

# Immunization Newsletter

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## International Expert Committee Declares Rubella Eliminated from the Region of the Americas



From left to right: Dr. Cuauhtémoc Ruiz, Immunization Unit Chief, PAHO; Ms. Andrea Gay, Executive Director Children's Health, UN Foundation; Dr. Carissa F. Etienne, Director, PAHO; Mr. Bernt Aasen, Regional Director for Latin America and Caribbean, UNICEF; Dr. Susan E. Reef, Team Leader for Rubella, Global Immunization Division, U.S. Centers for Disease Control and Prevention.

Photo credit: Sonia Mey-Schmidt, PAHO.

On 23 April 2015, the International Expert Committee for Measles and Rubella Elimination in the Americas (IEC) declared that rubella had been eliminated from the Americas. This announcement was made during a meeting at the Pan American Health Organization (PAHO). This makes rubella the third vaccine-preventable disease to be eliminated from the Region of the Americas, following the regional eradication of smallpox in 1971 and polio, declared eliminated in 1994.

Following the widespread adoption of the measles-mumps-rubella (MMR) vaccine in the Region's national immunization programs, in 2003 PAHO member countries set the target of eliminating rubella by 2010.

In the late 1990s, the English-speaking Caribbean countries pioneered the use of mass rubella vaccination campaigns targeting adolescents and adults. With support from PAHO and its Revolving Fund for Vaccine Procurement, approximately 250 million adolescents and adults in 32 countries and territories were vaccinated against rubella between 1998 and 2008. As a result of these efforts, the last endemic cases of rubella and congenital rubella syndrome (CRS) were reported in the Americas in 2009.

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## The Celebration of Vaccination Week in the Americas 2015

The 13<sup>th</sup> annual Vaccination Week in the Americas (VWA) was celebrated across the Region from 25 April to 2 May 2015. This year's regional slogan was "Boost your power! Get vaccinated!", to highlight that vaccination boosts immune systems and helps the body fight against more than 20 preventable diseases, turning those who get vaccinated into "superheroes" with special powers to defeat illness. A social media campaign using the hashtags #GetVax and #BoostYourPower encouraged people to take photos posing as superheroes and holding #GetVax signs and post them to social media or submit them to PAHO via the Web. Entries can be viewed at: <http://bit.ly/1ygpjK>. PAHO also partnered with the Chespirito Foundation this year in order to feature the image of the character Chapulin Colorado on one series of VWA materials.

The regional launch for VWA took place in Duran, Ecuador, an indigenous community outside of Guayaquil on 25 April. Participants included high level authorities from the Ecuadorian Ministry of Health, PAHO's Director and Representative in Ecuador and representatives from the United Nations Children's Fund (UNICEF), the Joint United Nations Programme on HIV/AIDS (UNAIDS), the United Nations Development Programme (UNDP), the United States Centers for Disease Control and Prevention (CDC) and the Sabin Vaccine Institute, among other partners. As part of the regional launch, PAHO, together with the United Nations Foundation, held a special #GetVax +SocialGood webcast to educate the public on the importance of vaccination. Experts addressed issues such as the impact of vaccines in public health,

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The IEC reviewed epidemiological evidence provided by PAHO and its member countries and concluded that there was no evidence of endemic transmission of rubella or CRS for five consecutive years, exceeding the three year requirement for declaring the disease eliminated. The committee noted that, in the near future, it hopes to be able to declare the Region free of measles as well.

This major public health achievement reflects the effort and commitment made by the countries of the Americas, the victory of partnerships and the hard work of thousands of health workers throughout the Region.

During the meeting of the IEC and as a pre-launch to Vaccination Week in the Americas (VWA) on 23 April, PAHO/WHO broadcast a special



**Members of the International Expert Committee for Measles and Rubella Elimination in the Americas.**  
Photo credit: Sonia Mey-Schmidt, PAHO.

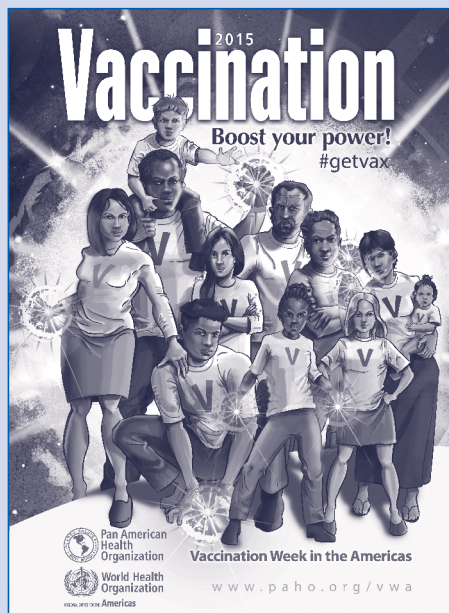
technical session via Livestream to discuss the advances and challenges with measles elimination in the Region. The discussion was

followed by a question and answer session for health personnel in the ministries of health in the Region. ■

**VWA** continued from page 1

recent outbreaks of vaccine-preventable diseases, the experience of Ecuador in vaccination and also shared ways for local level communities and organizations to support vaccination.

In addition to the regional launch, national VWA celebrations took place across the Region, including in Antigua and Barbuda, Argentina, Cuba, the Dominican Republic, Guatemala, Honduras, Nicaragua, Panama, Paraguay, Peru and Suriname, among many other countries. Multiple international launches were also held, including between Honduras and Guatemala; Bolivia and Peru; Argentina, Brazil and Paraguay; Guyana and Suriname; Panama and Costa Rica and Panama and Colombia.



This year under the framework of VWA, countries and territories targeted more than 60 million people across the age spectrum for vaccination against a wide range of diseases, including poliomyelitis, measles, mumps, rubella, and congenital rubella syndrome (CRS), diphtheria, whooping cough, neonatal tetanus, influenza, yellow fever, diarrhea caused by rotavirus, bacterial pneumonia, and human papilloma virus, among others. Common strategies included the administration of multiple antigens to complete vaccination schedules for children aged less than five years and/or to give booster doses to school-aged children; mass vaccination campaigns against polio, measles, rubella and CRS; the vaccination of women of childbearing age against tetanus and diphtheria and campaigns against seasonal influenza (southern hemisphere vaccine formulation).

Additionally, several countries used VWA as an opportunity to engage in specific information, education and communication activities. These included promoting vaccination in public schools; targeting education officers and school principals for orientation on the Expanded Program on Immunization (EPI); holding a one-day symposium on the challenges and prospects of the EPI; and conducting training activities for health care workers.

Many countries also continued the trend of using VWA as a platform to coordinate with other health programs and integrate additional preventative interventions with vaccination, including deworming, vitamin A supplementation, blood pressure, blood sugar, body mass index and vision screening, vector borne disease control and prevention, the



vaccination of pets and the provision of dental care, among other efforts.

In addition to the 13<sup>th</sup> celebration of VWA, 2015 also marked the 4<sup>th</sup> annual World Immunization Week (WIW), the overarching global initiative which links together vaccination weeks in all six regions of the World Health Organization. The theme for WIW 2015 was "Close the immunization gap", to draw attention to the need to reach equity in immunization coverage levels and provide universal access to vaccines for all people, as called for in the Global Vaccine Action Plan (GVAP).

More information on VWA and WIW can be found at [www.paho.org/vwa](http://www.paho.org/vwa) and <http://www.who.int/campaigns/immunization-week/2015/en/>, respectively. ■

# Eliminating Rubella and Measles in the Americas: Ten Key Actions Taken by the Countries of the Region and PAHO

On 23 April 2015, the International Expert Committee for Measles and Rubella Elimination (IEC) convened by the Pan American Health Organization (PAHO) confirmed the elimination of rubella and congenital rubella syndrome (CRS) after a rigorous review of the evidence presented by all the countries of the Region. Here are the 10 key actions taken by ministries of health in the Americas and by PAHO that were essential to reach this achievement:

## 1. A high level of political and financial commitment was attained.

After endemic measles elimination was achieved in 2002, ministers of health in the Americas made the commitment in 2003 to eliminate rubella and CRS from the Region by 2010. This commitment was widely shared from the highest national political level to the local community level, which helped guarantee that PAHO's recommended elimination strategies were successfully implemented. Many presidents also raised the vaccine flag; among them were the former president of Costa Rica and Nobel Peace Prize award recipient, Mr. Oscar Arias Sanchez.

Rubella and CRS elimination was achieved in 2009, when the last endemic cases were reported in Argentina and Brazil, respectively. Rubella and CRS elimination was an example of a joint commitment to child and family immunization and showcased how Pan-Americanism is a decisive factor in achieving important public health milestones.

## 2. Strategic partnerships were created.

Strong and strategic partnerships with scientific societies, academic institutions and churches were cultivated and sustained at the country level. Collaboration with the news media not only increased visibility for the rubella initiative, but also for routine immunization programs.

PAHO also promoted the development of key partnerships to support the elimination initiative, which included the American Red Cross (ARC); the US Centers for Disease Control and Prevention (CDC); the former Canadian International Development Agency (CIDA); the Measles & Rubella Initiative; Gavi, the Vaccine Alliance; the United Nations Foundation (UNF); the Japanese International Cooperation Agency (JICA); the March of Dimes (MOD); the Sabin Vaccine Institute (SVI); the United Nations Children's Fund (UNICEF); the United States Agency for International Development (USAID); and the Church of Jesus Christ of Latter-day Saints (LDS).

## 3. The rubella vaccine was introduced.

Starting in the 1990s, the measles, mumps and rubella vaccine was introduced free of charge into national immunization schedules. This vaccine marked a historical milestone in rubella and CRS elimination by ensuring that all newborn cohorts would be immunized against these diseases. The first dose of this safe and reliable vaccine is applied at 12 months of age, and the second at 18 months or 4 years.

Vaccination coverage equal to or greater than 95% is recommended in every municipality of every country in the Americas, as an essential strategy to keep the Region free of measles, rubella and CRS.

## 4. Indiscriminate mass vaccination campaigns were carried out.

More than 250 million adolescents and adults in 32 countries and territories were vaccinated against measles and rubella as part of mass vaccination campaigns between 1998 and 2008.

In addition to vaccinating in health centers and house-to-house vaccination, health workers took the vaccines to nontraditional places: vaccination posts were set up in schools, universities, prisons, subway and bus stations, workplaces, stores, fairs, markets, shopping centers, parks, stadiums (including the Maracanã stadium in Rio de Janeiro), concerts and beaches.

## 5. The regular immunization programs were strengthened to reach all corners of the Hemisphere.

Whether it was by vehicle or donkey, on foot or on horseback, by boat or raft, health workers were committed to reaching the most neglected populations with vaccination. They traveled to the border areas between countries, made their way to remote geographical zones and unsafe urban areas (such as favelas and other slums) and reached families in indigenous and Afro-descendant communities.

## 6. Bold social communication strategies contributed to rubella and CRS elimination.

Innovative communication strategies have been used for mass rubella vaccination campaigns, which target men and women of different age groups that have not traditionally been the focus of national immunization programs; this helped ensure high vaccination coverage throughout the countries of the Region.

These tactics have harnessed the inestimable support of sports leaders, particularly soccer players, to represent the face of vaccination campaigns in their respective countries, capitalizing on the popularity and reach of the sport to encourage participation in vaccination activities.

Nontraditional methods were also implemented, such as the use of megaphones for promotion, or enlisting the help of churches at the regional/local level to generate demand for vaccination activities and facilitate the work of vaccine brigades, particularly in rural or isolated areas.

## 7. Rubella and measles surveillance were integrated and CRS surveillance systems were set up.

Since the signs and symptoms of rubella are similar to measles, countries began to integrate rubella and measles surveillance for case detection and timely confirmation in mid-1998. Gradual strengthening of surveillance systems made it possible to conduct immediate case-by-case investigation, rapidly implement response measures and improve the

clinical monitoring and management of affected children. In addition, countries set up a system to monitor CRS for the timely notification of suspected cases, mainly at the first level of care. While only 13% of countries in the Americas reported suspected CRS cases in 1998, the number rose to 100% in 2003.

## 8. PAHO's Revolving Fund facilitated the timely supply of the measles and rubella containing vaccine for 41 countries.

The PAHO Revolving Fund is the regional mechanism that facilitates timely access to high-quality vaccines at the lowest prices for the majority of countries and territories in the Americas. Taking advantage of economies of scale, the Revolving Fund manages the procurement process and procures 46 vaccine presentations and 29 immunization supplies on behalf of 41 participating countries and territories. To this end, the Revolving Fund has greatly contributed to the countries of the Americas being free of rubella and CRS.

## 9. Laboratory capacities were strengthened.

As countries moved forward in their efforts to eliminate rubella and CRS, it became essential to document genotypes to determine the origin of cases. The ability of laboratories to confirm or rule out suspected rubella cases with the same serologic test used for measles was also strengthened. The countries now have greater ability to carry out more specific diagnostic tests – such as viral isolation and genotyping – for the final classification of cases imported from other regions of the world.

## 10. A maximum alert level was maintained vis-à-vis imported cases.

Measles and rubella viruses are still circulating in other regions of the world, which means the countries of the Americas are at risk of virus importations. This can happen when travelers bring the measles or rubella virus to our Region.

The first measles outbreak in the post-elimination era with more than 12 months of transmission occurred in the northern states of Pernambuco and Ceará, Brazil, and by definition, Brazil had reestablished endemic measles transmission. After intensive surveillance and vaccination efforts in the state of Ceará, it seems that the outbreak is now under control. The last confirmed case was reported on 13 June 2015.

Therefore, countries should remain vigilant and not let their guard down. In 2014, regional vaccination coverage against measles and rubella was 92%. Maintaining high and homogeneous vaccination coverage, as well as a sensitive, high-quality surveillance system for rapid and effective responses to imported viruses, remains essential for the Americas to sustain the gains that have been made in elimination. Above all, health workers should maintain a positive attitude and a permanent commitment to maintaining the achievements in elimination. ■

## Advances towards Polio Eradication

**Global polio eradication is of critical importance. The following articles introduce and explain the necessary components to achieve this goal and what is needed from all of the countries to make it happen, from introducing the inactivated polio vaccine (IPV) to implementing the switch from the trivalent oral polio vaccine (tOPV) to the bivalent oral polio vaccine (bOPV).**

### A Critical Step towards Achieving a Polio-Free World

Since the Global Polio Eradication Initiative was formed in 1988, the incidence of polio has been reduced by 99.9% worldwide, from more than 350,000 cases every year to 359 cases in 2014. Between January and June 2015, there have only been 29 cases worldwide.

The oral polio vaccine (OPV) has been a key instrument for polio eradication; however, OPV contains attenuated (weakened) polioviruses, which in extremely rare occasions can result in cases of polio due to vaccine-associated paralytic polio (VAPP) and in areas with low vaccination coverage can cause circulating vaccine-derived polioviruses (cVDPVs).

Until now, the benefits of OPV use have far outweighed any small, associated risks. Now that polio eradication is in reach and fewer cases of polio are reported, a new plan has been devised to minimize the risk of vaccine-associated cases of polio, while still achieving the global eradication goal.

For this reason, the Polio Eradication and Endgame Strategic Plan 2013-2018 calls for the global cessation of all OPV use in routine immunization programs as soon as possible after the eradication of wild poliovirus transmission. The Endgame was endorsed by the World Health Assembly, and follows the technical guidance of the Strategic Advisory Group of Experts on Immunization (SAGE), the independent global panel of experts that advises the World Health Organization (WHO) on all matters relating to immunization.

The cessation of OPV use will be completed in a phased manner in the 155 OPV-using countries, beginning with a switch from the tOPV (containing type 1, 2 and 3 serotypes) to the bOPV (containing only type 1 and 3 serotypes). The advantage of this is that wild poliovirus type 2 (WPV2) has been eradicated since 1999, and the type 2 component in the tOPV is responsible for virtually all cVDPV cases. There is therefore a public health priority to remove this component as quickly as possible. Following the eradication of the remaining strains of wild poliovirus type 1 and 3, all OPV use will then be stopped.

Before the switch from tOPV to bOPV, all countries should introduce at least one dose of the inactivated poliovirus vaccine (IPV). Adding at least one dose of IPV into routine immunization schedules will reduce any risks associated with the withdrawal of type 2-containing OPV, by boosting immunity to type 2 poliovirus. That is why there will be a worldwide roll-out of the vaccine across 126 countries by the end of 2015.

The introduction of IPV into routine immunization schedules together with the switch from tOPV to bOPV is a critical step to achieve a lasting polio-free world.

### Frequently Asked Questions – IPV Introduction

#### Why should countries introduce IPV?

Introducing IPV is a key element of the Endgame and global readiness to manage risks associated with OPV type 2 withdrawal. The Endgame calls for the introduction of IPV in all OPV-only using countries by the end of 2015. The primary role of IPV will be to maintain immunity against type 2 poliovirus while removing OPV type 2 globally. More specifically, IPV needs to be introduced for the following reasons:

- To reduce risks. Once OPV type 2 is withdrawn globally, if no IPV is used, there will be an unprecedented accumulation of children susceptible to type 2 poliovirus. IPV use will help maintain immunity to type 2. This will help prevent emergence of type 2 viruses should they be introduced after the type 2 component is removed from OPV. Thus, a region immunized with IPV would have a lower risk of re-emergence or reintroduction of wild or vaccine-derived type 2 poliovirus.
- To interrupt transmission in the case of outbreaks. Should monovalent OPV type 2 (mOPV type 2) be needed to control an outbreak, the immunity levels needed to stop transmission will be easier to reach with the use of mOPV type 2 in an IPV-vaccinated population, compared to the use of mOPV type 2 in a completely unvaccinated population. Thus, introducing IPV now could facilitate future outbreak control.

A WHO Position Paper on polio vaccines published in February 2014 is available online at: <http://www.who.int/wer/2014/wer8909.pdf>.

#### Is IPV safe?

Yes, IPV is considered very safe, whether given alone or in combination with other vaccines. It protects children against all three strains of poliovirus and when used together with OPV, can boost immunity. IPV can be administered to prematurely born infants (i.e., <37 weeks gestation) at the recommended age concurrent with other routine vaccinations.

#### Are there any potential side effects?

No serious adverse events have ever been reported following vaccination with IPV, including when used alone or in combination with other vaccines. Minor local reactions, such as redness and tenderness, may occur following IPV administration.

#### Can IPV be given along with other injections in one visit?

Many years of monitoring children in many countries that have received multiple injections in one visit have shown that it is safe to have multiple injections at one time. Globally, most middle and high-income countries have been safely using multiple injections for more than a decade. The IPV vaccine is effective when taken alone or with other vaccinations. Plus, for the child, it is better to experience one brief moment of discomfort than pain on two separate days/visits.

#### How many doses of IPV are needed?

At least one dose of IPV should be given to children, completing the immunization schedule with OPV.

#### Should the child continue to receive OPV after receiving IPV, when offered in the future?

Yes, until polio is eradicated globally, IPV should be used in conjunction with OPV, following the schedule recommended by PAHO/WHO.

OPV is extremely safe and effective at protecting children against lifelong polio paralysis. Over the past 10 years, more than 10 billion doses of OPV have been given to nearly three billion children worldwide. More

## POLIO ERADICATION continued from page 4

than 10 million cases of polio have been prevented, and the disease has been reduced by more than 99.9%. It is the appropriate vaccine through which to achieve global polio eradication.

OPV contains attenuated polioviruses. On extremely rare occasions, the use of OPV can result in cases of polio due to VAPP and cVDPVs. For this reason, the global eradication of polio will require the cessation of all OPV use. However, it is necessary to keep using OPV until the eradication of WPV types 1 and 3 is confirmed.

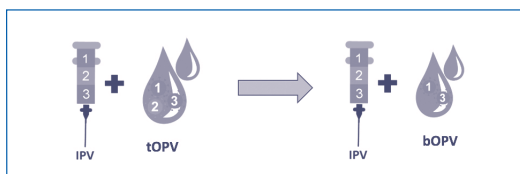
### Is IPV better than OPV?

No. Each vaccine has its own strengths. The combined use of both vaccines provides the best protection for populations and will accelerate the eradication of the remaining strains of polio transmission globally.

### Will we continue to use IPV after OPV is withdrawn?

Yes. Following global polio eradication and the global withdrawal of OPV, IPV will be the only vaccine with which to maintain immunity levels. It will probably be necessary to continue using IPV for several years after the last case of polio is reported.

## The Switch from tOPV to bOPV



2013-2018, approved by the Executive Board of WHO in January 2013, requires the removal of all OPVs.

The removal of OPVs must be done in a phased manner, from both routine programs and campaigns, to minimize the risk of new polio cases. The first phase of OPV removal is a switch from the current tOPV, containing antigens for poliovirus types 1, 2, and 3, to the bOPV, containing only types 1 and 3. The use of tOPV led to the eradication of wild WPV2, with the last detected case occurring in 1999, and has allowed us to get close to achieving global eradication.

The global switch from tOPV to bOPV is expected to occur in April 2016. Prior to the switch, manufacturers will cease production of tOPV. The supply of tOPV will be finite leading up to the switch, and no tOPV will be available after the switch.

The switch also must be a globally coordinated process. Any use of tOPV after April 2016 could jeopardize polio eradication due to the risk of generating cVDPVs from the type 2 component of the vaccine.

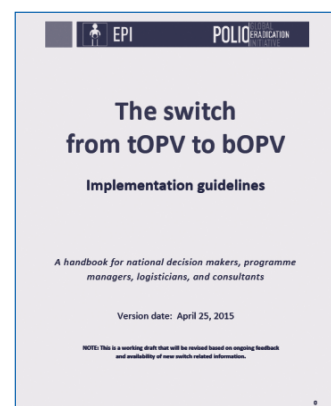
To prepare for the switch in April 2016, it is imperative that all OPV-using countries begin switch planning during Q1-Q2 2015 and finalize a budgeted national switch plan by September 2015. Timely planning and implementation of a switch plan will increase the probability of the successful removal and disposal of tOPV, minimize tOPV wastage and ensure a world free of cVDPV type 2.

Implementation guidelines for the switch are available in English, Spanish and French at [www.paho.org/polio](http://www.paho.org/polio).

The following is a list of key steps all countries are responsible for completing as part of the global switch from tOPV to bOPV:

- 1. Setting a National Switch Date:** Decision-makers must establish a switch date during the two-week window from 17 April 2016 to 1 May 2016. On the selected date, tOPV will be removed from all facilities, sent for proper disposal and replaced with bOPV.
- 2. Establishing management structures:** By mid-2015, countries are encouraged to establish switch coordination committees at national and subnational levels. These committees are responsible for developing the switch plan and providing implementation oversight.
- 3. Developing the switch plan:** All OPV-using countries should complete planning for the switch by the end of Q2 2015 and finalize a national switch plan by September 2015 using the recommended template, leaving approximately 10 months to prepare and implement activities.
- 4. Preparing for the switch:** Countries are expected to implement their national switch plans, complete training, distribute bOPV widely and withdraw and dispose of tOPV according to the timelines outlined in their plan.
- 5. Implementing the switch:** All countries should stop using tOPV and destroy remaining stocks of tOPV after their designated switch day in April 2016 to avoid the re-emergence of cVDPV type 2. Ongoing use of tOPV after April 2016 may threaten or postpone the global eradication of polio.
- 6. Validating absence of tOPV:** During the two weeks following the switch date, countries must validate that facilities are free of tOPV using appropriate methods of disposal.
- 7. Completing national validation:** There will need to be an independent evaluation of the switch. Guidelines on the independent evaluation will be shared with the countries in November 2015.

In May 2012, the World Health Assembly (WHA) declared the completion of poliovirus eradication to be a “programmatically emergency for global public health” and called on the Director General of the WHO to develop a comprehensive polio endgame strategy. The Polio Eradication and Endgame Strategic Plan



**POLIO ERADICATION** continued from page 5

## First Meeting of the Regional Certification Commission for the Polio Endgame in the Region of the Americas

To fulfill the recommendations outlined in the Polio Eradication and Endgame Strategic Plan 2013–2018, PAHO has formed a Regional Certification Commission for the Polio Endgame in the Region of the Americas (RCC).

The RCC had its first meeting on 11-12 June 2015 at PAHO Headquarters in Washington D.C. The main objectives of this meeting were to review the objectives of the Endgame and provide a global and regional context on the implementation of the Endgame requirements.

The RCC will be responsible for certifying that the Region of the Americas has fulfilled the necessary requirements for the Endgame. The role of the RCC is to assess the achievement of the four main objectives of the Endgame in the Americas.

The RCC will have the support of the independent National Certification Committees (NCC) that will assess, verify and present the required national documentation.



RCC members pictured from left to right: Dr. Jose Luis Diaz-Ortega; Dr. Mark A Pallansch; Dr. Arlene King, RCC President; Mr. Henry Smith; Dr. Angela Gentile; and Dr. Carlos Godoy Artega. Photo credit: Elizabeth Thrush, PAHO.

### Supporting Reference Documents for IPV Introduction and the Switch

A variety of supporting materials on IPV introduction and the switch from tOPV to bOPV have been developed to support the countries of the Americas.

#### **IPV Introduction**

All of these documents can be found on the PAHO Immunization website: [www.paho.org/immunization/IntroIPV](http://www.paho.org/immunization/IntroIPV).

- Technical Documents
  - IPV Introduction Guide
  - Brief on IPV Introduction, OPV Withdrawal, and Routine Immunization Strengthening
  - Background and Technical Rationale for Introduction of One Dose of Inactivated Polio Vaccine (IPV) in Routine Immunization Schedule
- Training Documents
  - IPV Training Modules
    - ◆ **Module 1:** Introduction to the polio endgame rationale and IPV vaccine
    - ◆ **Module 2:** Inactivated Poliovirus Vaccine (IPV) attributes and storage requirements
    - ◆ **Module 3:** IPV schedule, eligibility and contraindications
    - ◆ **Module 4:** IPV vaccine administration
    - ◆ **Module 5:** Recording and monitoring administration of the Inactivated Polio Vaccine (IPV)
    - ◆ **Module 6:** Monitoring Events Supposedly Attributable to Vaccination or Immunization (ESAVI)
    - ◆ **Module 7:** Communicating with parents, caregivers and health personnel about IPV and multiple injections
  - Multiple Injections: Acceptability and Safety
  - Frequently Asked Questions on the Introduction of IPV
- Communication Documents
  - **Issues Management Guide:** To support countries in preparing for unexpected situations with implications for public communications
  - **Media Resource Kit:** Preparing for IPV introduction

#### **Switch from tOPV to bOPV**

All of these documents can be found on the PAHO Immunization website: [www.paho.org/immunization/PolioSwitch](http://www.paho.org/immunization/PolioSwitch).

- Technical Documents
  - The switch from tOPV to bOPV - Implementation Guidelines
  - Protocol for notification, risk assessment, and response following detection of poliovirus type 2 following globally-coordinated cessation of serotype 2-containing oral polio vaccine
  - Reporting and classification of VDPV
  - Preparing for the Switch: Presentation | Video
  - WHO - Sample Budget for Switch Activities
  - Monitoring the Switch from tOPV to bOPV
  - Stock Management and Logistics Kit
- Training Documents
  - Training module for health workers on the switch from trivalent OPV to bivalent OPV
  - Job aid on the switch from trivalent OPV to bivalent OPV
- Communication Documents
  - An introduction to the switch from trivalent to bivalent OPV
  - OPV Switch Communication Planning Guide
  - Issues Management and Media Guide
- Frequently Asked Questions
  - FAQs on preparing for the withdrawal of all OPVs: Replacing tOPV with bOPV ■

## Measles/Rubella/Congenital Rubella Syndrome Surveillance Data Final Classification, 2014

Country	Total Measles/Rubella Suspect Cases Notified	Confirmed Measles <sup>(a)</sup>			Confirmed Rubella <sup>(a)</sup>			Congenital Rubella Syndrome	
		Clinical	Laboratory	Total	Clinical	Laboratory	Total	Suspected	Confirmed
Anguilla	1	0	0	0	0	0	0	1	0
Antigua & Barbuda	0	0	0	0	0	0	0	0	0
Argentina	484	0	1	1	0	2	2	125	0
Aruba	...	...	...	...	...	...	...	...	...
Bahamas	2	0	0	0	0	0	0	0	0
Barbados	33	0	0	0	0	0	0	0	0
Belize	68	0	0	0	0	0	0	0	0
Bermuda	0	0	0	0	0	0	0	0	0
BES**	...	...	...	...	...	...	...	...	...
Bolivia	157	0	0	0	0	0	0	0	0
Brazil*	6350	91	598	689	0	1	1	67	0
Canada	...	...	418	418	...	1	1	...	...
Cayman Islands	0	0	0	0	0	0	0	0	0
Chile	268	0	0	0	0	0	0	46	0
Colombia	2818	0	0	0	0	0	0	437	0
Costa Rica	44	0	0	0	0	0	0	0	0
Cuba	1151	0	0	0	0	0	0	0	0
Curaçao	0	0	0	0	0	0	0	0	0
Dominica	1	0	0	0	0	0	0	0	0
Dominican Republic	61	0	0	0	0	0	0	0	0
Ecuador	...	...	...	...	...	...	...	...	...
El Salvador	496	0	0	0	0	0	0	0	0
French Guiana	0	0	0	0	0	0	0	0	0
Grenada	0	0	0	0	0	0	0	0	0
Guadeloupe	0	0	0	0	0	0	0	0	0
Guatemala	243	0	0	0	0	0	0	6	0
Guyana	54	0	0	0	0	0	0	10	0
Haiti	123	0	0	0	0	0	0	22	0
Honduras	288	0	0	0	0	0	0	11	0
Jamaica	236	0	0	0	0	0	0	0	0
Martinique	1	0	0	0	0	0	0	0	0
Mexico	4925	0	3	3	0	0	0	0	0
Montserrat	0	0	0	0	0	0	0	0	0
Nicaragua	144	0	0	0	0	0	0	22	0
Panama	216	0	0	0	0	0	0	0	0
Paraguay	337	0	0	0	0	0	0	4	0
Peru	423	0	0	0	0	0	0	0	0
Puerto Rico	...	...	...	...	...	...	...	...	...
Sint Maarten (Dutch part)	0	0	0	0	0	0	0	0	0
St. Kitts & Nevis	0	0	0	0	0	0	0	0	0
St. Lucia	1	0	0	0	0	0	0	3	0
St. Vincent & the Grenadines	0	0	0	0	0	0	0	0	0
Suriname	90	0	0	0	0	0	0	0	0
Trinidad & Tobago	6	0	0	0	0	0	0	0	0
Turks & Caicos	0	0	0	0	0	0	0	0	0
United States	...	...	667	667	...	4	4	...	...
Uruguay	10	0	0	0	0	0	0	0	0
Venezuela	758	0	0	0	0	0	0	6	0
Virgin Islands (UK)	0	0	0	0	0	0	0	0	0
Virgin Islands (US)	...	...	...	...	...	...	...	...	...
<b>Total</b>	<b>19789</b>	<b>91</b>	<b>1687</b>	<b>1778</b>	<b>0</b>	<b>8</b>	<b>8</b>	<b>760</b>	<b>0</b>

(a) imported or related to importation; \* Provisional data as of epidemiological week 53-2014; \*\* Bonaire, St. Eustatius and Saba; ... No information provided

Source: ISIS, MESS and country reports.

Starting in 2015, the Immunization Newsletter will be published four times a year, in English, Spanish, and French by the Comprehensive Family Immunization Unit of the Pan American Health Organization (PAHO), Regional Office for the Americas of the World Health Organization (WHO). The purpose of the *Immunization Newsletter* is to facilitate the exchange of ideas and information concerning immunization programs in the Region, in order to promote greater knowledge of the problems faced and possible solutions to those problems.

An electronic compilation of the *Newsletter*, "Thirty years of *Immunization Newsletter*: the History of the EPI in the Americas", is now available at: [www.paho.org/inb](http://www.paho.org/inb).

References to commercial products and the publication of signed articles in this Newsletter do not constitute endorsement by PAHO/WHO, nor do they necessarily represent the policy of the Organization.

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## In Memoriam: Ana Betty Higuera Pérez

The Expanded Program on Immunization (EPI), both of Colombia and of the Americas, has lost a true heroine, one of those often anonymous people who, with their passion and dedication, have saved the lives of thousands of children and contributed to the EPI's success in Latin America. Ana Betty Higuera Pérez died on April 19, 2015 after an arduous fight against breast cancer. She was only 48 years old.

Ana Betty graduated as a nurse from the National University of Colombia and as an epidemiologist from the University of Antioquia. At the beginning of her career, she worked as a nurse for Doctors Without Borders, followed by time in the Basic Care Unit "La Candelaria," as well as in the District Department of Health of Bogota, where she worked as the EPI coordinator. Ana Betty later joined the National Institute of Health as part of the EPI group, where she participated in the Pan American Health Organization's (PAHO) research to evaluate the impact of vaccination against *Haemophilus influenzae* type b. Ana Betty also participated as a trainer on vaccine safety in several Latin American



Ana Betty Higuera Pérez.  
Photo credit: Nohora Higuera.

countries. In her later years, she served as a specialized EPI professional for Colombia's Ministry of Health.

Ana Betty dedicated her life to the EPI, from the local to the national level and was distinguished by her great knowledge on all issues related to immunization. She led many vaccination campaigns and also provided training and raised awareness about the benefits of

vaccinating early to prevent serious diseases. A committed epidemiologist, she was critical and demanding in her professional work and was always willing to share her wisdom with work colleagues and acquaintances.

Ms. Higuera stood out for being direct with all who associated with her. She was not about holding back words or having doubts. She was a serene woman who knew how to courageously present her truth; she also knew how to communicate joy, spreading it to all who spent time with her. Conversations with Ana Betty never lacked a friendly phrase or expression to lift the spirits of anyone with her during long work shifts or a detail to sweeten a shared moment.

Today a great sadness overwhelms the Latin American EPI family and our hearts ache due to the passing of a woman who was passionate about vaccination and a great colleague. We will hold in our memories all of the wonderful times we shared with her and the millions of children who will benefit from her great work. ■

**Contributed by:** Patricia Arce, Dr. Yenny Neira, and the family of Ana Betty Higuera Pérez.