,268) of the measles cases so far in the EU
- **UK:** 250 cases. Largest outbreak in the north west of England since the MMR vaccine was introduced in 1988!

# Measles spreads easily

- Measles is a **highly contagious** disease: the expected average number of new infectious measles cases in a completely susceptible population produced by a single case during its entire period of infectiousness ( $R_0$ ) is **12-18 !!**
- By way of comparison:

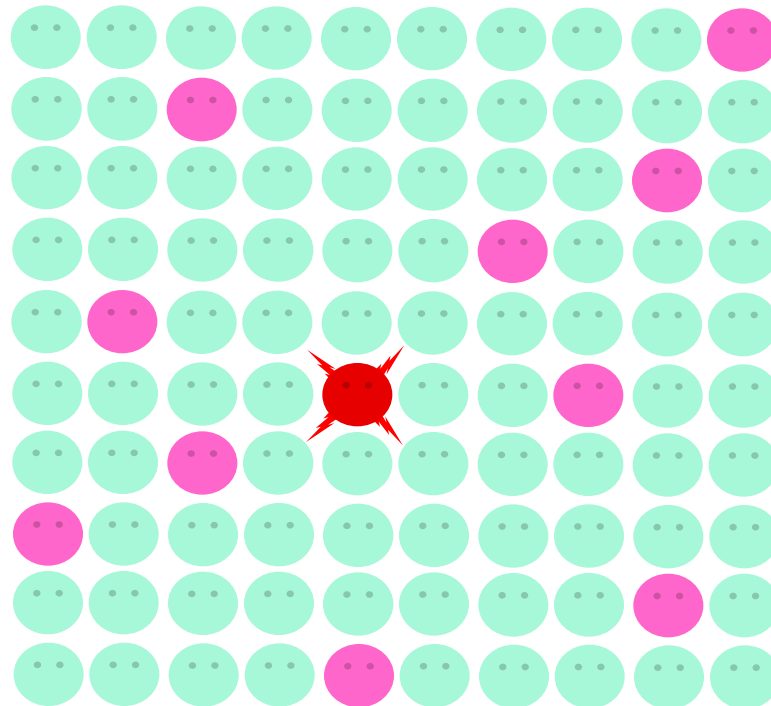
<b><i>Mumps</i></b>	<b><i>4-7</i></b>
<b><i>Rubella</i></b>	<b><i>5-7</i></b>
<b><i>Diphtheria</i></b>	<b><i>6-7</i></b>
<b><i>Pertussis</i></b>	<b><i>12-17</i></b>
<b><i>Polio</i></b>	<b><i>5-7</i></b>
<b><i>Seasonal flu</i></b>	<b><i>1.3 – 2.5</i></b>
<b><i>Smallpox</i></b>	<b><i>5-7</i></b>

# Herd immunity



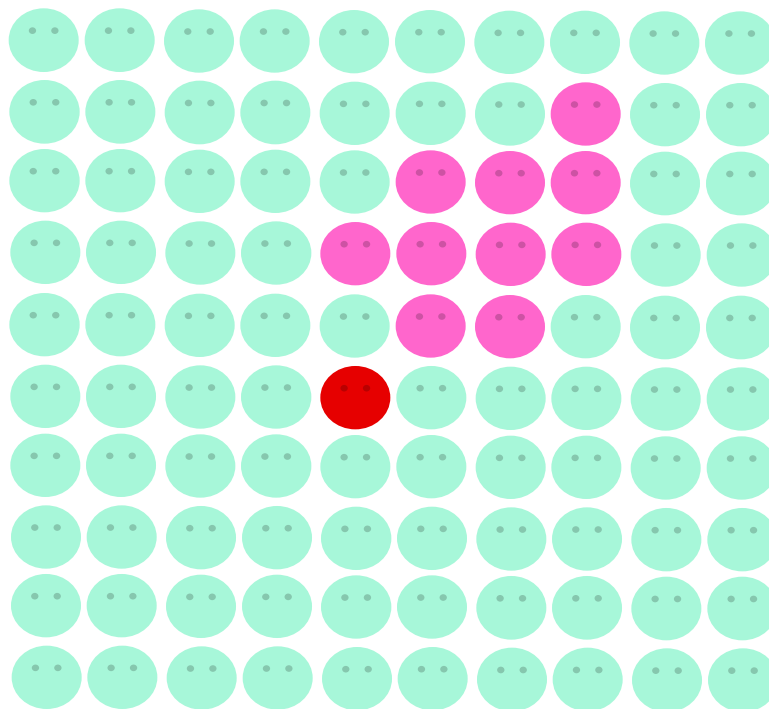
Courtesy of ECDC

# Herd immunity

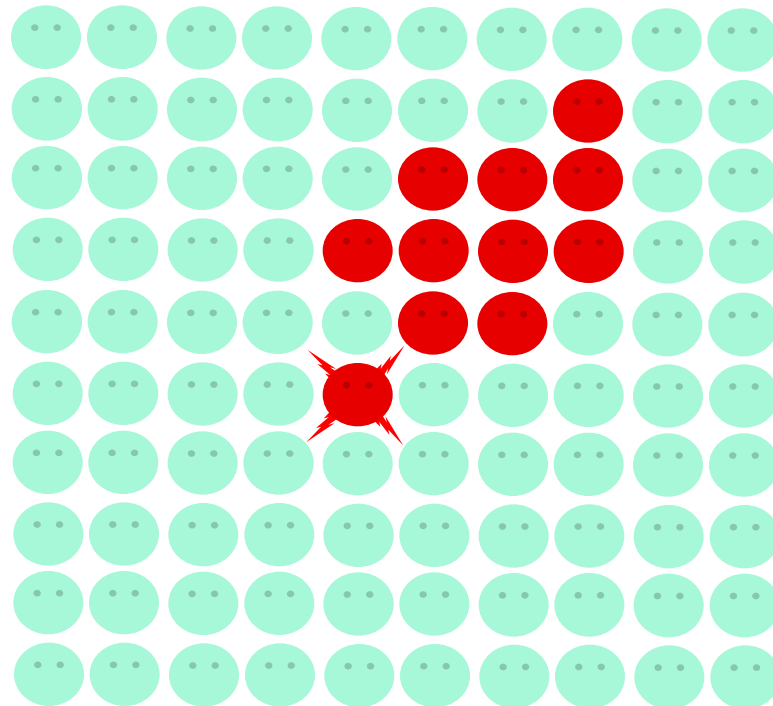




# Herd immunity



# Herd immunity



# Measles: a harmless childhood disease?

- As many as **1 out of every 20 children** with measles gets **pneumonia** and requires **hospitalisation**.
- **1 per 1,000 – 2,000** measles cases develops **encephalitis**.
- **1 - 3 per 1,000** measles cases **die**.
- A much more rare (1 per 100,000 cases) but **fatal** complication of measles infection is **sub acute sclerosing pan-encephalitis** (SSPE):
  - **fatal degenerative disease of the central nervous system that results from a measles virus infection acquired earlier in life.**
  - **on average, the symptoms of SSPE begin 7-10 years after the acute measles infection.**
  - **there is no cure for SSPE and the patient usually dies within 1-2 years**

# Measles elimination through vaccination

- **Measles elimination** (keeping  $R_0 < 1$ ) requires a vaccination coverage of **at least 95% of 2 doses of a measles containing vaccine**.
- Measles elimination is possible! The **Americas** have been declared **measles-free since 2002**.
- **2005:** Member States of WHO Euro region committed to **eliminate** measles and rubella and prevention of congenital rubella infection in the WHO European Region **by 2010**.  
**Elimination goal was not met!**
- **2010:** the Member States of the WHO Euro region **renewed** their **commitment** on measles and rubella elimination and prevention of congenital rubella syndrome **by 2015**.

# Measles vaccination coverage in EU

- **59% of EU Member States** do not reach a vaccination coverage of at least 95% of both doses of a measles containing vaccine !

	MCV1	MCV2
Austria	76*	64*
Belgium	94	83
Bulgaria	97	96
Cyprus	87	88
Czech Rep	97**	98
Denmark	85	85
Estonia	95	95
Finland	99*	no data
France	90	86***
Germany	96	90
Greece	99*	77*
Hungary	99	96
Ireland	90	no data

	MCV1	MCV2
Italy	90*	no data
Latvia	93	94
Lithuania	96	95
Luxembourg	96	no data
Malta	73****	97
Netherlands	96	92
Poland	98	94
Portugal	96	95
Romania	95	93
Slovakia	99	99
Slovenia	95	96
Spain	95	92
Sweden	97	94
UK	93	87

Coverage levels below 95% are highlighted in yellow

(\*) 2009 data

(\*\*) 2008 data

(\*\*\*) 2004 data

(\*\*\*\*) Incomplete data

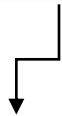
Source: WHO immunization coverage estimates 2010

# What's the problem with vaccination?

Safe and effective measles, mumps, rubella (MMR) vaccine

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Active offer of MMR



Problems related to vaccination providers

no recording/registry (incl. reminders)

not enough opportunities for vaccination

healthcare professionals not advocating

underserved populations (e.g. Roma)



Problems related to vaccination recipients

vaccine opponents

parents with worries about vaccine safety

vulnerable populations (<6m, immun comp)

# What is the EU doing about it?

- **Strengthening political commitment**
  - **June 2011:** EU Health Ministers adopted **Council Conclusions on childhood immunisation** inviting Member States and the Commission to step up efforts.
  - Discussions with **immunisation policy makers** on measures to improve vaccination coverage and exchange of good practices.
  - **Vaccination task force** in EU institutions (DG SANCO, DG Research, ECDC, EMA)
  - **16-17 October 2012: EU Conference on childhood immunisation** to take stock of actions taken so far and to discuss priorities for future action. **Will be publicly accessible via webstreaming!**

# What is the EU doing about it?

- **Support for immunisation programmes**
  - DG SANCO funded **European Conference on Immunisation Information Systems** (<http://www.smi.se/eciis>)
  - **Vaccination coverage monitoring** will be improved (ECDC / VENICE network).
  - **Scientific support** to EU Member States on vaccines and immunisation (EMA, ECDC).



# What is the EU doing about it?

- **Advocacy towards and by healthcare professionals**
  - Meeting with Standing Committee of European Doctors (CPME) to discuss **doctor's role improving vaccination coverage** (ECDC, 4 May 2012)
  - Exploring how the EU can promote that **evidence-based preventive medicine (such as vaccination)** is better addressed in **pre-graduate curricula** for medical students

# What is the EU doing about it?

- **Improving awareness and communication**
  - Participation in the WHO Euro '**European Immunisation Week**' (21-27 April 2012).
  - 'Free thinkers meeting on measles elimination' to exchange ideas on **innovative communication strategies** on vaccination (ECDC, 25 April 2012).
  - Planned **website with objective information on vaccination** (ECDC).
  - **EURONEWS video** on measles (ECDC).
  - Planned review of scientific evidence on behavioural science in relation to **attitudes towards vaccination** (ECDC).

# What is the EU doing about it?

- **Improving access to vaccination for underserved populations**
  - DG SANCO is funding the project **PROMOVAX** ([www.promovax.eu](http://www.promovax.eu)), which aims at promoting vaccination among migrant populations in Europe.
  - The Commission intends to highlight the need to improve vaccination in Roma children in its upcoming **Communication on Roma inclusion.**



European  
Commission

**Thank you  
for  
your attention!**



**Commission web page on vaccination:**

[http://ec.europa.eu/health/vaccination/policy/index\\_en.htm](http://ec.europa.eu/health/vaccination/policy/index_en.htm)