



# European Centre for Disease Prevention and Control

## Measles elimination: what to do if the present options are not used/implemented

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Nicosia, 5 July 2012

# Eradication or Elimination?

## WHO goals\*:

- by end **2015** achieve regional measles and rubella elimination goals
- by end **2020** achieve measles and rubella elimination in at least five regions
- by end **2015** establish a target date for the global eradication of measles
- by end **2020** establish a target date for the global eradication of rubella

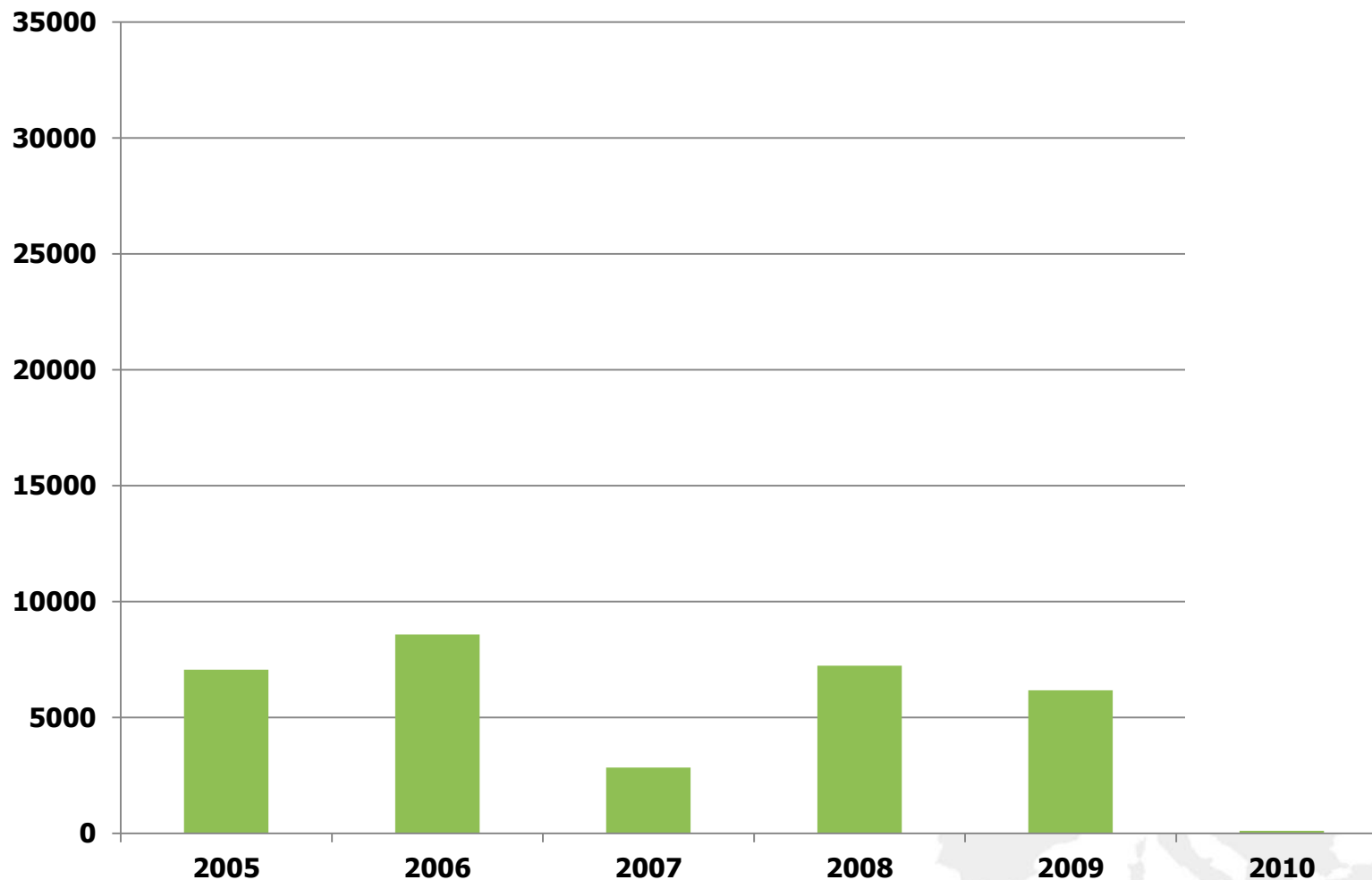
# Strategy components

1. Achieve and maintain high level immunisation
2. Monitor disease and programmatic efforts
3. Outbreak control
4. Communication to build public confidence
5. Research to improve vaccination, diagnostic tools and support cost-effective operations



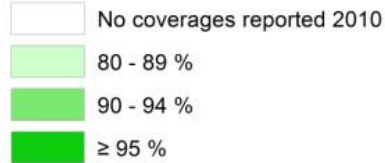
# What's up in Europe?

# Reported measles cases in the EU/EEA *2005/2010*

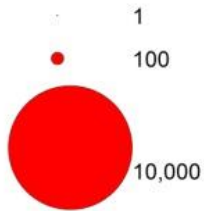


# Measles in Europe, 2011

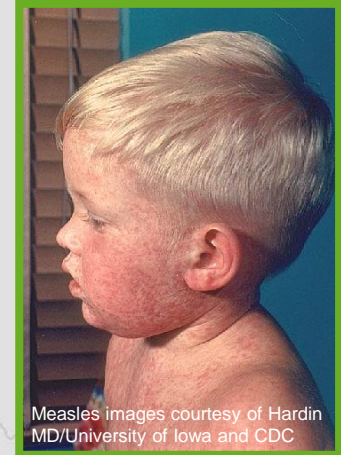
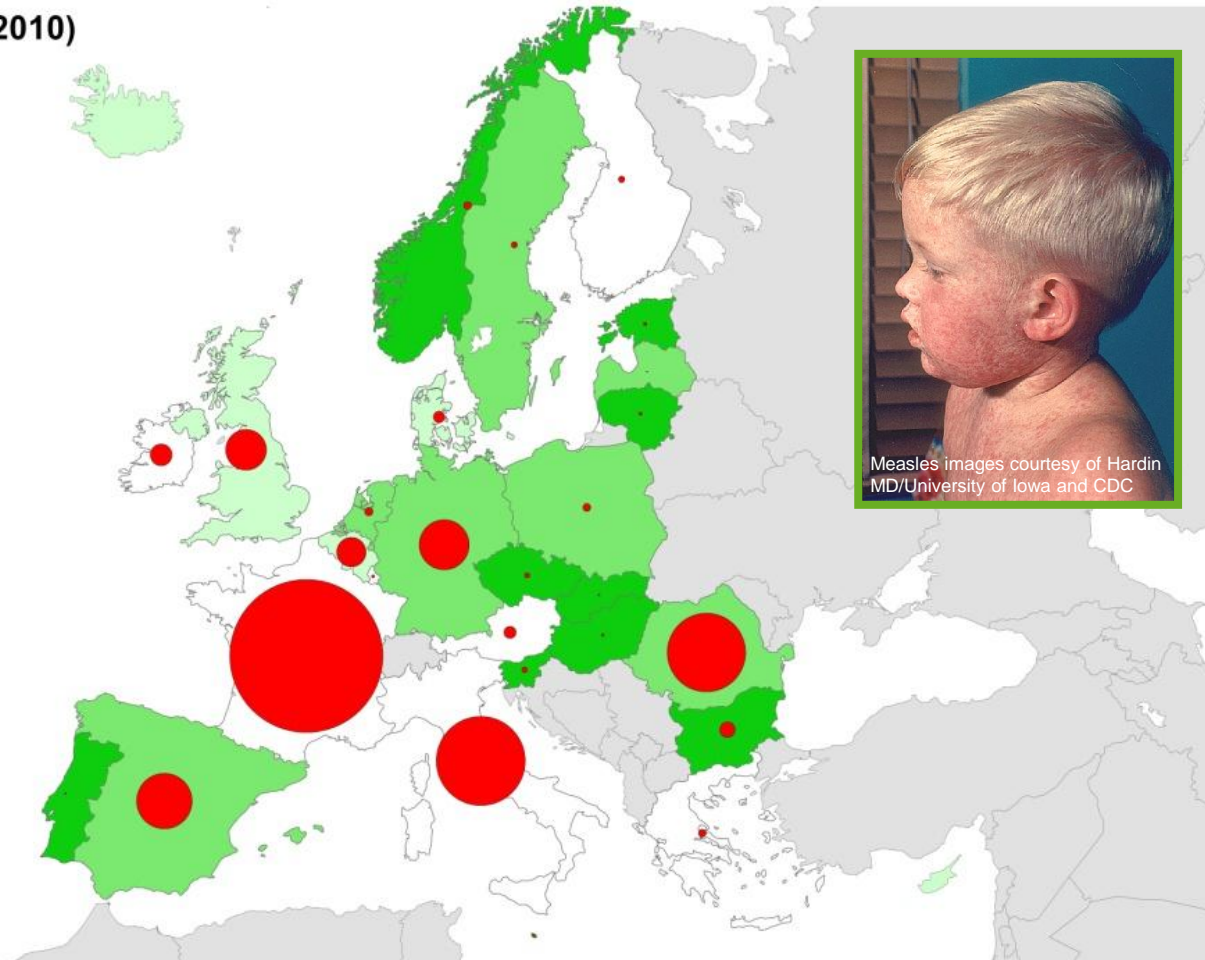
## Measles vaccine coverage (two doses, 2010)



## Number of cases



## Non visible countries

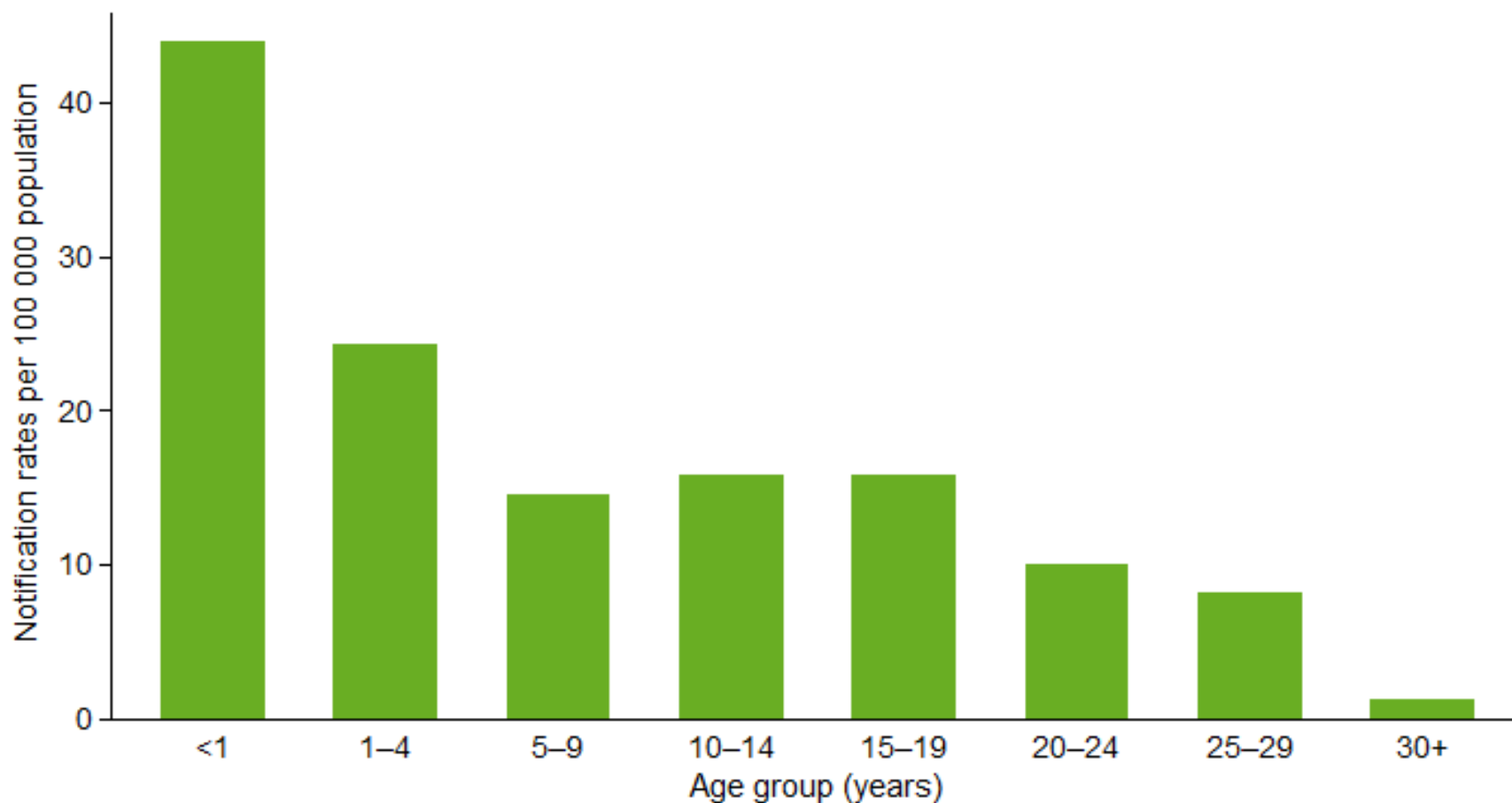


Measles cases in the EU n. 30,567 (Jan-Dec 2011, ECDC)  
and vaccination coverage (2010, WHO)

# Measles: a severe disease

Outcome	Number of cases	%
<i>Deaths</i>	8	0.03
<i>Cases with information on outcome status</i>	23.317	76.3
<i>No information provided/unknown</i>	7 242	23.7
Complications		
<i>Encephalitis</i>	27	0.1
<i>Pneumonia</i>	1 482	4.9
<i>Diarrhoea</i>	149	0.5
<i>Otitis media</i>	234	0.8
<i>Other complications</i>	1 841	6.0
<i>No complications</i>	3 921	12.7
<i>No information provided / unknown</i>	22 913	75.0
<b>Total cases</b>	<b>30 567</b>	

# Age-specific notification rate of Measles per 100.000 population, Europe, Jan-Dec 2011





# Vaccination status of reported cases (known for 83% of cases)

- 82% (20,902) were unvaccinated
- 18% (4,586) vaccinated, but only 4% (920) vaccinated with two doses

**45%**

*rough estimate of vaccine coverage  
in the population  
where cases originated \**

***\*assuming effectiveness of two MMR doses=95%***

# Coverage for one dose of MMR in EU 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	74.7	78.5	78.5	78.8	73.5	91	80	77	83	76	
Belgium	82.2	82.2	82.2	82.2	82.2	88	91.9	91.9		94	94
Bulgaria	88.6	90.1	92.1	95.5	94.7	96.2	95.7	96	95.9	96.1	96.5
Cyprus	85	85	85	86	86.3	86.3	87	87	87	87	87
Czech Republic	98	98	99	99.1	96.9						
Denmark	100	94	102.4	96	96	95	100	89		81	85
Estonia	93	94.7	95.2	95.2	95.5	95.9	96.1	95.5	91	95	95.1
Finland	96	96	95.8	97	97	97	97	98	97	98.5	
France	84	85	85	86	86			91	87	90.1	90.1
Germany	91.7	91	91	92	92.5	93.3	94	94.5	95.4	95.9	96
Greece	88	88	88	88	88				98.9	98.9	
Hungary	100	100	99.9	99.9	99.9			99.9	99.9	99.8	99.9
Iceland	90	88	91	93	93	90	91	95	96	92	94
Ireland	79	73	72.5	78.5	81.1	84.2	86.2	87.02	89	90.4	90
Italy	74	76.5	77	83	84	87.2	87				
Latvia	96.9	96.9	98.3	98.6	98.7	95	95.3	97	96.6	95.7	90.1
Lithuania	87	97.4	97.9	97.7	97.7	97.2	96.6	96.9	97	96	96.1
Luxembourg	91	91	95.4	95.4	95.4	95.4		96.2	96.2	96.2	96.2
Malta	74	65	65	90	87.4	86.01	94	79	78	82	72.55
Netherlands	95	95	96	95.7	96.27	96.3		95.9	96.2	96.2	95.9
Norway	92	93	88	84	88	90	91	92	93	92	93
Poland	97	97.2	97.6	97.5	97.4	98.2	98.2	98.3		98.3	98.2
Portugal	87	86.8	91.9	96.3	94.8	92.6	96.69	95	96.6	95	96
Romania	98	97.8	98.2	97.2	97.1	96.7		97.1			95
Slovakia	98	98.6	98.6	98.6	98	98	98.4	98.8	99	99	98.5
Slovenia	95.2	94	93.5	86.7	94		96.1	95.56	96	95	95
Spain	94	96	96.6	97.15	97.3	96.8	96.9	97.1	97.8	97.5	95.1
Sweden	94.2	88.5	95	95	94.5	95.4	95.4	96.2	96.2	96.7	96.5
UK	99	98.76	83	80	81	82.1	84.9	86.2	85.5	86	93

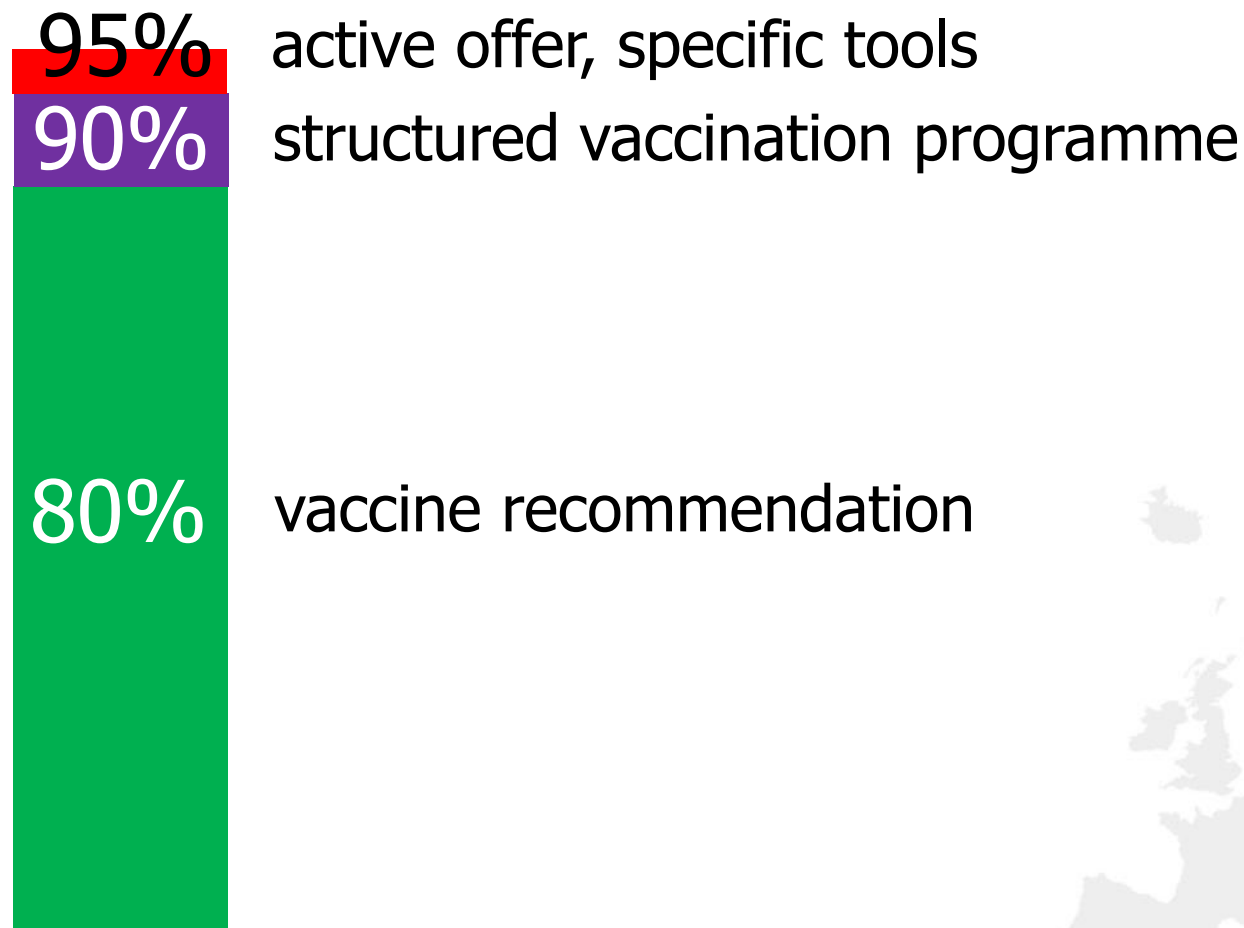
# Why measles still spread in Europe?

- A large population of susceptible individuals is still present in Europe.
- It is differently distributed:
  - by country
  - by age groups
  - by social status



# Solutions?

# Achieving high level immunisation



# Vaccination active offer *a stepwise approach*

Safe and effective vaccine

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Active offer of MMR

Problems related to  
vaccination providers

lack of recording/registry

lack of reminder system

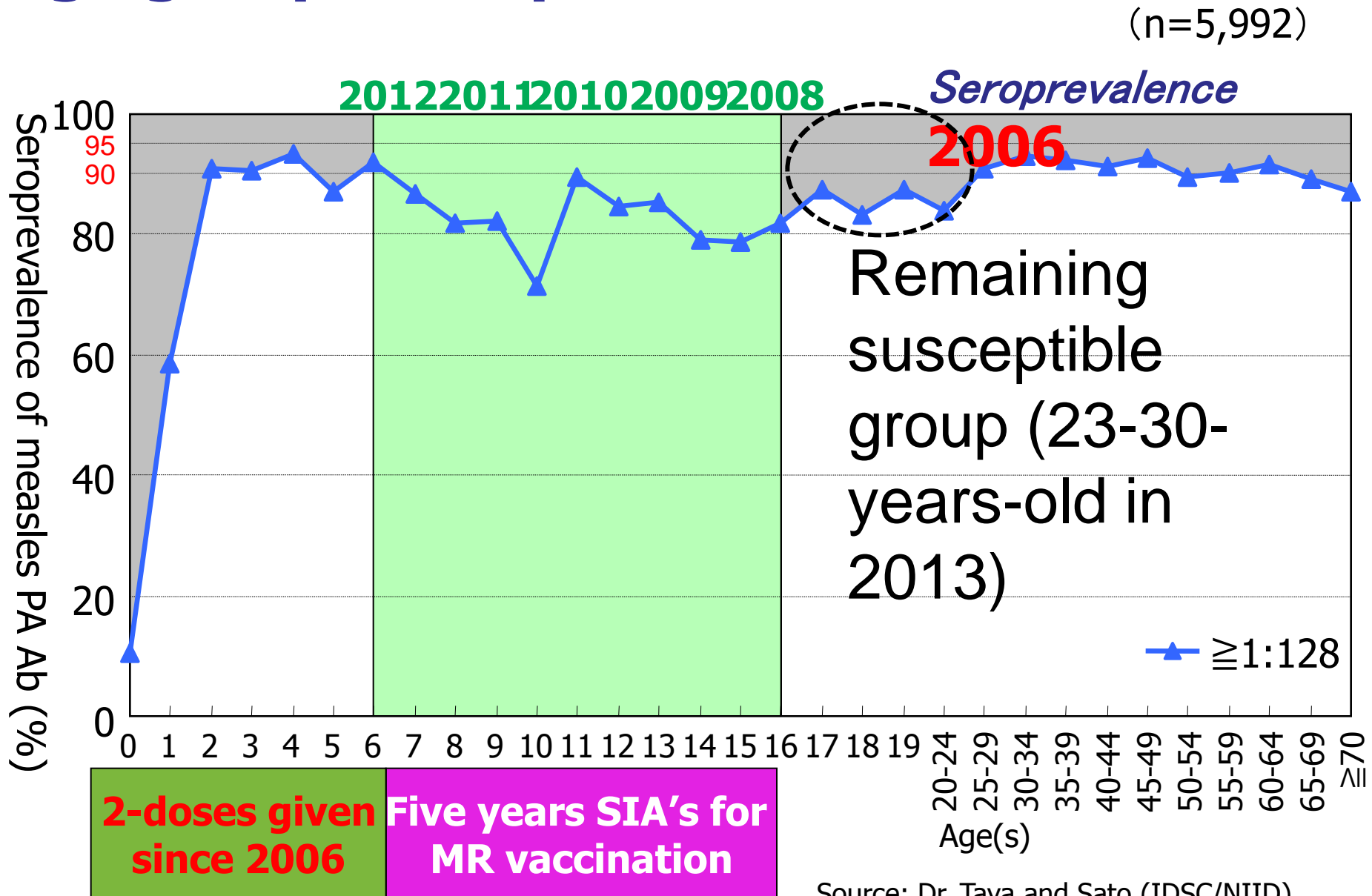
resistance among doctors

Problems related to  
vaccination recipients

vaccine sceptics

vulnerable populations

# A strategy to immunize the susceptible age groups in Japan





# Anti-vaccine activists



XIX century



XXI century



# Anti-vaccine activists

*some examples*



religious/philosophical  
beliefs

homeopathy,  
naturopathy,  
alternative  
medicines



followers of  
conspiracy theories



# Underserved groups

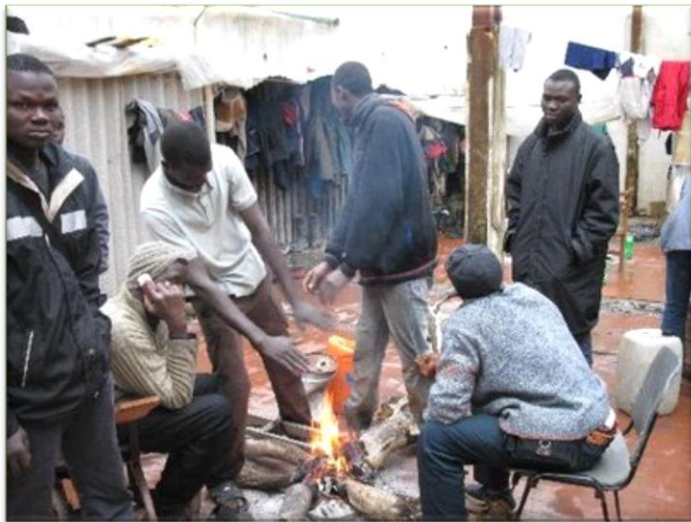
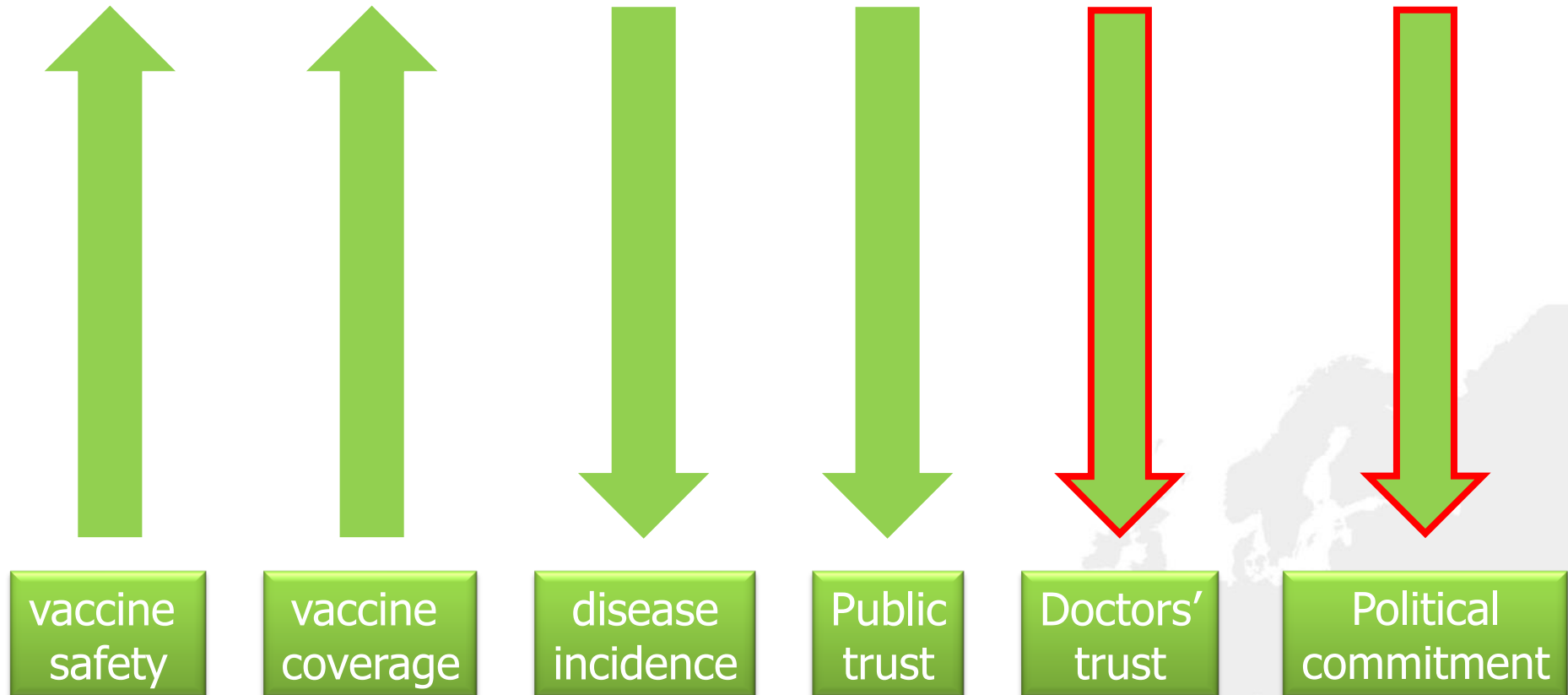


Photo via  
[www.vam.ac.uk/moc/images/image/36307-popup.html](http://www.vam.ac.uk/moc/images/image/36307-popup.html), by Eithne Nightingale

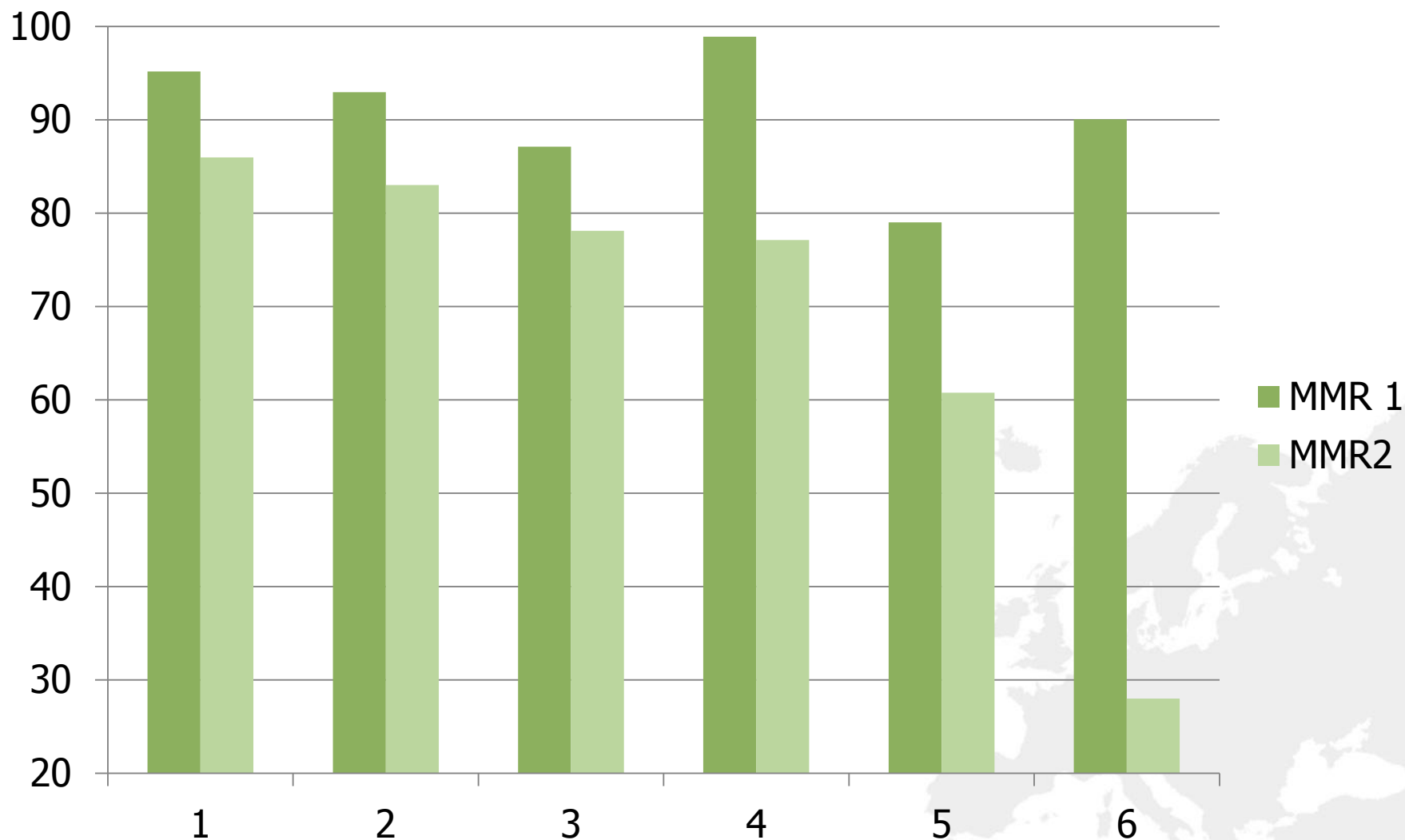


Photo via <http://www.flickr.com/photos/87563734@N00/>, Henri Weisen

# The Vaccination Paradox



# Differences between MMR 1 and MMR2 vaccination coverage in 6 EU countries





# Complacency, the main issue



They just don't pay attention!

# What to do if the present options are not used/implemented?

Active offer of  
two doses MMR  
to the target  
population

Building trust in  
order to achieve  
and maintain  
high levels of  
vaccination  
coverage



**Thank you!**

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