

Recent Successes in Measles Mortality Reduction and the Next Global Measles Control Goal

Global vaccine Research Forum

Bamako, Mali

6-9 December 2009

Peter Strebel, WHO/IVB/EPI



Overview

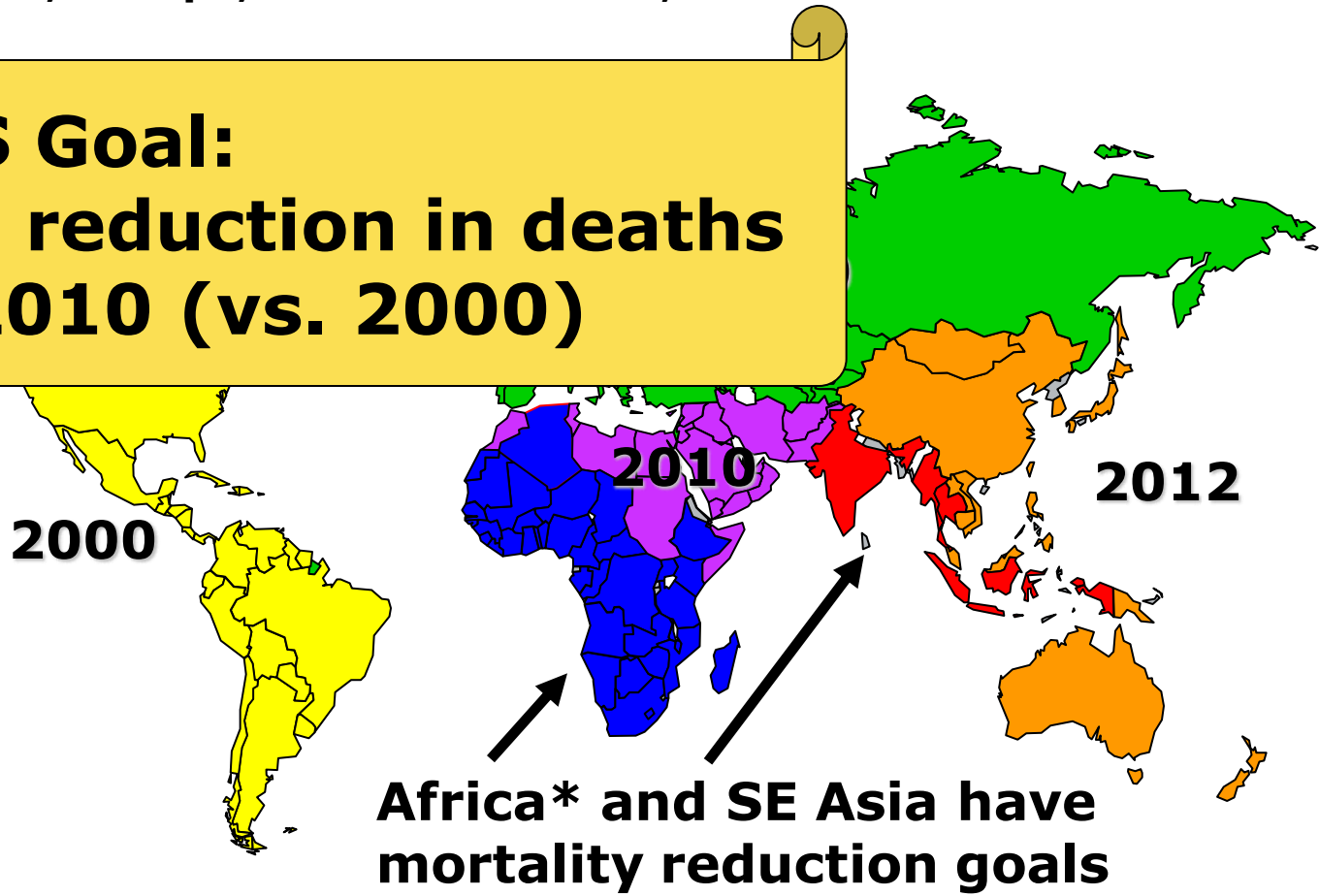
- Goals and strategies
- Progress
- Challenges/opportunities
- Feasibility of measles eradication

Goals and Strategies

Measles Control Goals by WHO Region, August 2009

Americas, Europe, E. Mediterranean, W. Pacific have elimination goals

**GIVS Goal:
90% reduction in deaths
by 2010 (vs. 2000)**



Regional Committee Meetings in Africa and SE Asia, September 2009

African Region:

"Towards elimination of measles in the African Region by 2020"

RC agreed to adopt actions for achieving elimination by 2020

SE Asian Region:

Resolution to mobilize political, societal and financial support towards elimination of measles
- date TBD



World Health
Organization

REGIONAL OFFICE FOR
Africa

REGIONAL COMMITTEE FOR AFRICA

Fifty-ninth session
Kigali, Republic of Rwanda, 31 August–4 September 2009

Provisional agenda item 8.11

TOWARDS THE ELIMINATION OF MEASLES IN THE AFRICAN REGION BY 2020

Report of the Regional Director

1. Reduction in measles mor Development Goal 4 (MDG 4) thirds by 2015 compared with indicator for measuring progress
2. Implementation of measles achievements, notably a remarka 2007. Despite the progress mad pre-elimination targets and subse
3. Major gaps in the mobilizati States to attain and sustain a h measles mortality reduction strat
4. Member States are request quality immunization services implementation of proven app approach. Furthermore, countrie the measles elimination goal by elimination targets.
5. The Regional Committee is measles elimination by 2020.

AFR/RC59/14
29 June 2009

ORIGINAL: ENGLISH



SEA/RC62/R3 SOUTH-EAST ASIA REGIONAL EFFORTS ON
MEASLES ELIMINATION

The Regional Committee,

Noting a significant reduction in global measles mortality by 74% between 2000 and 2007, from an estimated 750 000 deaths in 2000 to 197 000 in 2007, and an increase in the global routine measles immunization coverage from 72% in 2000 to 82% in 2007,

Noting that in the 47 countries where measles accounted for 98% of the total estimated global measles mortality in 2007, the measles vaccination coverage increased from 58% in 2000 to 72% in 2007,

Concerned that measles mortality is one of the barriers to achieving Millennium Development Goal 4, while affordable effective vaccine is available and evidence indicates that immunization is the most cost-effective intervention,

Recognizing that two countries in the South-East Asia Region have measles vaccine production capacities with the potential to ensure vaccine supply and security,

Noting the achievement—though varied across countries in the South-East Asia Region—of 42% measles mortality reduction between 2000 and 2008, although further improvements are required to increase and sustain a high level of routine immunization coverage,

Recalling the Global Immunization Vision and Strategies endorsed by the World Health Assembly resolution WHA58.15 urging Member States to strengthen national immunization programmes between 2006 and 2015, with the goal of achieving greater coverage and equity in access to immunizations,

Noting that the vaccine coverage target of two doses of measles containing vaccine (MCV1 and MCV2) to achieve elimination needs to be >95% in all districts, which can be achieved through a combination of routine services and periodic mass campaigns,

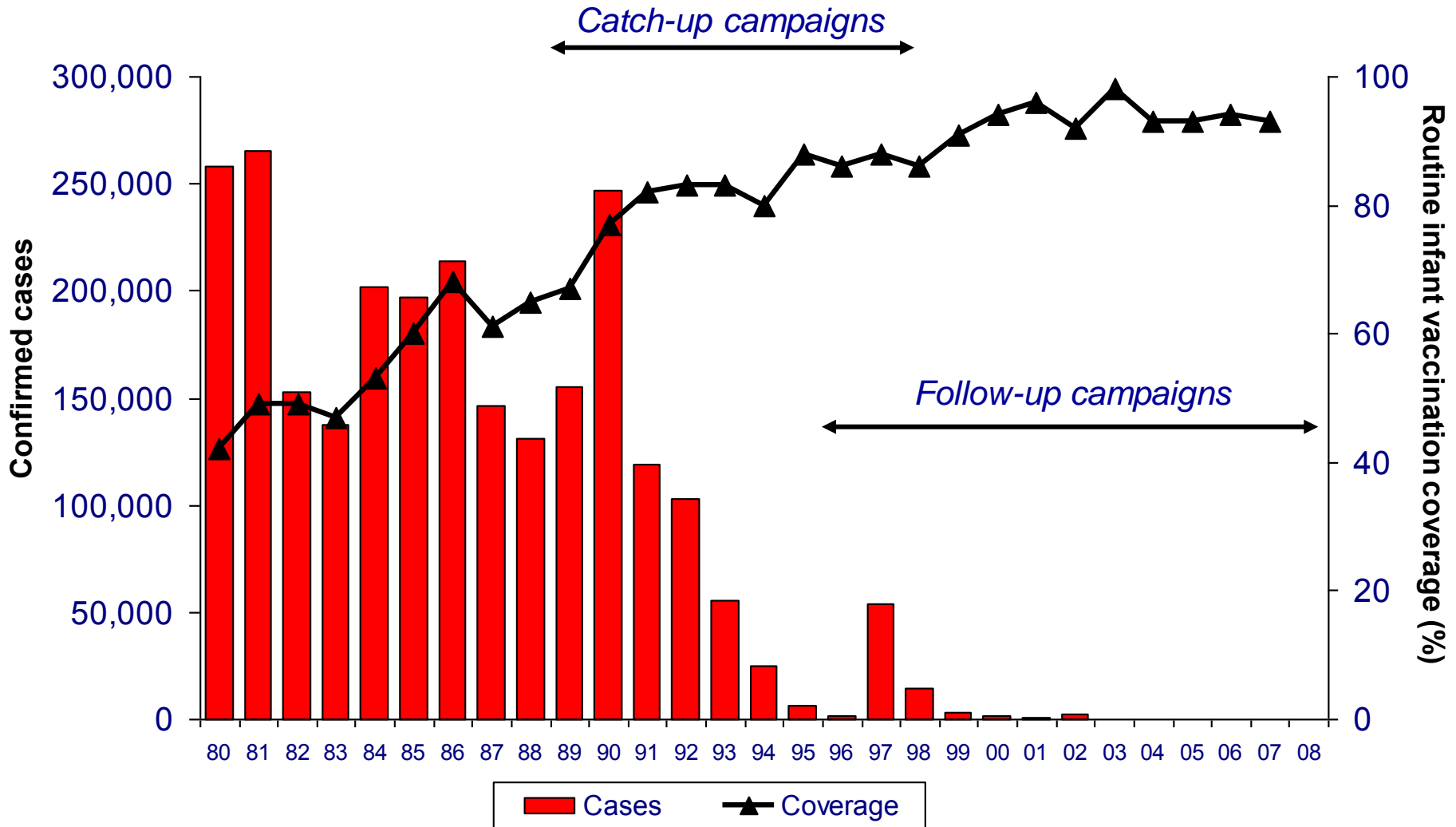
Further noting that high-quality case-based surveillance systems, adverse events following immunization (AEFI) monitoring and laboratory capacity strengthening are crucial components of measles elimination strategies,

Recognizing that various health systems challenges need to be addressed in the efforts towards measles elimination, in particular sustaining a high level of routine immunization coverage, other public health priorities that compete for limited resources, and maintenance of high-quality surveillance systems on measles incidence and mortality,

Strategies, 2009

	Mortality Reduction	Elimination
1 st dose coverage	$\geq 90\%^*$	$\geq 95\%$
2 nd dose/opportunity coverage (routine delivery or SIAs)	$\geq 90\%^*$	$\geq 95\%$
Surveillance	Aggregate or case-based	Country-wide and case-based
Case Management	Vitamin A Supportive Rx	Vitamin A Supportive Rx

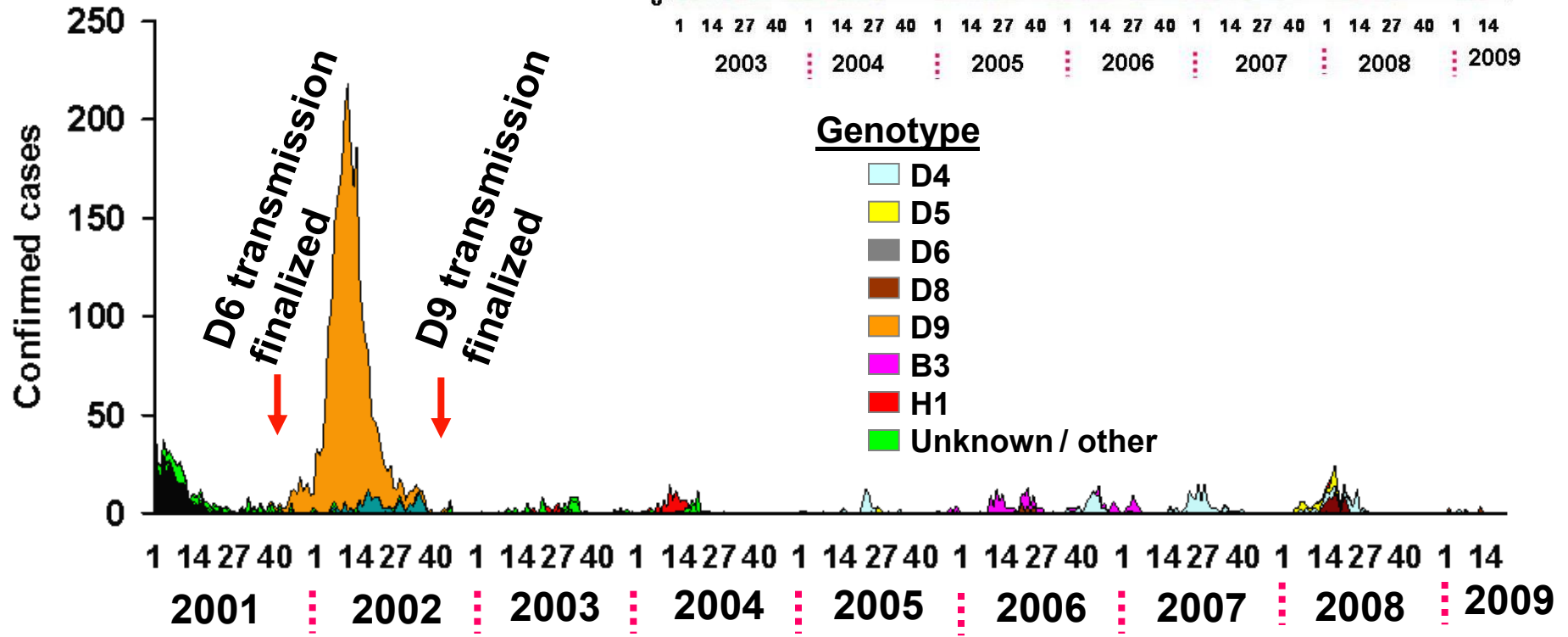
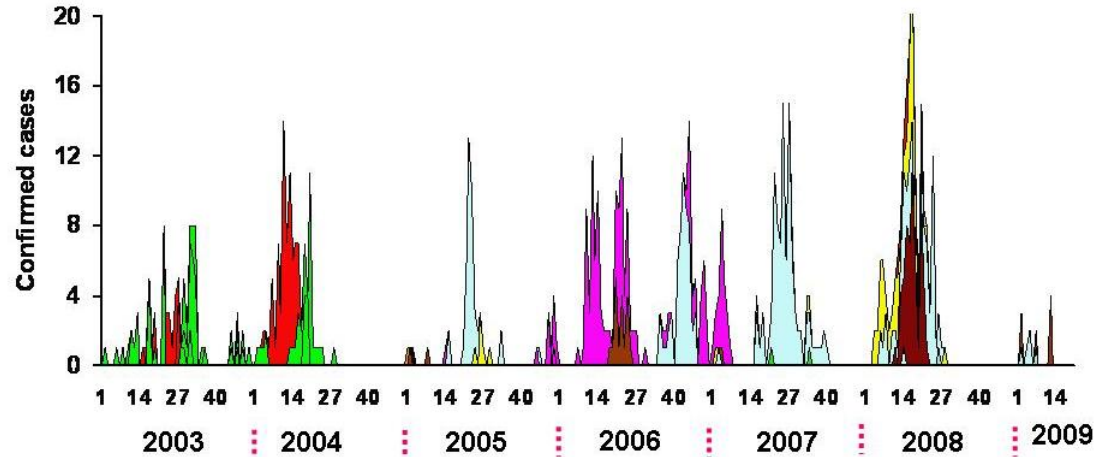
Measles Elimination, The Americas, 1980-2008*



*Data until May 21, 2009; coverage data not available for 2008.

Measles Elimination, The Americas, 2001-2009*

- Importations cause limited outbreaks
- Genotypes do not continue



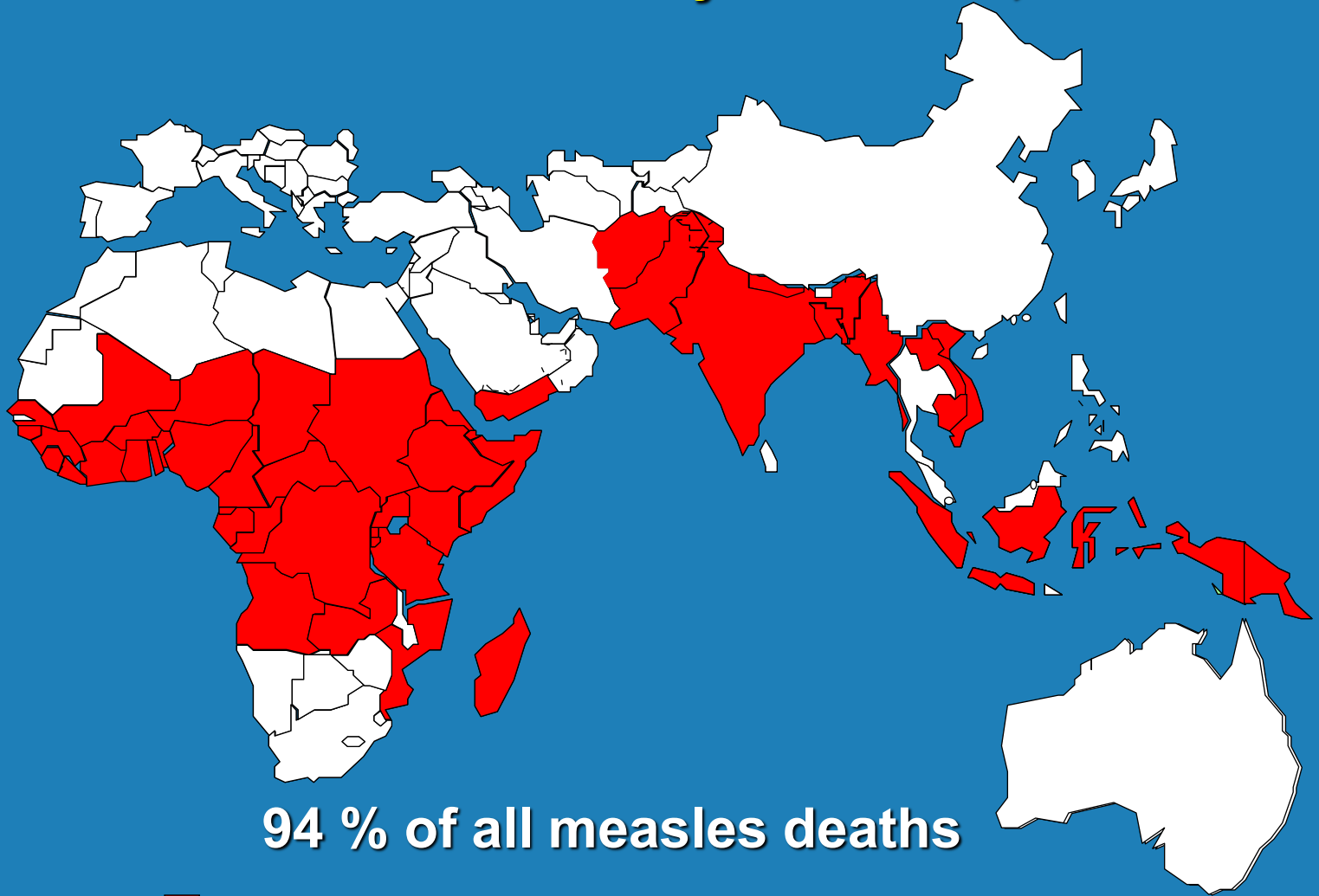
Source: Country reports to FCH/IM. Global Measles Laboratory.

* Provisional data as of 1 June 2009.

** Canada cases from 2008 (D8 genotype) linked to a case or transmission chain where the source of index case is unknown.

Progress

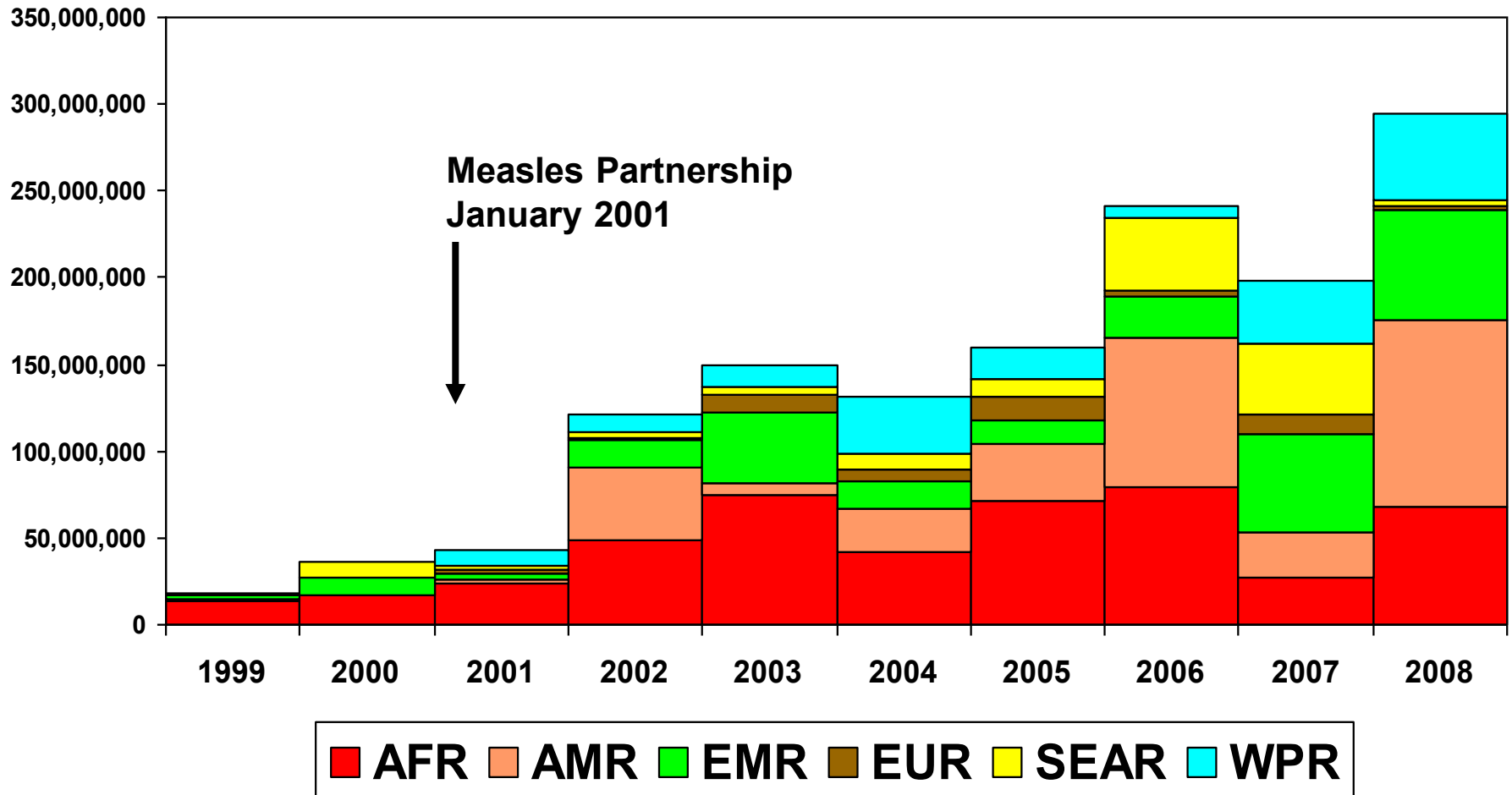
Measles Mortality Reduction 47 UNICEF / WHO Priority Countries, 2000



94 % of all measles deaths

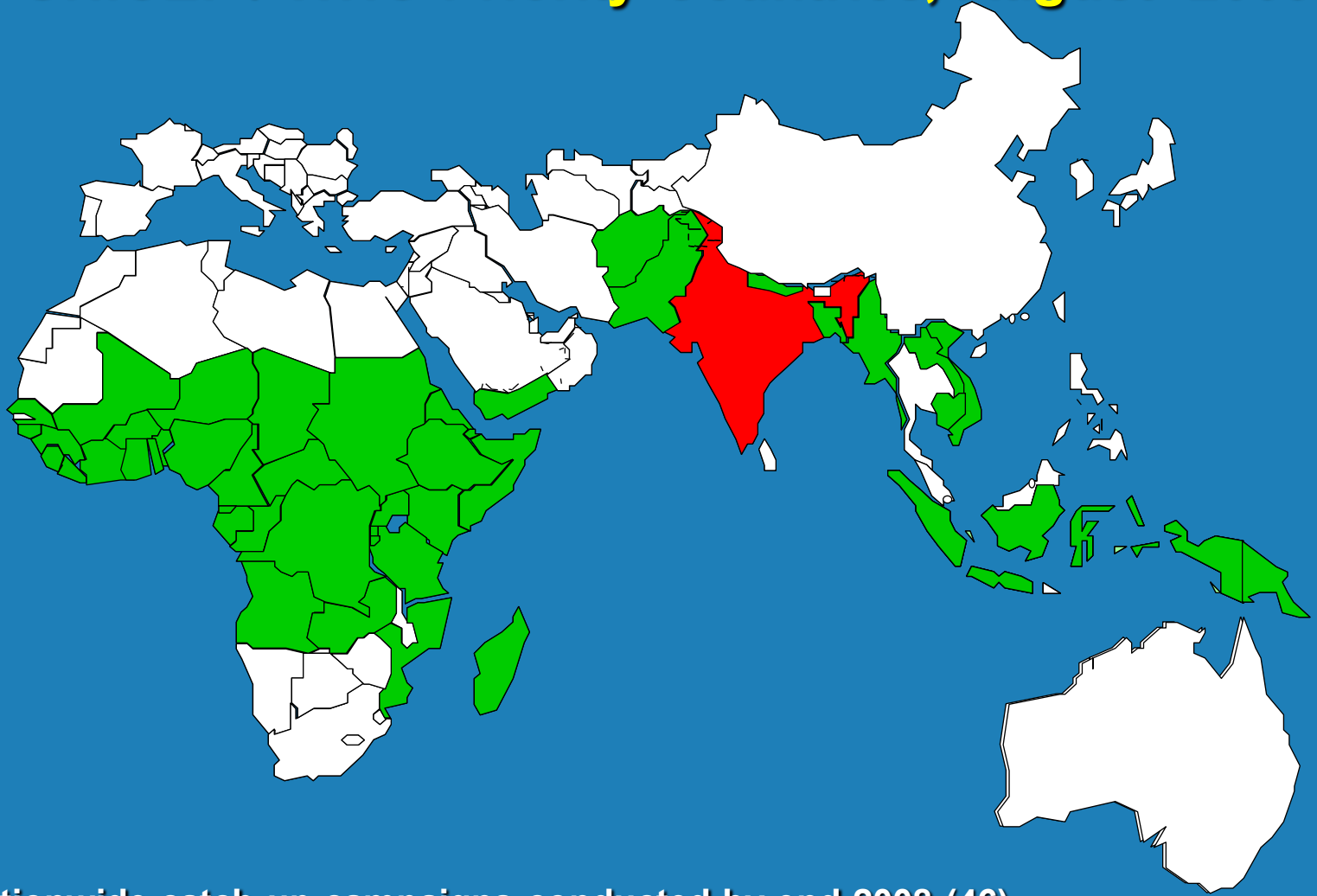
■ No 2nd dose either in nationwide campaigns
or through routine services (47)

Number vaccinated during measles supplementary immunization activities, by WHO region, 1999-2008



Measles Mortality Reduction

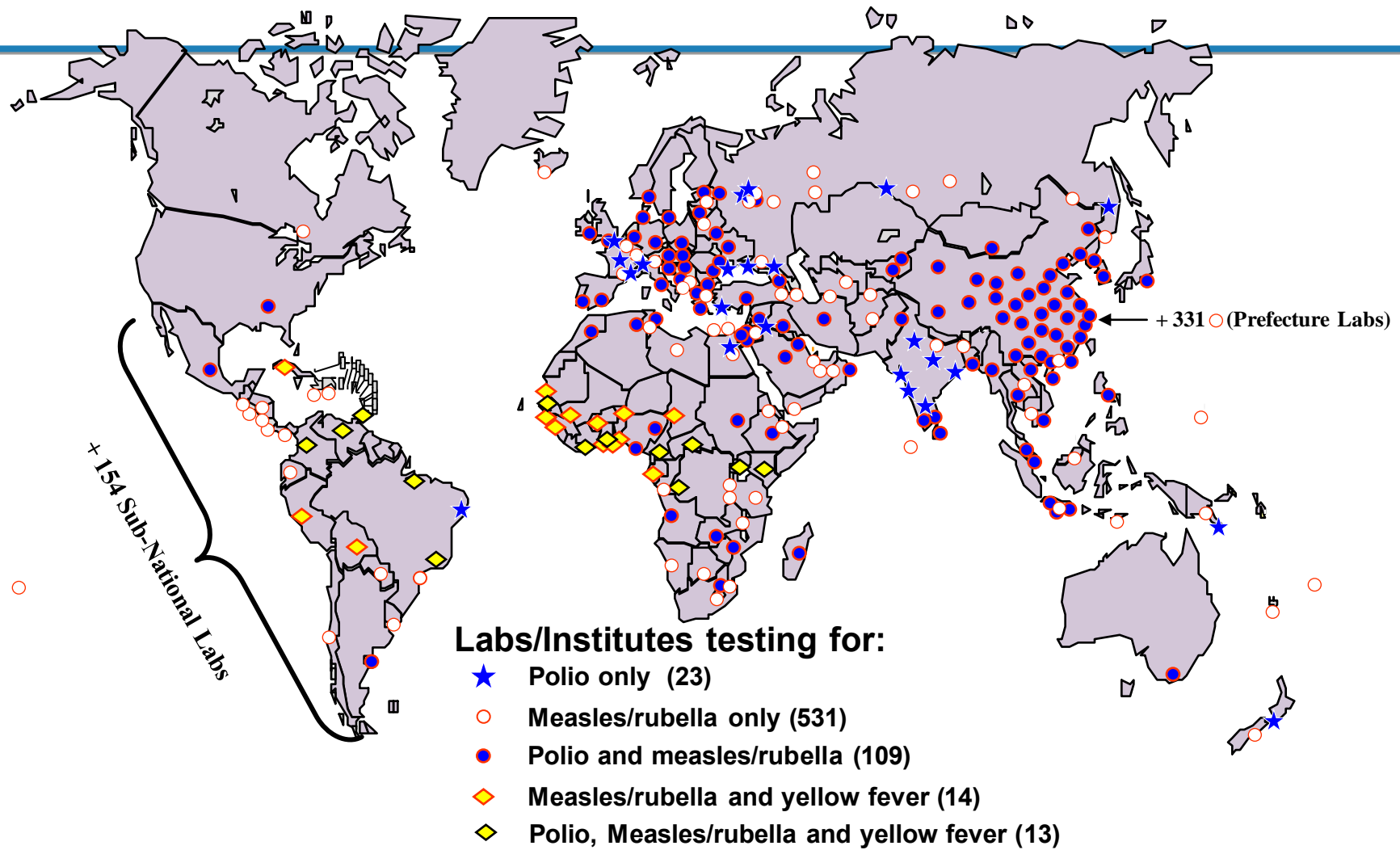
47 UNICEF / WHO Priority Countries, August 2009



 Nationwide catch-up campaigns conducted by end 2008 (46)

 No catch-up campaign yet (1)

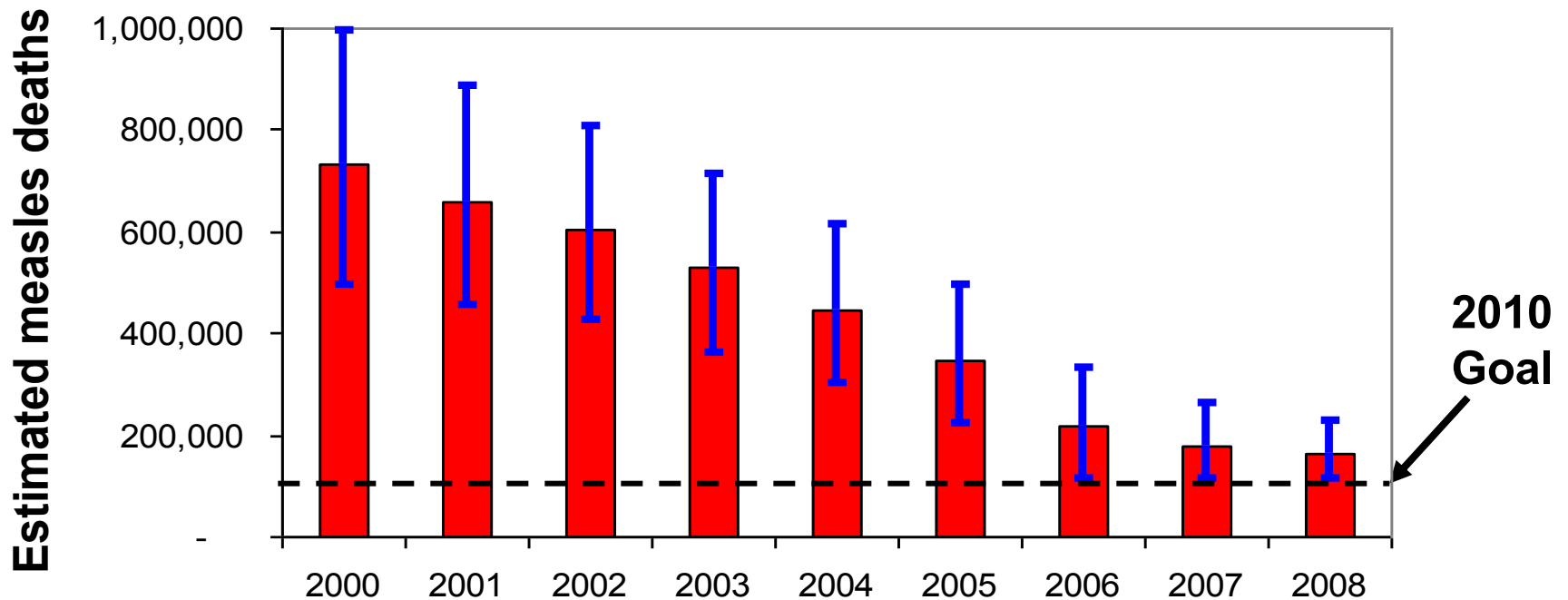
The Global Measles/Rubella Laboratory Network (>700 labs serving 183 countries)



Progress in Global Measles Control

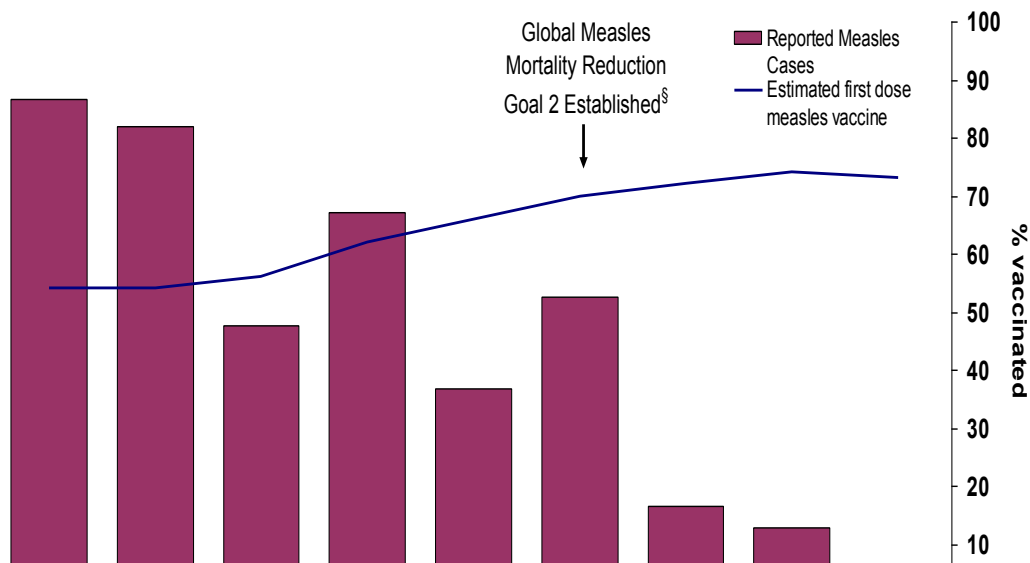
Global Measles Mortality Estimates*

All Ages, 2000-2008



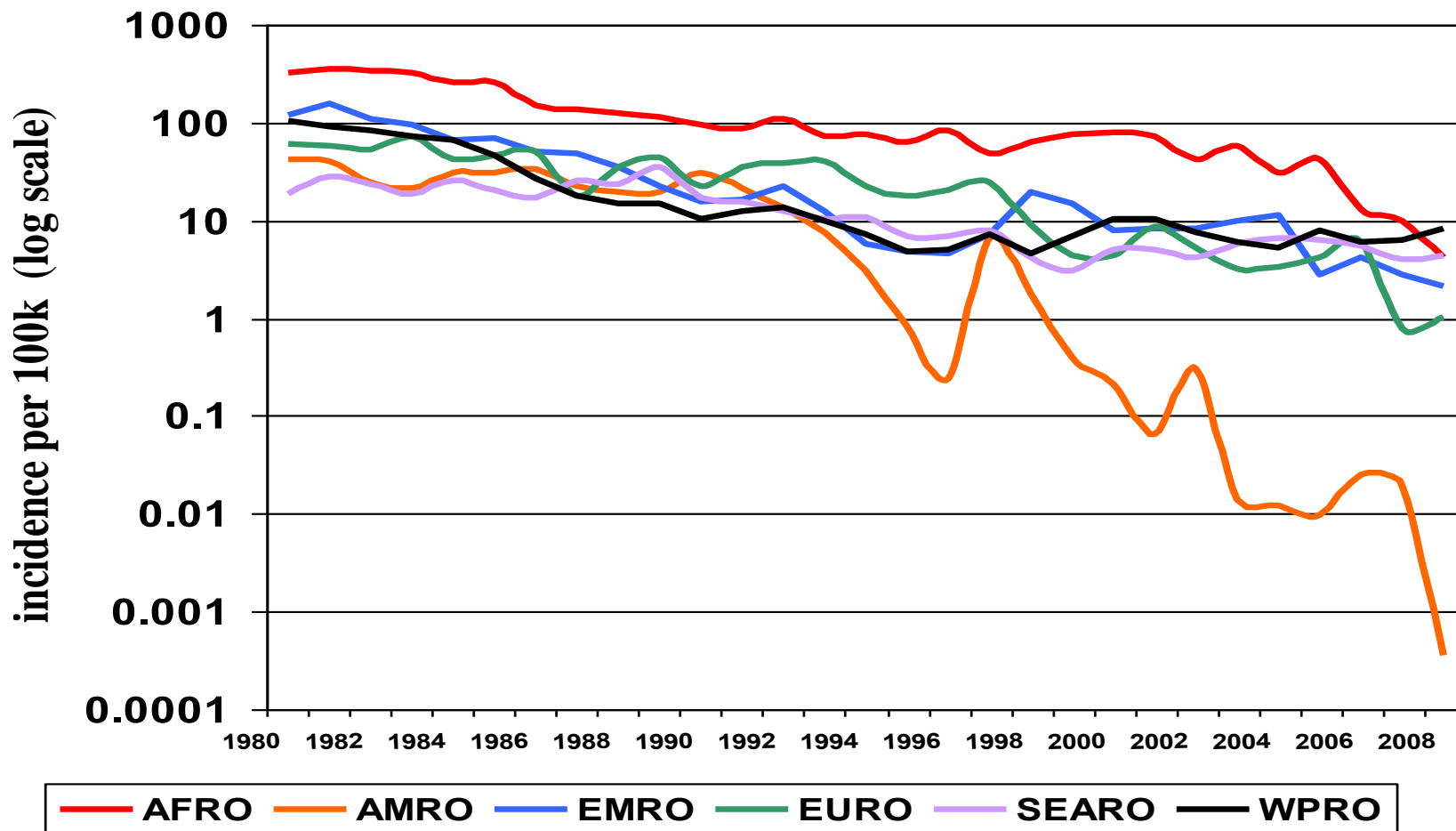
*Provisional data. Lancet 2007; 369: 191-200
High-low lines indicate uncertainty bounds

Number of reported measles cases and estimated first dose coverage, WHO African Region, 2000–2008



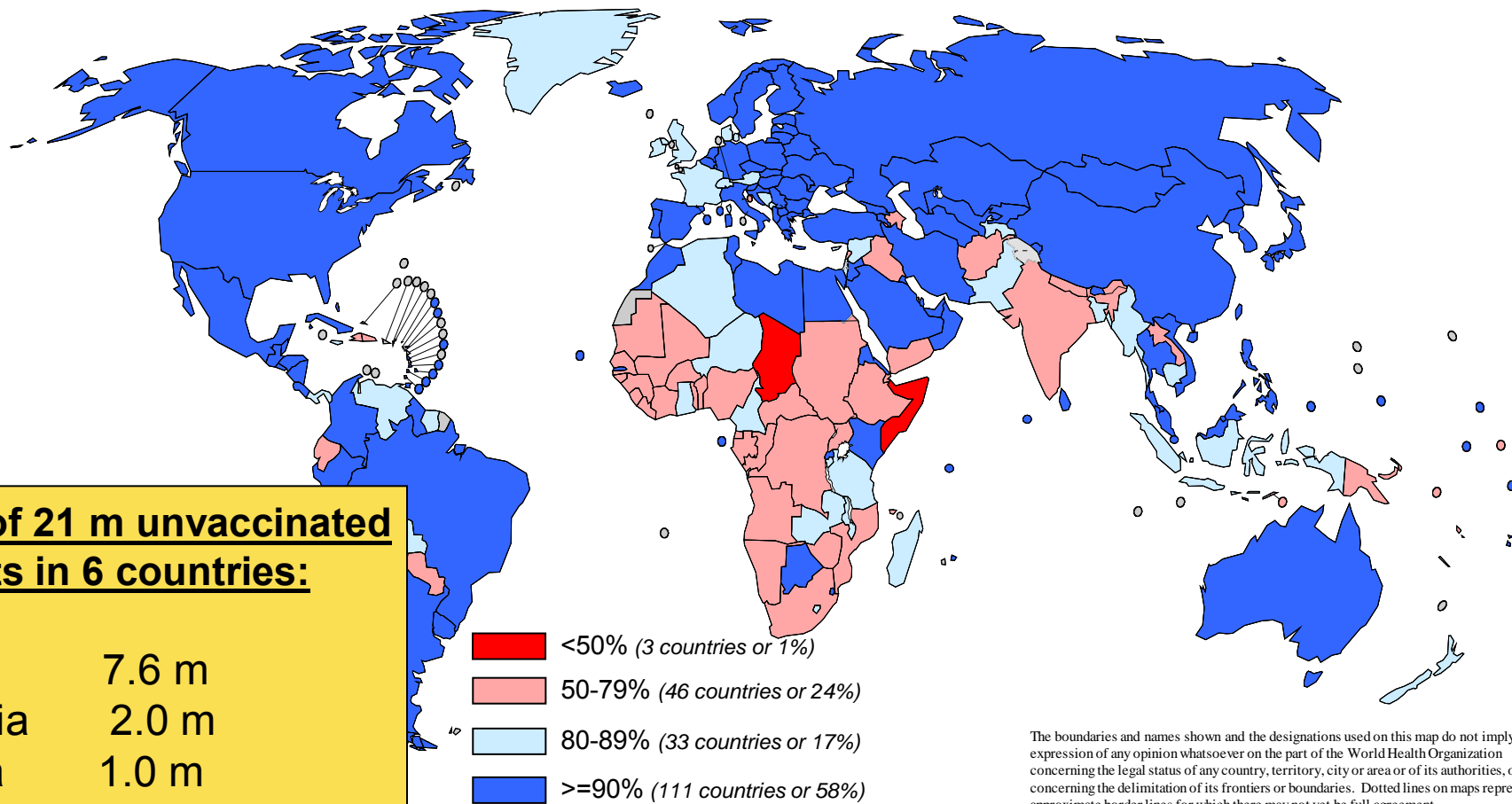
- MCV1 increased to 73%
- Compared to 2000:
 - 398 million vaccinated in SIAs
 - Estimated deaths reduced by 90%
- Reduction in reported cases from 521,102 in 2000 to 32,278 in 2008

Reported measles incidence by WHO region, 1980-2008



Challenges/ Opportunities

Immunization coverage with first dose of measles containing vaccines, 2008



60% of 21 m unvaccinated infants in 6 countries:

India	7.6 m
Nigeria	2.0 m
China	1.0 m
DRC	0.8 m
Pakistan	0.7 m
Ethiopia	0.7 m

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.
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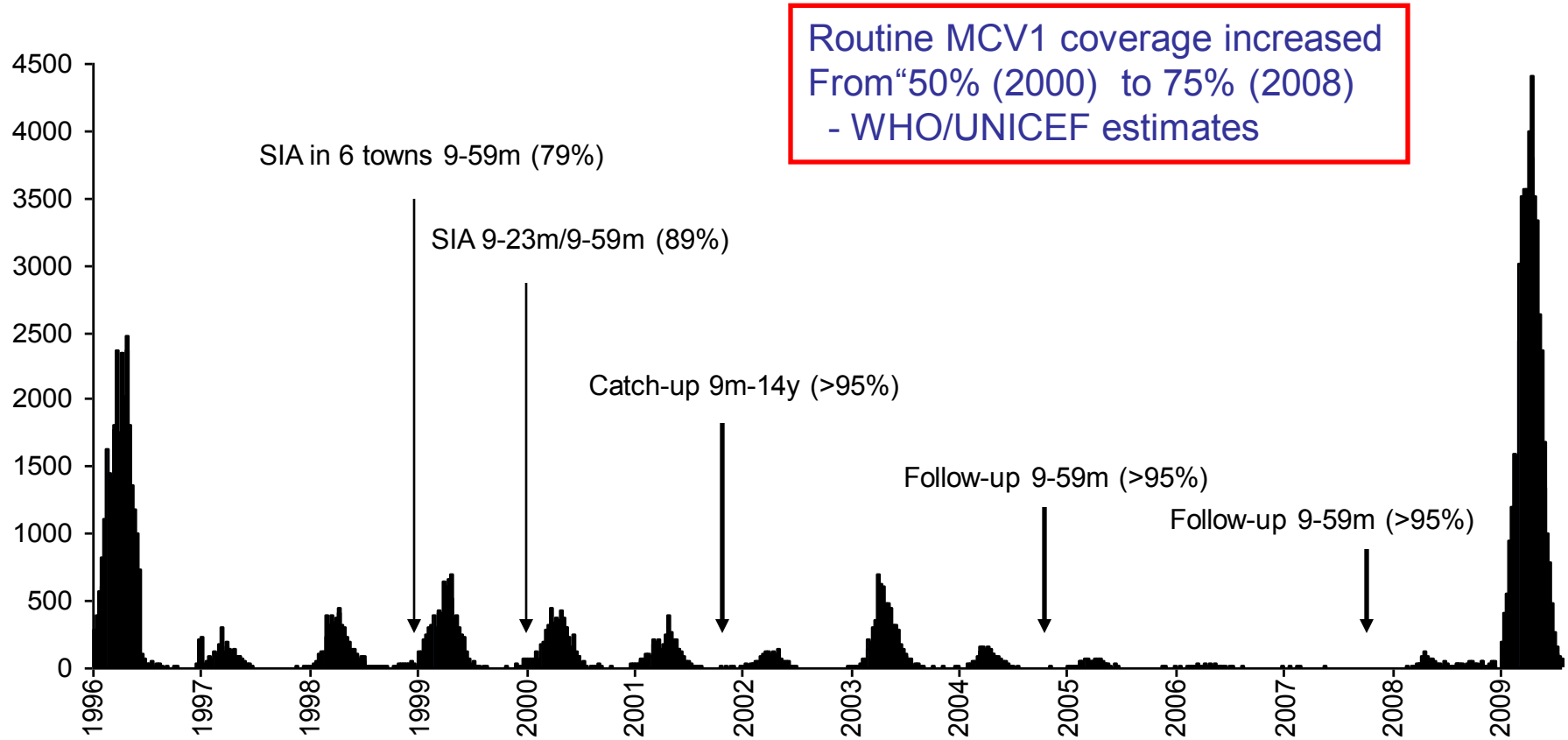
Source: WHO/UNICEF coverage estimates 1980-2008, July 2009

WHO Member States. Date of slide: 21 July 2009



World Health Organization

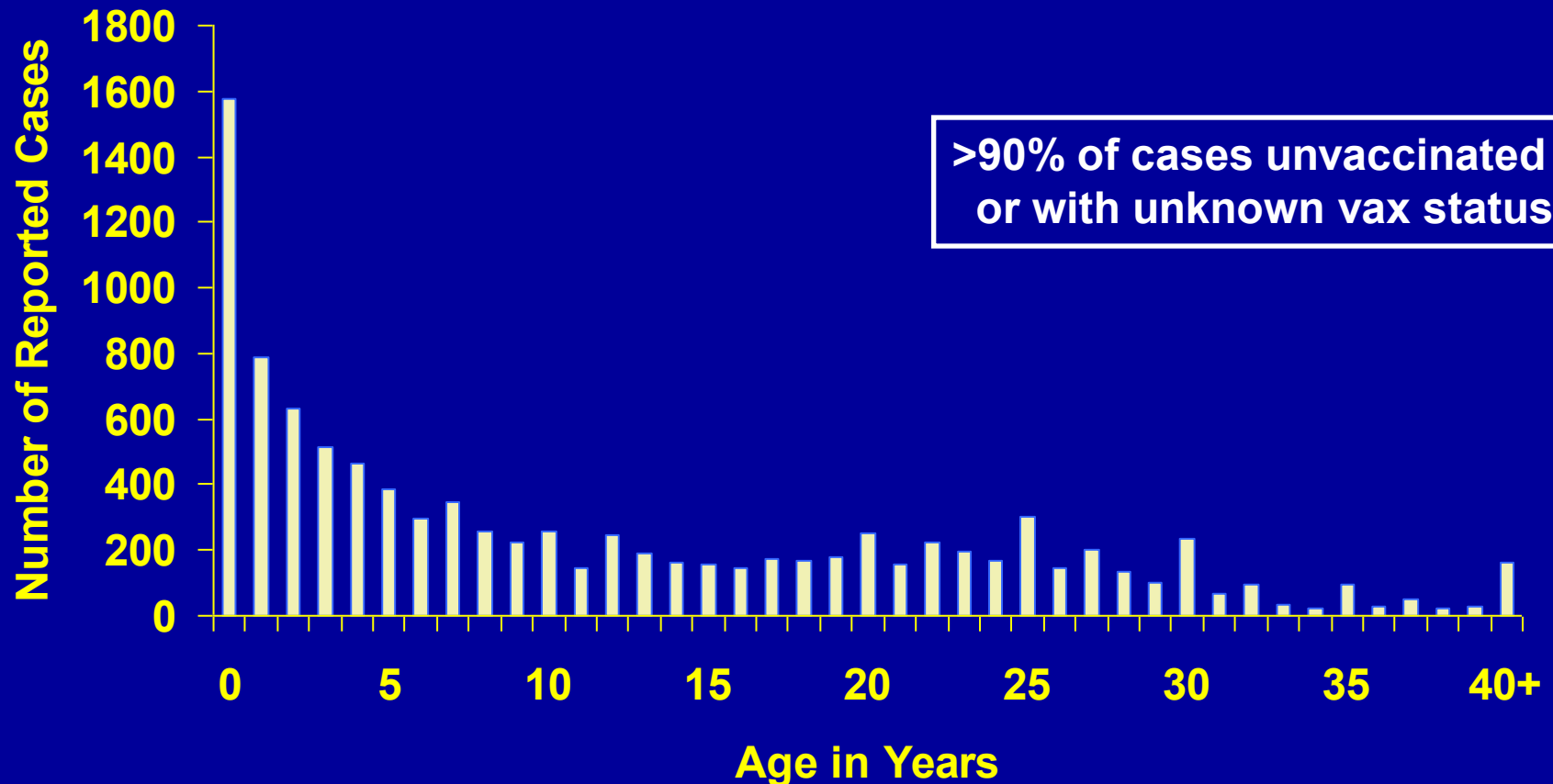
Suspected Measles Cases* by Week, Burkina Faso, 1996 – 2009 (August 8)



Routine MCV1 coverage increased
From 50% (2000) to 75% (2008)
- WHO/UNICEF estimates

*From aggregate data, as of 8 August 2009
Source: MOH Burkina Faso

Reported Measles Cases by Age, Burkina Faso, Weeks 1-19, 2009 (n=10,012)*

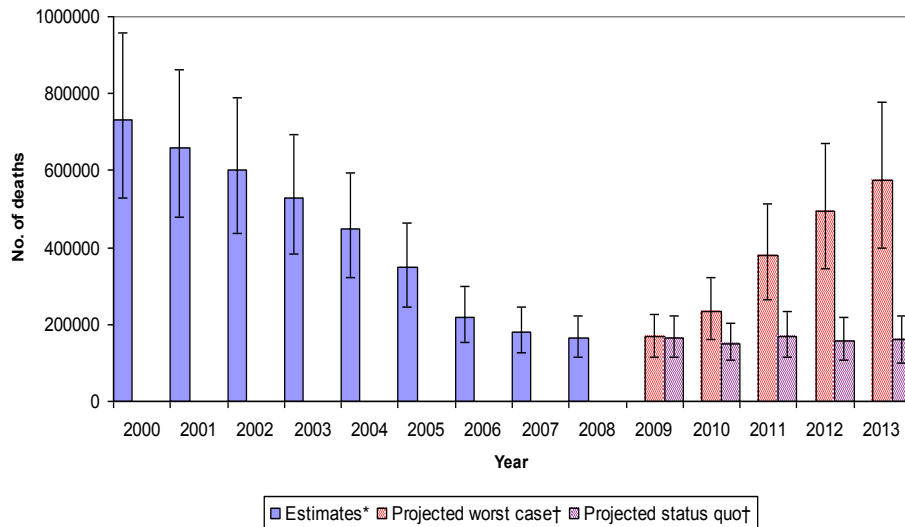


*From line listed data available from 11 districts on 20 May 2009

Source: MOH/Burkina Faso, CDC/GID

Risk of Resurgence

Figure. Estimated number of measles deaths worldwide, 2000–2008 and projections of possible resurgence in measles deaths worldwide, 2009–2013.



Reasons

- Measles no longer seen as a threat
- Funding down by 2/3
- Gaps in immunization coverage

Worst case: MCV1 level, no follow-up SIAs in 47 priority countries

Status quo: MCV1 increases and follow-up SIAs continue, no SIAs in India

Feasibility of measles eradication

Feasibility of Measles Eradication

1. Biological feasibility

2. Impact on health systems

3. Economic analysis

4. Vaccine market analysis

5. Programmatic feasibility

6. Risk analysis for post-measles era

7. Global context and political feasibility

Measles eradication is on agenda at the January 2010 EB



World Health Organization

Impact on Health Systems?

- What might be the impact of measles eradication on health systems and routine immunization programmes?
 - How could any negative impact be avoided/mitigated?
 - How can measles eradication activities be used to strengthen health systems?
- ➔ *Study by LSHTM with data from 6 countries*



How much will it cost?

- Is measles eradication C/E?
- How do eradication costs/ CE compare to the costs/ CE of achieving and sustaining the current global goal?
→ ***Study by JHU and others***
- ?? Validity of a global incremental cost-effectiveness ratio
 - marginal costs of increasing coverage >95% largely unknown
 - unpredictability (political unrest, social acceptance, governance)?
 - experience with polio eradication



Global context and political feasibility

- Competing priorities
- Trend to health systems strengthening
- Donor focus on Millennium Development Goals
 - MDG #4 – 2/3 reduction in child mortality by 2015
- Oct 2009 SAGE:
 - "risks of concurrent eradication programmes"
 - "lessons from polio eradication"



Summary - 1

● Progress

- Elimination in the Americas since 2002
- Estimated $\frac{3}{4}$ reduction in global mortality
- Strategies effective *IF* fully implemented

● Challenges

- Weak immunization systems
- India not committed to campaigns
- Decline in political and financial commitment
- Risk of resurgence

Summary – 2

- Measles eradication is biologically/technically feasible
 - Crucial role for ongoing research
- Studies on impact on health systems and estimated costs
 - Results unlikely to be definitive
- Consultative meeting planned for July 2010 to review all aspects of feasibility of eradication
- Draft report to the Executive Board (January 2010)
 - Eradication is a worthy goal
 - Proposes 2015 targets in line with MDG#4
 - Coverage 90% national and 80% at district level
 - Incidence <5 measles cases/million
 - 95% mortality reduction compared with 2000

Acknowledgements

- WHO regional focal points
 - AFRO: Balcha Masresha
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 - EMRO: Boubker Naouri
 - EURO: Rebecca Martin
 - SEARO: Jayantha Liyanage
 - WPRO: David Sniadack
- SAGE working group on measles
- QUIVER sub-group on measles
- WHO HQ staff
 - Marta Gacic-Dobo, Alya Dabbagh, David Featherstone
- Measles Initiative partners (ARC, CDC, UNF, UNICEF, WHO)
 - Gates Foundation