

Immunization Newsletter

Pan American Health Organization

Volume XXXVIII Number 3

Immunize and Protect Your Family

September 2016



Region of the Americas is Declared Free of Measles



The declaration of measles elimination in the Region of the Americas at PAHO's 55th meeting of the Directing Council, 27 September 2016. Credit: PAHO/WHO.

On 27 September 2016 in Washington, DC, the Region of the Americas became the first in the world to have eliminated measles, a viral disease that can cause severe health problems, including pneumonia, brain swelling and even death. This achievement culminates a 22-year effort involving mass vaccination against measles, mumps and rubella throughout the Americas.

The declaration of measles' elimination was made by the International Expert Committee for Documenting and Verifying Measles, Rubella, and Congenital Rubella Syndrome Elimination in the Americas. The announcement came during the 55th Directing Council of the Pan American Health Organization/World Health Organization (PAHO/WHO), which was attended by ministers of health from throughout the Region.

Measles is the fifth vaccine-preventable disease to be eliminated from the Americas, after the regional eradication of smallpox in 1971, poliomyelitis in 1994, and rubella and congenital rubella syndrome in 2015.

"This is a historic day for our Region and indeed the world," said PAHO/WHO Director Carissa F. Etienne. "It is proof of the remarkable success that can be achieved when countries work together in solidarity towards a common goal. It is the result of a commitment made more than two decades ago, in 1994, when the countries of the Americas pledged to end measles circulation by the turn of the 21st century."

Before mass vaccination was initiated in 1980, measles caused nearly 2.6 million annual deaths worldwide. In the Americas, 101,800 deaths were attributable to measles between 1971 and 1979. A cost-effectiveness study on measles elimination in Latin America and the Caribbean has estimated that with vaccination, 3.2 million measles cases and 16,000 deaths will have been prevented in the Region between 2000 and 2020.¹

See [FREE OF MEASLES](#) on page 2

IN THIS ISSUE

- 1 Region of the Americas is Declared Free of Measles
- 1 Smallpox Zero: A Tribute to Dr. Donald A. Henderson
- 3 Questions and Answers on Measles Elimination
- 4 Eliminating Measles: A Conversation among Experts
- 5 Remembering the Moment: Measles Elimination in the Region

- 5 Workshop on High-Quality Follow-Up Campaigns for Measles and Rubella Conducted in Peru
- 6 25 Years without Polio in the Americas
- 7 Measles/Rubella/Congenital Rubella Syndrome Surveillance Data, Final Classification, 2015
- 8 COLUMN: What I Have Learned... by Dr. Susan Reef

Smallpox Zero: A Tribute to Dr. Donald A. Henderson

Donald Ainslie Henderson, known as D.A. to many of his colleagues and field staff, passed away on 19 August 2016 surrounded by his family. He was well known for his leadership and guidance in establishing the immunization program that vanquished smallpox from the face of the earth under the auspices of the World Health Organization (WHO). To date, this is the only disease that has been eradicated using a vaccine.² D.A.'s field experience with smallpox actually started in the Region of the Americas; in June 1956 he was sent to Argentina to assist authorities with an outbreak of botulism, but during this visit he also went to investigate smallpox outbreaks in northern Argentina upon the request of health authorities.³

D.A. used the lessons learned from the Smallpox Eradication Program (SEP) to advocate, within WHO, for the establishment of what was to become the Expanded Program on Immunization (EPI) before he departed to become the dean of the School of Public Health at Johns Hopkins (now the Johns Hopkins Bloomberg School of Public Health) in 1977.

At Johns Hopkins, D.A. used the experiences he gained from the SEP to not only influence public health curriculum at the school, but also encourage public health professionals to innovate and think about new paradigms for confronting the challenges faced when attacking new emerging diseases, such as HIV. Later, D.A. would also go on to work for the U.S. government in several capacities, including advising on issues of bio-terrorism, both before 9/11 and after.

At the heart of D.A.'s thinking were several important lessons learned from the successful push to end smallpox, which he applied to his work tackling other public health issues. One was the importance of doing fieldwork, to understand what was going on first-hand and evaluate how a program was being implemented. In 1975, D.A. met me in Bangladesh to have an in-person look at their smallpox eradication program. He spent three days with me in the Jessore district, which lies southwest of Dacca. We visited the outbreak I was working on. One problem that worried me there was the lack of wooden blocks to hold the smallpox vials and protect them from the

² In 1769, British physician Edward Jenner demonstrated that "using bovine serum from cowpox" was effective in protecting individuals from smallpox infections (<http://bit.ly/2fRPzL>).

³ Donald A. Henderson, informed me of this at a PAHO TAG meeting held in Guatemala circa 1990's. I confirmed fact with Ms. Leigh Henderson, daughter of Donald and Nana Henderson, November 2016.

See [DA HENDERSON](#) on page 3

MEASLES continued from page 1

“This historic milestone would never have been possible without the strong political commitment of our Member States in ensuring that all children have access to life-saving vaccines,” Etienne continued. “It would not have been possible without the generosity and commitment of health workers and volunteers who have worked so hard to take the benefits of vaccines to all people, including those in vulnerable and hard-to-reach communities. Indeed it would not have been possible without the strong leadership and coordination provided by PAHO, Regional Office for the Americas of WHO.”

Measles transmission had been considered interrupted in the Region since 2002, when the last endemic case was reported in the Americas. However, as the disease had continued to circulate in other parts of the world, some countries in the Americas experienced imported cases. The International Expert Committee reviewed evidence on measles elimination presented by all the countries of the Region between 2015 and August 2016 and decided that it met the established criteria for elimination. The process included six years of work with countries to document evidence of the elimination.

Measles is one of the most contagious diseases and affects primarily children. It is transmitted by airborne droplets or via direct contact with secretions from the nose, mouth, and throat of infected individuals. Symptoms include high fever, generalized rash all over the body, stuffy nose, and reddened eyes. It can cause serious complications including blindness, encephalitis, severe diarrhea, ear infections and pneumonia, particularly in children with nutritional problems and in immunocompromised patients.

As a result of global measles elimination efforts, only 244,704 measles cases were reported worldwide in 2015, representing a significant decline from earlier years. However, more than a half of these reported cases were notified in Africa and Asia.

To maintain measles elimination, PAHO/WHO and the International Expert Committee have recommended that all countries of the Americas strengthen active surveillance and maintain their populations' immunity through vaccination.



WHO's Director General, Dr. Margaret Chan (left), and PAHO's Director, Dr. Carissa F. Etienne (right), celebrating the declaration of measles elimination. Credit: PAHO/WHO.



(Left to right): Dr. Susan Reef, Dr. Carissa F. Etienne, Dr. Merceline Dahl-Regis and Dr. Mary Agocs participate in a press conference to declare measles elimination. Credit: PAHO/WHO.

“I would like to emphasize that our work on this front is not yet done,” warned Etienne. “We can not become complacent with this achievement but must rather protect it carefully. Measles still circulates widely in other parts of the world, and so we must be prepared to respond to imported cases. It is critical that we continue to maintain high vaccination coverage rates, and it is crucial that any suspected measles cases be immediately reported to the authorities for rapid follow-up.”

Process to eliminate measles

In the 1990s, a decline in cases was recorded, but the most notable decrease was observed after the Region launched its initiative to eliminate measles in 1994. That year, the countries of the Americas established the goal to eliminate indigenous transmission of measles by the year 2000, through the implementation of surveillance and vaccination

strategies recommended by PAHO/WHO.

PAHO/WHO's elimination strategy recommended three lines of action for countries: 1) conduct a one-time national campaign to bring children between 1 and 14 years of age up-to-date with measles vaccination; 2) strengthen routine vaccination to reach a minimum of 95% of children every year; and 3) undertake massive follow-up campaigns every four years, to reach a minimum of 95% of children aged 1 to 4 with a second dose of vaccine.

Following this strategy, the last indigenous measles outbreak was registered in Venezuela in 2002. However, some countries in the Region still notified imported cases. Between 2003 and 2014, 5,077 imported measles cases were reported in the Americas.

After declaring the elimination of rubella and congenital rubella syndrome in 2015, the International Expert Committee waited for evidence of the interruption of a measles outbreak in Brazil, which had begun in 2013 and lasted for more than a year. After a year of targeted actions and enhanced surveillance, the last case of measles in Brazil was reported in July 2015.

With this achievement and considering that the Region has sustained elimination for more than 12 years, the International Expert Committee accepted the evidence presented by the countries and declared the elimination of measles in the Americas.

Key partners involved in the effort to eliminate measles and rubella include the ministries of health of PAHO/WHO's Member States, the United States Centers for Disease Control and Prevention (CDC), the United States Department of Health and Human Services, Health Canada, the (former) Canadian International Development Agency, the Spanish Agency for International Development Cooperation, the Sabin Vaccine Institute, the Serum Institute of India, March of Dimes, the Church of Jesus Christ of Latter-day Saints and the Measles-Rubella Initiative, a coalition of global partners that includes the International Federation of Red Cross and Red Crescent Societies, the UN Foundation, UNICEF and WHO. ■

¹ This data comes from an article titled “Cost-effectiveness of measles elimination in Latin America and the Caribbean: a prospective analysis,” published in *Vaccine* in 2002 (<http://bit.ly/2WpQ9Jj>).

“It is my hope that the other regions of the world are encouraged by the success of the Americas and that the lessons learned here serve them as they move toward their own elimination goals. The Americas Region has shown that with strong national immunization programs, dedicated financing and strong political commitment, measles can be stopped.”

—Dr. Margaret Chan, Director General of the World Health Organization

DA HENDERSON continued from page 1

sun. Direct sunlight could affect the viability of the vaccine to assure a good ‘take’. D.A. looked around and grabbed a stalk from a banana tree and cut it up to the size of the wooden block and made a hole in it with a knife to place the vial in. Problem solved.

Some additional principles that D.A. used in his work after smallpox eradication included the need to establish a good research operation for the program in question, use evaluations to measure progress, identify program bottlenecks and assure that effective management was in place. Only in this fashion could a manager successfully craft solutions and advance a public health program. However, the ability to do all of the above was contingent on having good quality information on all parts of a program. For this reason, implementing outstanding disease surveillance was essential to support good management decisions to reach a program’s goal(s). An equally important lesson was to assure that a manager surround him or herself with knowledgeable “can-do” staff, who were capable of providing critical and objective debate to assure that the best decisions were made when implementing the program’s activities. One crucial issue that D.A. was also concerned with was the



D.A. Henderson (right) and a health worker check the scars from smallpox vaccination on a child in Ethiopia, circa 1970. Credit: WHO.

quality of the smallpox vaccine being used. He made this a high priority early on when taking his position at WHO.

In 1985, Dr. Ciro de Quadros, then the Director of PAHO’s Regional Immunization Program, submitted D.A.’s name to then PAHO Director, Dr Carlye Guerra de Macedo, to nominate him to become the Chair of PAHO’s Technical Advisory Group on Vaccine-preventable Diseases (TAG) and to advise PAHO in its quest to eradicate indigenous wild poliovirus from the

Americas. Using the term from Dr. Lawrence Altman’s article on the death of D.A., Ciro de Quadros had also been a “lieutenant” of D.A.’s in the eradication of smallpox in Ethiopia⁴, and both men aptly guided the countries in the eradication of indigenous wild poliovirus from the Americas.

When asked what disease should be eradicated next, D.A. would often respond, “bad management!” Two publications, “Eradication of poliomyelitis: progress in the Americas” published by the Pediatric Infectious Disease Journal in March 1991⁵ and the December 2002 issue of the Immunization Newsletter (EPI Newsletter)⁶, fittingly summarize some of the basic EPI management principles mentioned above for further reference.

With the passing of D.A., the world lost a great public health visionary, who dedicated his life to protecting the health of millions. His colleagues and the young professionals that Dr. Henderson mentored continue to apply the lessons and advice provided by him in their work as public health professionals or in other fields of medicine. ■

Contributed by: Peter Carrasco.

⁴ See article published in *The New York Times* by Dr. Lawrence Altman, October 3, 2016 (<http://nyti.ms/2k4KOUN>).

⁵ “Eradication of poliomyelitis: progress in the Americas.” *Pediatric Infectious Disease Journal*, March 1991; Vol. 10; Issue 3 (pp. 222-229).

⁶ “Immunization Management and Sustainability.” *Immunization Newsletter*, December 2002; Vol. XXIV. No. 6 (pp.7-8). Available at www.paho.org/immunization/newsletter

Questions and Answers on Measles Elimination

Could measles return to the Americas?

Yes, measles could return because the virus continues to circulate elsewhere in the world. It will therefore be normal for countries in the Americas to continue to see imported measles cases. The keys to preventing the reintroduction of endemic measles in the Region (defined as ongoing virus transmission for more than one year) are to maintain strong surveillance systems that are able to detect imported cases and to respond quickly and decisively to any reports, halting further transmission. It is also necessary for countries to maintain high population immunity through ongoing vaccination, achieving at least 95% coverage in all districts, municipalities and areas of a country. These actions should continue until measles is eradicated globally.

Measles and rubella are prevented by the same vaccine; why were they not eliminated at the same time?

Despite being prevented by the same vaccine, the viruses are different, as is their epidemiology, which impacted the timelines for elimination. In terms of vaccines, the measles vaccine was one of the first vaccines countries included in their basic vaccination schedules after the Expanded Program on Immunization (EPI) was created in 1977. In 1994, when the decision was made to eliminate measles,

many countries had not yet introduced the combined MR/MMR (measles-rubella/measles-mumps-rubella vaccine. In terms of epidemiology, measles is more contagious than rubella and it is more difficult to control a measles outbreak. Additionally, two doses of vaccine are needed to provide adequate protection against measles⁷, whereas a single vaccine dose protects against rubella. This means that more people are likely to get measles if they receive only one dose of vaccine than is the case with rubella.

How long will we have to keep vaccinating children against measles?

Until it is confirmed that the measles virus has been eradicated worldwide, the possibility of not vaccinating against the disease cannot be considered.

Which is the cost of vaccinating against measles? How did countries manage that cost?

The MMR vaccine against measles, mumps, and rubella—purchased through the PAHO Revolving Fund—costs Latin American countries US\$1.14 per dose in 5-dose vials. It has been fully demonstrated that it is one of the most cost-effective public health interventions.

Thanks to the Revolving Fund, the countries of the Region have access to this vaccine and to supplies such as syringes and medical waste disposal

containers, with economies of scale at the lowest possible cost in the global market.

What vaccine-preventable diseases currently have the biggest impact on mortality and morbidity in children in the Americas?

Polio, measles and rubella have been eliminated from our Region, therefore our current challenges lie in controlling other vaccine-preventable diseases. Whooping cough (pertussis) has the biggest impact on morbidity in children. More than 30,000 cases were reported in 2015. Pneumonia and diarrheal diseases continue to have high incidence and mortality. The introduction of specific vaccines against measles, Hib, pneumococcus and rotavirus has significantly reduced the burden of pneumonia, meningitis and diarrheal diseases.

What are the greatest challenges following measles elimination?

Countries will continue to need to invest in plans to sustain measles elimination, which should include maintaining high rates of vaccination coverage (above 95%) and rapidly responding to any imported measles and rubella cases from other regions of the world. ■

⁷ Ninety-five percent (95%) of the population will gain immunity with just one dose of the measles vaccine. With a second dose, this percentage is raised to 99.9%, the percentage required to maintain good population immunity and elimination.

“This is an historic event, a major achievement, made possible with shared vision, collaborative effort, skilled leadership in public health, and dedicated health workers from large urban centers to small villages everywhere in our Region. Undergirded by the political commitment to get the job done and with solidarity that no country in the Americas Region will be left behind, what appeared to be impossible a decade ago is now a reality.”

—Dr. Merceline Dahl-Regis, President of the International Expert Committee for Documenting and Verifying Measles, Rubella, and Congenital Rubella Syndrome Elimination in the Americas

Eliminating Measles: A Conversation among Experts

The path to measles elimination for the Region of the Americas has been full of ups and downs. We spoke to four PAHO experts – Cuauhtemoc Ruiz Matus, Immunization Unit Chief, and Desiree Pastor, Cristina Pedreira and Alba Maria Ropero, all immunization regional advisors, about the road to elimination, lessons learned and how to move forward.*

*Edited for length and clarity

What were the initial reactions when people first began to talk about measles elimination?

Cuauhtemoc Ruiz Matus (CRM): When talk first started about measles elimination, we were just finishing up polio elimination. My own personal reaction when I heard was, “that’s crazy!” because I was imagining the process for measles would be the same as polio, which involved really quite arduous work in terms of case detection. But once I considered how the epidemiology of measles is so different than polio, the idea of elimination seemed much more feasible.

Cristina Pedreira (CP): Following the success of polio elimination in the Region, country experiences with measles in 1993 demonstrated it could be eliminated too. I remember Brazil began vaccinating children aged 9 months to 14 years against measles.⁸

Alba Maria Ropero (AMR): Based on the Brazilian and Caribbean experience, Colombia then began to vaccinate children up through 15 years in 1993. It was expanding vaccination to this older group that made a big difference on the reduction of measles morbidity and mortality.

Desiree Pastor (DP): Dr. Ciro de Quadros, who was leading immunization efforts at PAHO, saw that measles elimination was the logical next goal for the Region following polio elimination. When the resolution for measles elimination was brought to the PAHO Directing Council in 1994 – following the Region receiving verification for polio elimination – the countries of the Region supported it enthusiastically.

I was fortunate enough to work with Dr. Ciro de Quadros in 1992 when he was collecting the epidemiological evidence and getting the political buy-in from all of the ministers of health needed to propose measles elimination after polio eradication in the Americas was declared. Without any doubt, Dr. de Quadros was a clear leader for both initiatives and for successful strategies toward elimination in the Americas.

AMR: Cristina and I saw that enthusiasm first-hand in the countries, since we were lucky enough to witness the proposal for advancing toward measles



(Left to right): Immunization experts Cristina Pedreira, Alba Maria Ropero, Cuauhtemoc Ruiz Matus and Desiree Pastor, discussing their experiences with measles elimination in the Region. Credit: Octavia Silva, PAHO/WHO.

elimination, especially considering the successful experiences in Brazil and Colombia vaccinating everyone under 15 years of age.

What lessons learned from measles elimination have stayed with you over the years?

AMR: When I was working in Paraguay in 1999, the country had a very basic vaccination schedule. My goal was to support the country in updating and introducing new vaccines, using funds from the World Bank. When that plan didn’t work out, we had to advocate to Parliament for national resources to introduce the vaccines, like the measles-mumps-rubella (MMR) and pentavalent vaccines. Upon receiving approval from the Parliament, the country was able to increase its national immunization budget from \$600,000 to \$3 million. This was a fantastic success. **Countries using their own national funds for immunization programs have been key for our Region to make the advances it has.**

CP: As my first country experience as a PAHO consultant, I was working in a country with low measles vaccination coverage rates. After doing three campaigns without achieving adequate coverage, we decided to focus vaccination efforts on areas with confirmed cases. However, every day, cases were being confirmed in new areas. It was an uphill battle. **You have to stay in front of measles. If you’re behind, you’re already losing.**

CRM: Experiences in multiple countries have shown me that to have successful immunization campaigns, you really need to have **buy-in from key stakeholders** – especially at the community level. And your communication campaigns need to be inclusive and culturally appropriate for your audience...and everything has to be done in a way that’s politically neutral if you want everyone on board.

CP: Something else that’s stayed with me over the years has been what Ciro (de Quadros) told me

during a national polio vaccination campaign, when we were talking about whether or not to include measles vaccination as well. He told me to **never miss any opportunities to vaccinate when people are already mobilized. Ever.** And so we ended up with a campaign to vaccinate against polio and measles.

DP: The experiences with measles campaigns paved the way for rubella and congenital rubella syndrome (CRS) to be the next diseases to go. Cuba and the Caribbean got the ball rolling with cost-effectiveness studies on rubella and CRS. The English-speaking Caribbean carried out a campaign between 1998-2000 that focused on vaccinating people up to 45 years old, and its success showed the Region that a **big push can have a big impact.**

AMR: We have also learned the importance of country collaboration and **Pan Americanism.** A measles outbreak between Venezuela and Colombia, which was a very intense situation, resulted in a proposal for an international vaccination initiative; now we have Vaccination Week in the Americas, which will be celebrating its 15th anniversary in 2017.

DP: Along the line of Pan Americanism, something else measles and rubella elimination have shown is the importance of the PAHO Revolving Fund. It’s been imperative in ensuring that countries have access to high quality vaccines and supplies at the lowest possible price.

Now that the Region has achieved this huge goal of measles and rubella elimination, does the commitment exist to maintain it?

CP: The countries of the Region understand the importance of having strong, nationally financed immunization programs and accessible services. Vaccination needs to be included in all health planning, and it needs to stay on political agendas.

AMR: The lessons learned from measles and polio elimination allow us to evaluate the feasibility of eliminating other diseases, like the perinatal and early childhood transmission of hepatitis B in the Region.

CRM: The ministries of health also know that even though the Region has its elimination certification, the battle is not over – we all have to work harder than ever to maintain our achievements by keeping coverage rates high and surveillance systems strong. But the key to our success lies with the health workers on the ground; as long as they keep their passion and dedication to do whatever it takes to ensure that everybody is vaccinated – even in remote and insecure areas – we can keep measles and rubella from making a comeback in the Americas. ■

⁸The English-speaking Caribbean countries presented a sub-regional report to PAHO in 2013 stating that “In May 1991, in response to the resolution of the Caribbean Community, a mass vaccination campaign (catch-up) against measles was conducted for children from nine (9) months to fourteen (14) years old. Since the implementation of the 1988 CARICOM resolution in May 1991, there have been no endemic cases of measles in the member countries, making this sub-region the first to have implemented elimination activities and to have achieved measles-free status.”

“Today, let us celebrate. The elimination of measles and rubella in the America benefits children and families and motivates many others around the world to continue working towards a vision of a world without measles and rubella. Congratulations.”

—Dr. Mary Agocs, Senior Advisor for the Measles and Rubella Initiative of the American Red Cross

Remembering the Moment: Measles Elimination in the Region

The declaration of measles elimination in the Region of the Americas took place at the 55th Directing Council in Washington, DC, USA on 27 September 2016. Many important moments from this declaration can be found online as saved Facebook live streams and YouTube videos. The following is a list of some of these resources.

• **Facebook Live Streams:**



Press Conference on Measles Elimination at the 55th Directing Council (<http://bit.ly/2iCOJUD>)

How Did the Americas Eliminate Measles From the Region? (<http://bit.ly/2iaSZyl>)

• **YouTube Video Playlist:**

(Available online in English and Spanish via <http://bit.ly/2j2SFRs>)

Measles Elimination – 55th Directing Council	
Press Conference – Measles Elimination DC55	
Region of the Americas is Declared Free of Measles	
How did the Americas Eliminate Measles from the Region?	
Measles Elimination in the Americas	

Workshop on High-Quality Follow-Up Campaigns for Measles and Rubella Conducted in Peru



Participants at the Measles/Rubella Vaccination Campaign Workshop in Lima, Peru, June 2016. Photo credit: PAHO-Peru.

Workshop participants included the managers of immunization program from the four countries that implemented follow-up campaigns this year: Honduras, Mexico, Nicaragua and Peru.

Also in attendance were nine experts on vaccination campaigns, including PAHO immunization focal points from Nicaragua, Peru and Mexico and individuals from PAHO’s Washington, DC headquarters.

The purpose of the workshop was to identify the key factors involved in conducting high-quality measles/rubella follow-up vaccination campaigns, as well as the challenges involved in order to maintain high levels of population immunity. Efficacy, efficiency, homogeneity and opportunity were identified as the key criteria that determine a high quality campaign.

The workshop was planned with specific objectives, including:

- Conducting an analysis of the strengths,

See **MEASLES WORKSHOP** on page 6

Follow-up vaccination campaigns are fundamental to guarantee the sustainability of measles and rubella elimination. It is therefore necessary to invest more efforts into planning, implementing and evaluating the results of these campaigns, to ensure that all children in the campaign’s target

group (1-4 years old) have a second opportunity to receive a dose of the measles-rubella vaccine.

PAHO organized a workshop in Lima, Peru on 30 May – 3 June 2016 to advance in the development of tools that will be universally applied to all of the countries in the Region.

“I want to stress that our work is not yet done. We must not become complacent with this achievement, but rather protect it carefully. Measles still circulates widely in other parts of the world, and so we must be prepared to respond to imported cases. It is critical that we continue to maintain high vaccination coverage rates, and it is crucial that any suspected measles cases be reported to the authorities immediately. Today, however, we can all celebrate what is truly an extraordinary milestone and congratulate everyone who played a role in getting the job done!”

— Dr. Carissa F. Etienne, Director of the Pan American Health Organization

WORKSHOP continued from page 5

weaknesses, opportunities and threats pertaining to both the success factors and challenges that countries must confront in order to implement high-quality follow-up campaigns.

- Identifying the necessary steps for the countries to fulfill the basic requirements of a high quality campaign: opportunity, efficiency, homogeneity and efficacy.
- Reviewing and discussing the WHO document: *“Planning and Implementing High Quality Supplementary Immunization Activities for Measles and Rubella and other Injectable Vaccines.”*
- Reviewing and discussing two PAHO publications in development.

During the workshop, a consensus was reached regarding the key components to be included in the *Guide for High-Quality Campaign Planning in the Americas*, a PAHO publication which is

being formulated around the structure of the WHO document, in order to maintain adherence to technical guidelines at the global level in the Americas.

Additionally, a draft version of the *Manual for Post-Campaign Rapid Vaccination Monitoring* was reviewed. This manual will be used as the standard tool to find pockets of unvaccinated children after conducting follow-up campaigns in any country of the Americas.

Both of the above mentioned publications should be finalized in the near future, to begin implementing them in 2017. Honduras, Mexico, Nicaragua and Peru are planning to conduct pilot tests of the *Manual for Post-Campaign Rapid Vaccination Monitoring* and will select two or three municipalities in an attempt to measure efficacy in achieving the assigned goal, efficiency in cost per vaccinated child, homogeneity in administrative

coverage reached among their locations and opportunity in the timely preparation for each phase of the vaccination campaign.

The planned objectives for the workshop were fully completed and the next steps are to consolidate the edits made to the *Manual for Post-Campaign Rapid Vaccination Monitoring and the Guide for High-Quality Campaign Planning in the Americas*, develop a final version of each guide, promote the collection of campaign operational cost data from 2-3 municipalities in three countries of the Region that will be conducting campaigns and promote the use of the *Manual for Post-Campaign Rapid Vaccination Monitoring*, to validate this tool in the field prior to publication.

Counting on follow-up campaigns that meet the four criteria for high-quality will sustain achievements in the long term. ■

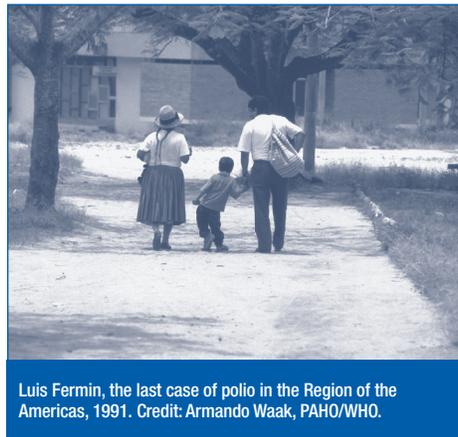
25 Years without Polio in the Americas

In August 2016, the Region of the Americas celebrated 25 years without polio cases caused by wild poliovirus.

The Americas led the way in the fight against polio and was the first Region in the world to establish the goal to eliminate the disease. By 1991, the Region detected the last cast of polio caused by wild poliovirus. Twenty-five years later, the world is now closer than ever to being polio-free, and despite so many years since the last case in the Americas, all countries in the Region have been steadily working hard towards keeping the Americas polio-free and achieving the objectives outlined in the Polio Eradication and Endgame Strategic Plan. Between 2015 and 2016, 32 countries in the Region introduced one dose of the inactivated poliovirus vaccine (IPV) into their routine immunization schedules and in April 2016, 36 countries and territories in the Region participated in the synchronized global switch from the trivalent oral polio vaccine (tOPV) to the bivalent vaccine (bOPV), reaffirming the Americas' commitment to achieve global polio eradication.

Looking back

In 1985, at the 31st Directing Council, the PAHO/WHO Member States passed a resolution declaring to eliminate polio in the Americas by 1990. The last endemic case of wild poliovirus in the Region occurred on 23 August 1991 in Pichinaki, Department of Junín,



Luis Fermin, the last case of polio in the Region of the Americas, 1991. Credit: Armando Waak, PAHO/WHO.

in Peru. Three years later, in 1994, the International Commission for the Certification of Poliomyelitis Eradication, an independent commission tasked with overseeing regional polio eradication efforts, declared the Americas to be polio-free.

Elimination methods

The Region achieved polio eradication through high vaccination coverage (>95%), active and high quality acute flaccid paralysis (AFP) surveillance, laboratory diagnostic capacity, and adequate outbreak control. The countries of the Americas did not create a special structure for polio eradication, but rather eliminated polio through strengthening the routine immunization programs that were already in place. This created a lasting legacy that not only impacted immunization programs, but also supported other health systems in the Americas, which was documented in the 1995 Report of the Taylor Commission.⁹

Sustaining elimination

The Americas have sustained polio elimination in the Region through the same methods used to rid the Region of the disease, including consistent and high polio vaccination coverage at national and sub-national levels, high quality AFP surveillance systems and a network of polio diagnostic laboratories.

Looking forward

Remarkable progress has been made toward achieving global polio eradication. Currently, polio is endemic to only these countries: Afghanistan, Nigeria and Pakistan. The fewest number of polio cases ever were reported this year, with only 26 cases as of September 2016, compared to 74 cases in 2015.

However, until polio is eradicated in every corner of the globe, the Americas need to continue maintaining high vaccination coverage and strive to meet the AFP quality surveillance indicators. Countries need to uphold their commitment and work towards achieving the goals outlined in the Polio Eradication and Endgame Strategic Plan, including the destruction or containment of all polioviruses, wild, vaccine-derived and Sabin.

Twenty-five years strong, and still fighting. We are writing the last chapter of a multi-decade effort of multi-disciplinary health workers. Soon, children will never be paralyzed by this disease again, anywhere. The legacy of polio eradication will go down in public health history. ■

⁹Taylor Commission, *The impact of the Expanded Program on Immunization and the Polio Eradication Initiative on health systems in the Americas*. Washington, DC, Pan American Health Organization, 1995.

Measles/Rubella/Congenital Rubella Syndrome Surveillance Data, Final Classification, 2015*

Country	Total Measles/Rubella Suspect Cases Notified	Confirmed Measles Cases			Confirmed Rubella Cases			Congenital Rubella Syndrome Cases (CRS)	
		Clinical	Laboratory	Total	Clinical	Laboratory	Total	Suspected	Confirmed
Anguilla	2	0	0	0	0	0	0	0	0
Antigua & Barbados	1	0	0	0	0	0	0	0	0
Argentina	413	0	0	0	0	0	0	113	0
Aruba	—	—	—	—	—	—	—	—	—
Bahamas	0	0	0	0	0	0	0	0	0
Barbados	17	0	0	0	0	0	0	0	0
Belize	45	0	0	0	0	0	0	1	0
Bermuda	3	0	0	0	0	0	0	0	0
BES**	—	—	—	—	—	—	—	—	—
Bolivia	115	0	0	0	0	0	0	0	0
Brazil	5809	33	181	214	0	0	0	89	0
Canada	—	—	196 ^a	196 ^a	—	0	0	—	—
Cayman Islands	0	0	0	0	0	0	0	0	0
Chile	703	0	9	9	0	0	0	135	0
Colombia	2230	0	1	1	0	0	0	508	0
Costa Rica	48	0	0	0	0	0	0	0	0
Cuba	1247	0	0	0	0	0	0	0	0
Curaçao	0	0	0	0	0	0	0	0	0
Dominica	0	0	0	0	0	0	0	0	0
Dominican Republic	118	0	0	0	0	0	0	0	0
Ecuador	337	—	—	—	—	—	—	—	—
El Salvador	266	0	0	0	0	0	0	0	0
French Guiana	2	0	0	0	0	0	0	0	0
Grenada	3	0	0	0	0	0	0	0	0
Guadeloupe	1	0	0	0	0	0	0	0	0
Guatemala	176	0	0	0	0	0	0	24	0
Guyana	25	0	0	0	0	0	0	0	0
Haiti	170	0	0	0	0	0	0	32	0
Honduras	197	0	0	0	0	0	0	16	0
Jamaica	139	0	0	0	0	0	0	0	0
Martinique	0	0	0	0	0	0	0	0	0
Mexico	4645	0	1	1	0	0	0	0	0
Montserrat	0	0	0	0	0	0	0	0	0
Nicaragua	161	0	0	0	0	0	0	49	0
Panama	72	0	0	0	0	0	0	1	0
Paraguay	568	0	0	0	0	0	0	0	0
Peru	671	0	4	4	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	0	0	0	0	0	0	0	4	0
St. Vincent & the Grenadines	0	0	0	0	0	0	0	0	0
Suriname	42	0	0	0	0	0	0	1	0
Trinidad & Tobago	10	0	0	0	0	0	0	1	0
Turks & Caicos	0	0	0	0	0	0	0	0	0
United States	—	—	188 ^a	188 ^a	—	3	3	—	1
Uruguay	10	0	0	0	0	0	0	0	0
Venezuela	673	0	0	0	0	0	0	3	0
Virgin Islands (UK)	1	0	0	0	0	0	0	0	0
Virgin Islands (US)	—	—	—	—	—	—	—	—	—
Total	18,920	33	580	613	0	3	3	977	1

*Data as of 30 September 2016; (a) imported cases or cases related to importation; **Bonaire, St. Eustatius and Saba, — No information provided

Source: ISIS, MESS systems 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.

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.

ISSN 1814-6244

Volume XXXVIII Number 3 • September 2016

Editor: Hannah Kurtis

Associate Editors: Cuauhtémoc Ruiz Matus and Octavia Silva

©Pan American Health Organization, 2016.
All rights reserved.

Comprehensive Family Immunization Unit

525 Twenty-third Street, N.W.
Washington, D.C. 20037 U.S.A.
<http://www.paho.org/immunization>



**Pan American
Health
Organization**



**World Health
Organization**
REGIONAL OFFICE FOR THE
Americas

COLUMN: What I Have Learned...

By Dr. Susan Reef, Medical Epidemiologist in the Global Immunization Division at the United States' Centers for Disease Control and Prevention (CDC)

During my 24 years in public health, I have worked with many talented, dedicated and passionate people. I have learned so much from them and their lives have helped to shape my life and career. In 1992, I was accepted into CDC's Epidemic Intelligence Service (EIS) training program; and in 1994, I joined the CDC's National Immunization Program, working mainly on rubella and congenital rubella syndrome. This opportunity changed the course of my career. Rubella is a very important disease whose most serious consequence is congenital rubella syndrome (CRS); however, rubella was not as prominent as polio (with the global eradication initiative), measles or chickenpox (with a newly licensed vaccine in the United States in 1995).

After learning about rubella and CRS, I decided to focus on pursuing the elimination of rubella. In addition to my domestic responsibilities in the United States, I started working with PAHO in 1996. In the Caribbean, the importance of rubella and CRS were recognized and in the late 1990s, a rubella and CRS elimination goal by 2020 for the Caribbean was established and subsequently achieved. At that point, I met Ciro De Quadros and Carlos Castillo from PAHO. Their passion, dedication and drive to push acceleration of the control of rubella was remarkable; it was their



Photo courtesy of Dr. Susan Reef.

energy and commitment that led to the establishment in 2003 of the goal of rubella and CRS elimination by 2010 for the Region of the Americas. In my collaboration with PAHO over the years, I have met so many amazing EPI managers and staff working in the Americas who have made all these achievements and others, possible.

In the late 1990s, as the United States pushed toward rubella and CRS elimination, I also met two very influential physician-scientists, Drs. Stanley Plotkin and Louis Cooper. Their insight, depth of knowledge, passion and desire for the elimination of rubella and CRS inspired me then and continues to help me focus on what needs to get done. One of the highlights of my career was the announcement at the United States National Immunization Conference that rubella and CRS elimination had been achieved in the United States. The cheers and excitement from state and

local health department staff were thrilling. They are the ones who achieved this goal!

Since 2000, I have traveled to many countries to work on rubella and CRS elimination; and over the last 15 years, I have worked with dedicated scientists and public health staff in other regions and at the global level. Some notable achievements have been the publication of the revised WHO rubella position paper in 2011, the decision by GAVI to support rubella vaccine introduction with funds of over \$500 million in 2011 and the declaration of the elimination of rubella and CRS in the Region of the Americas in 2015.

Throughout my career, the qualities that public health and medical staff have inspired in me are dedication, passion and the drive to do the right thing. With these qualities, great achievements can occur, as we have witnessed in rubella and CRS prevention throughout the world. ■

The objective of the "What I Have Learned" column is to provide a space for immunization professionals from across the Americas to share their unique experiences and lessons learned. Individuals who are interested in authoring a column are encouraged to contact Octavia Silva at silvao@paho.org.