

Feasibility of Measles and Rubella Eradication

In Preparation for a Report to the 73rd World Health Assembly 2020

Draft Outline of Report to the World Health Assembly

Introduction

World Health Assembly request for report

Measles and Rubella Mid-Term Review assessment

Regional elimination goals

Measles and rubella eradication and broader development and immunization goals

- Sustainable Development Goal 3 and GPW 13
- Global Immunization beyond 2020

Objectives and scope of the report

Timelines for intermediate targets and possible eradication goal

Historical Context

Summary of Recent Assessments of Measles Eradication

- Global Technical Consultation to Assess the Feasibility of Measles Eradication (2010)¹
- International Task Force for Disease Eradication (2015)²

Lessons from Prior Eradication Efforts

- Lessons learned from smallpox eradication
 - Need research and program flexibility
- Lessons learned from the Global Polio Eradication Initiative (Steve Cochi)
 - Use of targeted diseases initiative for broader health communication
 - Global lab network and disease surveillance
 - Experience with reaching every child
 - Program monitoring and accountability frameworks
 - Partner coordination, advocacy and resource mobilization

Status of Polio Eradication and the Polio Transition

- Brief status report on polio eradication and implications for measles and rubella eradication

¹Proceedings of the Global Technical Consultation to Assess the Feasibility of Measles Eradication, 28–30 July 2010. JID 2011:203 (Suppl 1).

²Meeting of the International Task Force for Disease Eradication, November 2015. Weekly epidemiological record. No 6, 2016, 91, 61–72.

- Polio transition

Measles and Rubella Mid-Term Review

- Overview of the Measles and Rubella Mid-Term Review

Progress toward Elimination

Strategies and Tactics for Measles and Rubella Eradication

- Current strategies for achieving measles and rubella elimination
- Recommended strategies and tactics based on country categorization
- Regional and global strategies to coordinate and synergize eradication efforts

Update on global and regional progress toward measles and rubella elimination goals

- Region of the Americas
- European Region
- Western Pacific Region
- Eastern Mediterranean Region
- African Region
- South East Asia Region
South East Asia Region mid-term review

Country case studies: successful elimination and failed elimination

Update on regional verification of measles and rubella elimination

Issues Raised by the Mid-Term Review

- Shift from primary reliance on supplementary immunization activities to primary reliance on routine immunization services (through strengthening the immunization delivery system) to assure high coverage with two doses of MCV
- Consideration of coverage targets needed to achieve and sustain elimination
- Acceleration of the introduction of rubella vaccine
- Shift from primary reliance on coverage to measure progress to incorporating disease incidence as a major indicator.
- Develop and maintain outbreak preparedness, respond rapidly to outbreaks and manage cases
- Classify cases to determine the proportion due to failure to implement existing strategies (i.e. directly programmatically preventable) versus cases that might require a change in strategy (e.g., change in

recommended age for dose 2) to induce immunity and directly prevent them

- Governance and resource mobilization

Operational Challenges

Operational Challenges to Measles and Rubella Eradication and Proposed Solutions

- Vaccine coverage required to achieve and sustain high levels of population immunity to measles
- Efficiency of current immunization programs
- Need for high quality and precise data on vaccine coverage and measles surveillance
- Methods to identify immunity gaps
- Susceptible adults and potential waning immunity
- Risk of measles and rubella virus re-introduction after eradication
- Region and country-specific challenges
 - Vaccine hesitancy
 - Conflict and insecurity
 - Weak health infrastructure and immunization programs
 - Subnational equity gaps
 - Need for regional coordination and synchronization of campaigns
 - Political support

Surveillance for Measles, Rubella and Congenital Rubella Syndrome

- Need for elimination quality surveillance
- Need for surveillance systems different from those used for polio eradication
- Best indicators to measure the sensitivity of surveillance
- Challenge of CRS surveillance

Challenges of sustaining elimination with delayed eradication

- Demographic changes, including population growth and urbanization
- Cost of outbreaks
- Waning immunity and secondary vaccine failure (susceptible adults)
- Fragility of control and the speed with which measles can return if immunization programs are eroded or interrupted (e.g. Venezuela)
- Potential loss of community confidence and political will

Innovative Strategies and Tools to Achieve Measles and Rubella Eradication

- Key research priorities and plans to establish mechanisms to fund and track research progress critical to eradication efforts
- New diagnostic and vaccination technologies, the timeline for their introduction, and a strategic plan for their implementation

- Strategies to achieve measles eradication without sustaining high levels of population immunity in all communities or through focusing on specific age-groups

Impact on the Health Sector

Impact of Measles and Rubella Eradication on Immunization and Health Systems

- Key published studies
- Diagonal rather than vertical approach
- GVAP goals on health system strengthening and WHO goals on immunization coverage and equity
- Case studies

Measles and Rubella Vaccine Supply

- Plans to engage vaccine manufacturers for the measles and rubella end game
- Use of measles and rubella vaccine after eradication

Financing

Expected Cost and Return on Investment

- Investment case analyses

Donor Support

- Strategies for engagement with potential donors
- Post-2020 GVAP stakeholder meeting

Cost of delaying eradication

Political and Public Support

Public Support for Measles and Rubella Eradication

- Social mobilization, media engagement and public relations
- Vaccine hesitancy and demand generation
- Role of professional societies
- Role of health sector confidence and engagement

Political Support for Measles and Rubella Eradication

- Engaging key stakeholders
- Country support at national, provincial and district levels
- Legislation in support of vaccination
- Donor support
- Cost of sustaining elimination

Ethical Imperative

Need for Measles and Rubella Eradication Champions

Case studies

Management and Accountability Framework

Measles and Rubella Midterm Review

- Integrated with the general immunization system and should be used to build and enhance the overall immunization system.
- RVCs should be established in all regions and serve as independent reviewers of progress toward measles and rubella elimination, and make region and country-specific recommendations
- M&RI and Gavi have complementary roles and should coordinate their support to countries based on the principles of
 - Governments have primary responsibility
 - Coordination of financial, technical, communication and advocacy support
 - Collaboration on program evaluation
 - Accountability for achieving results
 - Leveraging existing initiatives, networks, working groups and agency capacity
- Gavi and M&RI should work together to optimize use of available resources and to bring to bear the different strengths of each organization.

Global Polio Eradication Initiative governance and structure

- Governance
- Advisory and Monitoring
- Technical Advisory Groups
- Oversight
- Management

Timelines for Intermediate Targets and Possible Eradication Goal

Timeline for intermediate targets

- Realistic yet aspirational timelines for measles and rubella eradication
- Short, medium and long-term milestone and objectives
- Urgency
 - Preventable deaths, primarily in young children
 - More rapid loss of maternal antibodies in children of women with vaccine-induced immunity

- Potential waning immunity in adults not exposed to wild-type virus
- Impact of delay on measles epidemiology and the challenge of closing immunity gaps in older cohorts

Potential target date for measles and rubella eradication

Potential date to reconsider measles and rubella eradication

Risks of continued measles and rubella virus transmission

Conclusions and Recommendations

What will it take to achieve measles and rubella eradication?

What are the risks of setting an aspirational goal for measles and rubella eradication?

What is the new vision for measles and rubella eradication that integrates with a vision of a world in which all children have access to immunization and will mobilize the public, stakeholders and potential donors?

Recommendations to the World Health Assembly