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IN THIS ISSUE:

Resource Mobilization and Partnerships for Achieving the Regional Goal of Rubella and CRS Elimination

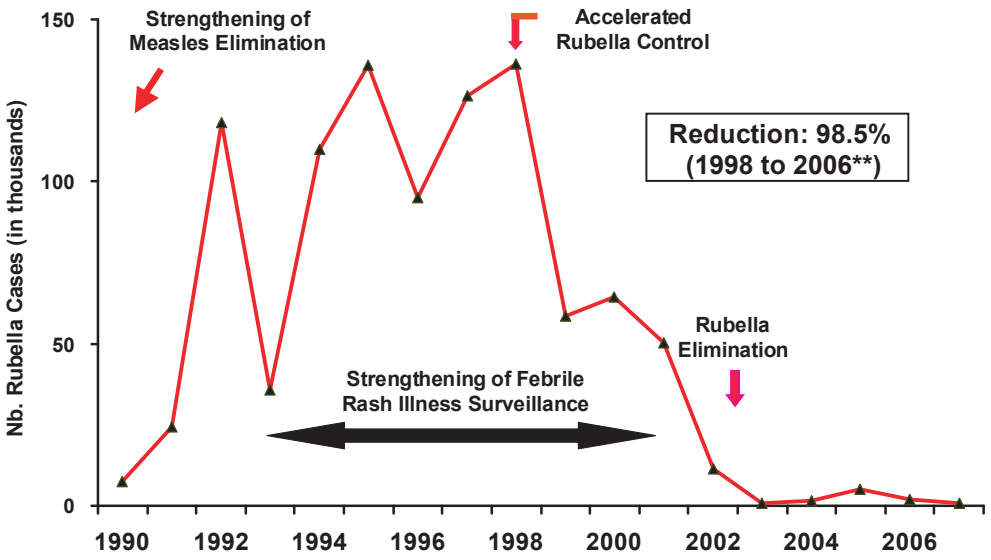
Intensified measles elimination activities in the early 1990s identified rubella as a significant public health problem in the Region of the Americas. Since then, progress has been achieved toward the interruption of endemic rubella virus transmission in the Region, resulting in a rapid reduction in the number of rubella cases and infants born with congenital rubella syndrome (CRS) (Figure 1).

Existing cost-benefit data, and the availability of a safe, affordable, and efficacious vaccine prompted PAHO's Directing Council to adopt Resolution CD44.R1 in 2003, calling for rubella and CRS elimination in the Americas by 2010. Three years later, the 47th Directing Council reaffirmed rubella elimination as a priority for the Region, acknowledging that sustained commitment of Member States and their partners was required to achieve the elimination goal. Considering the progress achieved to date, the 27th Panamerican Sanitary Conference is expected to adopt next October a resolution establishing an international Expert Committee to document the interruption of endemic measles virus and rubella virus transmission in the Region.

Elimination Strategy

PAHO's rubella and CRS elimination strategy includes the introduction of rubella-containing vaccine into the routine childhood immunization schedule, the completion of periodic follow-up campaigns with measles-rubella (MR) vaccine, the integration of measles and rubella surveillance, the implementation and strengthen-

Figure 1. Impact of Rubella Control and Elimination Strategies, The Americas, 1990–2007*



* Includes rubella cases reported to PAHO as of Epidemiological Week 19/2007.
** Provisional data.

Source: Country Reports to Immunization Unit, PAHO.

Measles and Rubella Vaccination Campaign in Honduras

In the 1990s, an average of 133 rubella cases per year were reported in Honduras, resulting in an annual incidence rate of 2.55 cases per 100,000. However, under-reporting was probably very high. In 1998 and 1999, an rubella outbreak resulted in 1,507 reported cases, 64.5% of which were confirmed by laboratory. Sixty-seven percent of cases occurred in women. Between 1998 and 2001, 210 suspect congenital rubella syndrome (CRS) cases were investigated and 11 confirmed by laboratory.

Honduras introduced the MMR (measles-mumps-rubella) vaccine in 1997 with a single-dose schedule in children aged 12 months. In 1999, in an effort to control rubella and CRS, the MR (measles-rubella) vaccine was introduced for women of childbearing age (WCBAs) aged 12-49 years. Coverage in WCBAs during 1999-2001 was 67%.

Elimination Strategy

The 2000 PAHO Technical Advisory Group on vaccine-preventable diseases recommended that a Regional initiative be launched to prevent rubella and CRS. Consequently, in 2001, the Ministry of Health, through the Expanded Program on Immunization (EPI), adopted the PAHO-recommended strategy seeking to accelerate rubella control and CRS prevention while strengthening measles elimination.

See **HONDURAS** page 2

ing of CRS surveillance, and the implementation of a one-time mass campaign in both men and women to rapidly reduce susceptible populations.

The critical elements of a high-quality mass vaccination campaign include high political commitment and participation; strong social communication; intensive social mobilization and local micro-planning to ensure full community participation; the involvement of scientific societies and other social actors; and the inclusion of the media.

Cost of the Strategy

Rubella disease burden data generated through improved measles elimination activities resulted in the accelerated control of rubella and CRS (1998-2003). Countries at the forefront of rubella vaccination strategy implementation, such as the English-speaking Caribbean, Chile, Costa Rica, Brazil, and Mexico, invested US $110 million towards rubella elimination. Following PAHO's 2003 Directing Council Resolution, it was estimated that the implementation of the rubella and CRS elimination initiative would cost an additional US $210 million (2003-2010). This included the provision of approximately US $35 million (17% of the total budget) in external budgetary funds from PAHO, WHO, and partners. The resources would supplement the estimated US $175 million (83%) that national immunization programs would invest in activities related to surveillance, laboratory, supplemental vaccination activities, supervision, social mobilization, training, research, program evaluation, and documentation of rubella elimination.

Resource Mobilization

Following the 2003 Directing Council, PAHO developed a regional Plan of Action to mobilize the resources needed to achieve the rubella and CRS elimination goal by 2010.

The period from 2003 to present has been marked by intense resource mobilization efforts directed at diversifying funding sources to ensure the sustainability of the initiative. To this end, inter-sectoral coordination with PAHO partners, external governmental agencies, non-governmental organizations, and community-based groups has been essential to mobilize the resources needed above government funding to conduct rubella elimination activities. From 2003 to December 2006, US $100.4 million were invested in the Regional initiative: US $76.5 million from countries and an additional US $1.3 million from PAHO and WHO regular budgets. In addition, PAHO partners, vaccine suppliers, and non-governmental organizations have contributed over US $22.6 millions. These funds have covered surveillance, campaigns, training, evaluation, and research costs associated with elimination activities.

In order to meet the rubella elimination target by 2010, an additional US $112.5 million will be required to complete rubella vaccination campaigns, and maintain and strengthen integrated measles/rubella and CRS surveillance in the Region. Of that amount, a total of US $95.5 millions (85%) will be financed by governments and the remaining US $17 millions (15%) is currently being mobilized by PAHO in collaboration with its partners. In addition, PAHO's Revolving Fund for vaccine procurement, which historically has successfully procured an uninterrupted supply of high-quality vaccines and syringes at affordable prices for countries of the Region, will continue to address country vaccine shortfalls as elimination is realized.

Partnerships

PAHO's partners have been essential to the success in meeting the challenge set forth in Resolution CD44.R1 to eliminate rubella and CRS in the Region by 2010. Partners include the American Red Cross, the US Centers for Disease Control and Prevention, the Canadian International Development Agency, the Global Alliance for Vaccines and Immunization, the Inter-American Development Bank, the International Federation of Red Cross and Red Crescent Societies, the Japanese International Cooperation Agency, the March of Dimes, the Sabin Vaccine Institute, the United Nations Children's Fund, the US Agency for International Development, the Church of Jesus Christ of Latter-day Saints, and the Serum Institute of India. Each partner has played a strategic role in implementing and/or evaluating one-time mass vaccination campaigns throughout the Region. Large vaccine suppliers have also contributed to campaign successes by donating high-quality vaccines to overcome country shortfalls and financing gaps.

Conclusion

Due to the unwavering support and dedication of PAHO's partners – multilateral and bilateral agencies, non-governmental organizations, and local-level contributors – great strides have been made in the Region, not only towards interrupting rubella virus transmission, but also in contributing to the strengthening of measles elimination. ■

HONDURAS from page 1

Honduras based its decision to consolidate measles elimination and accelerate rubella control and CRS prevention on the epidemiological analysis of rubella and the cost-benefit of the strategy, using the method described by Stray-Pedersen.[1] It was estimated that conducting a campaign to vaccinate 3.2 million individuals would result in a cost-benefit ratio of 1:10.

Campaign Objectives

The national plan for the vaccination campaign was articulated around the following objectives:

- Accelerating rubella control and preventing CRS;
- Reaching 95% coverage with one MR dose at national level in women aged 5-49 years and men aged 5-39 years; and
- Initiating and completing the vaccination schedule with all antigens in children aged 5 years and other groups targeted by the program.

The population to vaccinate was defined using projections from the 1988 national population and housing census and the analysis of female cohorts aged 12-49 years vaccinated with MR during the years 1999-2001. The following targets were established: 1,101,933 women aged 5-49 years and 2,115,967 men aged 5-39 years (total=3,217,900), representing 53% of the country's total population.

Campaign Implementation

Community participation was the main focus of the campaign. Public sector institutions, international cooperation agencies, private sector companies, and civil society united their efforts to reach a common goal.

The main strategies for campaign implementation were as follows:

- Announcing that the campaign was a national priority, through the release of a presidential accord encouraging strategic alliances at national, departmental, municipal, and local levels to assist throughout the process.

1 Stray-Pedersen B. Economic evaluation of different vaccination programs to prevent congenital rubella. NIPH Ann. 1982;5(2):69-83.

- Establishing strategic alliances with stakeholders from the public and private sectors, to ensure their active participation and full commitment in the planning, implementation, and evaluation stages of the campaign.
- Identifying the target population concentrated in work and school settings to establish vaccination tactics, needs for biologicals, syringes, and other supplies.
- Promoting the campaign as part of the EPI social mobilization strategy.
- Introducing training, monitoring, supervision, and evaluation as control mechanisms for process management, from planning to implementation.

The campaign started in June 2002. To optimize resources, the launch was held during the first week of the National Immunization Days (NIDs), organized annually to strengthen polio eradication. The phases of the campaign are as follows:

- Phase I (one week): vaccinate with one dose of oral polio vaccine children aged <5 years, and with MR vaccine the population, largely female, accompanying children aged <5 years.
- Phase II (two weeks): vaccinate with one MR dose women (5-49 years) and men (5-39 years) concentrated in preschools, elementary and high-schools, and universities in the private and public sectors. In addition to students, teaching and administrative staff received vaccines at fixed and mobile vaccination posts.
- Phase III (two weeks): vaccinate women (5-49 years) and men (5-39 years) in work places, through fixed vaccination posts.
- Phase IV (one week): conduct searches in health units, communities, the workplace, and education centers to identify and vaccinate non-vaccinated individuals. At the same time, rapid coverage monitoring (RCM) activities were conducted in at-risk communities.

Campaign Results

The campaign did not progress as planned due to a national emergency related to an outbreak of hemorrhagic dengue. Vaccination activities were interrupted in the country's two main health regions, accounting for over 60% of the target population. The impact was also felt in the remaining seven health regions, where the pace of vaccination activities slowed down. Six weeks into the campaign, the coverage rate was only 82% (2,635,502 vaccinated). Therefore, national authorities decided to continue with the campaign once the dengue epidemic was controlled. The campaign was launched again in late November and extended until December 2002, reaching a national coverage of 93% (2,992,647 vaccinated).

Because the goal of 95% MR coverage was not reached in 2002, exhaustive searches and RCM were conducted in 2003 to identify the non-vaccinated population.

After the NIDs held from 2-7 June 2003, Honduras finally reached 98% coverage at national level: 100% of women and 97% of men were vaccinated (Figure 1). Mistaken beliefs associating vaccination with sterilization methods were likely responsible for the lower coverage among men. Up to 25% of WCBAs, previously vaccinated during 1999-2001, were probably revaccinated because they had lost their vaccination cards.

The systematic use of RCM during NIDs, mass campaigns, and regular program activities facilitated the identification of areas at risk of obtaining coverage rates <95%.

All health regions of Honduras obtained coverage >95%, by age group and gender, except health region number 4 (Choluteca and Valle Departments) where coverage for men was <95%. Among the country's 298 municipalities, 78% (231) reached administrative MR coverage >95% in men aged 5-39 years. In women aged 5-49 years, >89% of municipalities reached coverage >95%.

In hospitals, MR vaccination was introduced postpartum and 80,000 women were vaccinated.

No severe adverse event was reported at national level. Only two cases of pregnant women inadvertently vaccinated during the campaign were reported. Both were followed-up and delivered a healthy newborn.

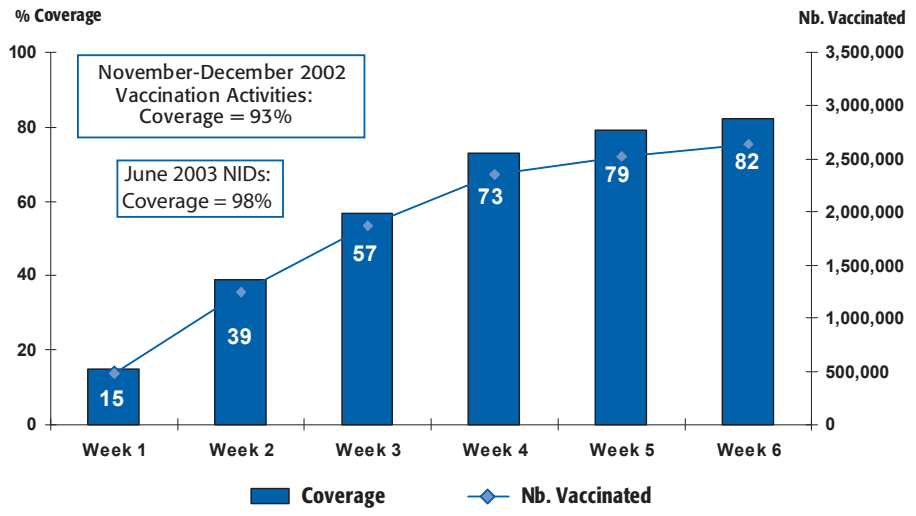
The total cost of the 2002 NIDs and the national measles and rubella vaccination campaign was US $2,638,750. Eighty-nine percent of the total (US $2,354,997) came from the government of Honduras, in the form of funds assigned to the EPI by the Ministry of Health, from municipalities, and from the private sector. The remaining US $283,753 were donated by the United States Agency for International Development, the Swedish Agency for International Development, the United Nations Children's Fund, PAHO, and other organizations such as the Rotary Club and Merck Laboratories.

Conclusion

Honduras conducted a successful mass vaccination campaign against measles and rubella despite difficulties linked to a national health emergency. Because coverage for the 2002 campaign was only 93% in men aged 5-39 years and women aged 5-49 years, supplementary activities were required to reach the original objective. During the 2003 NIDs, searches for non-vaccinated population were conducted and MR coverage reached 98% at national level. ■

Authors: Ida Berenice Molina, Regina Trinidad Durón, María Aparicia Palma; Expanded Program on Immunization, Ministry of Health, Honduras.

Figure 1. MR Coverage by Week, Mass Campaign, Honduras, 2002



Source: Expanded Program on Immunization, Ministry of Health, Honduras.

Rubella and CRS Elimination in El Salvador

Introduction

Between 1997 and 2004, El Salvador implemented an accelerated rubella control strategy. In 1997, the MMR (measles-mumps-rubella) vaccine was introduced into the routine childhood immunization schedule for children aged 1 year. Since its introduction, reported MMR coverage levels have been close to 95%. A year earlier, MMR had been included in the "Healthy School" program aiming to reach about 600,000 students aged 6-12 years. During the following two years, MMR was offered upon school entry. Additionally, between 1997 and 1998, 640,000 women aged 15-25 years were vaccinated against rubella. After the end of the "Healthy School" program, the second MMR dose was offered in all health units to children aged 6 years. However, in 2000 the age was lowered to 4 years because coverage was only 60% when administered at age 6 (Table 1).

Campaign Planning

In 2004, El Salvador embarked on an initiative to eliminate rubella and congenital rubella syndrome (CRS). Besides strengthening surveillance for rubella and CRS, health authorities decided to conduct a mass vaccination campaign aimed at rapidly interrupting endemic rubella transmission. A local study determined that conducting a mass vaccination campaign targeting men and women aged 15-39 would be cost-beneficial.

Planning the mass vaccination campaign took six months. At local levels, detailed micro-plans were developed in one month. As part of the planning stage, a mass communication campaign calling for volunteer blood donations was conducted prior to the campaign launch since blood shortages are a chronic problem in El Salvador. This was necessary because international regulations discourage blood donations following vaccination with live-attenuated vaccines such as MR (measles-rubella), and it was crucial for the country to ensure an uninterrupted blood supply.

Campaign Implementation

Between April and May 2004, El Salvador conducted a mass vaccination campaign targeting men and women aged 15-39 years (47% of the country's population), using the MR vaccine (Table 1). For the first two weeks of the campaign, activities targeted captive populations in workplaces, schools, and universities. In addition vaccination posts were set up in areas where people congregate, such as markets, malls, and bus stops. The following four weeks were devoted to door-to-door vaccination, a strategy that was essential to reach the country's rural areas. Over 4000 health workers worked exclusively for the campaign. The overall coverage reached 99%, with 2,796,391 persons vaccinated.

Daily progress monitoring at municipal level and weekly monitoring at central level played a key role in detecting problems so they could be corrected in a timely fashion. For example, by the fourth week of the campaign, it had become evident that males aged 20-34 years had coverage levels significantly lower than other groups. Therefore, the communication messages were directed at this age group and helped with improving coverage.

Another key component of the campaign, besides weekly administrative coverage monitoring, was rapid coverage monitoring (RCM) conducted to verify that vaccination targets had been achieved. RMC was key in identifying pockets of unvaccinated populations. In the end, more than 380 RCM were conducted, all reporting coverage levels ≥95%. It is worth noting that El Salvador was the first country in the Americas to conduct so many RCM activities as an integral part of its rubella elimination campaign.

MR was not offered to pregnant women, yet 909 pregnant women were inadvertently vaccinated. Fifty-nine (6.5%) of them were classified as being rubella susceptible at the time of vaccination. All babies born to these women were evaluated at birth: one had evidence of infection with vaccine virus, but none had birth defects compatible with CRS.

Conclusion

Vaccinating men and women aged 5-39 years was the first stage in El Salvador's efforts to eliminate rubella and CRS. To complete the vaccination strategies, health authorities will need to evaluate protected cohorts.

Many lessons were learned from the rubella campaign in El Salvador, such as the importance of involving all components of the health system (including the Salvadorean Institute of Social Security) and emphasizing communication and social mobilization efforts, the need for a detailed vaccination strategies at local levels, and how critical the use of RMC is to ensure coverage goals are achieved. The communication campaign regarding blood donation was a success since blood availability was not affected during the campaign. These lessons are now being applied by the country during vaccination campaigns against other diseases such as influenza (2004) and rotavirus (2006). It is also expected that the knowledge gained during the mass rubella campaign in El Salvador will be crucial when new vaccines are introduced in the country. ■

Table 1. Rubella and CRS Elimination in El Salvador: Vaccination Strategies, 1997-2007

Years	Strategy	Vaccine	Target Population	Coverage
1997	Introduction of the first dose (Regular Immunization Program)	MMR	Children aged 1 year	>90%
1996-1999	Healthy School Program	MMR	Children aged 6-12 years	100%
1997-1998	Door-to-Door Vaccination	Rubella	Women aged 15-25 years	80%
2000	Introduction of the second dose (Regular Immunization Program)	MMR	1999: cohort of children aged 6 years 2000-2006: cohort of children aged 4 years	80%
2001	Follow-up Campaign	MR	Children aged 1-4 years	98%
2004	Vaccination Campaign	MMR	Men and women aged 15-39 years	99%
2007*	Follow-up Campaign	MR	Children aged 1-6 years	95% (goal)

* Scheduled to end July 2007.

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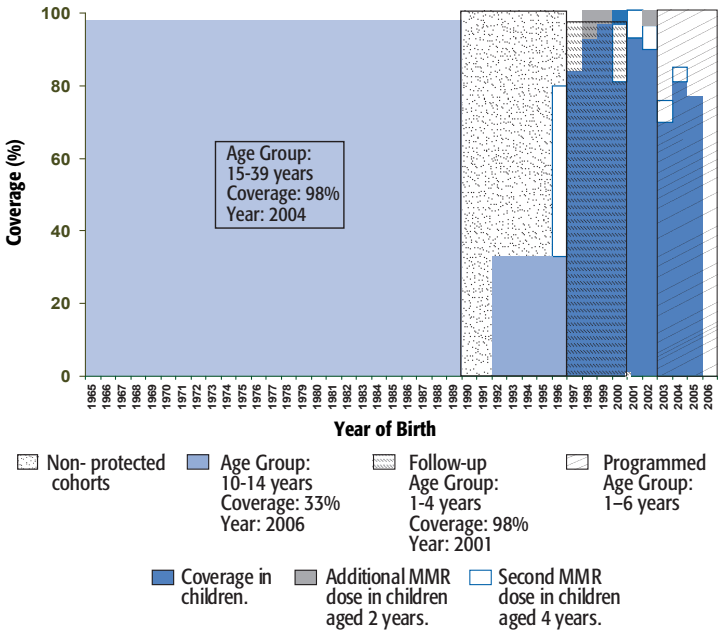
Rubella Transmission and Susceptibility Following the Campaign In El Salvador

Figure 1. Coverage Among Persons Vaccinated Against Measles/ Rubella, According to Year of Birth, El Salvador, 1965-2006



Note: Doses administered through the Healthy School Program are not included.

Source: Ministry of Health, El Salvador.

Because of a small rubella outbreak (2 confirmed cases) among students aged 10-14 years in August 2006, a cohort analysis was conducted to evaluate if all cohorts were protected against rubella. The analysis demonstrated that (1) Some groups had not been targeted for MMR or MR vaccination; (2) Not all children had received an MMR dose prior to their fifth birthday (Figure 1); and (3) The measles follow-up campaign planned for 2005, to counteract the build-up of susceptibles, since the MMR vaccine is not 100% effective, had not been conducted. Therefore, to prevent the reestablishment of rubella transmission, over 180,000 students aged 10-14 years were vaccinated in November 2006. To achieve rubella elimination, sustain measles elimination, and limit outbreaks following importations, it is necessary to ensure that all cohorts are protected. To this end, a follow-up campaign targeting children aged 1-6 years (born between 2002-2006) is scheduled for June-July 2007 and a mass vaccination campaign for students aged 11-17 years is planned for 2008.

The 2006 outbreak in El Salvador and the subsequent cohort analysis illustrates how, despite high routine MMR coverage and a successful mass vaccination campaign, some groups may remain unprotected. When planning mass vaccination campaigns for disease elimination, countries must thoroughly analyze the strategies implemented and the results obtained to ensure that all potentially susceptible groups are targeted. Also, even when the routine immunization schedule recommends the administration of two MMR doses, follow-up campaigns remain necessary if 95% coverage cannot be guaranteed for both doses in all municipalities.

Rubella Vaccination Campaign in Argentina

Background

Since 1998, the Ministry of Health (MOH) of Argentina has been implementing immunization and surveillance strategies based on the analysis of rubella trends, susceptible groups, and the cost-benefit of interventions. The MOH is committed to reach the goal of rubella and congenital rubella syndrome (CRS) elimination by 2010.

Based on seroprevalence studies, the vaccination coverage through the routine program with two doses of MMR (measles-mumps-rubella) vaccine, the behaviors of the adult population, and the availability of vaccinators, the country defined the group of women aged 15-39 years (n=6,795,786) as the target for its 2006 rubella and CRS elimination campaign. To reduce the risk of virus transmission, men in captive groups, such as work setting and other institutions, and groups at greater risk for infections were also vaccinated.

Organization and Planning

The organization and planning of the campaign was coordinated with the political and technical authorities from the country's provinces. Decisions, based on the analysis of coverage progress, were taken by the Federal Health Council (COFESA or *Consejo Federal de Salud)* in monthly meetings attended by the Minister of Health and province health authorities.

A ministerial resolution provided political and legal backing at national level. Provinces prepared declarations of support to the campaign and their governments adopted resolutions. The MOH established a budget (US $10,833,750) and transferred the funds to the provinces. Budget items included biologicals and syringes (55.3%), the social communication campaign (17.6%), and operating costs (27.1%). The provinces also assigned resources from their own budgets. The cold chain was strengthened through the purchase of refrigerators (n=2,300) and cold boxes (n=2,000) for vaccination activities in the field.

Campaign organization began eight months before implementation. Technical documents were developed in support of the campaign, such as technical and operational guidelines, local microplanning guides, vaccinator manuals, question and answer documents, and follow-up protocols for pregnant women inadvertently vaccinated. Training was provided, first for managers of the province programs through four regional workshops. To strengthen training and microplanning at local level, the workshops were repeated in the 512 departments of the provinces with funds from the national government. Vaccinators and supervisors were trained in 2,171 municipalities.

The campaign included diverse organizations, such as scientific societies (pediatrics, obstetrics and gynecology, perinatology, neurology, speech therapy, the Argentinean Medical Association, the Family Medicine Association, and nursing), the Rotary Club, *Asociación Apoyo Familiar*

(Association for Family Support), *Asociación Mensajeros de la Paz* (Association of Messengers for Peace), and international cooperation agencies (UNICEF and PAHO). The Argentinean Federation of OB-Gyn Societies, the Argentinean Pediatrics Society, the Argentinean Perinatology Society, the Argentinean Association of Family Medicine, and the Argentinean Nursing Federation signed a declaration of support to the vaccination campaign.

The national social communication campaign was designed with clear messages directed at two population groups: adolescents and university students and women with children. Spots were aired during peak listening and viewing time on the favorite radios and TV channels of the two target groups. Posters and leaflets were distributed to the provinces for placement in high-traffic public areas. Messages were published in nationally circulated magazines and newspapers. In addition, the material was distributed in digital format to the provinces to be adapted according to local situations. Campaign information was also disseminated through web pages, toll-free numbers, and an e-mail address created specifically for the campaign.

Campaign Implementation

The campaign was launched on 1 September, 2006 and was planned to last 60 days. After the first month, only 5 of the 24 provinces had reached coverage rates >80% and the national coverage was only 46%. Provinces with high populations, such as Buenos Aires, Capital Federal, and Santa Fe had coverage around 40%.

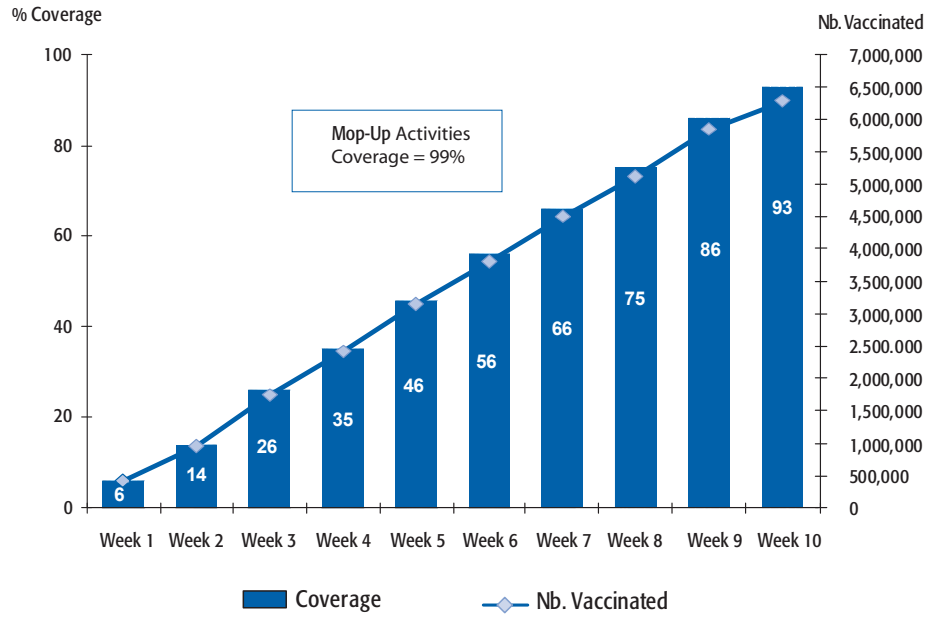
To make matters worse, a rumor began to circulate in late September through e-mail chain messages alleging that the vaccine had sterilizing properties. To clear all doubts among the population, the MOH developed a document on the quality and safety of the vaccine. The document was widely disseminated throughout the provinces and to the media. Health authorities granted radio, television, and newspaper interviews while scientific societies put out technical statements.

In order to reach the campaign goal, vaccination activities were extended until November. Vaccination strategies were adjusted, based on coverage evaluations among different age groups.

Campaign Results

By campaign end, the national coverage reached 98.86% (n=6,718,314 women vaccinated) (Figure 1). All provinces except Buenos Aires (89%) exceeded the goal of 95% coverage. Coverage in groups aged 15-19 years and 20-29 years reached levels >95%. In major cities the coverage in the group aged 30-39 years did not meet expectations, reaching 88% at national level. During monitoring activities, reasons given by women for not being vaccinated were that they had been previously vaccinated, they had positive serology results, they did not plan to have more children, they were absent when the vaccinators visited their place of employment or house, or they did not have time to come to the health center.

Figure 1. Coverage by Week, Rubella and CRS Elimination Campaign, Argentina, 2006



Source: Ministry of Health, Argentina.

A total of 1,257,555 men were vaccinated, mostly men in captive groups such as the armed forces, students, health care personnel, and employees at border posts. Provinces that vaccinated the highest proportion of men (>50% of male population) were Córdoba, Mendoza, and Catamarca.

The MOH national toll-free line received more than 25,000 calls and staff answered 32,273 questions during the campaign. Close to 3,000 electronic messages were answered and the e-mail address remains in use since vaccination is still provided, upon demand, by the health services. Reasons for consultation were as follows: where to get vaccinated (55%), vaccination and pregnancy (20%), indication and contraindication (15%), and rumor on the hormone contained in the vaccine (10%).

To verify coverage level, health authorities are using rapid coverage monitoring, the tool recommended by PAHO, in each of the country's department. The total number of persons to survey is 83,275 in 2,256 clusters.

Conclusion

The hard work of the health personnel, who demonstrated its strong commitment to disease prevention, and the response from the population to vaccination activities, primarily the adolescents, must be commended. Thanks to the rubella campaign, the immunization program at national and province levels has been strengthened in key areas, such as organization and microplanning, effective vaccination tactics, management of vaccination safety crisis, design and use of information systems, supervision, monitoring, and evaluation.

Following the campaign, a national technical team was formed to analyze and implement the strategies required to reach those not vaccinated during the campaign, particularly men. RCM will be used as part of the strategy to complete the vaccination of men. The strengthening of rubella and CRS surveillance is an essential component of the plan since it will allow to evaluate results and certify the goal of rubella and CRS elimination in Argentina by 2010. ■

Authors: Direction of Epidemiology, Ministry of Health, Argentina.

Lessons Learned from Rubella Vaccination Campaigns in the Americas

General Lessons Learned

- The vaccination of both men and women is required to achieve the elimination of rubella and congenital rubella syndrome, and to strengthen measles elimination efforts in the Americas.
- Planning for a mass vaccination campaign targeting women and men of different age groups not usually targeted by national immunization programs requires intensive planning, programming, and promotion, beginning at least six months before campaign launch.
- The planning stage must be systematically conducted to strengthen coordination and productivity of vaccination efforts, and must include the preparation of crisis management plans to confront any problem that may arise during the campaign.
- Systematic coordination between the Ministry of Health and health authorities at all levels is essential for campaign success, particularly when developing educational materials, integrating management levels (local, province, and national), organizing, programming, mobilizing and using resources, and developing systems for information, monitoring, and evaluation.
- The information, education, and communication strategy is critical to reach the vaccination goal. Messages must be adapted to the audience (men or women) and the place of residence (rural or urban areas).
- Social mobilization and participation of different actors from the public and private sectors, at national and local levels, are also paramount to reach the objectives.
- The availability of guidelines, methodologies, tools, and microprogramming guides is key to facilitate organization, implementation, and evaluation activities. Training of vaccination teams must ensure that immunization safety practices are followed, and result in the absence of ESAVIs[1] due to programmatic errors.
- Workshops provide a great learning experience as they allow workers to update their skills pertaining to the main components of the routine immunization program, such as microprogramming and planning, cold chain, vaccination safety and crisis management, effective mobilization and vaccination tactics, data analysis and decision-making, monitoring, supervision, and evaluation.
- Launching ceremonies and active participation from the President, Minister of Health, other dignitaries, and the media are key in maintaining the campaign on the public agenda throughout its duration.
- Progress monitoring, performed daily by municipalities and weekly by the Ministry of Health, is necessary to identify low coverage areas.
- Supervisory teams must be empowered and maintained to identify situations requiring adjustments or additional support to reach the campaign goal.

Lessons Learned in Honduras

- Vaccines, syringes, and supplies must arrive in the country at least two months before the campaign start. Honduras was forced to place emergency orders for syringes through PAHO's Revolving Fund due to non-delivery by an international provider.
- Efforts to respond to outbreaks of diseases not targeted by the campaign benefited from an existing infrastructure and mobilized communities.
- Joint implementation of the NIDs[2] and the MR campaign was key to optimize resources.
- Systematic use of RCM[3] during NIDs, mass campaigns, and regular program activities helped with identifying areas at risk of obtaining coverage rates <95% and allowed for timely implementation of activities, thus facilitating the achievement of coverage targets.

Lessons Learned in El Salvador

- Support from the Salvadoran Social Security Institute, which provides services for 20% of the population, was instrumental during the social mobilization efforts targeting adults.
- The communication and social mobilization campaign targeting volunteer blood donors before the campaign's launch was successful in avoiding blood shortages.

Lessons Learned in Argentina

- Training and joint collaboration between all sectors from the onset of campaign organization allowed an effective response to a rumor regarding the composition and quality of the vaccine. Permanent access to information through toll-free lines, web pages, and e-mail was extremely useful to clear doubts. Consequently, the rumor had a minimal impact on coverage results while the faith of the population in the routine vaccination program was strengthened.
- The weekly analysis on coverage progress took place in the office of the Ministry of Health, and was useful to strengthen strategies.
- The experimental use of an on-line information system during the campaign was an invaluable contribution to the routine immunization program. It will help accelerate the program's implementation and will allow the registering of coverage for all vaccines in the immunization schedule by place of residence.
- RCM, implemented in a coordinated manner by each province down to its local levels, with cooperation from the Ministry of Health, proved to be a valuable supervision and evaluation tool.
- The diversity and efficiency of the tactics used by each province to mobilize and immunize the population were a useful contribution to immunization strategies targeting adolescents and adults.

1 Events supposedly attributable to vaccination and immunization.
2 National Immunization Days
3 Rapid coverage monitoring.

Vaccination Campaign Phases for Rubella and CRS Elimination in The Americas

Most countries of the Americas that implemented rubella elimination campaigns conducted their activities according to the steps described in Figure 1:

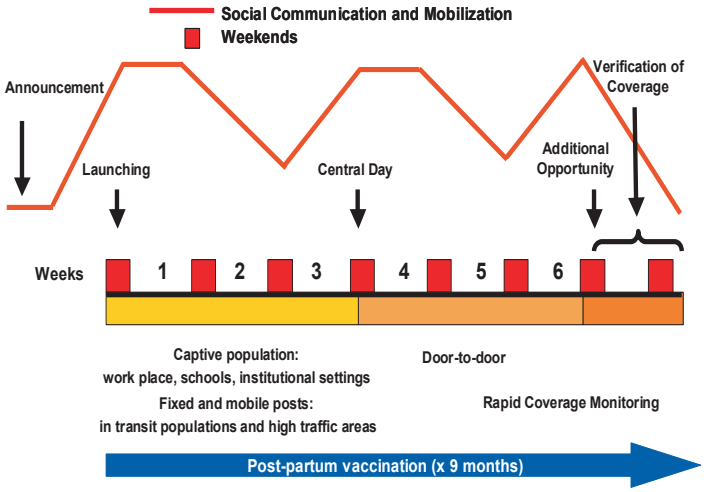
1. Targeting the captive population in work places, schools, and institutional settings (jails, armed forces quarters) by vaccination teams in addition to vaccination posts located in high traffic areas or places where people congregate, and health units where vaccination is routinely provided.
2. Adding door-to-door vaccination to regular activities.
3. Conducting rapid coverage monitoring (RCM) towards the end of the campaign to ensure that no population group or remote area is left unvaccinated.
4. Offering MR (measles-rubella) post-partum since the vaccine is not administered to pregnant women to avoid any association between the vaccine and adverse pregnancy outcome.
5. Conducting independent coverage verification, and recognizing each municipality that has achieved the campaign goal.

In addition to the above-steps, some countries introduced a "Central Day", at the campaign's half-way point, to provide an additional opportunity for those who have not yet sought vaccination. This served as a "re-launching" of the campaign with support from the media, the President, and other dignitaries to reinforce the public messages. A similar activity can be repeated toward the end of the campaign.

As shown in the figure, MR campaigns for rubella elimination, unlike vaccination campaigns targeting children, emphasize vaccination on weekends when adolescents and adults are more available.

Social communication and mobilization are adapted to each step so that messages are targeted to the populations most likely to be captured during each phase. ■

Figure 1. Vaccination Campaign Phases for Rubella and CRS Elimination



Source: Immunization Unit, PAHO.

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