

# Immunization Newsletter

Pan American Health Organization

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Immunize and Protect Your Family

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## Strengthening Immunization Records in Peru with the ODK Mobile App

In Peru, traditional immunization registries were recorded on paper forms before being entered into databases, presenting a challenge to obtaining timely immunization information. Moreover, the status of yellow fever vaccination coverage in populations over 2 years old is unknown.

Peru's Ministry of Health and the region of Junin's government joined efforts to improve the quality of immunization registries in the campaign against yellow fever, oriented to protect susceptible populations in the provinces of Chanchamayo and Satipo (where an outbreak had occurred), using an application in Open Data Kit (ODK) on Android mobile devices running Android iOS 1.6 or newer. Once installed, a form is loaded.

In Peru, every person has a national identification card (*Documento Nacional de Identificación* [DNI]) that includes their name, date of birth, gender, address and bar code. The app automatically records the vaccination date and GPS location and scans the DNI bar code for the remaining data. The app also records the vaccine batch expiration date and health network information. If the person being vaccinated does not have a DNI on hand, it is also possible to register the information using a questionnaire included in the app.



Mobile phone application for yellow fever immunization registries. Credit: Ministry of Health, Peru.

The data is not only recorded in each mobile, but also submitted automatically to an online server using the internet. If locations do not have internet connectivity, the recorded data is sent when an internet access point becomes available. A total of 650 health workers in four health networks have been trained to use the device. The vaccination campaign was performed door-to-door in urban and rural areas.

More than 180,000 people in the Junin region have been vaccinated and all vaccinations have been registered using the mobile app, reaching 87% of coverage in the area. Most importantly, there were real-time data and immediate reports. The system has been very well accepted by health workers

who have reported, "cell phones and the app are easy to handle" and the "DNI scan is more practical since it contains all of the person's data." ■

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### IN THIS ISSUE

- |   |  |
|---|--|
| 1 Strengthening Immunization Records in Peru with the ODK Mobile App              | 5 The Joint Reporting Form                               |
| 1 Analyzing vaccination coverage in the Region of the Americas, 2011–2015         | 6 32 <sup>nd</sup> Caribbean EPI Managers Meeting        |
| 3 The Switch in the Americas: a Video-Documentary                                 | 7 The Steps of the JRF for 2017                          |
| 4 Re-introducing the Birth Dose of the Hepatitis B Vaccine in St. Kitts and Nevis | 8 COLUMN: What I Have Learned... by Dr. Karen Lewis-Bell |

## Analyzing vaccination coverage in the Region of the Americas, 2011–2015

Immunization programs in the Americas have contributed to achieving the Millennium Development Goals and they will be an important part of meeting the Sustainable Development Goals, preventing the deaths of about 174,000 children aged <5 years in Latin America and the Caribbean.

In September 2015, the 54th Directing Council of the Pan American Health Organization (PAHO) approved the Regional Immunization Action Plan (RIAP) as the guiding framework for immunization in the Region of the Americas. The purpose of the RIAP is to continue making advances in immunization, while identifying and overcoming challenges now facing the Region's countries. It is consistent with the WHO's Global Vaccine Action Plan (GVAP). Despite efforts made by countries to achieve the RIAP, increasing equal access to immunization has been a very slow process. With this article, we present an analysis of vaccination coverage in the Americas from 2011–2015.

The information for this analysis was obtained from reports sent by national ministries of health<sup>1</sup> through the PAHO/WHO/UNICEF Joint Reporting Form on Immunization (JRF), which is the Region's official data source. Countries report "administrative" coverage—that is, they divide the total number of administered doses reported from the immunization registries of routine programs (numerator) by the target population (denominator). In general, coverage with three doses of the DPT-containing vaccine (DPT3) in children aged <1 year is used as a tracer indicator for program performance.

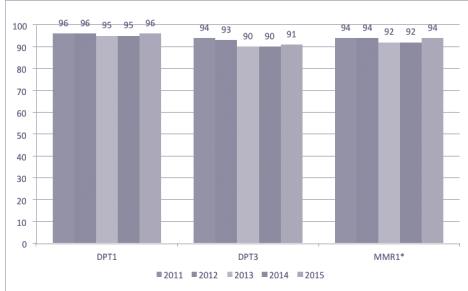
From 2011–2015, regional DPT3 coverage decreased, falling from 94% in 2011 to 91% in 2015. Additionally, in the last three years, a stagnant trend in coverage levels of 90–91% has been observed. During this period, DPT1 coverage exceeded DPT3 coverage every year, which indicates that children aged <1 year have access to vaccination (DPT1 coverage), but there is a problem in the follow-up of their vaccination schedules. However, these children do appear to be recaptured when the measles-containing

<sup>1</sup> Thirty-five Member States and six territories of the United Kingdom that reported data were included in the analysis. Three Dutch territories, three French departments and four other Member States that failed to report data were excluded.

**VACCINATION COVERAGE** continued from page 1

vaccine is administered at 1 year.<sup>2</sup> In 2015, the vaccine had better performance with 94% coverage, maintaining the tendency for all five years evaluated (figure 1).

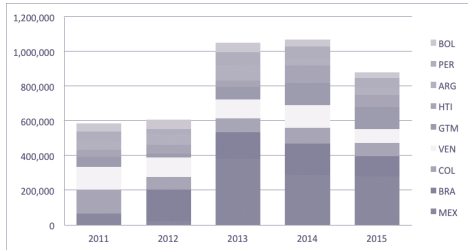
**Figure 1: Vaccination coverage by biological product, Region of the Americas, 2011-2015**



\*MMR1: first dose of the vaccine against measles, mumps, rubella.

In 2015, of the approximately 15,251,700 children aged <1 year in the Region<sup>3</sup>, 1,372,000 were not vaccinated with DPT3. As seen in figure 2, 75% of unvaccinated children in the Region live in seven countries. In the last three years, the number of unvaccinated individuals has increased in Mexico, which reported coverage levels almost 10 points lower than in previous years following modification of its information system due to data inconsistencies<sup>4</sup>. It is also noteworthy that Colombia, Guatemala and Venezuela are responsible for 30% of the non-vaccinated children aged <1 year, despite having only 12% of the cohort of children aged <1 year in the Region.

**Figure 2: Number of unvaccinated children (DPT3) by year and by country, Latin America and the Caribbean, 2011-2015**

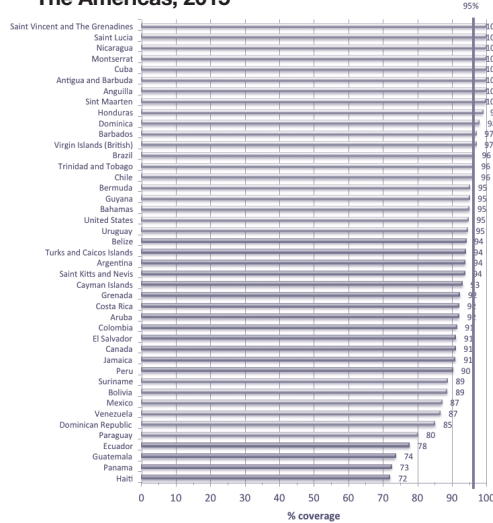


In 2015, of 41 countries and territories in the Region, 33 (80%) achieved greater than 90% coverage with DTP3, 20 (49%) achieved coverage greater than 95%, and four had coverage below 80% (figure 3). Coverage levels ranged from 72% to 100%.

Although Haiti is the country with the lowest coverage in the Region, the nation has made tremendous efforts to improve coverage, resulting in an increase from 60% in 2014 to 72% in 2015. In 2015, Honduras began using data from the XVII census completed in 2013 as its denominator. Compared to projections from the 2001 census, the new census shows a reduction in the number of children aged

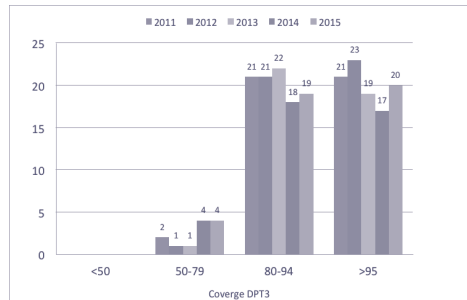
<1 year (30,246 children) and better reflects the true national vaccination coverage (99%). On the other hand, Panama was the country that experienced the greatest decrease in DPT3 coverage compared to 2014 (80% to 73%).

**Figure 3: Administrative Coverage DPT3, The Americas, 2015**



From 2011-2015, ten countries and territories have maintained DPT coverage greater than 95% for three consecutive years. As shown in figure 4, during 2011–2015, countries did not have a clear tendency to remain in one group or the other (> or <95%). In addition to the fact that improvements in coverage over 80% tend to occur very slowly, explanations for these findings include: 1) changes in measurement strategies (e.g., new information systems or modifications to the denominator); 2) marginal increases in coverage can occur due to timely interventions that are not monitored or maintained over time; and 3) decreases may result from reductions in human resources, supervision, or training, among other factors.

**Figure 4: Countries according to coverage range (DPT3). Region of the Americas, 2011-2015**

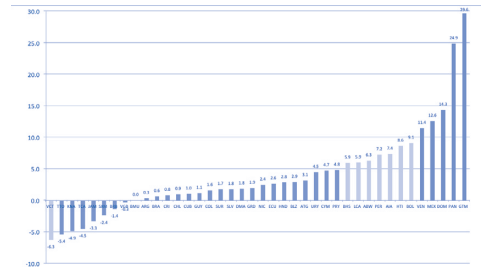


The dropout rate between the first and third doses of DPT in the Region is 6.4% — i.e., of 100 children who receive the first dose of DPT, six will not receive the third dose. If, however, we vaccinated the

children who already had contact with the system when they received the first dose, regional coverage would exceed 95%.

Fourteen countries have drop-out rates greater than 5% (figure 5). Guatemala, Panama, the Dominican Republic, and Mexico have the highest drop-out rates in the Region, revealing a problem in following up on cohorts of children. Countries with low coverage and low drop-out rates such as Ecuador have problems related to accessing health systems, since these countries can follow up on the children who receive the first dose. The Caribbean sub-region is characterized by negative drop-out rates, indicating the great mobility among the islands and variability in the denominator due to small populations.

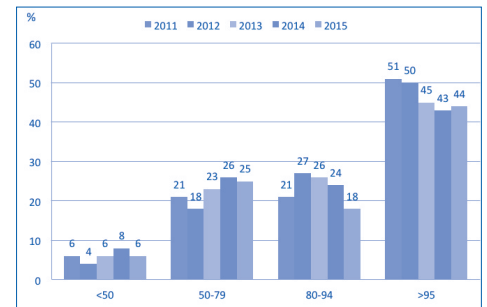
**Figure 5: Drop-out rate, DPT1-DPT3<sup>5</sup>, The Americas, 2015**



Both the GVAP and RIAP have established a municipal coverage indicator. Per the RIAP, the goal is that by 2020, 35 countries or territories achieve at least 80% DPT3 coverage in all districts or equivalent areas. By 2015, 13 countries met the goal of having 100% of their municipalities with coverages above 80% (figure 6).

Temporal evaluation of this indicator is strongly affected by factors such as the lack of political priority for immunization at the municipal level and the weak coordination among different administrative levels with overlapping responsibilities, which leads to monitoring and accountability activities not being completed.<sup>6</sup>

**Figure 6: Percentage of municipalities by coverage range (DPT3), Region of the Americas, 2011-2015**



Approximately half of the Region's 15,000 municipalities have coverage levels below 95%, and there are countries (e.g., Haiti, Peru, Bolivia,

<sup>2</sup> Haiti administers the measles-containing vaccine at age 9 months.

<sup>3</sup> United Nations, Department of Economic and Social Affairs, Population Division (2015). World Population Prospects: 2015 Review. New York. (<http://esa.un.org/wpp/>). WPP 2015: Linear interpolation using the midpoints of the five-year period to 1 January.

<sup>4</sup> Strategic Advisory Group of Experts on Immunization. World Health Organization. 2015 Assessment Report of the Global Vaccine Action Plan. ([http://www.who.int/immunization/global\\_vaccine\\_action\\_plan/SAGE\\_GVAP\\_Assessment\\_Report\\_2015\\_EN.pdf](http://www.who.int/immunization/global_vaccine_action_plan/SAGE_GVAP_Assessment_Report_2015_EN.pdf))

<sup>5</sup> Drop-out = (DPT1-DPT3) / DPT1\*100

<sup>6</sup> Strategic Advisory Group of Experts on Immunization. World Health Organization. 2016 Assessment Report of the Global Vaccine Action Plan. ([http://www.who.int/immunization/sage/meetings/2016/october/1\\_Draft\\_GVAP\\_Assessment\\_report\\_2016\\_for\\_Yellow\\_Book\\_28\\_Sep\\_2016.pdf?ua=1](http://www.who.int/immunization/sage/meetings/2016/october/1_Draft_GVAP_Assessment_report_2016_for_Yellow_Book_28_Sep_2016.pdf?ua=1))

**VACCINATION COVERAGE** continued from page 4

Dominican Republic, Venezuela and Colombia) that have municipalities with coverages below 50%.

In light of PAHO's Strategic Plan and the vision of the GVAP and RIAP, one area for impact is ensuring that immunization reaches everyone "no matter where they are born, who they are, or where they live." It is for this reason that in addition to an analysis of aggregate municipal data, an analysis of inequalities in immunization has been promoted.

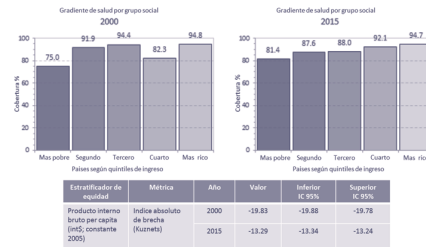
Although immunizations have reached approximately 90% of the Region's children, and resulted in such achievements as the elimination of polio, measles, rubella and congenital rubella syndrome, we must remember that 10% of the population has not been reached and acknowledge the social determinants of inequalities in immunization. To this end, in 2008, the Commission on the Social Determinants of Health made three general recommendations about working in the health sector: 1) prioritize universality in health, 2) view all policies in terms of health, and 3) measure the magnitude of the problem by evaluating population health as a function of change in social inequality: improving the population average by reducing inequalities.

In an exploratory analysis by PAHO's Sustainable Development Program of inequalities in DPT3 coverage among countries by income level, both globally and in the Americas, the following findings were noted:

- 1) During this time period, the Region of the Americas maintained 91% coverage, while the world increased coverage from 72% in 2000 to 86% in 2015.
- 2) For the world as a whole, as for the Americas in particular, DPT3 coverage remained much lower in the two lowest income quintiles in 2000 and 2015.
- 3) The absolute gap between the first and fifth quintiles (by income) in the Americas was

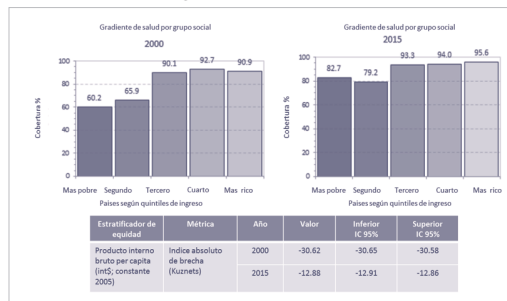
almost 20 points in 2000, but decreased to 13 points in 2015, a statistically significant difference (figure 7).

**Figure 7: Inequalities in DPT3 coverage by income, Region of the Americas, 2000-2015**



- 4) Inequalities persist in the world. However, the absolute gap in coverage decreased from 30 to 12 points during the same period, demonstrating that the world has made major progress in improving coverages in the poorest countries (figure 8). The impact of international cooperation in other regions of the world is likely evident here.

**Figure 8: Inequalities in DPT3 coverage by income at the global level, 2000-2015**



The challenges faced in ensuring that the benefits of immunization are achieved and maintained at their full potential, starting with the most vulnerable populations, require the investment and cooperation of different agencies.

- 1) From government:
  - a. Maintain and strengthen commitment to immunization programs by ensuring resources for all areas of the program as part of comprehensive universal health coverage.
  - b. Improve legal frameworks by protecting the financial sustainability of not only vaccines, but of all immunization program operations by creating mechanisms for systematic accountability at all levels.
- 2) From strengthened health services:
  - a. Extend immunization services (e.g., flexible schedules based on population dynamics) to ensure that all people have continuous access to vaccines, prioritizing the most disadvantaged populations.
  - b. Take advantage of integrated approaches within the health system (inputs, epidemiological surveillance, etc.) and other primary care interventions (deworming, vitamin A supplements, etc.)
- 3) From information systems that are useful for decision-making:
  - a. Ensure the management, analysis and use of quality data at all levels, including analyzing inequities to target interventions for the most disadvantaged populations.
- 4) From communication and social mobilization:

Although not evaluated in this analysis, the need to increase and maintain confidence in vaccines is well known. Specific events with great media impact have had repercussions on country programs. Accordingly, it is necessary to 1) systematically measure vaccination barriers and 2) based on these data, provide clear and specific information to each segment of the population. ■

## The Switch in the Americas: a Video-Documentary



Healthcare worker holds up tOPV and bOPV in "The Switch in the Americas."



Child receives bOPV vaccine in "The Switch in the Americas."

In 2016, 155 countries and territories from around the world made history in a coordinated global health effort that took the world one step closer to achieving global polio eradication.

During a two-week time period in April, the health sector swapped out the trivalent oral polio vaccine (tOPV) for the bivalent oral polio vaccine (bOPV), in what is known as the switch. Since this was a monumental event in global health history, PAHO

created a documentary video that will contribute to the polio legacy in the Americas. Released in December 2016, this video explains the fundamentals of why the world embarked on the switch journey, and how the countries in the Americas planned, implemented and supervised this process.

The video can be found in English ([www.youtube.com/watch?v=iPL9XQNH9h4](http://www.youtube.com/watch?v=iPL9XQNH9h4)) and Spanish ([www.youtube.com/watch?v=F9AaeQrWmbUJ](http://www.youtube.com/watch?v=F9AaeQrWmbUJ)). ■

*"The first heroes of this effort are the countries, national immunization programs and thousands of public health workers that every day look for children that haven't been vaccinated against polio."*

— Cuauhtémoc Ruiz Matus, Unit Chief, Comprehensive Family Immunization, PAHO

*"I think that the switch was a milestone for global public health. There has not been a similar experience in public health history – a moment where 155 countries united and in a coordinated and synchronized manner, withdraw one vaccine and start using another."*

— Cristina Pedreira, Regional Advisor, Comprehensive Family Immunization, PAHO

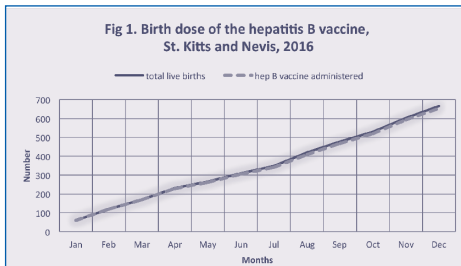
*"If we want to guarantee a world free of polio, we must ensure that the containment of poliovirus really is achievable."*

— Gloria Rey, Regional Advisor, Laboratory Network for Vaccine-preventable Diseases (VPD), Comprehensive Family Immunization, PAHO

*"We are writing the final chapter of polio history and I believe this is something that only happens once in a lifetime."*

— Patricia Arce Guzman, Sub-secretary of the Secretariat of Health, Bogota, Colombia

## Re-introducing the Birth Dose of the Hepatitis B Vaccine in St. Kitts and Nevis



Graph showing birth coverage of the hepatitis B vaccine.



Healthcare worker administering the hepatitis B vaccine to a newborn. Credit: Staff Nurse Mary Caines, neonatal unit, Joseph N. France Hospital.

In November 2015, the Federation of St. Kitts and Nevis successfully introduced the birth dose of the hepatitis B vaccine in order to prevent the mother-to-child transmission of hepatitis B among newborns, in addition to the existing strategy to prevent hepatitis B in childhood through completion of the three-dose hepatitis B vaccination schedule. Vaccination coverage was at 98% in the first year of implementation (2016) and this success was largely due to unequivocal political support at the highest level, the development of a structured approach to implementation, extensive social mobilization, teamwork among health care workers, community involvement and longstanding public confidence in the national immunization program.

More than thirty years ago, the Federation (of St. Kitts and Nevis) conducted a hepatitis B sero-prevalence study that revealed high prevalence rates of the hepatitis B virus (HBV) with the highest risk of acquiring the infection occurring during the perinatal period and in early school years. In response, St. Kitts and Nevis sought to introduce a plasma-derived hepatitis B vaccine to infants in 1988. The program, however, was discontinued due to public concerns around the risks associated with a plasma-derived product. In 1997, the recombinant monovalent hepatitis B vaccine was introduced among the child health population of 0-5 years old. In 2000, this was discontinued to accommodate the successful introduction of the hepatitis B vaccine as a part of the pentavalent combination given to infants at ages two, four and six months, as recommended. Typically given in a series of three doses, the vaccine provides protection from infection among more than

Planning and Programming	Programmatic Capacity	Social Mobilization	Epidemiological Surveillance	Monitoring and Evaluation
<ul style="list-style-type: none"> <li>Stakeholders meeting to present findings of study by PAHO's officials in July 2013 to the Ministry of Health</li> <li>Re-sensitization to public health providers in St. Kitts and Nevis January 2014, post EPI meeting</li> <li>Submission of proposal to policy-makers in February 2015 for modification of the immunization schedule to include birth dose of the Hepatitis B vaccine.</li> <li>Procurement of paediatric Hepatitis B vaccine from PAHO's Revolving Fund in 2015</li> <li>Capacity-building of nursing staff April-September 2015</li> </ul>	<ul style="list-style-type: none"> <li>Review cold chain capacity at central and regional levels prior to introduction</li> <li>Follow-up assessment of cold chain capacity and vaccine forecasting</li> <li>Develop guidelines to introduce the vaccine</li> <li>Record and documentation: Review immunization register to include the birth dose of the Hepatitis B vaccine</li> </ul>	<ul style="list-style-type: none"> <li>Development of a communication plan to sensitize antenatal clients, parents of newborns and the general public</li> <li>Publication and dissemination of leaflets and posters for parents and caregivers</li> </ul>	<ul style="list-style-type: none"> <li>Continue surveillance of selected vaccine-preventable diseases (VPDs) including Hepatitis B from current 21 sentinel sites</li> <li>Strengthen collaboration with private and public laboratories to ensure early notification of positive hepatitis B results.</li> </ul>	<ul style="list-style-type: none"> <li>Percentage of sentinel sites that submit reports weekly; at least 90%</li> <li>Notification rate: at least three (3) HepsAg-positive mothers per 1000 live birth annually</li> <li>At least 80% of cases where an adequate sample was sent for testing for HBsAg</li> <li>At least 80% of positive cases with timely investigations</li> <li>Conduct monthly field visits for the first 6 months to ensure adherence to protocols</li> <li>Monthly charting of Hepatitis B coverage to reflect progress</li> </ul>

Plan of Action to introduce the hepatitis B vaccine among newborns in St. Kitts and Nevis.

95% of healthy infants.

The Federation continued monitoring the prevalence of hepatitis B in the population and collaborated with the Caribbean Epidemiology Centre (CAREC) and PAHO in 2011-2012 to conduct a sero-prevalence study to assess the response to the vaccine. A representative sample (n=317) was selected from the antenatal population in both the public and private sectors. The results of the study revealed that 3.2% of the pregnant women tested positive for the hepatitis B surface antigen (HBsAg) and 52.4% of the pregnant women tested negative for anti-HBs (hepatitis B surface antibody).

The findings of the study informed the recommendation for changes to the immunization policy and schedule to re-introduce the birth dose of the recombinant hepatitis B vaccine with inoculation given within 24 hours of birth, as per the WHO's 2009 recommendation. Subsequently, PAHO's Technical Advisory Group on Vaccine-preventable Diseases (TAG) urged countries who had not yet introduced the hepatitis B birth dose to do so. The vaccine reduces the likelihood of developing an HBV infection by 3.5 times among infants born to infected mothers. Almost all births occur at the lone public hospital on each island and all births are supervised by a trained health worker, thus facilitating easier access to the vaccine at birth and easier access to a trained service provider administering the vaccine within the first 24 hours to achieve the maximum benefit.

A plan of action was developed, including planning and programming, programmatic capacity, epidemiological surveillance, social mobilization and monitoring and evaluation.

### Social mobilization

Informational leaflets and posters were developed and disseminated at public and private antenatal and delivery sites and parents were sensitized prior to re-introduction. There was mass media coverage through radio, newspapers and online news websites. Communication messages on the safety of the vaccine were geared towards parents.

### Programmatic capacity

Guidelines on the hepatitis B birth dose were developed and health care workers were trained in its use. All maternity staff was trained on the administration of the vaccine to ensure that it is administered by a trained health worker immediately after birth. The maternity staff was reminded that administering a vaccination or injection after birth was not a new practice, as they were already administering the Vitamin K injection and have been trained in injection techniques. The staff was also supervised in the first month of introducing the vaccine by the community nursing staff until they became comfortable with the technique.

### Cold chain management

Vaccine refrigerators were procured through joint efforts between a non-governmental organization and the Ministry of Health and installed on the hospitals' neonatal units. Cold chain assessments were conducted to provide updates on the current cold chain status and assess the cold chain requirement not only for the introduction of the hepatitis B vaccine among newborns, but also to project the cold chain requirement for the introduction of other vaccines in the pipeline.

HEP B continued from page 4

### Monitoring and evaluation

Monitoring indicators were developed with special emphasis on coverage, cold chain, vaccine supply, hepatitis B-positive mothers, premature newborns and events supposedly attributable to vaccination or immunization. Weekly supervisory visits were made to the hospital neonatal units and monthly reports were submitted. Follow-up and continued vaccinations of infants were done at child health clinics.

### Documentation

Accuracy of documentation was ensured through the use of a hepatitis B vaccine log book at neonatal units and simultaneous recordings of vaccines given in neonatal charts, birthing logs, clinic-based records and take-home child health records.



Healthcare workers at the hepatitis B training.  
Credit: Eulynis Brown, EPI Manager, St. Kitts and Nevis.

### Impact

There has been 100% acceptance of the hepatitis B vaccine birth dose, with 98% coverage since

its introduction. Looking ahead, in addition to monitoring hepatitis B vaccination coverage, the Federation of St. Kitts and Nevis would benefit from conducting a seroprevalence study among the accumulated cohort of vaccinees in at least five years, i.e. the cohort of children aged 4-5 years at the time of the study. Such evidence would support documentation of the elimination of vertical and horizontal hepatitis B transmission in the country. ■

**Contributed by:** Eulynis Brown, Ermine Jeffers, Rhonda Lowry-Robinson, Sonia Daly-Finley, Aldris Pemberton-Dias, Retna Walwyn Brown, Hazel Laws, Ministry of Health, St. Kitts and Nevis; Patrice Lawrence-Williams, Karen Lewis-Bell, Pan American Health Organization.

## The Joint Reporting Form

The joint reporting form (JRF) is a tool used to collect annual up-to-date information on the structure, policies, performance and impact of national immunization systems. The objective of this process is to obtain accurate and current data on the progress of immunization programs from all WHO/UNICEF Member States globally and disseminate information to all immunization stakeholders. The data reported through the JRF is the official country information source and is available online at [www.paho.org/immunization/data](http://www.paho.org/immunization/data).

Since the 1980's, the Comprehensive Family Immunization Unit of the Pan American Health Organization (PAHO) has collected data on immunization indicators and vaccine-preventable diseases. Originally, a DOS-based system (known as "PAISIS") collected morbidity, mortality and population data, as well as doses administered to calculate administrative coverage. Over the years, several other questions were added to what became known as the "PAHO EPI Tables," including items regarding morbidity and mortality by age group, coverage by municipality, immunization schedule, system performance indicators, financing data and safety. Initially, data were requested quarterly and later bi-annually. In 1997, the World Health Organization (WHO) and the United Nations Fund for Children (UNICEF) joined efforts to collect immunization-related data as many program indicators were being collected and used by both organizations, thus the WHO/UNICEF JRF was born.

In November 2004, a global meeting was held to exchange experiences about current regional data collection and analysis processes, gain consensus on the 2005 version of the JRF (2004 data), revise the content and streamline the collection process of the WHO/UNICEF JRF data. Participants included representatives from all WHO Regions (including

PAHO), UNICEF and members of WHO's department on Immunization, Vaccines and Biologicals. At the meeting, the core immunization data to be collected from throughout the world were determined and agreed upon. In 2005, the PAHO EPI Tables merged with the WHO/UNICEF JRF using the name PAHO-WHO/UNICEF JRF.

Since then, the contents, format and schedule for data collection have been defined jointly by both the WHO's headquarters and its regional offices. Regions are free to make modifications and additions to accommodate regional immunization strategies and priorities. The forms are reviewed every two years and the last JRF review took place in November 2016.

The process of completing the JRF starts in February each year, when PAHO sends the JRF to the countries in the Region of the Americas and then countries fill out the forms with participation from all areas responsible for the Expanded Program on Immunization (EPI) (surveillance, laboratory, finances, etc.). The deadline for sending the forms is 15 April each year. The process of revision and validation starts at PAHO headquarters and feedback is given to the countries regarding inconsistencies, missing data and other problems, requesting their clarification. It is important to highlight that if countries don't respond to this feedback given or submit on time, there may be data gaps, delays in publication of official data and dissemination of imprecise information.

The information from the JRF is disseminated in at least three of PAHO's printed publications: the Immunization Newsletter, the "Immunization in the Americas" brochure and immunization country profiles. Similarly, WHO and UNICEF use JRF data to produce annual publications, articles and reports with worldwide distribution.

### Progress made in 2015–2016

After over a decade of using the JRF tables and applying recommendations from WHO's Strategic Advisory Group of Experts (SAGE) working group on the Global Vaccine Action Plan (GVAP)<sup>7</sup> and PAHO's Technical Advisory Group on Vaccine-preventable Diseases (TAG), in 2015 country workshops started focusing on improving the quality of the data reported in the JRF. These workshops have aimed at identifying and addressing the various obstacles encountered in the completion and submission of the tables, for example, inconsistencies in the data, missing data and late submissions. In 2015 and 2016, PAHO organized JRF workshops in Panama (14 Latin American countries attended in July 2016), Guyana (during the 31<sup>st</sup> annual Caribbean EPI Managers Meeting (24 Caribbean countries attended in November 2015) and Grenada, during the 32<sup>nd</sup> annual Caribbean EPI Managers Meeting (29 EPI representatives from the Caribbean attended in November 2016).

Because the JRF is one of the main sources of information feeding the monitoring and evaluation cycle of the GVAP, the Regional Immunization Action Plan (RIAP)<sup>8</sup> and other global initiatives, the quality of its data is fundamental and counting on quality information from the countries can have a global impact. This was kept in mind during the meetings held in Guyana, Panama and Grenada, with PAHO and participating Member States working together to identify the main problems, barriers and potential solutions to ensure JRF data quality for opportunity, completion and integrity of information. The participants developed a more comprehensive, consistent and critical focus on reporting to the JRF and on the use of its data to feed the development and evaluation of national immunization policy.

On the other hand, Member States requested

<sup>7</sup> The WHO's Global Vaccine Action Plan 2011-2020 can be accessed in English, Spanish and French at <http://bit.ly/1i7s8s2>

<sup>8</sup> The Regional Immunization Action Plan can be found as "CD54/7, Rev. 2" in English and Spanish at the following link: <http://bit.ly/2urh0bP>

JRF continued from page 5

that PAHO improve feedback on the use of the information gathered from the JRF, as well as facilitate the data collection, variable collection and variable automatization processes.

As a conclusion to the workshops, PAHO and the countries of the Region of the Americas committed to improving the completion, submission, validation and cooperation for the JRF, as well as using the skills acquired to both facilitate data collection and reporting and guide the systematization of analyzing this data within the analytical system of the countries' EPIs.

With all of the information obtained from these workshops, PAHO attended a meeting organized by WHO in October 2016 in Kigali, Rwanda, with the objectives of (1) reviewing and agreeing on the core data items and any regional modifications for the 2016-2017 JRF; (2) establishing the schedule for finalization of the form, transmission of the form to national programs, return receipt, analysis and dissemination of these data (a common schedule for data collection and analysis is necessary to ensure comparability and consistency across regions and agencies); (3) discussing strategies to improve the quality and use of immunization data at local, national, regional and global levels; and (4) brainstorming ways to better analyze, package and communicate immunization data for use by all stakeholders. During this meeting, PAHO presented the main results from the workshops, in addition to discussing the Region of the America's technical opinion on what is required information at the regional and global level.

#### Recommendations from the meeting in Rwanda and workshops in Panama, Guyana and Grenada

- Improve collaboration and strengthen support to country offices to improve data collection for the JRF



Participants from the JRF workshop in Panama, July 2016. Credit: Marcela Contreras/PAHO.



Capturing the JRF/RIAP workshop in Grenada, November 2016. Credit: Marcela Contreras/PAHO.



Capturing the JRF/RIAP workshop in Grenada, November 2016. Credit: Marcela Contreras/PAHO.



Capturing the JRF/RIAP workshop in Grenada, November 2016. Credit: Marcela Contreras, PAHO.

- Improve coordination with UNICEF offices within country and regional offices throughout the JRF process
- Discuss modifications to the JRF with technical advisors at the regional level and complete justification sheets when adding or changing indicators to the JRF
- Prepare documentation on the JRF process
- Clarify and improve instructions on how to fill out the indicators in the forms
- Improve communication by providing feedback and addressing feedback from the countries regarding the requested and collected data
- Provide training or prepare easy-to-follow guidelines on how to complete the forms
- Define a focal person to collect the data for different topics in the countries
- Promote the JRF as a tool to collect the data that the countries are already collecting in regional and sub-regional meetings
- Organize meetings between those responsible for data collection and reporting to ensure that all persons and areas in charge of the information are familiar with the JRF
- Improve data automation in the JRF to make it easier to fill out
- Continue supporting countries and territories in the Region to ensure JRF data quality, as it is the official source to monitor adherence to the RIAP. ■

## 32nd Caribbean EPI Managers Meeting

Managers from the Expanded Programs on Immunization (EPI) in the Caribbean, public health professionals from the ministries of health for the Caribbean, PAHO representatives from the Comprehensive Family Immunization Unit and PAHO country representatives came together for the 32nd annual Caribbean EPI Managers Meeting in St. George's, Grenada on 28-30 November 2016.

The meeting aimed to review the status of the EPI program in the Caribbean, with a focus on the following objectives:

- Provide an update on topics related to immunization programs
- Develop country action plans to achieve goals set for 2017
- Discuss the sustainability of measles/rubella/congenital rubella syndrome (CRS) elimination in the Region

- Discuss implementation of the switch from tOPV to bOPV, as well as poliovirus containment
- Discuss the status of surveillance and management of vaccine-preventable diseases in the time of Zika
- Assess strategies for new vaccine introduction in countries

The overall goal of the meeting was to analyze achievements from 2016, as well as plan country activities for 2017. Regional achievements included measles elimination and the switch from tOPV to bOPV. In response to these achievements, newly risen challenges, such as strengthening acute flaccid paralysis (surveillance as part of the polio eradication endgame and the sustainability of measles, rubella/CRS elimination, were also discussed.

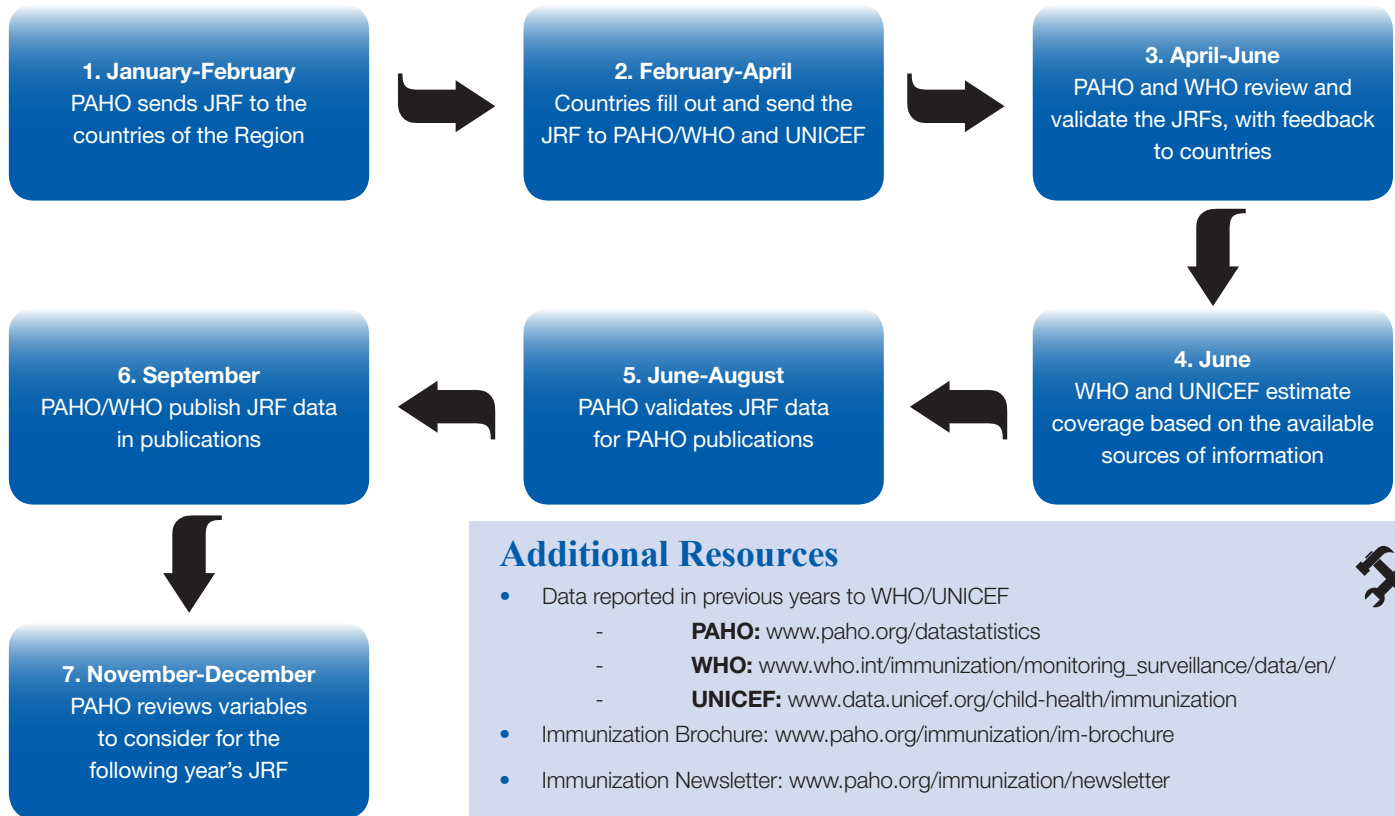
Workshops were held to develop country action

plans, plan for new vaccine introduction and review the Joint Reporting Form (JRF).

Experts presented updated information on a variety of topics, including fever/rash surveillance in the time of Zika, communication strategies for HPV and budgeting for vaccines procured through the Revolving Fund. Country representatives subsequently shared experiences from their respective immunization programs.

With the slogan of "Go for the Gold!" and featuring Jamaican Olympian Usain Bolt, Vaccination Week in the Americas (VWA) was highlighted by many countries, with an emphasis on the concurrent timing with the successful switch from tOPV to bOPV. Even with the continued success of the EPI, country managers were reminded to not remain complacent and focus on a vision for even stronger immunization programs for the future. ■

## The Steps of the JRF for 2017



### Additional Resources

- Data reported in previous years to WHO/UNICEF
  - **PAHO:** [www.paho.org/datastatistics](http://www.paho.org/datastatistics)
  - **WHO:** [www.who.int/immunization/monitoring\\_surveillance/data/en/](http://www.who.int/immunization/monitoring_surveillance/data/en/)
  - **UNICEF:** [www.data.unicef.org/child-health/immunization](http://www.data.unicef.org/child-health/immunization)
- Immunization Brochure: [www.paho.org/immunization/im-brochure](http://www.paho.org/immunization/im-brochure)
- Immunization Newsletter: [www.paho.org/immunization/newsletter](http://www.paho.org/immunization/newsletter)



### Do's and Don'ts of Filling out the JRF



- **Do** review instructions.
- **Don't** change anything in the forms (i.e. create new tabs, change tab names or change the formula in the non-protected cells).
- **Don't** leave blanks (complete all questions), otherwise, enter either **NA** (not applicable) or **ND** (no data). Most cells with automatic calculations can be overwritten.
- **Do** use the "Comments" boxes for additional information.
- **Do** send forms to responsible offices.
- **Do** submit forms on time.
- **Do** maintain communication with those responsible for filling out the tables, as well as with the country's immunization focal points.
- **Do** conduct final revisions of all tables with the immunization focal point to ensure:
  1. The correct completion of:
    - Table 2 (schedules)
    - Campaign reports
    - Late doses
    - Stock-outs
    - Supplementary activities
    - Table 9 (program financing vs. vaccine acquisition)
  2. The consistency of:
    - Tables 1 and 1A
    - Tables 4A and 5
    - Number of municipalities: cover page and table 6
- If you need updates on country data, **do** contact Carilu Pacis, Marcela Contreras or Martha Velandia.

### Why is the JRF important?



- It monitors the performance of national immunization programs.
- It is the official source for and monitors the progress of the global, regional and national Plans of Action (GVAP/RIAP).
- It is the foundation for assessing coverage estimates for WHO/UNICEF.
- It supports the decision-making process, estimates the burden of disease from VPDs and defines vaccination strategies.
- It reports on the vaccination status of countries in the Region of the Americas through publications:
  - Immunization Brochure
  - Country profiles
  - Immunization Newsletter
  - Basic health indicators in the Americas

Starting in 2015, the Immunization Newsletter is being 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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**Pan American  
Health  
Organization**



**World Health  
Organization**

REGIONAL OFFICE FOR THE **Americas**

## COLUMN: What I Have Learned...

*By Dr. Karen Lewis-Bell, PAHO Immunization Advisor, Caribbean Sub-Region*

Despite experiencing the epidemiological transition of diseases in most countries of the Caribbean and the emphasis now placed on the prevention and management of non-communicable diseases, we cannot overlook vaccine-preventable diseases and achievements made with polio, measles and rubella elimination. In the past 25 years since the last case of indigenous measles in the Caribbean, the importation of five cases reminds us of the vulnerability of the sub-region, welcoming some 21 million stop-over visitors and 18 million cruise ship visitors to our shores each year. The re-introduction of these diseases is a reality. The recent outbreaks of Zika have taught me that measles and rubella surveillance needs to be strengthened and not overlooked in times of national disease crises for us to sustain the elimination of these diseases.

Working with 25 countries and territories in the English and Dutch-speaking Caribbean over the past three years, I have come to learn that efforts must be sustained to keep the immunization program high on the priority list of ministries of health. With the natural attrition of healthcare workers, the majority of current national EPI managers have not seen most vaccine-preventable diseases and therefore have little appreciation of the magnitude of the attendant morbidity and mortality. Continuous training and sharing of current technical information is crucial to facilitate capacity-building and enhancing knowledge to support communication with parents and other stakeholders. Communication strategies and methods have to be changed with the increased use of social media and the continuous visibility of anti-vaccination groups. I have learned that the conversation needed to positively influence vaccine hesitancy or refusal must not



Photo courtesy of Karen Lewis-Bell.

only be rich in technical information and logical reasoning, but also appeal to emotions, morals and ethical beliefs. Risk communication and human interest stories on cases of vaccine-preventable diseases are important in this regard. The use of a high profile personality to champion the cause is also of great value and thanks to world champion sprinter Usain Bolt, this was achieved during Vaccination Week in the Americas (VWA) 2016.

2016 was a challenging year for EPI managers who no longer have immunization or child health as their only areas of responsibility. The plethora of reports and activities required of them made timely deliverables difficult. The increased influenza incidence and mortality faced by a number of countries, reports on the laboratory poliovirus containment, the tOPV to bOPV switch and the report on measles and rubella sustainability, in addition to regular activities like VWA and completion of the WHO/UNICEF Joint Reporting Form (JRF), took a toll on the country teams.

only be rich in technical information and logical reasoning, but also appeal to emotions, morals and ethical beliefs. Risk communication and human interest stories on cases of vaccine-preventable diseases are important in this

Ongoing communication, timely reminders, gentle persuasion and the use of both short-term consultants to assist with certain activities and simple templates were facilitating factors. I have also learned that when achievement targets are well-articulated and deadlines reasonably-spaced, the probability of completion is greater.

The Caribbean countries have been leaders in vaccine introduction, but have been lagging behind with the introduction of the human papillomavirus and pneumococcal conjugate vaccines. The costs of these newer vaccines have been the mitigating factor to introduction, despite the upper middle income classification of many countries. I have therefore realized that more effort is needed in convincing governments of the societal value of these vaccines and the need for equitable access. The use of economic studies and effective schedules, as well as innovative delivery strategies, will help in garnering the required commitment and support. I have also learned that introducing these vaccines purely on a voluntary basis with informed consent does not result in adequate protection.

Finally, I have learned that we need to be purposeful in expanding the benefits of vaccination to all and widening stakeholder involvement in advocacy to ensure that we attain and sustain 95% coverage for all antigens. ■

**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 [silvae@paho.org](mailto:silvae@paho.org).**