

EXAMPLE

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Congenital Rubella Syndrome Following a Community-wide Rubella Outbreak—Rio Branco, Acre, Brazil, 2000-2001

Background: Rubella infection during the first trimester of pregnancy has a risk of up to 90% for miscarriage, stillbirths and congenital defects (e.g. cataracts, cardiopathy, deafness) known as Congenital Rubella Syndrome (CRS). In Acre State, rubella vaccination targeting children aged 1-11 years was introduced in April 2000, with an estimated coverage of 95% achieved by August 2000. To evaluate rubella control strategies, we investigated a community rubella outbreak in Rio Branco, Acre.

Methods: Suspected cases were detected through passive case reporting, and active case finding conducted at health facilities, laboratory and community. Blood samples were taken for rubella-specific IgM antibody detection. Confirmed rubella cases were patients with rash, fever and rubella-specific IgM antibodies. Suspected CRS cases were infants born with CRS-compatible defects or born to mothers with a history of rubella during pregnancy. Confirmed CRS cases were infants with CRS-compatible defects and rubella-specific IgM antibodies.

Results: Of 1568 suspected rubella cases reported from Rio Branco from April 1 to December 31, 2000, 391 (25%) were confirmed. The epidemic peak was in August. The incidence among persons aged 12-29 years (2.6/1,000 population) was increased 2.6 fold relative to children 1-11 (95%CI=2.1-3.5). Following the outbreak 21 suspected CRS cases were detected; 19 (91%) were tested for rubella-specific antibodies and four (19%) had confirmed CRS; fatality was 75%. The peak incidence of confirmed CRS (6.5/1,000 live births) was in March 2001.

Conclusions: Vaccination among school-age children was insufficient to prevent a rubella outbreak among young adults, with a high incidence of confirmed CRS seven months after the epidemic peak. Therefore, a vaccination campaign targeting persons aged 12-29 years was conducted in November 2000 and postpartum vaccination was implemented.

Keywords: rubella outbreak, congenital rubella syndrome, rubella vaccination, rubella