

## ECDC DIRECTOR'S PRESENTATION

### Parents trust paediatricians' view on childhood vaccination: take your responsibility seriously

Excellence in Paediatrics conference, Doha 6 December 2013

Ladies and gentlemen, dear colleagues,

I am pleased to have been invited to this 'Excellence in Paediatrics conference 2013', here in Doha.

I am Marc Sprenger, and the Director of the European Centre for Disease Prevention and Control, ECDC.

I would like to spend the next 20 minutes talking about **childhood vaccination** and **the crucial role that paediatricians play** in advocating vaccination programmes and ensuring a high vaccination uptake.

The success of vaccination programmes is an uncontroversial reality – in Europe, as well as worldwide.

Vaccination prevents disease and hospitalisations, and saves lives.

The success of vaccination programmes means that many people that were born in Europe during the last three decades do not even recognise the names of severe infectious diseases, such as smallpox, poliomyelitis, tetanus and diphtheria.

#### The success of vaccination programmes



Nevertheless, and despite this success, countries in the European Union are currently suffering from the highest burden of measles in the developed world.

Measles, which is highly infectious but also a vaccine-preventable disease, is indeed re-emerging in some parts of Europe.

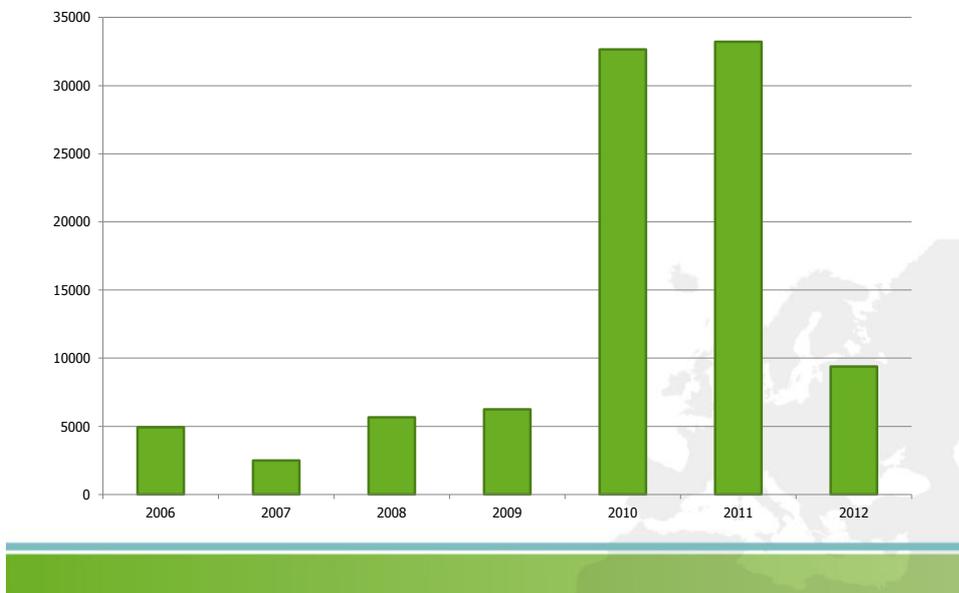
So far for 2013, more than 11 000 cases of measles have been reported in the EU (*provisional data*).

And currently, typically low-incidence countries are experiencing outbreaks of measles, especially among their vaccine-sceptic populations.

I will come back to that soon.

But first, let's take a look at the situation of measles in Europe since 2006.

## Measles cases reported in the EU during the period 2006-2012

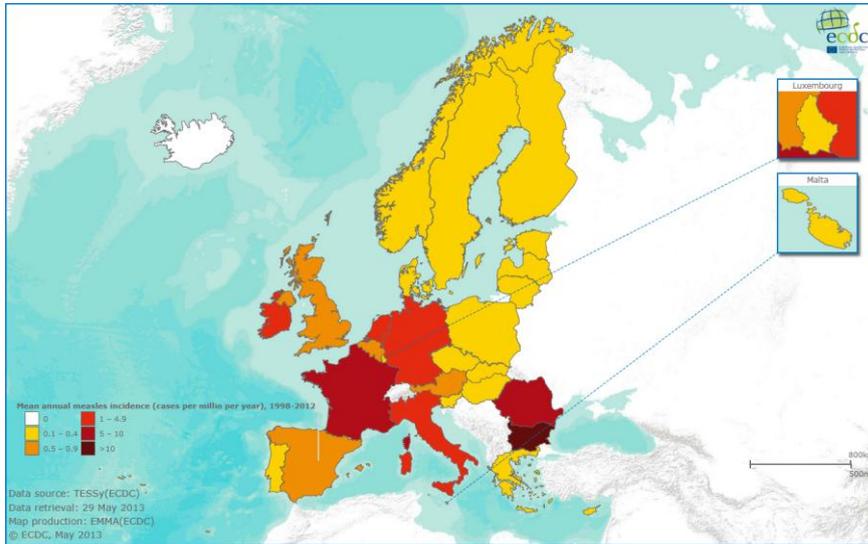


The trends you see here show a very typical endemicity pattern, with large outbreaks that are followed by 'low endemicity' years.

But even during the low endemicity years, such as between 2006 and 2009, we see a pattern which is not within the 'normal' given that there are around 5000 measles per year.

Here we see the mean annual incidence of measles since 1998. As you can see, no European country has been spared.

### Mean annual incidence of measles in EU/EEA MS, Jan 1998-Dec 2012



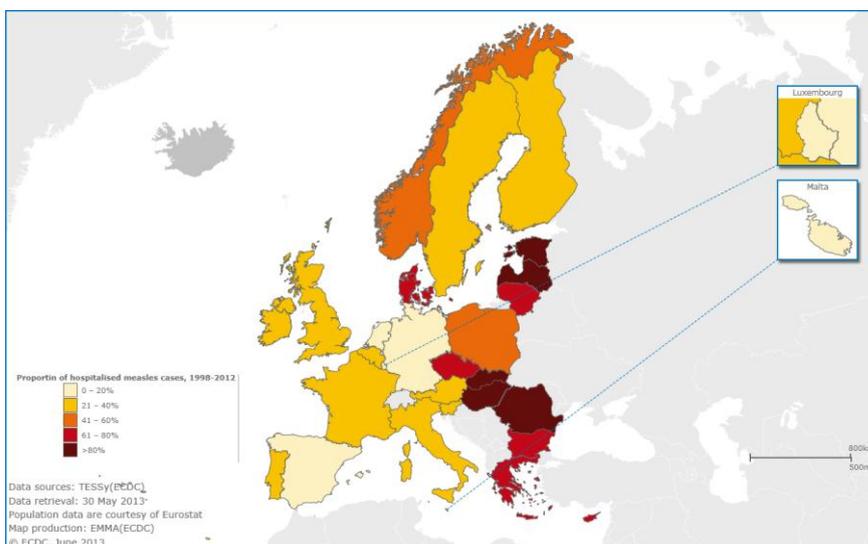
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Some countries, such as Germany in 2009, Bulgaria and Romania in 2010 and France in 2011 experienced very large outbreaks of measles.

Though measles may seem like a fairly harmless disease, it can lead to serious complications. Around 25% of those affected with measles need hospitalisation, due to complications such as pneumonia but also due to very high fever in young children.

Here you see the rate of hospitalisation in Europe over the same period of time as in the previous slide (1998-2012).

### Hospitalisation rate of measles cases in EU/EEA MS, Jan 1998-Dec 2012



5

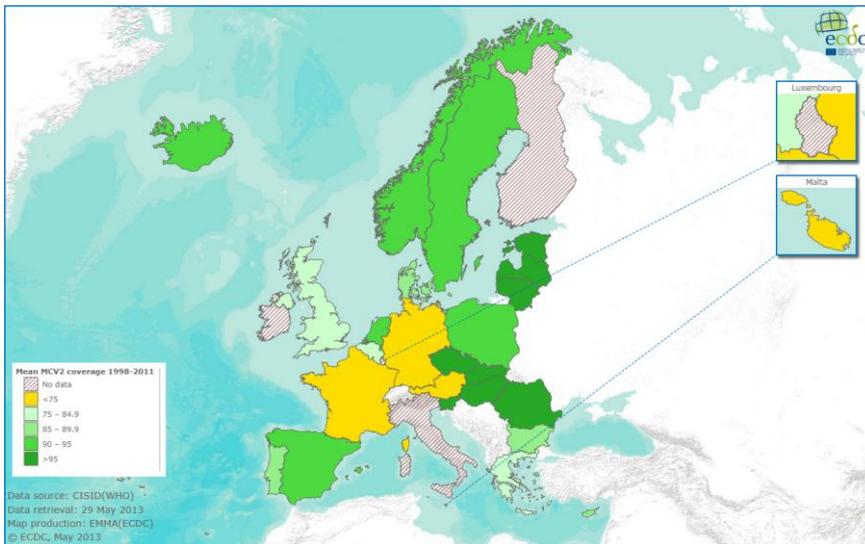
Hospitalisation due to measles leads to a high consumption of resources and to unnecessary suffering.

Serious complications from measles are unnecessary, considering that safe and cheap vaccines are available.

To reach elimination of measles, we need to reach a vaccination coverage of 95% of the population, with two doses of the MMR vaccine.

When it comes to vaccine coverage of measles, the situation in Europe is fairly diverse, as you can see on this slide.

## Average MCV2 vaccine coverage in EU/EEA countries, 1998-2011



6

What you see here is an average estimate of vaccine coverage for two doses of the MMR vaccine between 1998 and 2011.

Countries represented in yellow here, such as France, Austria and Germany, have vaccination coverage of 75% or less.

This is most worrying!

What is also of concern is that even countries with a two-dose vaccine coverage of 95% or more (*in dark green*) are accumulating pockets of susceptible populations.

That is why we have been experiencing outbreaks of measles also in countries such as in Romania and Bulgaria.

These recent outbreaks are a sign that immunisation programmes are not reaching all children, and are not working optimally.

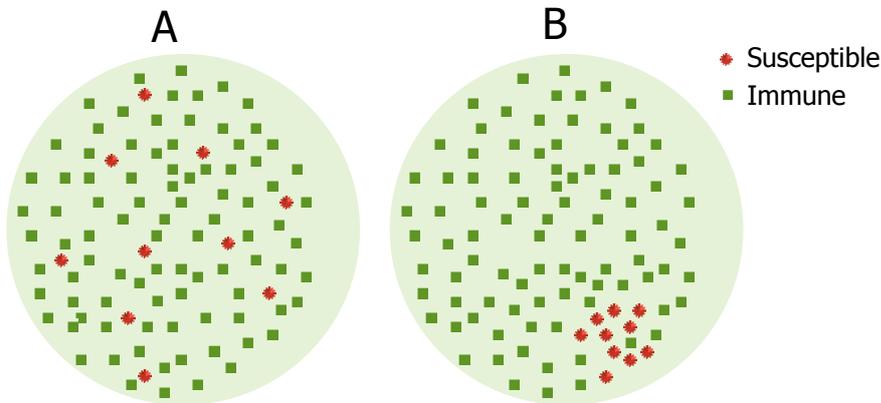
Unfortunately, large pockets of susceptible unimmunised populations exist, and have been accumulating in many EU countries.

Outbreaks may occur earlier and easier when such pockets are concentrated in the same geographical area or belong to the same population group. And clustering changes the dynamics of an outbreak.

## Size is not all that matters



The issue of geographical clustering and why disaggregating data is important.



Both populations on this slide have a 90% immunity rate against measles.

However, what you also see, both in population A and B here, are susceptible unimmunised populations (*the red dots*).

If measles is imported into population A, the risk of another person becoming infected is low.

Transmission will be slow because there is enough distance between individuals in the population.

However, in population B, transmission will be fast after importation. Because the populations are in a cluster, it is likely that most of them will develop measles.

Clusters are also more common in some of the under-vaccinated populations.

In 2009-2010 the huge measles outbreak in Bulgaria shows us how a large and clustered vulnerable group can become affected with a vaccine-preventable disease.

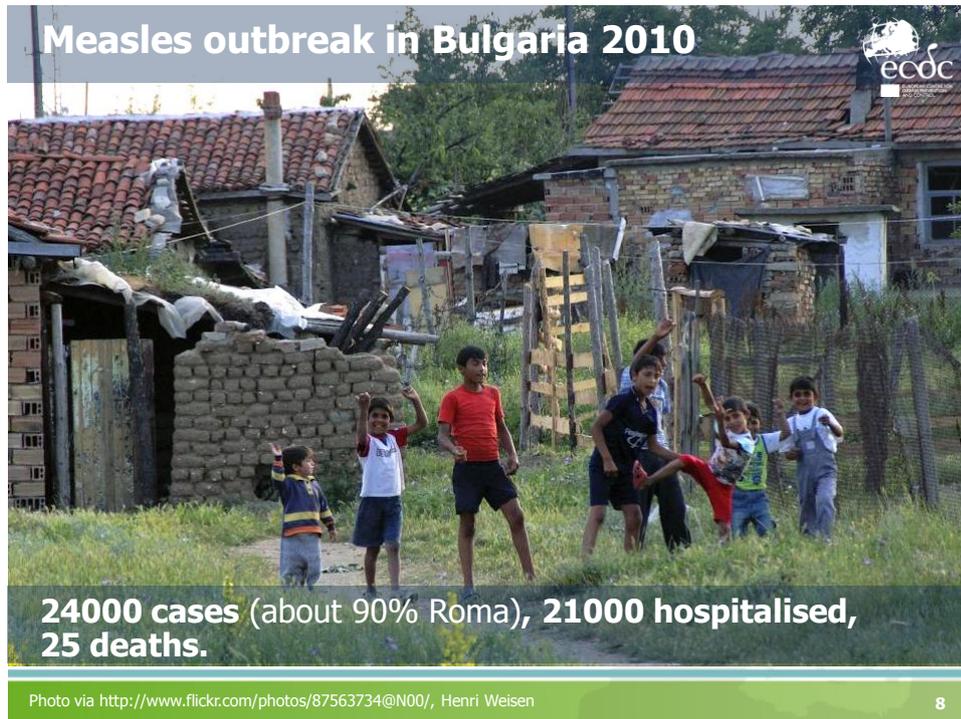
When measles was imported to Bulgaria from Germany in 2009, the official vaccination coverage indicated that propagated transmission was unlikely.

But we now know that 21 000 people required hospitalisation, and 25 people died from complications of measles.

Disproportionally many of those affected (90%) were from the ethnic Roma minority.

Immunisation programmes are not reaching all children – for example not all children that grow up in vulnerable, so-called 'hard-to-reach' populations.

That is why I am pleased that ECDC is supporting the pilot project 'Let's talk about protection'. In this pilot project, four countries (Bulgaria, Romania, Slovakia and Hungary) are working in close collaboration.



And one of the aims is to develop targeted messages and actions to the so called 'hard-to-reach' population groups, such as the Roma.

Another 'hard-to-reach group' that I would like to talk about concerns those parents who actively chose not to vaccinate their children.

These parents are sometimes more worried about the adverse effects than of the disease itself, or they may chose not to have their children vaccinated for ideological or religious reasons.

We are currently experiencing on-going outbreaks of measles among children and young adults in the United Kingdom and in the Netherlands.

These outbreaks are mainly due to parents' decisions not to vaccinate their children - A decision that may have been taken for vaccine safety concerns and possible side-effects, or for religious or ideological reasons.

In the UK, more than 1 200 measles cases were reported between November 2012 and July 2013, mainly in Wales.

These cases are mainly a result of under-vaccination. And although more than 75 000 young people have since the outbreak been immunised in the UK, an estimated 30 000 children in the age group 10-18 years remain unvaccinated.

This could lead to further outbreaks.

And unfortunately, we are now seeing a second outbreak in parts of Wales.

I also mentioned that there are groups of people that for religious reasons chose not to vaccinate their children

Currently, the Netherlands is experiencing a large outbreak of measles in the so-called Dutch Bible Belt.

In general, the Dutch population is well protected against measles through vaccination or through natural immunity.

However, 2367 measles cases were reported, between 1 May and 20 November this year.

And only during last week, 63 new cases were reported including eight hospitalisations.

## Ongoing measles outbreaks in Europe



Source: <http://www.rivm.nl/Onderwerpen/M/Mazelen>

2

These outbreaks are mainly occurring in municipalities with a low level of vaccination coverage, under 90%, and among people that belong to the Dutch Orthodox Reformed Church.

For religious reasons they chose not to vaccinate their children.

And it is not only the very young children that are affected: more than half are older children; young adults over 15 years.

Tragically, a 17-year old Dutch girl died of measles complications a couple of weeks ago.

Unfortunately, we are also now seeing exportation of this outbreak.

The western province of Alberta in Canada have been reporting about a local measles outbreak, with links to the Dutch outbreak.

And as of 2 December, 42 measles cases have been confirmed according to the Alberta Health Services.

In 2005, the WHO Regional Committee for Europe endorsed a resolution on eliminating measles and rubella infection by 2010.

Europe missed this important WHO goal, and a renewed commitment to eliminate measles and rubella has been set for 2015.

However, when looking at the epidemiological reports for Europe, we see that some vaccine preventable diseases are still endemic.

This is the case for measles where we know that most of the EU countries are still suffering with the highest burden of measles.

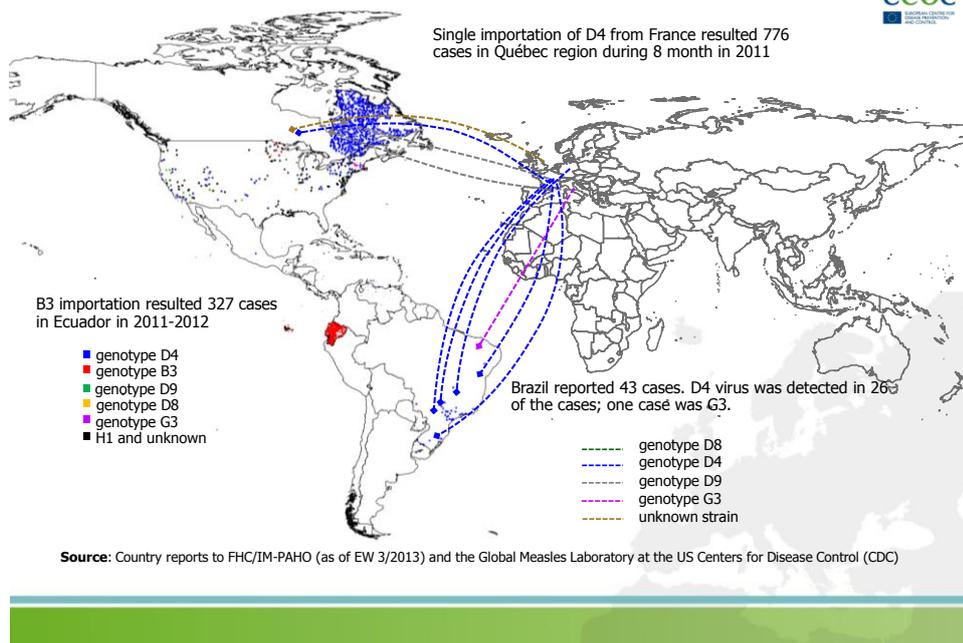
To achieve the goal of measles and rubella elimination, we need to learn more about the different under-vaccinated groups;

The vulnerable groups that in the context of immunisation do not have equitable access to vaccines, and the vaccine sceptics or opponents

So we need to design tailored interventions aimed at increasing vaccination coverage in these particular groups.

Today, the EU is the largest exporter of measles to the Americas.

## Measles importations to America - 2011



The large measles outbreak in France in 2011, for example, led to substantial exportation of cases to Quebec.

In 2005, the WHO Regional Committee for Europe endorsed a resolution on eliminating measles and rubella infection by 2010.

Europe missed this important WHO goal, and a renewed commitment to eliminate measles and rubella has been set for 2015.

However, when looking at the epidemiological reports for Europe, we see that some vaccine preventable diseases are still endemic. This is the case for measles where we know that most of the EU countries are still suffering from the highest burden of measles. To achieve the goal of measles and rubella elimination, we need to learn more about the different under-vaccinated groups;

The vulnerable groups, that in the context of immunisation do not have equitable access to vaccines, and the vaccine sceptics or opponents.

We need to design tailored interventions aimed at increasing vaccination coverage in these particular groups.

Tailored interventions involve using different communication channels for the different groups. In the so-called 'hard-to reach' populations, such as the Roma community, it is important to make use of health mediators and to involve their community leaders.

### Hard-to-reach groups



- Community involvement
- Involvement of community leaders
- Culturally sensitive approach
- Support of national health institutes

Photo: Zingaro, via <http://www.flickr.com/people/30208099@N00/> 12

When it comes to reaching out to adolescents, we need to make sure that we 'talk the same language' and communicate with young people through the appropriate channels, such as by using social media.

Findings show that social media currently represents a key information source for the public.

### Adolescents



Photo: <http://www.flickr.com/photos/restlessglobetrotter/>

A WHO eHealth cross-country survey on seven countries showed that 71% of the internet users surveyed had used internet for health purposes.

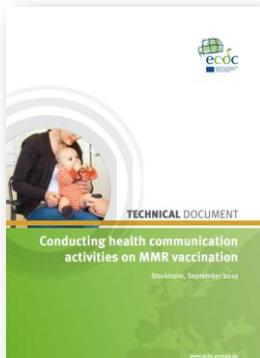
Another survey showed that 75% of the people interviewed viewed companies that microblog. Public health authorities therefore need to become active on social media and engage in a two-way communication.

The last group of under-vaccinated that I would like to talk about are population groups that—partially or completely – refuse vaccination for political, philosophical, religious, or ideological reasons.

Some of these groups are also actively spreading rumors against vaccination.

## Anti-vaccination groups

Political, philosophical, religious or ideological reasons



Rudolf Steiner, 1861–1925: "In Steiner schools we do not recommend vaccination<sup>1</sup>."

Photo: public domain

<sup>1</sup> The Coordination Office of Rudolph Steiner Schools in Switzerland and Liechtenstein. See also Roggendorf H, et al. Measles outbreak in a mainly unvaccinated community in Essen, Germany. Euro Surveill. 2010;15(26).

This is perhaps the most challenging group to address.

I would like all doctors here at the conference today, to think of ways to reach these groups to allow them to make informed decisions.

The role of healthcare professionals is crucial when it comes to helping parents make informed decisions.

From research it is clear that health professionals are the people most trusted by parents.

Therefore, doctors, nurses and other healthcare professionals need to be convinced that childhood vaccination, including MMR vaccination, is a priority to avoid epidemics and to eliminate disease.

Doctors and nurses need to provide parents with balanced and evidence-based information to help them make informative decisions regarding vaccination.

## Healthcare professionals have a crucial role to play



Source: Amrita B and Anoto AB via flickr.com

Vaccinating our children is not only about protecting them, but it is also a matter of responsibility towards those children that are still too young to be vaccinated.

Max was one of those little children.

He caught measles at 6 months as his family happened to live in a community with low vaccination coverage.

When he became an adolescent he developed Subacute Sclerosing Pan-Encephalitis, SSPE.

## Max, 18 year old, victim of subacute sclerosing pan-encephalitis



December 2004



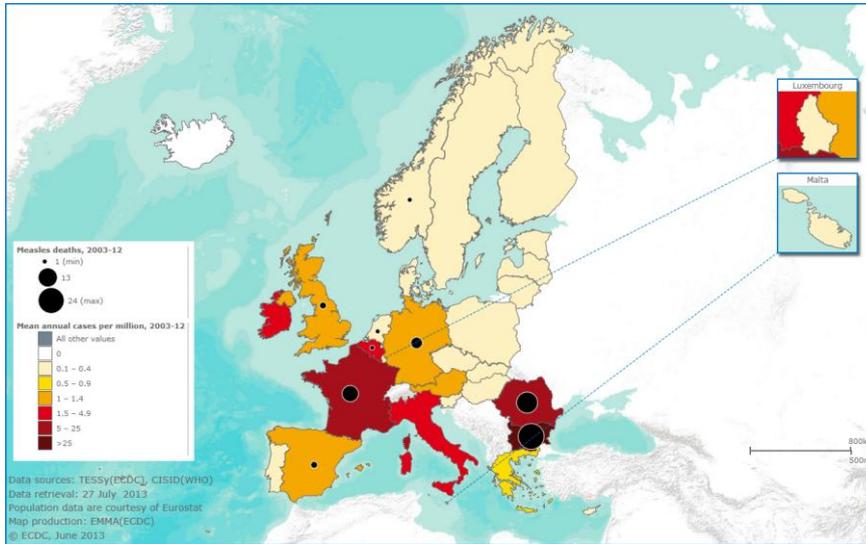
October 2012

Listen to the full story at the following address (or Google "Luxembourg childhood immunisation conference"): <http://webcast.ec.europa.eu/eutv/portal/archive.html?viewConference=17619&catId=17338>

Do not forget that measles can even lead to death as a direct consequence of the disease.

This map shows the mean incidence of measles cases and the number of deaths (the black dots) for Europe, between January 2003 and December 2012.

### Mean annual incidence of measles cases and number of deaths in EU/EEA MS, Jan 2003-Dec 2012



17

ECDC is strongly committed to bring vaccine preventable diseases high on the agenda, and we fully support WHO to allow Europe to meet the measles and rubella elimination goal.

To reach this goal, ECDC is committed:

- to continuously monitor diseases and to know what strains are circulating for the most effective vaccine in a given situation;
- to provide sound and clear information to the decision makers;
- to provide evidence based information to the health care professionals;
- to provide convincing and transparent information to the public;
- to help EU Member States to reach the under-vaccinated populations;
- and to help EU Member States improve the impact of vaccination programmes by facilitating the sharing of information and practices across the borders.

In my view, moving towards a more coordinated approach of vaccination programmes is desirable.

A couple of years ago, during the European Health Forum in Gastein, I had the honour to sit in the same panel as Dr. Edwin Borman who was at the time the Secretary General of the European Union of Medical Specialists.

In his work in South Africa, Dr. Borman had seen several children living in poor conditions and dying of measles.

But what he found extremely sad and above all unnecessary was that, even in Europe, children are dying of measles.

And every child that dies from measles in Europe is a death that should not have happened!



Josef Cristian M.  
Austrian citizen  
Died 1999 at age 4 of SSPE



***To get measles is a shame.  
But to die of measles is a crime***

DONATO GRECO

[://de.euronews.com/2012/03/26/masern-der-kampf-gegen-die-vergessene-krankheit/](http://de.euronews.com/2012/03/26/masern-der-kampf-gegen-die-vergessene-krankheit/)

Measles should be considered as **public health emergency**:  
*'Is it ethically acceptable to tolerate any serious complication, or death, from measles when an effective vaccine is available.'*  
Liam Donaldson, Professor of Health Policy, UK

So, in order to meet the goal set by WHO of reaching measles and rubella elimination by 2015, routine childhood vaccination systems need to be reinforced for the very young children.

In addition, countries will need to run specific catch-up campaigns to protect all those children and young adults that missed the opportunity to get vaccinated.

And most of all, effective and targeted communication is important to reinforce parents' trust in vaccination.

If we really want to see result, substantial commitment should involve all stakeholders.

And here I am really counting on you as doctors. Evidence show that you are in a good position to empower parents to take an informed decision about vaccinating their children.

Paediatricians, family doctors, nurses are a trusted source of information and the ones in direct contact with parents and their children.

So you have a crucial role to play in advocating childhood immunisation programmes.

We all need to take our responsibility and ECDC is committed to contribute in reaching this goal.

Thank you

## Thank you for your attention

Questions?

