

Rubella and the Americas

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The article by Robertson et al. (1) in this issue of the *Revista Panamericana de Salud Pública/Pan American Journal of Public Health* provides a welcome update on the global situation with rubella, congenital rubella syndrome (CRS), and rubella immunization. There has been significant progress both in use of rubella vaccine and in surveillance for rubella and CRS in recent years. In 1996, 78 of 214 reporting countries/territories (36%) were using rubella vaccine routinely (2). This new *Revista/Journal* article indicates that 124 of them (58%) are now using the vaccine, an increase of more than 50% in their number in just 6 years.

A total of 123 countries/territories are currently reporting rubella to the World Health Organization (WHO), and 89 are reporting CRS. However, the total number of cases of rubella and CRS reported from these countries is significantly lower than the number estimated to actually occur in these countries. This situation reflects a variety of factors. In the case of acute rubella, underreporting relates to the fact that many cases of rubella are subclinical or very mild, few patients with rubella seek medical attention, and there are other causes of rash illness. In the case of CRS, underreporting relates to underdiagnosis, the difficulty of establishing causality in older children who are blind or deaf, and the underdevelopment of surveillance programs in settings likely to see cases of CRS, such as neonatal intensive care units and rehabilitation services for the blind and deaf.

Because of the significant clinical resemblance between measles and rubella, achieving effective control over measles will require being able to differentiate between it and rubella. Global efforts to accelerate reductions in measles mortality and complications rely on adequate surveillance of measles, including laboratory confirmation of the disease. Laboratory-based surveillance of rash illness in the Americas has demonstrated that a significant proportion of rash illnesses initially thought to represent measles were in fact rubella.

As pointed out in the article by Robertson et al. (1), the global measles/rubella laboratory network has matured to the point that 155 countries have now established national measles/rubella laboratories. Reference laboratories are in existence or being established in all six of the WHO regions.

More countries and more regional alliances are addressing reductions in rubella and CRS. Surveillance is increasingly making it possible to differentiate between measles and rubella. These facts highlight the unfortunate situation that the Global Alliance for Vaccines and Immunization (GAVI) has not yet included rubella vaccine in its classification of underused vaccines. This is in spite of the fact that evidence indicates that cost is a factor in policies about rubella vaccine use (as it is for hepatitis B and *Haemophilus influenzae* type b vaccines, which are covered by GAVI) and that rubella immunization in developing countries is economically justified (3). Data presented in the article by Robertson et al. (1) indicate clearly that inclusion of rubella vaccine in immunization programs is related to the country's development status: 100% of industrialized countries use rubella vaccine, compared to 71% of countries with economies in transition and 48% of developing countries.

It may be useful here to recall the differences in strategy required by differing objectives in rubella. Preventing CRS can be achieved by vaccinating just adolescent girls and/or women of childbearing age. Eliminating both rubella and CRS entails universal vaccination of infants, surveillance, and assuring immunity in women of childbearing age. Countries undertaking rubella elimination should ensure that women of childbearing age are immune and that routine coverage in children is sustained at greater than 80% (4).

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Two WHO regions, the European Region and the Region of the Americas, have taken the lead in establishing targets for rubella/CRS control or elimination. In 1984 the European Region adopted a target of eliminating indigenous rubella and CRS, and more than 80% of the countries in the European Region are now using rubella vaccine in their immunization programs.

In the Americas a Hemispheric goal of measles elimination by 2000 was established and implemented (5). As progress was made in measles elimination, interest in use of rubella vaccine began to increase (6). The lead in use of rubella vaccine was taken by the countries of the English-speaking Caribbean, where many countries included rubella vaccine in their efforts to eliminate measles. The strategy in the Caribbean included two major components: (1) mass vaccination of males and females up to age 40 with combined measles-rubella (MR) or measles-mumps-rubella (MMR) vaccine, to provide protection to those imminently at risk of a rubella-infected pregnancy, and (2) introduction of rubella vaccine into the regular schedule of infant/young child immunization (7).

The strategy in the Caribbean was effective both in planning and in reality. Transmission models and economic models indicated that the combined measles/rubella elimination strategy would be effective and cost-effective. Reality has borne this out: Measles and rubella are no longer indigenous diseases in the English-speaking Caribbean.

Reflecting continuing progress in Western Hemisphere measles elimination and growing interest in use of rubella vaccine, in September 2003 the Directing Council of the Pan American Health Organization approved a resolution calling for Member States to eliminate rubella and CRS by the year 2010 (8, 9). Achieving that target in the Americas will require modification of rubella elimination strategies in several countries that currently use rubella vaccine only in selected groups or only in routine childhood immunizations, so as to ensure that women of childbearing age are protected and that transmission is interrupted (10).

The Region of the Americas has been at the forefront in reaching many important immunization goals, including polio eradication and measles elimination. Eliminating rubella and CRS from the Western Hemisphere will be another instance of the exemplary achievements of the Region.

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