

# Control of rubella and congenital rubella syndrome (CRS) in developing countries, part 2: vaccination against rubella

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*In 1995–96 we conducted a review of rubella immunization strategies. Worldwide, 78 countries (more than one-third) reported a national policy of using rubella vaccine. This was closely related to country economic status. Based on the United Nations country classification, rubella vaccine is used in 92% of industrialized countries, 36% of those with economies-in-transition, and 28% of developing countries. Cases of congenital rubella syndrome (CRS) may be prevented as follows: by providing direct protection to women and/or schoolgirls (a selective vaccination strategy); by vaccinating boys and girls to provide indirect protection by reducing the transmission of rubella virus (a childhood vaccination strategy); or by a combination of these approaches (a combined strategy). A combined strategy was most commonly reported (60% of countries); seven countries (9%) reported a selective strategy; and 24 countries (31%) reported only childhood immunization. Experience has shown that it is essential to include vaccination of women of childbearing age in any rubella control strategy. Childhood vaccination alone may pose a risk of an increase in CRS cases. Although many countries have introduced rubella vaccine, few report any data on the impact of vaccination. Countries using rubella vaccine need to establish surveillance for rubella and CRS and monitor coverage in each of the target groups.*

## Introduction

Live attenuated rubella vaccines were licensed in the USA in 1969 and introduced throughout much of the industrialized world soon afterwards. Rubella vaccine has, however, not been recommended for inclusion in the Expanded Programme on Immunization (EPI) in developing countries (1) since when sustained high coverage cannot be guaranteed its introduction could increase the susceptibility of adult women by slowing, but not interrupting, rubella transmission (2). Even without a global recommendation, some countries have added rubella vaccine to their national immunization programmes, reflecting the high coverage levels (>80%, often >90%) with childhood vaccines in these countries,

as well as a national response to studies documenting the burden of congenital rubella syndrome (CRS) (3).

There is considerable documentation of the burden of disease related to CRS in some developing countries (3). Approximately 50 developing countries have already conducted substantial studies to assess their CRS disease burden. For countries that have not yet done so, part 1 of this review provides guidance on various methods suitable for surveillance of CRS. In part 2, we present information on the current use of rubella vaccine in different WHO regions, with emphasis on developing countries. Summarized are lessons learned about the effect of different vaccination policies on rubella and CRS control, and recommendations are made for developing comprehensive rubella control programmes in those countries that have or are considering a rubella vaccination policy.

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## Methods

We conducted a literature review of congenital rubella syndrome, acquired rubella, and rubella vaccine in developing countries as well as referring to key articles on rubella immunization in industrialized countries. In addition, we consulted UNICEF, which facilitates vaccine purchases for the poorest countries about rubella vaccine prices.