WHO South-East Asia Region
Elimination of Measles and
Control of Rubella and
Congenital Rubella Syndrome

M&RI Partners Meeting
09 September 2014
Washington, D.C.
SEAR Population Density by First Administrative Level

Number of persons per Sq. Km

- 0 - 10
- 11 - 100
- 101 - 300
- 301 - 500
- 501 - 1000
- 1001 - 13464

Source: Annual EPI reporting form 2013.

*Population density by second administration level for Bhutan, Sri Lanka and Timor-Leste.
Reported Measles\(^1\) and 1st Dose Measles RI Coverage\(^2\), SEAR, 2000–2013

1 WHO/UNICEF JRF
2 WHO/UNICEF coverage estimates 2013 revision (July 2014)
Reduction in Estimated Measles Deaths by WHO Region, 2000 to 2012

<table>
<thead>
<tr>
<th>Region</th>
<th>% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMR</td>
<td>100%</td>
</tr>
<tr>
<td>EUR</td>
<td>64%</td>
</tr>
<tr>
<td>AFR</td>
<td>52%</td>
</tr>
<tr>
<td>EMR</td>
<td>63%</td>
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<tr>
<td>SEAR Ex India</td>
<td>57%</td>
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<tr>
<td>India</td>
<td>71%</td>
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<tr>
<td>WPR</td>
<td>84%</td>
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<td>Global</td>
<td>78%</td>
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</table>

2015 reduction goal (95%)


5th SEAR ITAG Meeting, 25-29 August 2014, New Delhi
Reported Measles Incidence Rate
SEAR, 2000-2013

2015 target: 5 cases per million

Data: WHO/UNICEF JRF (As of 15 July 2014)
SEAR 2000 - 2013

- Last case of wild polio January 2011
- Great progress in reducing measles disease and deaths
- Two doses of a MCV in the routine immunization system in 9 countries
- RCV nationwide in 6 countries
- Measles / Rubella surveillance in all countries
Regional Goal

66th Meeting of the SEAR Regional Committee in September 2013 in New Delhi resolved to:

Adopt the goal of measles elimination and rubella/CRS control in the South-East Asia Region by 2020
Operational Definition

Measles Elimination

The absence of endemic measles transmission in a defined geographical area (e.g., region or country) for >= 12 months in the presence of a well-performing surveillance system.

……and this means zero cases due to indigenous virus.
Objectives to Achieve 2020 Regional Goals

- Achieve and maintain at least 95% population immunity with two doses against measles and rubella within each district of each country in the Region through routine and/or supplementary immunization.
- Develop and sustain a sensitive and timely case-based measles and rubella and CRS surveillance system in each country in the Region that fulfils recommended surveillance performance indicators.
- Develop and maintain an accredited measles and rubella laboratory network that supports every country or area in the Region.
- Strengthen support and linkages to achieve the above three strategic objectives.
Immunization Strategies

• Achieve and maintain at least 95% population immunity against measles and rubella within each district of each country
  – Combination of routine and campaigns
  – Extremely high 1\textsuperscript{st} and 2\textsuperscript{nd} dose coverage through routine immunization
  – Nationwide wide-age range (9m-15y) MR campaign “Catch Up”
  – Nationwide or sub-national narrow age range MR campaigns as necessary “Follow Up”
Immunization
Immunization Strategies (cont)

• Strengthen vaccine management systems
• Improve vaccine, immunization and injection safety
• Monitor and evaluate
1st Dose Measles RI Coverage by Country, SEAR, 2009-2013

Source: WHO/UNICEF coverage estimates 2013 revision (July 2014)
2\textsuperscript{nd} Dose Measles RI (MCV2) Coverage by Country
SEAR, 2009-2013

Source: WHO/UNICEF coverage estimates 2013 revision (July 2014)
# Measles-Rubella Wide-Age Range Catch-up Campaigns

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Type</th>
<th>National or Sub-nat</th>
<th>Vax Ags</th>
<th>Target Ages</th>
<th>SIA Target pop (no.)</th>
<th>No. vax</th>
<th>Cov (% of SIA target)</th>
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<tbody>
<tr>
<td>BAN</td>
<td>2014</td>
<td>Catch Up</td>
<td>National</td>
<td>MR</td>
<td>9 M-14 Y</td>
<td>51,745,231</td>
<td>53,644,603</td>
<td>104</td>
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<tr>
<td>DPRK</td>
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<tr>
<td>IND</td>
<td>from 2015</td>
<td>Catch Up</td>
<td>Rolling National</td>
<td>MR</td>
<td>9 M-15 Y</td>
<td></td>
<td></td>
<td>To do</td>
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<tr>
<td>INO</td>
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<tr>
<td>MAV</td>
<td>2005, 2007</td>
<td>Catch Up</td>
<td>National</td>
<td>MR, MMR</td>
<td>6-34Y, 4-6Y</td>
<td>174,526</td>
<td>140,104</td>
<td>80</td>
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<tr>
<td>MMR</td>
<td>2014/2015</td>
<td>Catch Up</td>
<td>National</td>
<td>MR</td>
<td>9 M-15 Y</td>
<td></td>
<td></td>
<td>To do</td>
</tr>
<tr>
<td>NEP</td>
<td>2012</td>
<td>Catch Up</td>
<td>National</td>
<td>MR</td>
<td>9 M-15 Y</td>
<td>9,958,196</td>
<td>9,991,152</td>
<td>100</td>
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<tr>
<td>SRI</td>
<td>2004</td>
<td>Catch Up</td>
<td>Rolling-national</td>
<td>MR</td>
<td>16-20 Y</td>
<td>1,890,326</td>
<td>1,362,108</td>
<td>72</td>
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<td>THA</td>
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<tr>
<td>Country</td>
<td>MCV in RI</td>
<td>RCV in RI</td>
<td>Catch-up SIA</td>
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<tr>
<td>Maldives</td>
<td>2 dose</td>
<td>MMR</td>
<td>Yes; MR-6y-25y &amp; 6y-35y ✚</td>
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<tr>
<td>Bangladesh</td>
<td>2 dose</td>
<td>MR</td>
<td>Yes; M-9m-10y; MR-9m-15y</td>
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<tr>
<td>Bhutan</td>
<td>2 dose</td>
<td>MR</td>
<td>Yes; M-9m-15y; MR-9m-15y &amp; 15y-44y ✚</td>
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<tr>
<td>Indonesia</td>
<td>2 dose</td>
<td>No</td>
<td>No</td>
<td></td>
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<tr>
<td>Nepal</td>
<td>2 dose</td>
<td>MR</td>
<td>Yes; M-9m-15y; MR-9m-15y</td>
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<tr>
<td>DPR Korea</td>
<td>2 dose</td>
<td>No</td>
<td>Yes; M-6m-15y &amp; 16y-45y</td>
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<tr>
<td>India</td>
<td>2 dose</td>
<td>MR</td>
<td>No; MR-9m-15y from 2015</td>
<td></td>
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<tr>
<td>Myanmar</td>
<td>2 dose</td>
<td>No</td>
<td>No; MR-9m-15y (Dec14/Jan15)</td>
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<tr>
<td>Sri Lanka</td>
<td>2 dose</td>
<td>MMR</td>
<td>No</td>
<td></td>
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</tr>
<tr>
<td>Thailand</td>
<td>2 dose</td>
<td>MMR</td>
<td>No</td>
<td></td>
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<td></td>
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<tr>
<td>Timor-Leste</td>
<td>1 dose</td>
<td>No</td>
<td>No</td>
<td></td>
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</tbody>
</table>

Source: WHO/UNICEF JRF 2013, SEARO
Mass Immunization Campaigns Are an Important Strategy Impact on Measles Outbreaks, Bangladesh, 2002-2014

Source: ¹ 2002-2003 JRF annual cases; and 2004-2014 Monthly VPD data reporting.
² WHO- Unicef Estimates 2013
Surveillance
Regional Measles Elimination and Rubella/CRS Control by 2020

• The new regional goals require new activities in relevant areas including surveillance

• Case-based, laboratory supported measles/rubella surveillance is required to meet the 2020 regional goals
Surveillance standards for measles and other priority vaccine-preventable diseases in South-East Asia

Report of a regional workshop
New Delhi, India, 23–27 September 2013

World Health Organization
Regional Office for South-East Asia
Current Status

- All countries do some form of case-based surveillance
- All countries report case data to SEARO
- 10 countries have an accredited national laboratory
- BHU, DPRK, MAL and SRL may have eliminated measles
- BAN, NEP, THA and TLS with relatively low level of measles transmission
- MYN will conduct a nationwide wide-age range MR campaign Jan/Feb 2015
- TLS yet to introduce RCV or conduct an MR campaign
- IND and INO have relatively high levels of virus transmission and yet to conduct a nationwide wide-age range MR campaign
- CRS surveillance
  - Two countries report cases to SEARO
  - Two additional countries piloting
- Certification level AFP surveillance in all countries
Definition

Case-based laboratory supported measles/rubella surveillance is:

Case-based reporting of every clinically-suspected measles case with the results of laboratory testing, and “zero” reporting, and not merely confirming a few cases by laboratory testing and then reporting of aggregate numbers as is currently done. This means tracing all cases, and obtaining personal and epidemiological details of each case in order to establish chains of transmission.
Criteria

• Countries should establish nationwide case-based, laboratory supported measles / rubella surveillance as soon as feasible
  – Relatively low levels of virus transmission
  – After a nationwide wide-age range MR campaign
  – All countries except IND and INO ready to establish now
  – IND and INO conduct case-based reporting in selected areas, and will implement nationwide case-based surveillance only after the nationwide wide-age range MR campaign
Laboratory
Laboratory

• All countries have a national laboratory for measles / rubella surveillance
  – 10 countries have an accredited one
• 37 laboratories currently in the Regional network
• All report results to SEARO
SEAR MR laboratory network, 2014: 37 Labs

Sub-National lab 13
National lab 21
Nat. Ref. Lab-India 2
Req. Ref. Lab 1
Strengthen Support and Linkages
Support and Linkages

- Advocacy, social mobilization and communication
- National and subnational coordination and advisory bodies for measles elimination and rubella/CRS control
- A regional verification commission (RVC) and national verification committees (NVC) for measles (and rubella/CRS) elimination
- Identify and utilize synergistic linkages of integrated program efforts
- Programme monitoring and oversight
Support and Linkages (cont)

- Will cost approximately an additional 800 million USD
- Political support from the highest level of national governments
- Line budgets for these activities
- Partnering with governments, civil society, philanthropic, NGOs, international organizations, religious organizations and private companies
Key Challenges

• Increasing routine immunization coverage
  – Can’t rely on repeated SIAs as polio did in some areas
• The large countries – India and Indonesia
• Ensuring adequate vaccine supply
• Ensuring adequate funding
• Ensuring adequate trained staff
The Funding Challenge, 2014-2020
Regional Requirements of about US$800 mill.

- GAVI funding support available
- Measles Rubella Initiative funding support
- Reliable funding support from USCDC
- National budget lines:
  - India will cover its vaccine costs
  - Indonesia may have potential funds for vaccine
  - Other countries: mix of external and internal funds
Strengthening Routine Immunization

- If routine immunization does not achieve greater than 95% coverage for both doses, then measles elimination will likely not be achieved.
- This has not been achieved for any antigen throughout the Region.
- No greater challenge.
Conclusion: The 2020 Target Can Be Reached

Positives:
• BHU, DPRK, MAL and SRL may have eliminated measles
• BAN, NEP, THA with relatively low level of measles transmission
• Polio infrastructure still in place in the five priority countries of BAN, IND, INO, MYN and NEP

Challenges:
• Routine immunization coverage for both doses of MR or MMR must be extremely high, >95%
• All countries that have yet to conduct national wide-age range MR campaigns must do so
• All countries need to rapidly achieve required case-based, laboratory supported surveillance standards
• Need to accelerate implementation of the recommended strategies