

Immunization Newsletter

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December Regional Meetings and Workshops held in Peru

Eighth Meeting of the RCC for the Polio Endgame in the Region of the Americas

The **Eighth Meeting of the Regional Certification Commission (RCC) for the Polio Endgame in the Region of the Americas** was held on 3-6 December in Lima. During this meeting, the RCC reviewed and provided feedback on a proposed format for annual country reports on polio eradication activities. The secretariat provided an update on the regional surveillance and vaccination coverage situation, presented advances with containment activities and proposed a strategy for increasing the visibility of polio eradication activities and highlighting the work of the countries in fulfilling the objectives of the Polio Eradication and Endgame Strategic Plan. Country delegations from high-risk countries were invited to private sessions with the RCC to inform on the challenges they are facing with polio eradication activities, including meeting coverage goals and surveillance indicators. Each country presented a risk analysis that they had conducted and actions they are taking in order to mitigate the identified risks. The RCC provided country-specific recommendations and will send a letter with these to the National Certification Committees (NCCs) of these countries.



Members of the Regional Certification Commission (RCC) for the Polio Endgame in the Region of the Americas, December 2017. Credit: PAHO/WHO.

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Pneumococcal Conjugate Vaccination in the Americas

In Latin America and the Caribbean (LAC), pneumococcus has been estimated to cause 12,000-28,000 deaths, 182,000 hospitalizations, and 1.4 million clinic visits annually. Countries in the Americas have been among the first developing nations to introduce pneumococcal conjugate vaccines (PCVs) into their EPIs. As of July 2017, 34 countries and territories in the Region of the Americas provide PCV10 or PCV13 as part of their routine national schedule. Twenty-seven countries have introduced PCVs, representing 90% of the birth cohort in LAC. Currently, eight countries use PCV10 and 19 countries use PCV13, representing 47% and 53% of the birth cohort in LAC, respectively. Almost all LAC countries use a PCV 2+1 schedule, though four countries use the 3+0 schedule.

In December 2016, a systematic review aimed at summarizing evidence of impact and effectiveness of PCVs on hospitalizations and deaths due to pneumonia, meningitis, and invasive pneumococcal disease (IPD) among children aged <5 years in LAC was published.¹ The search was conducted using Medline, WoS, Lilacs, Scopus and Central databases and gray literature published in any language from 2009 to January 2016. Inclusion criteria for this systematic review considered studies addressing the outcomes of interest among children in the target age group and the following designs: randomized trials, cohort or case-control studies, interrupted time series studies with at least three data points before and after the intervention, and before-after studies.

The screenings identified 1,085 citations, 892 from databases and 193 from other sources. Of these, 22 were included for analysis: 15 focused on PCV10 and seven on PCV13. Studies were from Brazil, Chile, Uruguay, Argentina, Peru, and Nicaragua. A descriptive analysis was performed based on effectiveness measurements provided or derived from the

¹ De Oliveira, PLOS ONE | DOI:10.1371/journal.pone.0166736.

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One Step Away from Making History: a World without Polio



Participants from the Fifth Regional Polio Meeting in Lima, Peru. Credit: PAHO/WHO.

The **Fifth Regional Polio Meeting**, held on 4-6 December with representatives from 28 countries, including participation from the Expanded Program on Immunization (EPI), Acute Flaccid Paralysis surveillance, NCC presidents and the polio reference laboratory

network. RCC members, chair of the Global Certification Commission and representatives from the United States Centers for Disease Control and Prevention, UNICEF, Rotary International, PATH, Task Force for Global Health and PAHO/WHO participated as well.

The purpose of this meeting was to build capacity for national teams to detect and respond adequately and opportunely to an importation of wild poliovirus or emergence of a circulating vaccine-derived poliovirus (cVDPV) and prepare for global certification and the post-certification era.

Regional New Vaccines Surveillance Workshop

From 6-8 December 2017, 65 participants from ten countries in the Region of the Americas attended a workshop in Peru on Regional New Vaccine Surveillance. The participants included the National Responsible for Epidemiology for New Vaccines Surveillance, the person at the national level responsible for laboratory for bacterial diseases and the PAHO immunization focal points for Argentina, Bolivia, Colombia, Ecuador, Honduras, Nicaragua, Paraguay, Peru and Venezuela.

The objectives of this meeting were to discuss the regional advances and challenges within the sentinel hospital epidemiological surveillance of bacterial pneumonia, bacterial meningitis and rotavirus, carry out data quality controls and discuss the next steps for the Global New Vaccine Surveillance Network.

The two-day workshop was split into three main topics: presentations from PAHO



Participants from the Regional New Vaccines Surveillance Meeting, Peru, December 2017. Credit: PAHO/WHO.

and sentinel hospitals about new vaccine surveillance in the Region, presentations and discussions on the new web-based system for vaccine surveillance and a review of data quality in the Region, as well as some practical training for the hospitals to investigate and describe their own data quality issues.

The main recommendations from the meeting included:

- It is important that data analyses be done at the local level.
- Laboratory quality control results are now available through the *Public Health England* website (www.ukneqasmicro.org.uk).
- It is important to remember that sentinel surveillance is part of a joint effort of the clinical, epidemiological and laboratory staff, coordinated with the immunization teams, which at the regional level becomes evident given that the program is part of the Regional EPI. This highlights the regional belief that the function of immunization programs is not only to vaccinate, but also to develop the immunization policies of their territories and to provide the evidence that is required in public health.
- PAHO/WHO needs to further investigate the need for offline access to the web-based system.

Starting in January 2018, sentinel surveillance data will only be received through the VINUVA cases tool. The PAHO team will be available to facilitate the use of this tool. Data in the Excel tool will no longer be accepted as the tool generates many problems.

Applying Tools to Monitor and Analyze the Data Quality of Vaccination Coverage

PAHO held a workshop to analyze and discuss vaccination coverage in the Region of the Americas in Peru, on 6-8 December 2017. 25 professionals from 14 countries with experience managing the Region's immunization programs participated in the workshop, along with a group of facilitators from PAHO.

During the meeting, a description was given on the vaccination coverage situation and on performance indicators from the Region's immunization programs, emphasizing the observed disparities at the municipal/district level or equivalent. Subsequently, country representatives presented on the

problems they have faced in trying to reach higher vaccination coverage and the innovative strategies they are implementing. These contributions enriched the group discussions, during which participants analyzed the major challenges facing the Region and the most viable national and regional interventions to overcome them. A group exercise conducted through



Participants at the meeting focused on tools to monitor and analyze the data quality of vaccination coverage, Peru, December 2017. Credit: PAHO/WHO.

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an electronic application led to consensus on the priority problems and interventions.

At the end of the workshop, the participants presented on some of the interventions that could be implemented in the short-term to overcome

problems in vaccination coverage. Improving stocks and access to vaccines, improving the reporting and registering of information, strengthening the training of human resources from the program, as well as the administrative personnel

from the ministry of health and/or finances were among the interventions mentioned. Finally, permanent communication campaigns that emphasize the benefits of vaccination were mentioned as part of the mentioned strategies. ■

Perspectives on the Sustainability of Immunization Programs in the Americas

In recent years, Expanded Programs on Immunization (EPIs) have faced internal and external challenges that place at risk the progress made in the control and elimination of VPDs. For this reason, a key element of program success is monitoring and ensuring program sustainability—i.e., the capacity to maintain at least the level of achievement attained to date. PAHO and Member States monitor programmatic sustainability through various indicators, including vaccination coverage rates and morbidity and mortality due to VPDs.

In the past five years, regional DTP3 coverage, the standard indicator to monitor immunization progress globally, has fallen short of the regional goal (>95%) and, in fact, continues to fall. Some countries have increased coverage levels or kept them the same, but a significant number have reported declining coverage. What's more, analysis of subnational coverage levels shows wide variations, indicating the existence of high-risk areas and populations.

During the 1980s and 1990s, the EPI at the country and regional levels showed steady progress with broad political and institutional commitments from governments to the program, resulting in a steady rise in coverage rates. In the first decade of this century, however, regional vaccination coverage stagnated, and the trend has continued downward in the first years of the 2010s. National EPI programs have required carrying a greater operational and financial burden that threatens the gains that have been made. In addition, national programs face a number of challenges, such as the high costs of new vaccines, financial crises, commercial and political

interests, health reforms, and misinformation about vaccines, among other factors.

Given these circumstances, the sustainability of the EPI should be prioritized at all levels of the organization. With this in mind, the financial, operational, and social sustainability of the program must be ensured. These three pillars, which are interdependent and yet have their own characteristics and dynamics, are key factors that threaten immunization program sustainability.

Challenges to financial sustainability include absent or insufficient legal frameworks, domestic financial crises, changes in resource mobilization and in financial resources allocation in countries, health reforms implemented without consideration of EPIs, high costs of new vaccines, and commercial interests. These conditions cause expenditures to be concentrated in vaccine procurement, delays in payment for vaccines, vaccine shortages, lack of infrastructure maintenance, scarcity of human resources, and lack of ongoing training and supervision.

Operational sustainability is affected by lack of financial resources, which can result in lack of trained health workers, lack of active supervision and oversight, absent or outdated infrastructure, and lack of supplies. Insufficient resources also result in missed opportunities for vaccination, lack of a timely and adequate response to outbreaks, lack of integrated immunization program management, poor coordination among program components, and waning commitment and failure to prepare the

next generation due to lack of motivation among personnel.

The role of society is also key to program sustainability. Current conditions indicate that there is insufficient information about the benefits and safety of vaccines; that existing information is inaccurate or misleading; that there is a public perception of low risk of acquiring VPDs as a result of the program's achievement, meaning that the program is a victim of its own success; and that decisions on vaccination are often political and not evidence-based. Consequences of this misinformation include indecisions about vaccination ("hesitancy"), the emergence of anti vaccination groups, lack of social and financial mobilization, higher program costs for communication campaigns, failure to prioritize the immunization program, missed opportunities for vaccination, and the resulting accumulation of susceptible persons.

Monitoring the immunization program's sustainability indicators has revealed the risk of losing gains that have been made, putting the Region at risk for the reintroduction of eliminated or controlled VPDs. PAHO and Member States must therefore seriously consider the analysis and recommendations of the Midterm Review of the GVAP and RIAP, which call on governments to exercise strong leadership and governance of EPIs. Each country faces different challenges. However, case studies presented to TAG, including examples from Argentina, Dominican Republic, Haiti, Mexico, and Venezuela, show common themes.

Recommendations

- TAG urges Member States to secure adequate financing for their immunization programs. Financing should cover not only vaccine procurement but also continued investment in infrastructure, human resources, and the programmatic activities needed to achieve immunization goals.
- TAG reiterates the importance of establishing a legal basis for immunization activities and financing to protect the sustainability of historic gains in the Region. To continue strengthening the legal basis of programs, TAG calls on PAHO to collect lessons learned regarding immunization laws and to facilitate exchanges among Member States.
- TAG requests that PAHO support countries in efforts to monitor the operational, financial, and social sustainability of EPIs. These activities should include country-tailored approaches and discussions about common challenges at the highest political levels in the Americas.
- Given the turnover of human resources and the rapid growth of program scope and responsibility, Member States are encouraged to prioritize training at the administrative and operational levels of their EPIs. ■

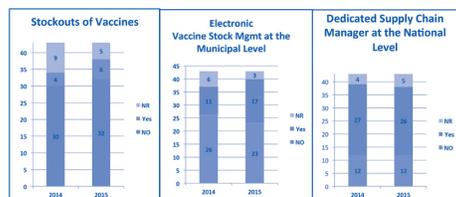
Strengthening Management of the Cold and Supply Chains in the Americas

Since the EPI's inception in 1977, the expansion of cold chain and supply chain operations have been two critical pillars for ensuring that vaccines remain potent until administration and thus have enabled numerous achievements in public health. PAHO has supported these operations in the countries by providing technical guidance and trainings and by supporting monitoring and evaluation activities of cold chain and supply operations.

After 40 years of expanding cold and supply chain operations, and introducing new more expensive vaccines, cold chain and logistics managers need real-time, quality information to support optimal operation of these systems and to support planning and quality improvement activities for the future. Another issue facing managers is the increase in target populations for vaccination. Therefore, having a first-class operation in each country will require that managers at all levels have the best data available to ensure that health services have the optimal doses of each vaccine so as not to disrupt the provision of immunization due to stock-outs. Countries should thus have robust vaccine management inventory systems to track each vaccine dose and other immunization ancillary equipment (syringes, cotton swabs, etc.). Each country should review the capacity of its inventory system to provide quality data and key reports such that managers at all levels can plan and make effective decisions.

Analysis of data from PAHO/WHO's JRF country reports on cold chain indicators for the period 2014-16 shows that four countries (12%) in the Region experienced stock-outs during 2014 and six (16%) during 2015. Additionally, 11 (30%) countries and 17 (42%) reported using electronic vaccines stock management systems. In 2014 and 2015, 27 countries and 26 countries, respectively, reported having dedicated supply chain managers at the national level.

Graph 1 Selected cold chain indicators, Latin America and the Caribbean, 2014-2015



*Source: Country reports to PAHO-WHO-UNICEF (JRF), 2014-2015.

*Source: Country reports to PAHO-WHO-UNICEF (JRF), 2014-2015

The 20 countries without stock-outs have electronic vaccine stock management systems at the district level. Conversely, the 10 countries with reported stock-outs indicated that they lacked electronic vaccine stock management systems at the district level. Of note, 33 countries indicated that they do not have a supply chain manager. Only three countries did not submit a response for these two indicators (Graph 1).

The number of countries that reported stock-outs or could not provide an answer on this issue suggests that several countries need to evaluate the management inventory system to assess their current

stock management system or to consider installing a digital inventory management information system.

Based on the above information, countries should continue strengthening: 1) management of cold and supply chain operations; 2) investment of resources to obtain first-class operations in cold and supply chains; 3) training in the use and understanding of the JRF form, such that reliable data are collected from all countries.

Due to the high cost of new vaccines and those in the pipeline, including the increasing number of doses, countries must also have a stock records management system to track each vaccine dose and its location. Countries lacking real-time information systems that cannot provide this information are highly encouraged to acquire the required software. PAHO offers a free version of such software, *Vaccination Supplies Stock Management (VSSM)*. Managing the stocks of vaccines and immunization-related supplies is essential to ensuring that each dose of vaccine remains potent and can be safely administered. To this end, PAHO has provided technical cooperation to install and train managers using the VSSM software.

VSSM provides managers with lot tracking, knowledge of vaccines and syringes expiration dates, monitoring of vaccine and supply stocks in each facility to avoid stock-outs, maximum and minimum stocks levels (including available storage capacity), and estimates of wastage rates for each vaccine and syringe. VSSM can also provide more than 40 status reports. The most recent version can be installed using a web-based platform and can be used to manage inventories of other medical supplies. In addition, the web-based version (wVSSM) provides all users with real-time information on the stocks of vaccines and immunization supplies. The wVSSM provides national managers the ability to "see" the vaccines and other supplies stocks, their conditions, expiration dates of products and the available quantities of vaccines and supplies, including the availability of storage capacity. These data permit managers to make the best decisions regarding the cold chain, supply chain, and logistics operations. VSSM is now installed in five countries, and 12 countries have been trained to use it. Three countries use wVSSM, and one country has expanded the use of wVSSM to other health services for managing stocks of other medical supplies (pharmaceuticals and medical devices).

Effective Vaccine Management (EVM) is a tool to assess the performance of a country's vaccine supply and cold chain operations. EVM uses nine criteria that cover the management and performance of cold and supply chain operations, from the point where vaccines arrive into the country, after being delivered from the vaccine manufacturer, to the point of delivery to the user. Since 2014, PAHO has supported four EVM assessments in Bolivia, Guyana, Honduras, and Nicaragua. (UNICEF supported the EVM assessment in Haiti). All four PAHO-supported countries achieved

EVM scores of >80% with Honduras earning the highest at 97%. These evaluations also revealed the need to replace aging cold chain equipment and the vehicles needed to distribute vaccines. Countries will be responsible for allocating financial resources to replace the aforementioned equipment. Decisions to purchase more equipment or to increase supply chain operations, to ensure that vaccine or supply stock-outs are avoided in all facilities, will depend upon economic and logistical evaluations. Accordingly, PAHO recommends that each country implement an EVM. Therefore, training in use of the EVM is urgently needed. This situation also indicates that all countries need to carry out a cold chain inventory every year at the national level.

PAHO will need resources to provide technical cooperation to support cold and supply chain assessments using EVM and to install VSSM as requested by countries. PAHO will also need funding to conduct trainings on cold chain management and vaccine handling, building cold rooms and use of new refrigeration technologies, and improving management information systems to support all operations. These activities will allow countries to document the safe storage of vaccines and avoid stock-outs in all health facilities.

Recommendations

- To improve all components of their cold and supply chains and vaccines operations management, Member States are encouraged to conduct effective vaccine management assessments and use findings to develop an action/improvement plan.
- Member States should be able to generate information in a timely and systematic manner to evaluate the critical aspects of vaccine supply and other operations. Member States are encouraged to enhance or adapt existing information systems to meet this objective. Member States may request assistance from PAHO to introduce and use VSSM.
- Member States should ensure periodic and standardized training of all healthcare staff, particularly in situations with high staff turnover, on the standards of cold chain and vaccine supply management.
- TAG calls on Member States to continue investing in cold and supply chains to maintain the Region's achievements in vaccination and to respond to the needs of new vaccine introductions. ■

Improving Access and Timely Supply of Vaccines/Syringes through the PAHO Revolving Fund

The PAHO Revolving Fund for Vaccine Procurement (RF) continues to be a key component of technical cooperation for immunization in the Americas and for the timely access of high quality vaccines to 41 countries and territories in the Region at the lowest prices. In addition to its contributions in eliminating VPDs, the RF continues to support the rapid uptake of new and under-utilized vaccines. Success has been a shared responsibility across the Region in confronting the challenges of global vaccine markets, implementing appropriate procurement strategies, refining accurate country vaccine demand plans, and aligning with national budgets to minimize the risk of interruptions in vaccine supply.

Challenges of global vaccine market and supply

Vaccine markets are unique and unlike those of other pharmaceuticals. The markets are more prone to manufacturing failure and require high-quality manufacturing standards with resulting regulatory oversight and costs. Production timelines are often lengthy and require considerable and careful advance planning. There are a limited number of manufacturers, which restricts the global supply base of some vaccines and limits competition and affordable prices. Nevertheless, the RF continued its outreach to suppliers by participating in events such as the annual meeting of the Developing Country Vaccine Manufacturers Network (DCVMN) in Buenos Aires, Argentina, in October 2016.

Supplies of IPV and YF vaccines have presented unique challenges for the Region. Together with regional immunization colleagues, the RF supported the vast majority of countries and territories in introducing IPV during 2016 and in transitioning from tOPV to bOPV. In light of the deteriorating global supply situation, RF officials consistently made IPV supply briefings to Ministers of Health and EPI Managers. Both global suppliers of IPV were monitored frequently for changes in their respective supply plan availability, as recommended by the ad hoc TAG meetings to date.

The YF outbreak in Brazil also impacted the availability of YF vaccine supply to endemic countries in the Region, reducing by approximately 60% the RF supply plan for 2017. Proactively, the RF engaged with WHO and UNICEF colleagues in the evolving governing structure for the new global EYE Strategy, resulting in the RF being named to the Leadership Group together with WHO, UNICEF, and GAVI representatives. The result has been a realignment of YF global vaccine supply between the Americas and Africa Regions in the second half of 2017.

Finally, as a result of negotiations of HPV and PCV prices in the past few years, the RF has contributed

an estimated US\$ 30 million in annual cost savings for participating Member States.

Demand planning and monitoring

Careful preparation and forecasting of vaccine demand from countries and territories is necessary to support PAHO's procurement strategy. Still, opportunities to improve accuracy of country demand plans exist. In 2016, only four countries had a demand planning accuracy of >80% on >80% of the vaccines requested and procured through the RF. Increased national financial burden, special initiatives such as the introduction of IPV and switch of tOPV to bOPV, were among the reasons why countries did not procure the quantities planned originally.

Accurate demand plans need to be backed up with reliable budget and timely payments of invoices for vaccines procured. In 2016, many countries experienced difficulties with timely payment of vaccines and syringes procured using the RF credit line. As of 30 November 2016, 29 of the 34 countries and territories with obligations under the RF credit line were in arrears (seven with 60-90 days, and 22 with outstanding payments >90 days). Timely payment to the RF is important to avoid any delays with the placement of orders on behalf of countries using the RF credit line. The RF is working closely with PAHO leadership in leveraging the use of the new PAHO's Management Information System (PMIS) deployed in January 2016 to make available accurate procurement and financial data for country offices and Member States. The RF has developed reports and dashboards for piloting and subsequent deployment in Country Offices during the second half of 2017. These tools will monitor financial obligations and purchase requests in real time.

In 2016, RF officials made technical cooperation visits to 11 countries in the Region to update authorities on vaccine markets, resolve supply issues, and facilitate actions to improve demand planning and financial performance.

In May 2017, a review of the demand planning policies, procedures, metrics and systems took place, with the participation of country and PAHO representatives, under the guidance of an expert on forecasting and demand planning using probability and statistical tools. To continue strengthening RF's planning and demand systems, PAHO is considering various initiatives, including a training network to improve country knowledge and practices.

Efforts to improve the RF performance are also taking place at the strategic and operational levels. In July 2017, the RF is launching an assessment funded from a variety of resources, including Member States (1.25% fee) and PAHO's regular budget. Additionally, a WHO grant from the Bill and Melinda Gates Foundation will look at the RF's strategy,

as well as its financial and operational systems in order to improve its customer value proposition (CVP) to countries as primary stakeholders and its relationships with vaccine and syringe suppliers

Global efforts to improve access to affordable vaccines

The RF collaborates closely with WHO and other partners in the Vaccine Product, Procurement, and Price (V3P) initiative to disseminate the contributions of the RF model and its pooled procurement approach to sustain vaccine access at low prices in the Region. The PAHO-GAVI Cooperation Agreement has facilitated close collaboration with GAVI colleagues in the PCV negotiations previously mentioned.

Other regions in the world continue to show interest in pooled vaccine procurement initiatives—for example, EMRO/WHO in 2013. More recently, RF officials spoke at a National Vaccine Conference (July 2017) in Thailand and are exploring a collaborative initiative with WPRO/WHO to share lessons learned.

Recommendations

- TAG reaffirms its recognition of PAHO's Revolving Fund's current principles as a pillar in the progress and success of immunization programs in the Americas. In turn, TAG acknowledges the importance of Member States in providing accurate demand plans and securing budgets to support collectively the Revolving Fund.
- TAG continues to recommend that Member States ensure the development of increasingly accurate demand forecasts with greater long-term visibility. PAHO should support Member States in demand planning and monitoring.
- TAG encourages PAHO to keep updating Member States on vaccine markets and to implement proactive procurement responses to specific vaccine issues.
- TAG encourages PAHO to continue supporting global efforts to improve access to affordable vaccines, including regional pooled procurement initiatives.
- TAG welcomes the Revolving Fund assessment of its business model and proactive positioning for future years, while maintaining its core principals. TAG also welcomes the opportunity to participate in this assessment and encourages Member States to do the same. ■

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data available in each study and sensitivity analysis. Effectiveness estimates ranged from 8.8-37.8% for hospitalizations due to x-ray-confirmed pneumonia, 7.4-20.6% for clinical pneumonia hospitalizations, 13.3-87.7% for meningitis hospitalizations, and 56-83.3% for IPD hospitalization, varying by age, outcome definition, type of vaccine, and study design. The main conclusions of the systematic review were that the available evidence indicates significant impact for both PCV10 and PCV13 in the outcomes studied. There was no evidence of the superiority of one vaccine over the other with regards to impact and effectiveness on hospitalization and mortality outcomes in children aged <5 years. These results provide immunization programs with information for decision-making on PCV use.²

Another global systematic review reported in the report "Pneumococcal Conjugate Vaccine

Product Assessment," also concluded that there is no systematic evidence of superiority of one vaccine over another (PCV10 or 13) on pneumonia outcomes. A broad range of estimated impact was observed (13-68% for clinical pneumonia and 34-66% for chest x-ray confirmed pneumonia). Additionally, the report concludes that there is strong evidence from immunogenicity studies in all regions to support the use of either immunization schedules: two primary doses with a booster (2+1) at age ≥ 9 months or three primary doses (3+0). A significant reduction in IPD caused by vaccine serotypes was observed following PCV10 and PCV13. In addition, most published studies have demonstrated PCV impact on mortality following the routine use of both available products in a range of high and low-income countries. In summary, the global review supports the findings from the systematic review in LAC. ■

Recommendations

- TAG reviewed evidence on the safety, impact, and effectiveness of PCV10 and PCV13 and concluded that neither vaccine is superior to the other, with similar safety, effectiveness, and impact profiles. Accordingly, Member States should introduce and/or maintain PCV10 or PCV13 in their routine schedule based on logistics and cost considerations.
- Member States should use either a 2+1 or 3+0 schedule based on local epidemiological profile of the disease and the ability to achieve high coverage.
- Member States should further strengthen bacterial pneumonia and meningitis surveillance, conduct additional epidemiologic and laboratory studies to continue monitoring the trends of the disease, measure PCV impact, and evaluate circulating pneumococcal serotypes. ■

² *Pneumococcal Conjugate Vaccine Product Assessment*; Kate O'Brien, April 2017, Available at www.jhsph.edu/research/centers-and-institutes/ivac/resources/pcv-product-assessment-april-25-2017.pdf

Strengthening the Decision Making Capacity of National Immunization Programs

Ministries of health in the Americas have established National Immunization Technical Advisory Groups (NITAGs) or equivalent independent groups to strengthen decision-making processes and outcomes regarding vaccines and immunization. Comprised of a multidisciplinary membership, these advisory bodies provide independent, evidence-based guidance to national health authorities on immunization policy. While the roles and responsibilities of NITAGs in policy formulation vary by country, the committees are generally considered vital to ensuring a transparent and credible process for decision-making for a range of immunization issues, including changes in schedules, adoption of new vaccines and immunization strategies, and monitoring of immunization-related progress and impact.

Both WHO and PAHO have recommended the establishment of NITAGs since the early 2000s. Following the regional adaptation of the GVAP, PAHO Member States adopted a commitment to establishing functional NITAGs in ≥ 18 countries by 2020. In accordance with global standards, the Americas consider NITAGs to be functional if they meet the following indicators:

1. Legislative or administrative basis for the advisory group
2. Formal written terms of reference
3. At least five different areas of expertise represented among core members
4. At least one meeting per year

5. Circulation of the agenda and background documents at least one week prior to meetings

6. Mandatory disclosure of any conflict of interest

In 2016, 20 countries and territories reported having an active NITAG. Of these, 15 met the minimum criteria for "good functionality." Three countries that had previously reported active NITAGs either did not provide a report on NITAG activity or reported that their advisory committees were no longer active. In all three cases, countries lacked a strong administrative or legal basis for their NITAG. Notably, Haiti was the latest country to establish a NITAG and held a formal induction meeting for newly appointed members in March 2017.

Experience during the last decade has shown that establishing and strengthening NITAGs is critical for improving leadership in making informed decisions about the introduction and financial sustainability of vaccines. To maintain the progress made and achieve the goals set forth for this decade, countries must continue to strengthen NITAGs or establish these committees where they do not yet exist. In this respect, English-speaking countries in Caribbean represent a special situation in which nations and territories in a sub-region have worked together to standardize immunization policies. This model is unique, and governments in this sub-region could consider strengthening the formality of this model.

Recommendations

- TAG reiterates the importance of Member States establishing independent technical advisory bodies on immunization to provide evidence-based policy guidance to governments on immunization.
- TAG stresses the importance of ministries of health and NITAGs in implementing procedures for managing real or perceived conflicts of interest related to policy guidance to ensure transparency and credibility. All NITAG members must submit written declaration of interests.
- TAG calls on Member States to continue strengthening their local capacity for evidence-based decision-making around immunization. This requires investing in the Secretariat and NITAGs.
- TAG requests that PAHO continue to support Member States in their efforts to standardize methods for evidence review and presentation as support to NITAG deliberations and policy formulation.
- TAG encourages Member States to join the Global NITAG Network to share experiences and lessons learned as well as assessments of evidence on immunization. ■

Measles/Rubella/Congenital Rubella Syndrome Surveillance Data, Final Classification, 2016

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	8	0	0	0	0	0	0	1	0
Antigua & Barbuda	2	0	0	0	0	0	0	0	0
Argentina	316	0	0	0	0	0	0	112	0
Aruba	—	—	—	—	—	—	—	—	—
Bahamas	1	0	0	0	0	0	0	0	0
Barbados	25	0	0	0	0	0	0	0	0
Belize	153	0	0	0	0	0	0	1	0
Bermuda	0	0	0	0	0	0	0	0	0
BES*	—	—	—	—	—	—	—	—	—
Bolivia	121	0	0	0	0	0	0	0	0
Brazil	2179	0	0	0	0	0	0	80	0
Canada	0	0	11	11	0	1	1	0	0
Cayman Islands	—	—	—	—	—	—	—	—	—
Chile	216	0	0	0	0	0	0	110	0
Colombia	1536	0	0	0	0	0	0	550	0
Costa Rica	36	0	0	0	0	0	0	61	0
Cuba	1508	0	0	0	0	0	0	0	0
Curaçao	—	—	—	—	—	—	—	—	—
Dominica	1	0	0	0	0	0	0	1	0
Dominican Republic	174	0	0	0	0	0	0	0	0
Ecuador	300	0	1	1	0	0	0	0	0
El Salvador	195	0	0	0	0	0	0	0	0
French Guiana	—	—	—	—	—	—	—	—	—
Grenada	33	0	0	0	0	0	0	0	0
Guadeloupe	—	—	—	—	—	—	—	—	—
Guatemala	206	0	0	0	0	0	0	0	0
Guyana	57	0	0	0	0	0	0	0	0
Haiti	56	0	0	0	0	0	0	26	0
Honduras	58	0	0	0	0	0	0	22	0
Jamaica	185	0	0	0	0	0	0	0	0
Martinique	—	—	—	—	—	—	—	—	—
Mexico	4004	0	0	0	0	0	0	0	0
Montserrat	—	—	—	—	—	—	—	—	—
Nicaragua	124	0	0	0	0	0	0	48	0
Panama	57	0	0	0	0	0	0	0	0
Paraguay	389	0	0	0	0	0	0	0	0
Peru	432	0	0	0	0	0	0	0	0
Puerto Rico	—	—	—	—	—	—	—	—	—
Saint Kitts and Nevis	15	0	0	0	0	0	0	0	0
Saint Lucia	0	0	0	0	0	0	0	21	0
St. Vincent & the Grenadines	—	—	—	—	—	—	—	—	—
Sint Maarten (Dutch Part)	—	—	—	—	—	—	—	—	—
Suriname	10	0	0	0	0	0	0	1	0
Trinidad & Tobago	14	0	0	0	0	0	0	5	0
Turks and Caicos	—	—	—	—	—	—	—	—	—
United States	—	—	72	72	0	0	0	0	0
Uruguay	0	0	0	0	0	0	0	0	0
Venezuela	792	0	0	0	0	0	0	7	0
Virgin Islands (British)	—	—	—	—	—	—	—	—	—
Virgin Islands (U.S.)	—	—	—	—	—	—	—	—	—
Total	13,203	0	84	84	0	1	1	1,046	0

*Bonaire, St. Eustatius and Saba; —No data provided

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.

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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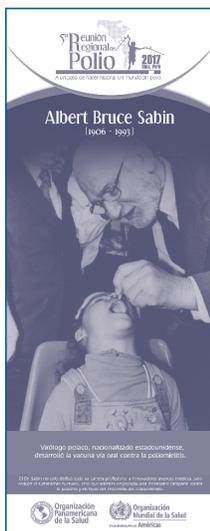
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Celebrating Leaders of Polio Eradication in the Americas

The theme for the fifth Regional Polio Meeting was "One step away from making history: a world without polio." During this meeting, PAHO/WHO developed banners to honor four important leaders in polio eradication:

- Albert Bruce Sabin (1906-1993):** A Polish virologist and nationalized American, Dr. Sabin developed the oral poliovirus vaccine. He not only dedicated his entire professional career to innovative medical advances to reduce human suffering, but also undertook a tireless campaign against poverty and in favor of knowledge throughout his life.
- Jonas Edward Salk (1914-1995):** Salk was an American medical researcher and virologist who discovered and developed the inactivated poliovirus vaccine. In addition to his research work, he continuously promoted the creation of collaborative environments to explore the basic principles of life and contemplate the wider implications of scientific discoveries for the future of humanity and thus contribute to the well-being and understanding of man.
- Ciro de Quadros (1940-2014):** Brazilian epidemiologist who was one of the central figures in polio eradication in Latin America and the Caribbean, distinguished as Public Health Hero of the Americas by PAHO. In the late 1970s, he founded the PAHO/WHO Expanded Program on Immunization (EPI) and successfully mobilized technical support to Member States. He was also a key figure behind the creation of the



PAHO Revolving Fund for Vaccine Procurement, established in 1977.

- Donald A. Henderson (1928-2016):** An American physician, educator and epidemiologist, Henderson led the global smallpox eradication program of the WHO and in 1974, promoted the global polio eradication program. In the Region of the Americas, he was president of PAHO's Technical Advisory Group (TAG) on Vaccine-preventable Diseases. He continues to be an example for thousands

of health professionals and was recognized for his meritorious work by many institutions and governments, having received honorary titles and prizes, among them, PAHO's Public Health Hero of the Americas award.

PAHO/WHO also developed a video that shows both historic and current immunization leaders across the Region talking about their experiences being a part of the polio eradication process, available here (Spanish only): <https://youtu.be/SKRm1BpLtO8>. ■