

Progress in creating a world free of measles, rubella and congenital rubella syndrome Measles & Rubella Initiative

Measles & Rubella Initiative January 2014 Dr. Steve Cochi, CD<u>C – scochi@cdc.gov</u>









What's Next for Eradication?

Global developments in measles and rubella elimination

Feasibility of Measles Eradication



- July 2010 Global Consultation
 - Measles can and should be eradicated
 - In the context of strengthening immunization and primary health care systems
 - Opportunity to accelerate rubella control and the prevention of congenital rubella syndrome
 - Target date of 2020 feasible if measurable progress



SAGE, November 2010

- Measles can and should be eradicated
- Measurable progress towards 2015 global targets and existing regional elimination goals <u>is required</u> before establishing a target date
- Requested frequent updates on progress





Measles and Rubella Elimination Goals by WHO Region, 2013

Page 5

All 6 WHO Regions have measles elimination goals Americas and Europe have rubella elimination goals



Measles and Rubella Targets

- WHA 2015 Global <u>Control</u> Targets:
- Measles mortality reduction of 95% vs. 2000 Measles reported incidence <5 cases per million Measles vaccination coverage ≥90% nationally, ≥80% in every district
- Regional Measles and Rubella Elimination Goals:
 - 2000 AMRO measles (rubella elimination by 2010)
 - 2012 WPRO measles
 - 2015 EMRO (measles) and EURO (measles + rubella)
 - 2020 AFRO (measles) and SEARO (measles)
- <u>GVAP Goals</u>:
 - 2015: measles elimination in 4 and rubella elimination in 2 regions
 - 2020: measles and rubella elimination in 5 regions









World Healt



94% Reduction in reported measles cases

Measles global annual reported cases and MCV1 coverage*, 1980-2012



* MCV1 coverage: coverage with first dose of measles-containing vaccine as estimated by WHO and UNICEF







Reported cases increased in 2010 and 2011, but provisional total lower for 2012*



*2012 data are provisional, includes reports from 181/194 countries









Global MCV1 coverage at 84% 1st Dose measles vaccine coverage by WHO region, 1980-2012



Source: WHO/UNICEF coverage estimates 2012 revision. July 2013; Immunization Vaccines and Biologicals, (IVB), World Health Organization. 194 WHO Member States. Date of slide: 17 July 2013







UNITED NATIONS

unicef 🙆

Measles 2nd dose introductions planned in 9 more countries during 2013-14



American Red Cross



Reduction in estimated measles deaths, 1985 - 2011



Source: WER 2013; 88(3):29-36







Page 12





Van den Ent et al (2011) J. Infect Diseases 2011;204:S18-S23



Reduction in Estimated Measles Deaths by WHO Region 2000 to 2012



-

Source: WER February 7, 2014



Estimated Future Deaths Averted during 2011–2020 in 73 countries supported by the GAVI Alliance

Vaccine	No. of Future Deaths Averted
Measles	13,444,504
Hepatitis B	4,851,930
Pneumo	1,544,762
HiB	1,395,024
Rota	805,561
HPV	525,869
Rubella	404,959
Men A	252,999
JE	64,956
Yellow fever	34,849
Total	23,325,413

Source: L.A. Lee et al. Vaccine *31S (2013) B61–B72*



Scaling-up 2nd Dose Strategies

Number of doses of measles vaccine administered, by delivery strategy, 2000-2010



Measles campaigns in 32 countries in 2012





American Red Cross



Page 18 **Measles Genotype Surveillance**



WHO

- Network of 673 laboratories
- Outbreak and virus tracking
- Diagnosis in the field

concerning the legal status of any country, territory, city or area or of its authorities, or o approximate border lines for which there may not yet be full agreement. ing the delimitation of its frontiers or boundaries. Dotted lines on maps represent @WHO 2011 All rights reserved

Measles elimination goal in SEARO--2020



- India completed measles SIAs in Sept 2013
 - 139 M children to date
- Routine MCV1 up from 61% to 79%
- MR SIAs: Nepal in 2012, Bangladesh in 2014
- Regional goal of measles elimination by 2020

*India is not included in this graph. Data source: surveillance DEF file Data in HQ as of 5 Aug 2013











Final push to eliminate measles in WPRO



- Region making remarkable progress towards elimination
- Regional TAG reaffirmed elimination goal, recommended establishing rubella elimination goal
- Resurgence in China

unicef 🙆

 MR SIAs in Cambodia, Viet Nam

Data source: surveillance DEF file Data in HQ as of 5 Aug 2013

American

Red Cross





The Americas

Measles vaccination coverage among children <1 year of age* and reported measles and rubella cases, 1970-2012



*MR in children aged 1 year as countries introduced measles-rubella containing vaccines

Source: Country reports to FCH-IM/PAHO.



MRI Strategic Plan



- High vaccination coverage with two doses of M and R containing vaccines
- 2. *Effective surveillance,* monitoring and evaluation
- 3. *Outbreak preparedness and response* & case management
- Communication to build public confidence and demand for immunization
- 5. Research and development









Vision

Achieve and maintain a world without measles, rubella and congenital rubella syndrome

tria

Page 23

Goals

By end 2015:

- Reduce global measles mortality by at least 95% compared with 2000 estimates.
- Achieve regional measles and rubella/CRS elimination goals.

By end 2020:

Achieve measles and rubella elimination in <u>at least five</u> WHO regions.



Countries using rubella vaccine in their national immunization system



Estimated average incidence of CRS per 100,000 live births, 2010





GAVI eligible with no rubella genotype data, ever (47/56)

Acknowledgements: LabNet

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

World Health Organization Weekly epidemiological record Relevé épidémiologique hebdomadaire

Organisation mondiale de la Santé 15.8.07 2011, 866 15.8.07 12 301, 367 ANN No. 32, 2007, 40, 301, 316

Contents 301 Rabela vectors: WHO position paper	Rubella vaccines: WHO position paper	Note de s de l'OMS les vaccin
Seemaine 301 Nord es delse patter de 1049 opperant be vecto articulation	In accordance with its mandate to provide pulsars to Member States on health add- icy matters, WHO issues a series of regu- larly updated position papers are owners and combinations of watches against dis- eases that have an international public health impact. These papers are concerned primarily with the size of watches in large-scale immunization programmer, they ammenties essential background in- formation on diseases and vancines, and conclude with the current WHO position	Conforménier nir des recon sur les questi publie une sér rement actual citations vacciu qui ont des co internationale ment sur Putil de programs échelle; elles s

	la position actuelle de l'OMS concernant l'uti- lisation de crs derniers dans le monde.
The papers have been reviewed by entr- ols experts and WHO and, and since 2006 they have been reviewed and endorsed by WHO Strangic Akrisony Graup of Reperts (SAGE) en Insusanisation. ¹ The patition papers are designed to be used maked by national polici heath dificult maked by national polici heath dificult manness. The may dia be of simerar to arcranical funding agnotics, vaccine mandacturess, the endocid commonly, the scientific media and the public.	On more set the manimises put do specialism on entritives or the personal de TOMS et, depisi 306, sont examines et approaries put de Couque autolique consultant d'asport (MAZ) de TOMS aut la vaccination. Ces nore de synthès nour inclujament de doubles nur responsables nationant de la nater polique nan adre ander per participation et doubles nur responsables nationals de la nater polique prénente un kindré pour la cognitione de vaccias, le moche adreid, les antémi derivation, le moche adreid, les antémi sientépas et le pard politi.
and a second sec	and a second and a second se

his document replaces the first rubella. La présent cancie position paper published in the rubelly Pajdensingial Record in the publice data 000-2 li noorportes the most recent decompanyes in the field of rubells wavelle. In three-data or order to previde updated guidance on the introduction and use of rubelli li three-data.

WORLD HEALTH ORGANIZATION GROWN ORGANIZATION MONIXALE DE LA SANTÉ GROWN

use of rubella Les recommandatione reasones à l'unita y sacciae autimbolone, cost de causias fance pessented. SACE lors de sa résuite d'évantes causad at http:// présentés la Tadeusse subsante http:// tot/samunitation/sage/previous/en/nd

Rubella as the "game changer"

2011 WHO Rubella vaccine position paper:

"In light of the remaining global burden of CRS and proven efficacy and safety of RCVs, WHO recommends that countries take the opportunity offered by accelerated measles control and elimination activities to introduce RCVs."

 The preferred approach is to begin with MR vaccine or MMR vaccine in a wide-age range campaign followed immediately with introduction in the routine programme.

 Countries introducing RCV should achieve and maintain immunization coverage of 80% or greater with RCV delivered through routine services and/or regular SIAs.

GAVI support for measles and rubella >\$750 million through 2018

- **Rubella** introduction:
 - MR catch-up SIA (9m-14y)
 - Introduction grant
 - Cost to GAVI \$554 million
- Performance-based funding for 1st dose measles coverage
- Continue support for grants to introduce MCV2 in routine
- Support for measles follow-up SIAs in 6 large countries*
- Support for measles outbreak response immunization (\$55 million)



Rubella as the "game changer"



"WHO recommends that countries take the opportunity offered by accelerated measles control and elimination activities to introduce RCVs."

Page 31

- Preferred approach: begin with MR vaccine in a wide-age range campaign followed by introduction in routine
- Countries introducing RCV should achieve and maintain immunization coverage of ≥80% delivered through routine and/or regular SIAs
- GAVI support (\$554 million) for MR vaccine introduction will shift market away from M to MR
- Need ensure highest-quality campaign preparations and implementation, improved monitoring, and post-campaign surveys

unicef 🙆

UNITED NATIONS

World Healt





Rubella in catch up SIAs in 20 countries during 2013-2015





Data in HQ as of 14 June 2013









Summary

- Score card shows remarkable progress
 - 50 years of measles vaccine led to >90% reduction in global cases and deaths
 - Over 40 years of rubella vaccine with rubella elimination in PAHO
- Each region demonstrates progress and challenges
 - PAHO maintaining elimination
 - Progress in AFRO and WPRO
 - On-going outbreaks in EMRO and EURO
 - SEARO established 2020 elimination target in Sept 2013
- Opportunities to accelerate progress
 - Rubella roll-out two birds with one stone!!
 - New outbreak response fund
 - Alignment of policy (SAGE in November) and funding (GAVI)
 - On the road to eradication but need to accelerate progress towards regional goals









