Assessing the feasibility of global measles elimination

SAGE Working Group on Measles

29-30 January 2009

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Overview

- Progress with programme of work
- Defining global measles elimination
Progress with Programme of work
Global Consultation Meeting (2010)

- Programmatic feasibility
- Economic analysis
- Global context and political feasibility
- Biological feasibility
- Vaccine market analysis
- Impact on health systems

Recommendations for next measles global goal (2011)

Options post elimination?
Key steps and timeline

- April 2009: Present update to the SAGE
- May 2009: Submit programme of work to the EB (inc. definitions)
- Nov 2009: Report to the SAGE
- Jan 2010: Present an interim report of progress to the EB
- Jun 2010: Global consultation meeting
- Sep 2010: Discuss next goal with Regional TAGs
- Nov 2010: Present the report from the global meeting to the SAGE
- Jan 2011: Report to the EB of conclusions of global consultation meeting
- May 2011: Report to WHA on measles progress and conclusions of the global consultation meeting, and set the next measles goal.
Consultation process and advisory groups

Consultation process:

- WHO Secretariat to ensure input from regions and partners throughout the project
- Global consultation meeting: reviews the evidence and provides recommendations as to the feasibility of global measles elimination and the next appropriate measles goal.

Advisory groups

1. SAGE: oversight of project and review of recommendations of global consultation meeting
   - SAGE WG on measles- overall guidance (policy and programmatic focus)

2. Quantitative Immunization and Vaccine related Research Advisory Committee (QUIVER)
   - Ad hoc measles WG- focus on methodology of economic analysis and health systems impact- cross linkages between 2 WGs
QUIVER Ad Hoc WG on Measles

- In the October 2008 QUIVER meeting, an Ad Hoc WG on Measles was established to assist QUIVER on quantitative research issues regarding measles vaccination.
- Operates under the same rules of confidentiality, conflict of interest etc. such as applied in QUIVER meetings.
- Final decisions made by QUIVER
- Discussions through emails, telecons and meetings
- The group is led by QUIVER members Drs Brian Grenfell and Ramanan Laxminarayan.
- For the economic analysis: additional experts are included/invited (Drs: Aparnaa Somanathan, Arnab Archarya, Walt Orenstein and Lou Garrison)
- For the impact on health systems, health systems experts will be invited
Economic Analysis and Impact on Health Systems

- Discussions on TOR for RFP (econ. analysis) held with Ad Hoc Working group on Measles.

- Time line:

  Feb 09:
  - RFP posted

  March-April 09:
  - proposals reviewed and APW's issued

  May 09:
  - Meeting with Ad hoc Working group members and winning principle investigators for proposals
  - fine tune study design and coordinate data sharing
Biological Feasibility

- In collaboration with the Carter Center International Task Force for Disease Eradication and support from CDC

- Meeting will take place on June 4th 2009 to address the biological feasibility of measles eradication including evidence:
  - that effective diagnostic tests are available
  - for an effective intervention
  - of elimination in a large geographic area
  - that humans are the only reservoir for measles
Vaccine Market analysis

Project Objectives:

- Define a set of alternative demand (i.e., control / elimination/eradication) scenarios that can be used to bound the supply equation (aligned with econ analysis)

- Assess the current and future supply situation for MCVs, including an understanding of current products as well as new products (such as those with improved thermostability, use of VVMs, etc.)

- Identify potential supply strategies to ensure that a sustainable and affordable supply of pre-qualified vaccine will exist for developing world populations (under various demand scenarios)

- Provide WHO with a user friendly tool to assess impact of various demand scenarios on price trends
Vaccine Market analysis

- BMGF contracted Oliver Wyman Group
- Work to be completed by Feb 09
- OW group conducted interviews with measles control experts, WHO/UNICEF focal points, country representatives, vaccine manufacturers and academics.
- Conduct Regular telecons with key partners to discuss results and provide input.
Defining global measles elimination
Background

- WHO was requested to examine the feasibility of "global measles elimination"

- November 2008 SAGE Meeting:
  - The secretariat should prepare an interim report for the EB that clarifies the definition of elimination and the timeline for implementing the programme of work.

- Consensus process started initially within WHO and will seek input from partners.
Definitions

International Task Force for Disease Eradication 1989-1992

- **Eradication**: Reduction of the *worldwide* incidence of a disease to zero as a result of deliberate efforts, obviating the necessity for further control measures. True eradication usually entails eliminating the microorganism itself or removing it completely from nature.

- **Elimination**: Refers to cessation of transmission of a disease in a single country, continent, or other limited geographic area, rather than global eradication.

- **Control**: Reduced incidence or prevalence of a disease or condition; control measures are still required.
Definitions (cont)

Berlin (Dahlem) Conference 1997

- **Elimination of disease**: Reduction to zero of the incidence of a specified disease in a defined geographical area as a result of deliberate efforts; continued intervention measures are required.

- **Eradication**: Permanent reduction to zero of the worldwide incidence of infection caused by a specific agent as a result of deliberate efforts; intervention measures are no longer needed.

- **Extinction**: The specific infectious agent no longer exists in nature or in the laboratory.
Measles specific definitions

2001: The WHO-UNICEF strategic plan:

- **Measles elimination**: The situation in a large geographical area in which endemic transmission of measles cannot occur and sustained transmission does not occur following the occurrence of an imported case; continued intervention measures are required.

- **Measles eradication**: Interruption of measles transmission worldwide as a result of deliberate efforts; intervention methods may no longer be needed. Eradication represents the sum of successful elimination efforts in all countries.
2003: Cape Town Measles meeting

- **Measles elimination**: is a dynamic situation in a large and well populated geographical area where endemic measles transmission cannot occur and where *sustained* transmission does not occur following the reintroduction of measles virus by an imported case.

2008: Indicators for monitoring progress towards elimination and targets suggestive of having achieved elimination (unpublished consensus document)

- **Measles Elimination**: The absence of endemic measles cases for a period of twelve months or more, in the presence of adequate surveillance.
For measles, global measles elimination = measles eradication

Measles *eradication*: Interruption of measles transmission worldwide as a result of deliberate efforts; intervention methods *may no longer be needed*. Eradication represents the sum of successful elimination efforts in all countries.
Feedback obtained within IVB and WHO regions:

- Technically correct and acceptable

- Given the current climate with polio eradication, assessing the feasibility of measles eradication may not be acceptable to some member states, donors or the public health community.

- The term: "intervention methods may no longer be needed" deviates from the classic eradication definition and is too vague. Should be either removed or clarified.
Definition proposal 2

Keep the term **global measles elimination**

**Pros:**

- May be more acceptable than eradication
- Consistent with continuing vaccination once global elimination is achieved
- Containment is less critical as vaccination is continued

**Cons:**

- Term is not aligned with agreed upon definitions and will likely be criticised as inaccurate.
Desired outcome from this session

- Reach consensus on a definition for global measles elimination.
- Provide feedback and comments on issues discussed.
Extra slides
Thank you
Impact on Health Systems

1. The impact of implementing measles elimination strategies in countries representing different types of health system functioning, measles control goals and health service infrastructure on:
   - routine immunization services
   - the functioning and development of the health care system.

2. To identify strategies for maximizing potential synergies and minimize potential negative impacts and:
   - provide guidance on how these strategies can be promoted at the national, regional and global levels.
   - identify resource needs for the implementation of these strategies.
Global context and political feasibility

- lessons learnt from the regional measles elimination efforts/other public health eradication/elimination efforts.
- potential sources of funds needed.
- Political will (country perspectives, – Regional Committees of AFR and SEAR, partners)
Measles specific definitions


- **Measles elimination**: a situation in which endemic transmission has stopped, sustained transmission cannot occur, and secondary spread from importations will end naturally, without intervention. While R must <1 to prevent sustained transmission, there is no particular value of R at which elimination is achieved; it is the constant maintenance of R < 1 that defines elimination.

2001: The WHO-UNICEF strategic plan:

- **Measles elimination**: The situation in a large geographical area in which endemic transmission of measles cannot occur and sustained transmission does not occur following the occurrence of an imported case; continued intervention measures are required.

- **Measles eradication**: Interruption of measles transmission worldwide as a result of deliberate efforts; intervention methods may no longer be needed. Eradication represents the sum of successful elimination efforts in all countries.