Background

Framing any health policy at the global or national level should be based on recommendations generated through evidence.

The addition of a new vaccine to any immunization programs is no exception, since a new antigen could be both expensive and have adverse events, though rare.

In India the National Technical Advisory Group on Immunization (NTAGI) has recommended the introduction of Rubella vaccine (the reason for this remains a mystery!)

What is Rubella?

Rubella (German Measles) is a mild viral infection of children and adults. However, if infected during pregnancy (the first trimester) the virus can have a potentially devastating effect causing congenital rubella syndrome (CRS) in the developing fetus (2,3,4).

Rubella syndrome potentially devastating effect causing congenital pregnancy of children (the paradoxical effect!)

Rubella vaccine strategy in low and middle income countries:


d iscussion

Objectives

Generate evidence to formulate health policy for Rubella vaccines in low and middle income countries (where the general immunization coverage is not satisfactory).

Methodology

Quantify the burden of:
- Rubella through a sero-survey of residual antenatal blood samples
- CRS in a cohort of children at the Community Health department of the Christian Medical College, Vellore

30 by 7 cluster survey: the existing rubella vaccine coverage in the community (rural and urban Vellore).

Cochrane systematic review on rubella vaccination: critical appraisal (PRISMA statement).

Literature review: To evaluate
- rubella sero-positivity rates
- incidence of rubella
- CRS from India and other developing countries.

Mathematical model: To predict the dynamics of the disease with respect to different vaccination strategies.

Why base health policy on evidence?

The paradoxical effect!

Low birth rate + partial immunization coverage (<80%)

Circulation of the wild rubella virus (disease remains endemic)

Susceptible build-up in a population

The inter-epidemic gap from the usual 5-7 years/infections take much longer to occur.

Partial immunization coverage results in shift of age at infection to older age groups leaving more women in child bearing age vulnerable to the infection (5).

Methodology (cont’d)

GRADE Approach: Use the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach by a panel of stakeholders, for formulating recommendations based on evidence generated in previous steps.

Frame health policy: based on
- Recommendations by GRADE panel
- socio-cultural factors
- cost effectiveness

In a nutshell…

These steps advocated can be used to generate evidence (at a local level) and can be extrapolated to a national level to help in decision making for Rubella vaccine strategy.

References


