

Immunization Newsletter

Pan American Health Organization

Volume XXXV Number 4

Immunize and Protect Your Family

August 2013



XXI Meeting of PAHO's Technical Advisory Group (TAG) on Vaccine-preventable Diseases: "Vaccination: A Shared Responsibility"

Quito, Ecuador • July 3-5, 2013

The Pan American Health Organization's (PAHO) Technical Advisory Group (TAG) on vaccine-preventable diseases (VPDs) was originally established in 1985 to set forth evidence-based strategies for polio eradication. Since then, it has progressively expanded its mandate to the current aim of strengthening the immunization policy dialogue among key stakeholders in the Americas involved in efforts to control vaccine-preventable diseases (VPDs). TAG functions as the leading regional forum to review and promote regional goals and strategies for immunization. Specifically, the TAG reviews national immunization program progress and results, assists in the identification of research needs, and oversees the progress of research efforts in course.

During its XXI Meeting, the TAG reviewed topics ranging from pneumococcal vaccination in adults, polio situation, second dose application of measles-containing vaccines, pertussis, yellow fever, human papilloma virus, meningococcal and influenza vaccination, immunization registries, the PAHO Revolving Fund, vaccination during humanitarian emergencies, vaccines in the pipeline, evidence-based decision-making, Global Vaccine Action Plan (GVAP) indicators, and costing and planning of immunization programs. In this issue of the Newsletter, we highlight the topics presented to TAG for decision. The final report with all TAG recommendations can be found at www.paho.org/immunization. ■



Picture 1 [from left to right]: Helen Rees (SAGE Member), Gina Tambini (PAHO), Anushua Sinha (TAG Member), Akira Homma (TAG Member), Arlene King (TAG Member), Cuauhtemoc Ruiz Matus (PAHO), Ciro de Quadros (TAG Chair), Jon Andrus (PAHO), Peter Figueroa (TAG Member), Jeannette Vega (TAG Member), and Roger Glass (TAG Member).

IN THIS ISSUE

- 1 XXI Meeting of PAHO's Technical Advisory Group (TAG) on Vaccine-preventable Diseases: "Vaccination: A Shared Responsibility"
- 1 Meeting of the Vaccine-Preventable Disease Laboratory Networks for the Region of the Americas
- 2 Polio, TAG Recommendations
- 3 Measles and Rubella, TAG Recommendations
- 4 Pertussis, TAG Recommendations
- 5 Yellow Fever, TAG Recommendations
- 5 Pneumococcal Vaccination in Adults, TAG Recommendations
- 6 Meningococcal Disease and Vaccines, TAG Recommendations
- 7 Human Papilloma Virus Vaccine Introduction and Framework for Impact Evaluation, TAG Recommendations

Meeting of the Vaccine-Preventable Disease Laboratory Networks for the Region of the Americas

Quito, Ecuador • 2 July 2013

On 2 July 2013, right before the TAG meeting, representatives for 25 Region's public health labs, technical experts from the Argentina's Malbran Institute and the US Centers for Disease Control and Prevention (CDC), as well as PAHO national and regional immunization advisors participated in a meeting aimed to identify the capacities, strengths and opportunities to maintain the achievements, face new challenges, and improve the performance of the Regional Lab Networks.

Technical presentations and discussions addressed the following topics: status of vaccine preventable diseases (VPDs) in the Region; essential role of the VPD Lab Networks, achievements and challenges; experiences of hospital-based sentinel surveillance of pneumonias and diarrheas caused by rotavirus; achievements and challenges of the Invasive Bacterial Disease Lab Network; experiences of the integration and quality control of Mexico's national measles/rubella laboratory network; experiences of the implementation of a national lab network to support HPV surveillance in Argentina; and past and future of pertussis lab diagnostics.

Organized in work groups, the participants discussed aspects related to: How can response-capacity and performance of national laboratories be strengthened and maintained? How can the communication between lab and surveillance teams be improved, as well as the information flow and compliance with indicators? How can laboratories maintain the achievements and face the challenges of new vaccine surveillance?

See **LABORATORY NETWORKS** on page 8

Polio

On May 2012, the World Health Assembly declared ending polio a “programmatically emergency for global public health” and called on the Director-General of the World Health Organization (WHO) to develop and finalize a comprehensive polio endgame strategy. The Polio Eradication and Endgame Strategic Plan 2013-2018* was developed to capitalize on this new opportunity to end all polio disease. It accounts for the parallel pursuit of wild poliovirus eradication and circulating vaccine-derived poliovirus (cVDPV) elimination, while planning for the backbone of the polio effort to be used for delivering other health services to the world’s most vulnerable children.

In 2012, SAGE, the Strategic Advisory Group of Experts on immunization of the WHO recommended the withdrawal of the type 2 component of OPV as soon as possible from routine immunization programs in all countries, facilitated by the introduction of at least one dose of IPV. The SAGE recommendation is based on the fact that “poliovirus

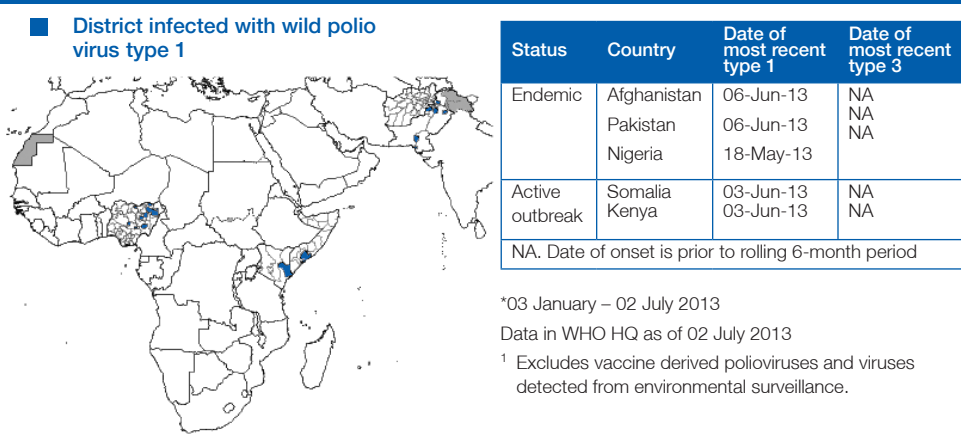
type 2 was eliminated in 1999 and that the continued use of trivalent OPV, in areas where coverage is not adequate, contributes to ongoing type 2 vaccine-associated paralytic poliomyelitis and outbreaks of cVDPVs” The SAGE working group emphasized that before interrupting the use of the type 2 vaccine, the following conditions should be met: the current outbreak of cVDPV2 in Nigeria must be interrupted; absence of outbreaks caused by cVDPV2 for at least one year; adequate epidemiological surveillance that makes it possible to detect and control any cVDPV2 outbreak; adequate quantities of bivalent OPV available; an IPV at an affordable price, a global reserve of type 2 monovalent OPV; and an international agreement to discontinue the global use of trivalent OPV.

During the meeting, TAG members received a report on the global eradication situation, the scenarios for polio vaccine supply, the status of the epidemiological surveillance in the Americas and the Polio Eradication and Endgame Strategic Plan 2013-2018. ■

The Polio Eradication and Endgame Strategic Plan 2013-2018 has four major objectives:

- 1 To stop all wild poliovirus transmission by the end of 2014 and any new outbreaks due to cVDPV within 120 days of confirmation of the index case;
- 2 To strengthen immunization systems and withdraw the oral polio vaccine (OPV).
 - It engages all 144 countries that currently use OPV; and
 - Calls for the withdrawal of the type 2 component from the trivalent OPV and the introduction of at least one dose of affordable inactivated polio vaccine (IPV);
- 3 To certify all of the regions of the world as polio free and ensure that all poliovirus reserves are safely confined; and
- 4 To do legacy planning.

Wild Poliovirus Infected Districts¹, Previous 6 Months*



* The full plan is available at: http://www.polioeradication.org/Portals/0/Document/Resources/StrategyWork/GPEI_Plan_FactFile_EN.pdf.

TAG Recommendations (Polio)

- Countries of the Americas must wait for the fulfillment of the conditions stated by SAGE for the cessation of the use of Sabin type 2 containing vaccines; these conditions must be met before making any change in vaccination policy. As long as there are outbreaks caused by cVDPV type 2 and the wild poliovirus continues to circulate in the world, the trivalent oral polio vaccine (tOPV) remains the vaccine of choice for the Americas.
- PAHO should convene a Working Group to develop a strategic plan describing current options and scenarios, as well as the timelines for the implementation of the polio endgame in the Americas. This plan should discuss the feasibility of using different OPV/IPV schedules; the availability of combination vaccines containing IPV, where the ideal situation would be having an hexavalent DTwP-Hib-IPV-HepB vaccine, among other issues.
- All countries must reinforce the activities aimed to achieve or maintain vaccination coverage >95% in every district or municipality. If countries do not achieve that coverage they must evaluate the accumulation of non-immunized and conduct vaccination campaigns.
- All countries must continue to maintain adequate acute flaccid paralysis (AFP) surveillance in order to timely detect any importation or emergence of VDPVs, and must report to PAHO on a timely fashion to allow the proper monitoring of the Regional situation.
- TAG reinforces its previous recommendations (Argentina 2011) for countries considering the introduction of inactivated polio vaccine (IPV); compliance with sanitary conditions and vaccination coverage guaranteeing an adequate protection to their communities.
- PAHO must continue to maintain a dialogue with vaccine suppliers in order to guarantee the provision of polio vaccines for the Americas.

Measles and Rubella

The countries of the Americas have demonstrated indisputable progress on the interruption of the endemic transmission of the measles and rubella viruses. Since 2002, the Region of the Americas has achieved and maintained elimination of measles and the last case of endemic transmission of rubella was reported in 2009. Continued circulation of the measles virus in other regions of the world has had an impact on the epidemiology of measles in the Americas. Following the annual occurrence of 89 to 249 imported cases and cases secondary to importation since 2003 and a large increase in cases reaching 1369 in 2011, the number of confirmed cases decreased to 143 cases in 2012 (Figure 1). All of the measles cases in 2012 were linked to importations and were reported by the following seven countries: Argentina, 2; Brazil, 2; Canada, 10; Colombia, 1; Ecuador, 72; United States of America, 55; and Venezuela, 1. Most outbreaks in the Region have been linked to the genotypes of imported viruses D8, D4 and B3. As for rubella, in 2012 only 16 cases were reported: Argentina 1, Canada 2, Colombia 2, Mexico 2 and the USA 9.

In light of the Region's vulnerability and risk, last year at the 28th Pan American Sanitary Conference, Member States approved a plan of action for maintaining the elimination of measles, rubella and congenital rubella syndrome (CRS) in the Region of the Americas (Resolution CSP28.R14). In this Resolution, countries are called upon to strengthen active surveillance of measles, rubella and CRS; to ensure measures

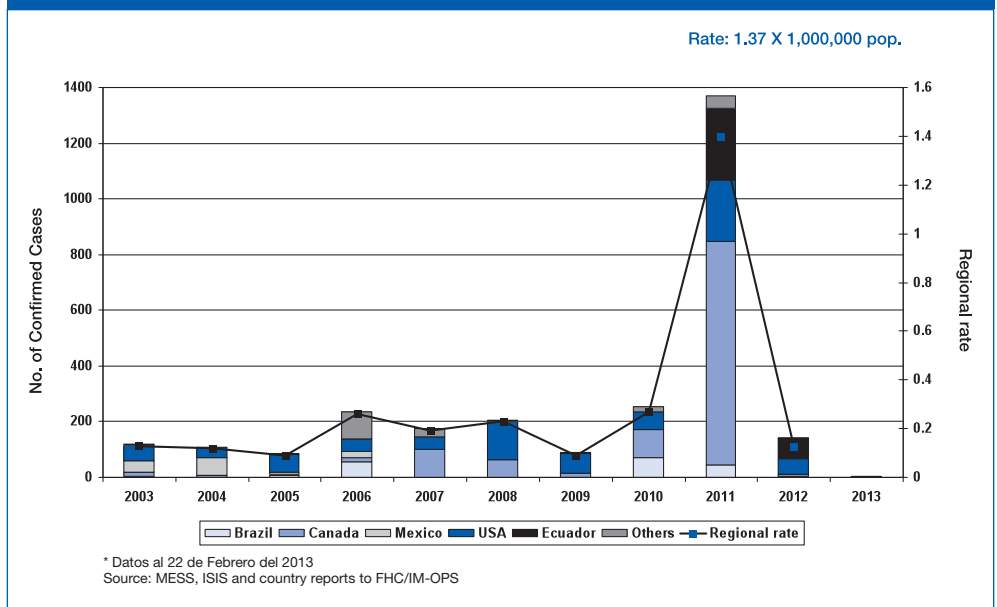
for responding in a timely manner to viruses and imported outbreaks; and to maintain 95% or more immunization coverage at the national level and in every municipality.

In order to achieve 95% or higher coverage with two doses of measles-mumps-rubella (MMR) or measles-rubella (MR) vaccines, many countries offer a second dose of the vaccine (MMR2) in follow-up campaigns. To determine the timing of these campaigns, the accumulation of susceptible individuals is monitored. When the number of susceptible individuals is nearly equivalent to a cohort

of newborns, generally every 4 or 5 years, a follow-up campaign is conducted.

A growing number of countries have introduced MMR2 to their national routine immunization schedule at varying ages. In 32 countries (76%), it is administered to children from 3 to 6 years of age, in 5 countries (12%) from 15 to 18 months of age, in 2 countries (5%) at 2 years of age, in 2 other territories (5%) at 9-12 years of age and in 1 country (2.4%) at 6-7 years of age. Nevertheless, most countries are not reaching 95% MMR2 coverage. ■

Figure 1: Distribution of confirmed measles cases in the Americas, 2003 – 2013*



TAG Recommendations (Measles and Rubella)

- The TAG commends countries for their efforts in maintaining measles and rubella elimination and encourages countries to continue implementing its previous recommendations in order to maintain the elimination of measles, rubella and CRS.
- TAG endorses the recommendations of the International Expert Committee, made at the fourth joint meeting with representatives of the national commissions, and urges countries to implement them and to submit their final verification reports by 01 December 2013.
- With the goal of achieving the highest MMR2 coverage possible, administration of the MMR2 vaccine is recommended at 15-18 months, and can be given simultaneously with other vaccines, such as the first DPT booster.
- Countries should continue to verify vaccination status at school entry and immunize children who have not been vaccinated with MMR2.
- Countries should continue with high-quality follow-up vaccination campaigns in order to guarantee a high level of immunity, while the Region continues with the verification process and vaccination coverage $\geq 95\%$ has been achieved with two doses of MMR or MR in the routine program.
- PAHO Governing Bodies and Member States should continue advocating for measles and rubella elimination in global forums such as the World Health Assembly considering that importations of the virus pose a challenge for maintaining elimination in the Americas.
- PAHO should support country efforts to systematize the lessons learned from the recent measles outbreaks and to share them with other countries of the Americas as well as with the rest of the world.

Pertussis

Pertussis is a significant cause of childhood mortality globally, and as such, it has been a topic for discussion in the last three TAG meetings. Recommendations made during these meetings include the need for strengthening of epidemiological surveillance; the administration of a 4th dose as part of the routine vaccination schedule; starting diphtheria-tetanus-pertussis (DTP) vaccination at 6 weeks of age and vaccinating pregnant women only during outbreaks; and carefully replacing the whole-cell pertussis vaccine with the acellular vaccine, while the duration of immunity conferred by acellular vaccines is still being evaluated.

Following previous recommendations, the regional pertussis epidemiological situation, the recommendations of the Strategic Advisory Group of Experts on Immunization (SAGE) of the World Health Organization (WHO), evidence on the duration of the protection conferred by acellular vaccines, and the conclusions of the PAHO/WHO Pertussis Working Group were presented during this meeting.

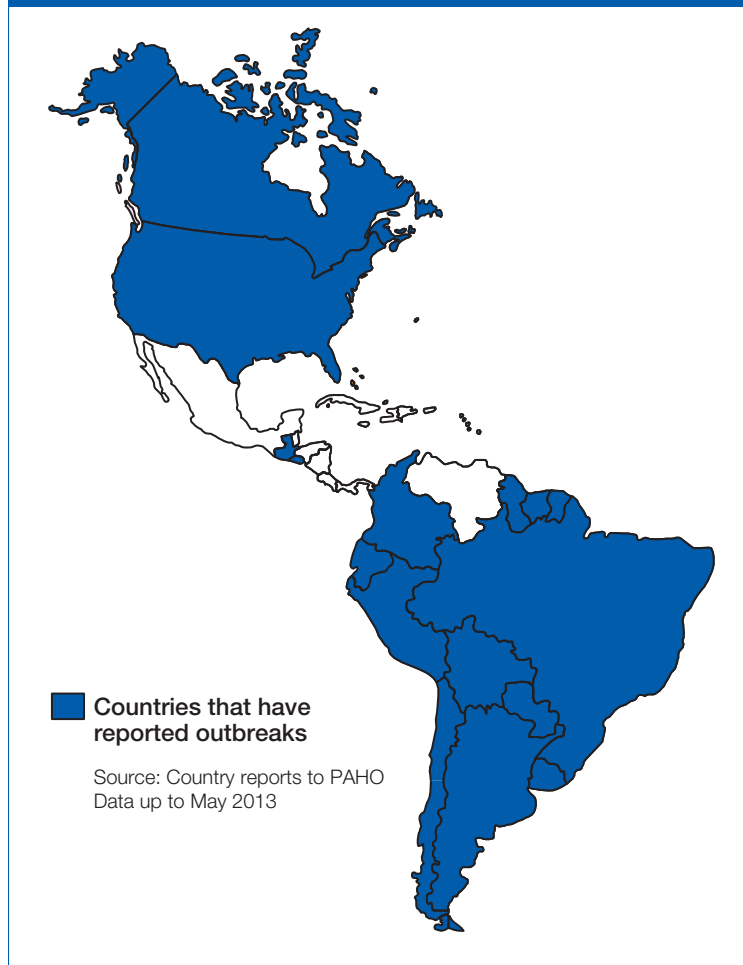
After holding two meetings and gathering information from Latin American and Caribbean countries, the Pertussis Working Group has prepared a guidance document on Investigating and Reporting of Pertussis Outbreaks. In this document, the Group reported that: a) with the exception of Cuba, Costa Rica, Dominican Republic, Haiti, Honduras, Mexico, Nicaragua, Panama, and Venezuela, every Latin America country, as well as Canada and the United States, has reported pertussis outbreaks during the last 3 years (Map 1); b) in 2012, the pertussis incidence rate (per

100,000 inhabitants) ranged from 0 (zero) in Cuba to 33.8 in Chile; c) the case-fatality rate varied widely, for example, in 2012 in the Dominican Republic it was 18%, in Paraguay 9%, in Honduras 6%, in Mexico 5%, in Brazil 1.5% and in Chile 0.2%; d) in countries that reported outbreaks, 42% of the cases involved infants under 6 months of age; e) eight countries use a general definition of pertussis cases, while nine have specific definitions by age group; f) some countries continue using immunofluorescence as a laboratory diagnostic method, despite the fact that its use is no longer recommended; and g) some countries reported numerous outbreaks, some with only two or three cases each.

Information currently available on the duration of immunity conferred by acellular vaccines was presented during the meeting. This

information continues to show that duration of immunity is shorter than that of the whole-cell vaccine. Meanwhile, SAGE has asked its own Working Group to continue gathering epidemiological evidence to facilitate decision-making. ■

Map 1: Countries that have reported pertussis outbreaks, 2010 - 2013



TAG Recommendations (Pertussis)

- Countries using current vaccination schedules with whole-cell pertussis vaccines should continue to do so. There is marginal and insufficient benefit to consider changing from whole-cell pertussis-containing vaccines to acellular pertussis-containing vaccines.
- Countries should continue striving to provide timely vaccination and achieve coverage levels >95% with pertussis-containing vaccines in all municipalities.
- All countries should strengthen pertussis surveillance to better monitor the epidemiology of the disease. Countries should continue assessing the quality of their surveillance systems in order to evaluate the reliability of their data on incidence, case-fatality, age distribution, proportion of cases confirmed by different methods, and vaccine effectiveness.
- Countries should use the guidelines proposed for investigating all outbreaks, to allow national programs and TAG to continue evaluating the epidemiology of pertussis on an ongoing basis.
- TAG reiterates its previous recommendations related to outbreaks. These recommendations include lowering the age for initiating vaccination to 6 weeks and vaccinating pregnant women only in areas affected by the outbreak. Currently, there is no evidence for TAG to recommend routine vaccination of pregnant women.

Yellow Fever

Yellow fever continues to be a significant public health problem for the 13 countries of the Americas with endemic areas. Over the last thirty years, yellow fever virus activity has been restricted to the enzootic area shared by Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Panama, Peru, Suriname, Trinidad and Tobago, and Venezuela. Since late 2007, the Region has experienced intense circulation of the yellow fever virus with extensive epizootics and outbreaks of human cases. The endemic area was extended to include Paraguay and northern Argentina, because of human cases and epizootics detected in 2008.

The main mode of transmission of yellow fever in the Americas is the sylvatic cycle. However, in 2008, cases of yellow fever were reported in the metropolitan area of Asuncion, Paraguay. Prior to this, the last confirmed urban outbreak of yellow fever in the Americas had occurred in 1942 in Brazil. This event, in addition to the proliferation of *Aedes aegypti* in the Region, shows the high risk of re-urbanization that still exists in the Americas.

From 1985 through 2012, countries have reported 4,066 cases and 2,351 deaths from yellow fever in the Region, with a 58% fatality rate. During this period, 95% of the cases were reported by 4 countries: Peru with 54%, Bolivia with 18%, Brazil with 16%, and Colombia with 7% of the cases. French Guiana, Guyana, Panama, Suriname and Trinidad and Tobago have not reported cases in more than two decades.

Pneumococcal Vaccination in Adults

The epidemiology of pneumococcal disease in adults in developing countries is not well described, but it is acknowledged that the burden of disease globally is significantly underestimated. In addition, the burden of pneumococcal disease has increased due to the number of individuals with chronic diseases or infected with HIV, as well as the aging of the population in many countries. Drug resistance, which is the greatest obstacle to the successful treatment of infections, has also been on the rise. In industrialized countries, fatality from pneumococcal bacteremia can reach 15-20% among adults and 30-40% in older adults, even when patients receive appropriate antibiotic therapy and intensive care.

Currently, there are two vaccines available in the market for use in adults: the 23-valent pneumococcal polysaccharide vaccine (PPV23), (1, 2, 3, 4, 5, 6B, 7F, 8, 9N, 9V, 10A, 11A, 12F, 14, 15B, 17F, 18C, 19A, 19F, 20, 22F, 23F and 33F), licensed since the 1980s for the population > 2 years of age, and the 13-valent (1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F and 23 F) pneumococcal conjugate vaccine (PCV), licensed in 2013 for use in adults over 50 years of age. Both vaccines are considered safe and well tolerated.

Many studies have been conducted on the effectiveness of the PPV23 in healthy adults and adults with risk conditions since this vaccine was licensed. The results of these studies are not consistent and there is considerable controversy regarding the efficacy in the different population groups against different outcomes studied (invasive pneumococcal disease – IPD, pneumonia, mortality, etc.), in the context of childhood PCV vaccination.

The yellow fever vaccination strategies used in the Region of the Americas include: 1) introduction of the yellow fever vaccine in national immunization programs for children 1 year of age in every country with endemic areas; 2) vaccination campaigns during inter-epidemic periods; 3) vaccination campaigns in response to outbreaks or epizootics, and 4) administration of the vaccine to those traveling to areas where there is a risk of transmission of the yellow fever virus, except for those for whom vaccination is contraindicated.

As of 2012, every country in the Region with enzootic areas has added the yellow fever vaccine to their national immunization schedules. In Argentina, Brazil and Panama, the vaccine is only administered in areas with potential risk. Vaccination coverage of children 1 year of age in countries where yellow fever is endemic, which is approximately 70% for the period from 2007 to 2012, has been significantly affected by insufficient availability of the vaccine. This shortage of yellow fever vaccines places the achievements attained by the Region at risk, with regard to the strategy of vaccinating children one year of age, as well as the vaccination of susceptible individuals living in high-risk areas.

During the meeting, TAG discussed recent SAGE recommendations and came to similar conclusions. In 2013, the WHO published a revised Position Paper on the use of the yellow fever vaccine (available at: <http://www.who.int/wer/2013/wer8827.pdf>). ■

TAG Recommendations (Yellow Fever)

- TAG endorses the recommendations issued by SAGE:
 - One yellow fever vaccine dose is sufficient to provide sustained immunity and life-long protection against the disease, therefore no booster is required.
 - In regards to special populations, immunocompromising conditions including symptomatic HIV or CD4+ counts < 200 cells/mm³ are contraindications to vaccination while age ≥60 years, pregnancy, and breastfeeding are precautions to vaccination. A risk-benefit analysis is recommended for individuals with a precaution to vaccination.
 - The recommendation for the simultaneous administration of MMR and yellow fever is maintained, given that to date there is no sufficient evidence to change current recommendations.
- TAG calls for further studies to better understand the potential need for boosters in special groups, as well as the simultaneous administration of yellow fever and other live vaccines such as MMR in children. Also, additional studies are needed on the immunogenicity and safety of yellow fever vaccine in persons aged >60 years, HIV-infected adults and children, and pregnant and breastfeeding women.
- TAG reemphasizes the importance of yellow fever vaccination through the routine immunization program and of maintaining high coverage levels in order to prevent cases and outbreaks of the disease.
- PAHO should work towards addressing the long-standing issue of insufficient yellow fever vaccine supply in the Region through technology transfers and other mechanisms. Similarly, TAG strongly urges PAHO, WHO, partners, and vaccine manufacturers to develop a strategy to increase the global production capacity for yellow fever vaccine.

PNEUMOCOCCAL VACCINATION continued from page 5

Furthermore, multiple studies underscore the possibility that IPD rates will remain high among people for whom the PPV23 is recommended, partially due to low coverage with this vaccine, because of its limited effectiveness in populations with risk conditions and the potentially short duration of immunity. More recently, immunogenicity studies have been conducted for the 13-valent PCV in adults. These studies have shown good immunogenicity, especially for the serogroups included in the vaccine.

In many industrialized countries, the incidence of adult IBD has decreased sharply with the introduction of childhood pneumococcal conjugate vaccines, including age groups that are not the primary vaccination target group, due to the herd immunity effect these vaccines provide. ■

TAG Recommendations (Pneumococcal Vaccination in Adults)

- PCV should be introduced in the routine vaccination schedule for children and high coverage should be maintained. PCV not only protects vaccinated children, but also protects other age groups as a result of herd immunity.
- Countries should establish high quality epidemiological surveillance of pneumonia and invasive bacterial diseases in adults and the elderly, at sentinel sites, to better understand the epidemiological profile of the disease in these age groups and to measure the herd effect of the conjugate vaccines used.
- The available evidence does not support the use of PPV23 in adults with risk factors due to the questionable effectiveness of the vaccine in preventing pneumococcal disease in this risk group.
- Countries currently using PPV23 in adult populations should consider conducting strategic research to contribute to the understanding around the value this vaccine.
- At this time, TAG does not recommend the use of conjugate pneumococcal vaccines for all adults. Introduction of PCV in adults should be grounded in evidence and decisions should not be based on the availability of donations or other factors.

Meningococcal Disease and Vaccines

Meningococcal disease (MD) refers to the spectrum of infections caused by *Neisseria meningitidis* including meningitis, bacteraemia and bacteremic pneumonia. In the majority of countries, *Neisseria meningitidis* is recognized as the leading cause of fulminant meningitis and septicaemia. Therefore, it is considered to be a significant public health problem. MD is associated with high mortality (10-20%), and approximately 20% of survivors develop sequelae, such as deafness, neurological deficit or amputation of a limb.

MD affects every age group, but the highest incidences are found in children under five, especially those under one year of age. In some populations, peaks of incidence may also occur in adolescents or young adults and adults over 65 years of age. During outbreaks and epidemics, changes tend to occur where the highest incidence rates are in adolescents

and young adults. The majority of MD cases are sporadic. The disease presents seasonal variations, especially in the winter, and outbreaks occur at irregular intervals. Invasive meningococcal infections are mainly caused by serogroups A, B, C, X, W135 or Y capsular polysaccharides, but it is important to note that this disease is marked by great variation in relation with the distribution of serogroups by region and over time.

In Latin America, available data indicate that serogroups B and C are still responsible for the majority of cases. Serogroups W135 and Y are emerging and have been reported in some countries, while serogroup A has virtually disappeared in the Region. Although the proportion of isolated serotypes in the Region is known, the burden of disease cannot be inferred from

these serotypes due to the aforementioned weaknesses in epidemiological surveillance.

There are single meningococcal polysaccharide vaccines or vaccines conjugated with a carrier protein. Although polysaccharide vaccines produce an antibody response, conjugate vaccines are more immunogenic and also induce immunological memory. Polysaccharide and conjugate vaccines against meningococcal groups A, C, W135 and Y are available in the market. Both vaccines are safe and effective. The polysaccharide vaccine does not provide adequate immunity in children aged <2 years of age and in children over 2 years of age, it offers limited-duration immunity because it does not induce immunological memory. Recently, in January 2013, the first recombinant meningococcal serogroup B vaccine was recommended for licensure by the European Medicines Agency. ■

TAG Recommendations (Meningococcal Disease and Vaccines)

- It is imperative that the countries implement systems for epidemiological surveillance of meningococcal disease in order to know its real magnitude and epidemiological profile. PAHO should continue providing guidance for the standardization of lab diagnostic methods and for the reporting of the disease.
- Countries that already have sentinel epidemiological surveillance for bacterial meningitis and pneumonia in children under five should establish a plan of action to improve the quality of information, including improvement in and standardization of diagnostic laboratory techniques.
- Countries should establish sentinel sites for other age groups for bacterial meningitis and pneumonia, using standard laboratory techniques and case definitions.
- Countries should analyze their epidemiology, during outbreaks and epidemics, before making decisions regarding control measures, including the identification of groups to vaccinate and the vaccine to be used.
- Countries with high burden of disease in young children that decide to introduce meningococcal conjugate vaccine as part of the routine immunization program targeting children aged <1 or <2 years should ideally include catch-up vaccination of children and adolescents, or at least of adolescents, given that this is the age-group with the highest carriage levels.

Human Papilloma Virus Vaccine Introduction and Framework for Impact Evaluation

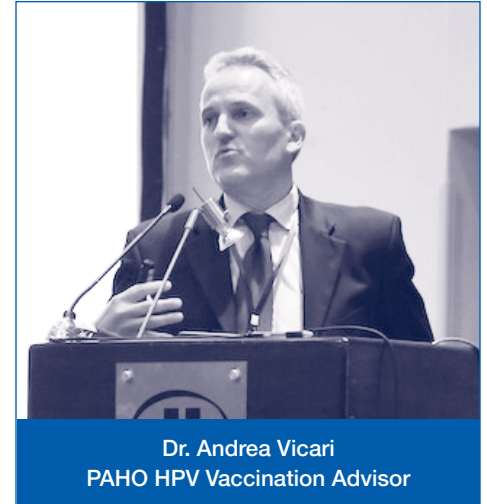
Countries in Latin America and the Caribbean are increasingly introducing vaccines against human papillomavirus (HPV) in their national immunization schedules. In July 2011, four countries had included the HPV vaccine in their schedules and 2.6 million girls (34% of an adolescent female cohort typical for the Region) had access to HPV immunization. In July 2013, ten countries have included the HPV vaccine in their schedules and 4.5 million girls (58%) have access to HPV immunization.

While progress in HPV vaccine introduction over the past two years is notable, obstacles to a wider adoption by other countries of the Region persist. First, together with PCV, the HPV vaccine remains the most expensive EPI vaccine in the Revolving Fund intended for potential universal use. Vaccine cost is also perceived as unaffordable and sometimes as unfairly priced. Second, public health priorities in Latin America and the Caribbean often focus on childhood killers (pneumonia and diarrhea) and maternal mortality and, consequently, public investments are directed at their prevention. Finally, health professionals express uncertainty about safety and long-term efficacy of HPV vaccines, its delivery strategies, and the possible integration with cervical cancer screening.

The HPV vaccine is safe, but public and some health professionals continue to have concerns regarding HPV vaccine safety. In

June 2013, WHO Global Advisory Committee on Vaccine Safety reviewed updated information about the safety of HPV vaccines. Based on that information and considering that more than 170 million doses have been distributed worldwide and more countries are offering the vaccine through national immunization programs, this Committee concluded that it continued to be reassured by the safety profile of the currently available HPV vaccines. The characteristics of today's HPV vaccines, the data generated in the large clinical trials and post-marketing surveillance (both with passive and active systems), and the efforts are all important considerations supporting such a conclusion.

At its previous meeting, the TAG recommended that PAHO develop a framework to monitor HPV occurrence and to evaluate the impact of HPV immunization in the Region. The proposed framework outlines primary and complementary endpoints that can be monitored over three subsequent periods following a HPV vaccine introduction. For the short-term (5–10 years after vaccine introduction), prevalence of HPV genotypes in sexually-active adolescents is the primary monitoring endpoint, and, if the quadrivalent vaccine were introduced, prevalence of genital warts could be a complementary endpoint. On the medium-term (10–15 years after vaccine introduction), prevalence of precancerous lesions (with adjustment for screening coverage)



Dr. Andrea Vicari
PAHO HPV Vaccination Advisor

and/or HPV genotype prevalence in invasive lesions are primary endpoints; cervical cancer screening coverage and positivity of screening tests could be complementary endpoints. In the long-term (≥ 20 years after vaccine introduction), cervical cancer incidence or mortality and HPV genotype prevalence in invasive cancer are primary endpoints; incidence of other HPV-related cancers, cervical cancer screening coverage, and follow-up of women with positive screening tests could be complementary endpoints. Rather than being prescriptive, this framework illustrates different options that Countries can adopt depending on the specific national and local conditions. Activities developed within the regional framework may have a positive influence on national programs for cervical cancer screening. ■

TAG Recommendations (HPV Vaccine Introduction and Framework for Impact Evaluation)

- Countries which have introduced HPV vaccine should strengthen their efforts to characterize vaccination coverage at sub-national and national levels.
- TAG also recommends that countries, which are considering an introduction, carefully plan information systems to collect and analyze coverage data at all levels.
- TAG endorses the June 2013 statement of WHO Global Advisory Committee on Vaccine Safety related to HPV vaccine and recommends that PAHO disseminate evidence of HPV vaccine safety in the Region.
- Countries should, depending on their capacities, adopt the activities laid out in the regional framework for impact evaluation of HPV vaccine. TAG recognizes that a regional network of HPV laboratories is an integral component of such a framework.
- TAG recommends 2- and 3-dose extended HPV immunization schedules for girls aged 9–13 years as they can offer immunological, programmatic and financial advantages. TAG also recognizes the need to gather data on a longer term for 2-dose schedules.
- PAHO should continue to explore mechanisms to make the HPV vaccine more affordable without compromising the principles of the Revolving Fund.

The *Immunization Newsletter* is published every two months, in English, Spanish, and French by the Comprehensive Family Immunization Project 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 XXXV Number 4 • August 2013

Editor: Carolina Danovaro
Associate Editors: Gabriela Felix and Cuauhtémoc Ruiz Matus

©Pan-American Health Organization, 2013.
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>

LABORATORY NETWORKS continued from page 1

The Laboratory Networks of the Americas has been providing support for VPD eradication, elimination, and control initiatives as soon as they have been approved by PAHO Governing Bodies. The essential role of the laboratory is to provide accurate, reliable and timely information that helps guide the use of resources for the control, elimination and eradication of diseases, as well as to support the documentation of the impact of new vaccine introduction.

Country representatives reaffirmed the need to promote the integration of data generated by laboratories with that of epidemiological surveillance, in order to enable the comprehensive analysis of VPDs at the national and regional levels.

In view of the importance of guaranteeing compliance with the VPD surveillance indicators, participants emphasized that laboratory performance indicators should be included in

surveillance information systems and systematically reported to the Ministries of Health and to PAHO/WHO.

PAHO's Technical Advisory Group (TAG) endorsed the recommendations issued during the meeting of the VPD laboratory networks of the Americas. TAG recommendations, including those related to the VPD lab network, can be found at www.paho.org/immunization. ■

TAG Recommendations (VPD Laboratories)

- Laboratories within the Network should harmonize the different procedures used to identify serotypes/serogroups/genotypes of the different VPD causing pathogens, in order to facilitate the comparability of lab results between countries and optimize the availability of data in all countries of the Region of the Americas.
- TAG reiterates that surveillance and labs are essential components of an effective immunization program and that they are required for strategic and evidence based decision-making. For these reasons, TAG urges countries to improve the integration of information generated by labs with those of the surveillance system.
- TAG recognizes that there is a need to establish a Regional Network of Vaccine Preventable Disease Laboratories that would generate reliable results, under the implementation of standardized tests and quality assurance programs, to facilitate decision-making in health and support impact evaluations of new vaccine introductions.
- PAHO should analyze the possibility of procuring reagents and diagnostic kits for vaccine-preventable disease surveillance through the Revolving Fund.
- TAG endorses the recommendations issued during the meeting of the Regional Vaccine Preventable Disease Laboratory Network held in Quito, Ecuador on 2 July 2013 (Annex B of the final report available at www.paho.org/immunization).