

# **Ad-hoc Virtual TAG Meeting 2016**

**1<sup>st</sup> Ad-Hoc Meeting of the Technical  
Advisory Group on Vaccine-preventable  
Diseases**

**May 13, 2016  
Washington, DC, USA**

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## Acronyms

AFRO	WHO Regional Office for Africa Region
AFP	Acute Flaccid Paralysis
BCG	Bacillus Calmette-Guérin (vaccine against severe forms of tuberculosis)
bOPV	Bivalent Oral Poliovirus Vaccine
CI	Confidence Interval
cVDPV	Circulating Vaccine-Derived Poliovirus
CYD-TDV	First Dengue Vaccine Introduced in the Market
DTP	Diphtheria-Tetanus-Pertussis Vaccine
EMA	European Medicines Agency
EMRO	WHO Regional Office for the Eastern Mediterranean Region
EMTCT	Elimination of Mother-to-Child Transmission
EURO	WHO Regional Office for European Region
fIPV	Fractional Dose of the Inactivated Polio Vaccine
GHSS	Global Health Sector Strategy
HBeAg	Hepatitis B “e” Antigen
HBIG	Hepatitis B Immune Globulin
HBsAg	Surface Antigen of the Hepatitis B Virus
HBV	Hepatitis B Virus
HCC	Hepatocellular carcinoma
HIV	Human Immunodeficiency Virus
ID	Intradermal
IM	Intramuscular
IPV	Inactivated Polio Vaccine
mOPV	Monovalent Oral Poliovirus Vaccine
mOPV2	Monovalent Oral Poliovirus Vaccine Type 2
MTCT	Mother-to-Child Transmission
NRA	National Regulatory Authorities
OPV	Oral Poliovirus Vaccine
OPV2	Oral Poliovirus Vaccine, Second Dose
PAHO	Pan American Health Organization
RF	Revolving Fund
SAGE	Strategic Advisory Group of Experts on Immunization of the World Health Organization
SEARO	WHO Regional Office for the South-East Asia Region
STI	Sexually-Transmitted Infections
TAC	PAHO Hepatitis Technical Advisory Committee
TAG	Technical Advisory Group on Vaccine-preventable Diseases
tOPV	Trivalent Oral Poliovirus Vaccine

UNICEF	United Nations Children’s Fund
VDPV	Vaccine-Derived Poliovirus
VDPV2	Vaccine-Derived Poliovirus Type 2
WHA	World Health Assembly
WHO	World Health Organization
WPRO	WHO Regional Office for the Western Pacific Region
WPV2	Wild Poliovirus Type 2

## Introduction

On May 13, 2016, technical staff from PAHO met with members of the TAG for an ad-hoc virtual meeting. The discussion during this meeting included three topics: the global shortage of IPV, use of the dengue vaccine in routine immunization and the feasibility of eliminating perinatal Hepatitis B in the Region of the Americas. Dr. Cuauhtemoc Ruiz Matus welcomed the TAG members and attending staff and gave the word to TAG chair Dr. Peter Figueroa. Dr. Figueroa expressed that the global IPV shortage was the main reason behind calling the meeting, as it is an urgent matter that should be effectively addressed in the Region. A brief update on the current status of yellow fever globally and in the Region was also given at the meeting, as well as an update on the Terms of Reference for TAG members.

Although virtual technical meetings had been successfully conducted in the past, this was the first time that a virtual TAG meeting was held. TAG members acknowledged the versatility of this type of TAG session. Virtual ad-hoc TAG meetings will be conducted in the future, especially if another urgent matter for discussion becomes known.

## Global IPV Supply Situation: How to Manage the Limited IPV Supply and Deal with Potential Stockouts

### Background

In May 2012, the World Health Assembly declared the completion of polio eradication as a “programmatically emergency for global public health.” On 25 January 2013, the Executive Board of the World Health Organization (WHO) approved the targets, goals, and timelines of the Polio Eradication and Endgame Strategic Plan 2013-2018, which seeks to simultaneously eradicate wild poliovirus and eliminate vaccine-derived poliovirus (VDPV). The main objectives of this Strategic Plan are to detect and interrupt poliovirus transmission; to strengthen immunization programs and withdraw the oral poliovirus vaccine, commencing with the withdrawal of the type 2 component by switching from the trivalent (serotypes 1, 2 and 3) to the bivalent (serotypes 1 and 3) vaccine; to contain poliovirus and certify the interruption of transmission; and to plan how to utilize the legacy of the fight against poliomyelitis.

For the globally synchronized switch from the trivalent to the bivalent oral poliovirus vaccine, WHO recommended that all countries using only the oral poliovirus vaccine (OPV) introduce at least one dose of the inactivated polio vaccine (IPV) into their routine vaccination programs to ensure that new cohorts of newborns have some protection against the type 2 poliovirus, either wild or vaccine-derived. In April 2014, the Technical Advisory Group (TAG) on Vaccine-Preventable Diseases of the Pan American Health Organization (PAHO) recommended that the countries should consider a sequential schedule. Ideally, countries should consider two IPV doses followed by two OPV doses. However, if a country is considering only one IPV dose, this should be with the first dose of the DTP-containing vaccine and followed by three OPV doses.

Due to the very limited supply of IPV, in order to ensure that all countries in the Region would have access to IPV before the switch, PAHO made an agreement with the countries that participate in the Revolving Fund (RF) to introduce only 1 dose of IPV, preferably in the second semester of 2015, in a schedule of one dose of IPV followed by 3 or 4 doses of OPV, until the IPV supply is sufficient to meet the real demand of all countries. Nonetheless, global supply of IPV continues to be insufficient and not timely and the availability of IPV is expected to remain constrained until the end of 2017.

In October 2015, the Strategic Advisory Group of Experts on Immunization of the World Health Organization (SAGE) reaffirmed that the withdrawal of OPV2 should proceed in April 2016, even in countries where IPV introduction will be delayed, due to the fact that the public health risks associated with the continued use of the type 2 component in tOPV far outweigh the risk of new VDPV2 emergence after use of OPV2 is stopped. The bOPV supply is sufficient to meet the global demand.

### Risk of VDPV emergence

Based on the mathematical models considered, there is expected to be at least 1-2 cVDPV type 2 outbreaks within the first 12 months following the switch, with Pakistan representing a high-

risk area. The risk is greatest in the first year and declines thereafter; however, the consequences are expected to be greater the longer the interval between the switch and the emergence, particularly in areas where IPV coverage is not equal to or greater than 95%.

It is important to highlight that IPV has only a limited role in preventing the emergence of VDPV type 2. IPV's primary value is in minimizing the occurrence of paralytic disease from any WPV2 or VDPV2 after the switch. However, if a type 2 outbreak emerges post-switch, it would be rapidly controlled with the monovalent oral poliovirus vaccine type 2 (mOPV2), as the population would have already received at least one IPV dose and therefore would already have some degree of immunity.

### **Global IPV supply situation**

The level of commitment from countries to meet the IPV introduction timeline was exceptional. Out of 126 planned introductions, 100 countries have introduced IPV as of 1 May 2016. In the Americas, all of the 32 countries that had previously used only OPV have already introduced IPV in their routine immunization schedule. Unfortunately, the rapid scale-up of IPV production required has encountered multiple challenges, leading to a global shortage. Current constraints mean that approximately 20 countries, from AFRO, EMRO, EURO and WPRO, which have not already received their first IPV shipment through UNICEF and are considered at low risk for circulating vaccine-derived poliovirus (cVDPV) type 2 outbreaks, will not be able to introduce IPV in 2016. These countries are expected to receive their first IPV shipments in the fourth quarter of 2017. In addition, shipments to approximately 25 countries, from AFRO, EMRO, SEARO and WPRO that have already introduced IPV and are considered at low risk for type 2 outbreaks, will not receive additional supply before the fourth quarter of 2017.

### **Update of IPV supply situation in PAHO Region**

Currently, the PAHO Revolving Fund only procures IPV through one manufacturer, Bilthoven Biologicals, from The Netherlands. This supplier has reduced the quantity offered to the RF due to production issues in 2016. Additionally, scheduled deliveries have been delayed. The first deliveries for 2016 are only expected from September 2016 onwards, and there are outstanding orders from the 2015 plan, totaling 1.4 million doses, which will hopefully be delivered through August 2016.

The only other possible IPV manufacturer, who in addition to not accepting the conditions set by the RF, has also progressively been reducing the supply of this vaccine to UNICEF. Furthermore, the RF has accepted a small availability of doses in pre-filled syringes for a couple of countries to diminish the supply gap. No additional sources of supply exist globally.

### **Supply perspective**

The PAHO Revolving Fund has been working closely with the manufacturer to stay up to date on any potential further setbacks and has been adapting the IPV allocation and delivery plans, prioritizing countries that are in the greatest need to avoid stockouts. Despite the efforts, one country is facing a stockout and 5 additional countries could face the same situation if the manufacturer performance continues to deteriorate. Considering this production performance, the Region must be prepared to face country stockouts, varying from a few weeks to several

months. This risk will last through the end of 2017, until additional production capacity is available.

### **Fractional dose schedules**

There is a growing body of scientific evidence on the safety and immunogenicity of intradermal (ID) fractional IPV (fIPV) dose administration, which delivers 0.1ml or 1/5 full intramuscular (IM) dose. Studies have been conducted for ID fIPV-dose as primary series in routine immunization schedules, as well as for boosting.

In March of this year, the WHO updated the Polio Position paper, which includes a recommendation to face the global IPV shortage, recommending that: *“As an alternative to the intramuscular injection of a full dose of IPV, countries may consider using fractional doses (1/5 of the full IPV dose) via the intradermal route, but the programmatic cost and logistic implications of this option should be considered. The SAGE working group in March 2016 confirmed that the proposed schedule of two ID fIPV can induce equal or better immunity than the current one full-dose schedule.”*

The SAGE working group, in March 2016, confirmed that the proposed schedule of two ID fIPV doses can induce equal or better immunity than the current one intramuscular full dose schedule.

While the use of mOPV is the mainstay of an outbreak response, there are some special recommendations for ID fIPV use in outbreak response. The SAGE working group, in January 2016, recommended that ID fIPV should be used for outbreak response. They reaffirmed this recommendation in March 2016, adding that fractional IPV provides good seroconversion in naïve infants, prevents paralysis and boosts humoral immunity in previously OPV-vaccinated children.

### **Recommendations**

The TAG reiterates its concern about the insufficient global supply of IPV and recognizes that the RF and the Immunization Unit are closely monitoring the situation and adjusting IPV delivery schedules in order to avoid stockouts in countries of the Region.

Due to the overall global deficit of IPV that will last through 2017, the TAG recommends that countries:

#### **1. Reduce IPV wastage**

- Ensure strict adherence to the vaccination schedule, using IPV only with children that have turned two months of age after the official introduction date of IPV in the country.
- Fully implement the WHO open vial policy, which permits the use of open vials of IPV for up to 28 days, provided that the defined criteria are met as outlined in the [WHO policy on the use of opened multi-dose vaccine vials](#).
- To reduce wastage of the vaccine, avoid, whenever possible, the use of IPV in extramural activities, prioritizing vaccination strategies that use fixed or mobile vaccination posts.
- Closely monitor IPV supply in the country to assure that all services are supplied and all possible service points that could have excessive vaccine wastage are identified, for providing appropriate recommendations.

## **2. Prepare to respond to possible IPV shortages**

- All health workers should be informed about a possible shortage of IPV and prepared to respond to this eventuality.
- In the absence of IPV for administration as the first dose of vaccination against polio, children should receive bOPV as the first dose in the schedule. In these cases, IPV should be applied at the first contact as the second, third or booster dose in the schedule, always respecting the minimum interval of 4 weeks between doses of polio vaccines.
- Due to the uniqueness of this recommendation, it is necessary to inform all vaccinators about the importance of clearly registering which vaccine was used, in both the national registry and on the child's vaccination card, so that for the next visit, it will be clear if the child has already received a dose of IPV or if this dose is still pending.

## **3. Prepare to respond to polio outbreaks**

- All countries should review their polio outbreak response plans, considering the guidelines presented in the documents published by the Global Polio Eradication Initiative, on 20 April 2016: Standard Operating Procedures for responding to poliovirus events and outbreaks, Part 1: General Standard Operating Procedures, and Part 2: Specific protocol for type 2 poliovirus (both available on the PAHO website: [www.paho.org/polio](http://www.paho.org/polio)).
- Countries should ensure that they can receive mOPV2 in a very short time from the global stock pile for outbreak response, which will be sent through UNICEF.
- IPV will not be needed to respond to all type 2 polio outbreaks. However, if it is assessed that IPV use is necessary, the WHO recommends that countries use fractional doses, administered intradermally, to make sure there is sufficient supply to serve all countries in need.
- Countries should evaluate their capacity in terms of skilled human resources to implement a vaccination campaign with fractional doses of IPV administered intradermally. Furthermore, countries should ensure that they can use the IPV vaccine this way, as recommended by the WHO for outbreak response. The recommendation is based on scientific evidence, but it is not indicated so on the vaccine inserts, therefore that means that countries must use fractional IPV as off label use.

## **4. Evaluate the capacity for use of ID fIPV in routine program, if needed**

- At this time TAG does not recommend that countries begin an ID fIPV schedule, but this option could be considered if the supply situation continues to worsen.
- Another TAG meeting should be convened if there is a change in the current IPV supply situation that justifies further assessment and recommendations.
- In the meantime, all countries should begin to evaluate the capacity of the program to implement an ID fIPV schedule. This includes evaluating the availability of trained personnel to apply ID vaccine, BCG syringes, programmatic cost and feasibility. Also, countries should evaluate if any changes need to be made to the national registry system.
- Due to the fact that the ID fIPV recommendation is based on scientific evidence, but is not included in the vaccine inserts, countries should ensure they can use ID fIPV off label.

## **5. Strengthen surveillance**

- The TAG reiterates that due to the risk of the emergence of cVDPV type 2 in the post-switch period, all countries must maintain sensitive surveillance systems in order to rapidly detect and interrupt any type 2 circulating poliovirus.
- Countries should strive to meet the following AFP quality surveillance indicators:
  - 1 AFP case per 100,000 children less than 15 years old
  - > 80% cases with adequate samples
  - > 80% cases investigated within 48 hours or less

## Use of the Dengue Vaccine in Routine Immunization

At the last meeting of the TAG held in Varadero, Cuba in July 2015, an update on the current status of dengue vaccine development was presented and discussed. Based on knowledge about the research and development pipeline for dengue and the data available on the only product near marketing launch at the time, the TAG recommended the following:

1. TAG recommends that the countries swiftly implement an integrated approach to prevention, control and case management of dengue, as stated in the World Health Assembly Resolution (2015).
2. While the burden of dengue in the Americas is important, TAG notes there is insufficient evidence to make a recommendation on vaccine introduction at this time. TAG itself is committed to considering timely new evidence as it becomes available and countries should do the same over the coming months in their own national decision-making processes.
3. In coordination with other initiatives, PAHO's ProVac Initiative should support national level decision-making through the use of economic evaluations grounded in local data.

As noted in the TAG of Cuba, introducing the dengue vaccine is part of the Global Strategy for the Prevention and Control of Dengue (2012-2020). Given the importance of having a preventive vaccine against this disease, the Strategic Advisory Group of Experts on Immunization (SAGE) established a workgroup comprised of dengue experts in March 2015.

CYD-TDV – a quadrivalent vaccine – (Dengvaxia of Sanofi Pasteur) is the first dengue vaccine candidate to come to the market. The live attenuated vaccine is already registered in five countries (Mexico, Brazil, El Salvador, Paraguay and the Philippines) globally. It has been registered for use among people aged 9 to 45 or 9 to 60 years and requires a 3-dose series given at 0, 6 and 12 months. It is also in the process of being registered in other countries.

In Latin America, CYD-TDV was first registered in Mexico in December 2015 for use among people aged 9 to 45 living in endemic areas. Registration at the country-level implies that the product can be locally marketed and sold. However, a NRA decision to license a biologic is separate from the decision to incorporate a product into a routine public health program.

Besides the CYD-TDV product, there are an additional 5 vaccines that are currently being evaluated in different phases of clinical trials. The CYD-TDV vaccine is not prequalified by the WHO yet. Prequalification requires registration by the NRA of the country in which the vaccine is made (in this case, EMA - European Medicines Agency). The WHO is waiting for the submission of a request by the manufacturer to initiate the prequalification process.

According to the information generated by the CYD-TDV vaccine phase III studies:

- SAGE reviewed the evidence generated by two major phase III studies:
  1. People 2-14 years of age in 5 countries in Asia
  2. People 9-16 years of age in 5 countries in Latin America

- The efficacy of the vaccine depends on several factors:
  1. Type of strain: greater protection against the type 3 and 4 than against type 1 and 2.
  2. Age: greater protection in older children.
  3. Severity of disease: greater protection against serious and hospitalized cases.
  4. Serologic status of individual at time of vaccination: complete protection was achieved only in participants with previous exposure to dengue virus.

The efficacy of the vaccine evaluated 25 months after the first dose among ages 9 to 16 years in both clinical trial studies was 65% (95% CI 60.7 - 69.9).

The protection response was different for the 4 dengue serotypes. For types 1 and 2, 50% and 42% of individuals were protected, respectively, and for the serotypes 3 and 4, 74% and 77% of individuals were protected, respectively.

In Asia, it was observed that children initially immunized at 2 to 5 years of age, showed a statistically significant increase in the risk of hospitalization due to dengue in the third year after the first dose, although, this risk disappeared in the 4<sup>th</sup> and 5<sup>th</sup> year. The biological explanation of this situation has not yet been determined, but may be related to the first exposure to the vaccine and/or age. This situation was not observed in the age group of children >5 years of age.

In general, phase III clinical trial results conducted in Asia and Latin America have shown that the CYD-TDV vaccine is effective, providing protection against all 4 serotypes of the dengue virus and that it has an acceptable safety profile. However, the local epidemiology and distribution of serotypes pre-vaccination appears to affect the overall efficacy of the vaccine.

The SAGE also considered the results of a comparative modeling analysis that evaluated the potential public health impact of introducing the CYD-TDV in a routine program, which was performed by 7 different teams. The results from the different modeling groups were consistent in their conclusion: in places of high transmission, the introduction of this vaccine at the beginning of adolescence could reduce dengue fever-related hospitalization by 10-30% in a period of 30 years. This represented a substantial health benefit. However, the modeling analysis determined that the vaccine might be less beneficial in places with low transmission, due to the high proportion of seronegative individuals, leading to a minor protective effect.

With this information the SAGE recommended that:

- Countries consider the introduction of the CYD-TDV only in places (national, sub-national level) with high endemicity (seroprevalence  $\geq 70\%$  in the target population group for vaccination or other epidemiological marker).
- In highly endemic areas (seroprevalence at 9 years of age approximately 90% or more), vaccination at the age of 9 years old will have the greatest impact. On the other hand, in places where the seroprevalence at 9 years of age is less than 90% (but greater than 50%), vaccination at age 11 to 14 years is advisable.

- Optimal protection requires a series of 3 doses given at 0/6/12 months. However, more evidence will be needed to understand if a simplified schedule may allow similar or better levels of protection.
- The currently available vaccine is restricted for use in ages 9 to 45.
- The target group for vaccination should be defined by each country on the basis of an analysis of the endemicity of dengue and programmatic feasibility.
- Due to an increase in the risk of hospitalization in children 2 to 5 years of age, it is not recommended that this vaccine be used in children younger than 9 years old, which is indicated by the manufacturer in the product insert.
- It is not recommended as an emergency response tool in outbreaks.
- Co-administration with other vaccines is not recommended since data on safety and immunogenicity in these conditions is not yet available.
- The introduction of the vaccine against dengue must be part of a comprehensive integrated control strategy, including strengthened vector control, case management and surveillance.
- The decision about the introduction of this vaccine – as has been done in the past – requires a thorough country-level assessment, including consideration of the national and local priorities, the epidemiology of the disease, predictive impact, cost-effectiveness and affordability and budgetary impact.

### **Recommendations**

- Given the conditions for the use of this vaccine and the lack of evidence on some aspects of safety and effectiveness, PAHO's TAG reaffirms the prior recommendation made in July 2015 and does not recommend the introduction of the dengue vaccine into routine national immunization programs at this time.
- Countries should strengthen surveillance in order to better understand dengue disease burden. This is especially important in the context of outbreaks of vector-borne diseases like Zika and Chikungunya.

## Feasibility of Perinatal Hepatitis B Elimination in the Americas

Hepatitis B virus (HBV) infection is a leading cause of infectious disease mortality worldwide with an estimated 4 million new HBV infections and 780,000 deaths annually. It is preventable with vaccination. The World Health Organization (WHO) estimates that worldwide more than 2 billion people are infected with HBV, of whom 240 million have a chronic infection. Most HBV-related morbidity and mortality result from complications of chronic infection: cirrhosis and hepatocellular carcinoma (HCC). It is estimated that 15-25% of people with chronic HBV infection will die prematurely from HBV-related cirrhosis or HCC.

The risk of chronic infection is inversely related to the age at infection. Chronic infection develops in up to 90% of infants infected during the perinatal period, 20-60% of young children infected in the post-perinatal period through five years of age, and in <5% of children, adolescents, and adults with infections acquired after five years of age. Globally, two-thirds of HBV-related deaths result from infection acquired in the perinatal and early childhood period.

According to a recent review, approximately 7.4 million people are living with chronic HBV infection in the Americas. The regional average of HBV seroprevalence is 0.81%, however in highly endemic areas, such as the Amazon basin, the prevalence of HBV infection is over 8%. In regions of low endemicity, including the United States and parts of South America, HBsAg prevalence is less than 2% and other areas in Latin America have intermediate prevalence (between 2% and 4%).

The WHO is currently developing a 2016-2021 Global Health Sector Strategy (GHSS) on viral hepatitis, with the plan to submit it to the 69<sup>th</sup> World Health Assembly in May 2016. The GHSS responds to specific requests included in resolution WHA67.6 of 2014, asking the WHO to assess the feasibility of eliminating HBV infections as a public health problem. The 2016-2019 Regional Plan for Viral Hepatitis presented and endorsed by a Directing Council Resolution in 2015 is fully aligned with the WHO's perspectives and includes targets, activities and interventions specific to the elimination by 2030, with EMTCT of HBV integrated into the existing platform for HIV and syphilis.

The WHO is promoting the elimination of HBV infection by the year 2030. The feasibility of HBV elimination was determined through modeling studies. The results of these studies were used to set the targets that include eliminating HBV by 2030 through a combination of high routine 3-dose infant vaccination coverage, high birth dose coverage, and the scale up of treatment services for persons with chronic HBV infection.

Currently, WHO and SAGE recommendations to reduce perinatal and early childhood transmission emphasize the importance of a birth dose of hepatitis B vaccine administered within 24 hours of birth, followed by two or three doses to complete the series. PAHO Regional Immunization Action Plan (2016-2020) presented to the Directing Council in September 2015

includes these recommendations and specific indicators to monitor the progress made by countries.

In the Americas in 2014, regional coverage with three doses of the hepatitis B vaccine among children less than one year of age was 89%. It is important to highlight the progress made on birth dose introduction in the national infant immunization schedules from 18 countries in 2013 to 27 countries in 2016. Regional coverage with the Hepatitis B birth dose is 81% (source: WHO/UNICEF Joint Reporting Forms/Country Survey).

Regarding the use of Hepatitis B immune globulin (HBIG) prophylaxis in conjunction with HBV vaccination, this may offer a minimal additional benefit to newborn infants whose mothers are HBsAg positive, particularly if they are also hepatitis B “e” antigen (HBeAg) positive. However, the use of HBIG is not currently recommended by the WHO and it is not feasible in most countries due to program logistics (lab-based screening to identify HBsAg-positive mothers, and due to the supply and cost of HBIG).

### **Recommendations TAG 2015**

- **Vaccination and monitoring**

1. PAHO and countries should evaluate the current status of hepatitis B control and the feasibility of hepatitis B elimination, so that TAG can assess their progress and the feasibility of eliminating hepatitis B at the regional level.
2. TAG reminds countries to introduce the birth dose of the hepatitis B vaccine, i.e., the first dose within 24 hours after birth, in countries that have not already introduced it.
3. Countries should monitor the administration of the birth dose within 24 hours of birth.
4. Countries should document prevalence of hepatitis B infection among pregnant women and strengthen hepatitis surveillance.
5. TAG reiterates previous recommendations on hepatitis B vaccination for children, healthcare workers, and other high-risk groups.

### **Follow-up to 2015 TAG Recommendations**

Continuing the inter-programmatic approach, several regional programs have included the elimination of Hepatitis as a public health problem by 2030, *including the EMTCT of HBV infection, which is considered a milestone on the road to HBV elimination:*

- PAHO Regional Plan on Viral Hepatitis (2016-2019) presented to the Directing Council in September 2015.
- PAHO Regional Immunization Action Plan (2016-2012) presented to the Directing Council in September 2015.

### **Other activities:**

The PAHO Hepatitis Technical Advisory Committee (TAC) was established in November 2015 and a PAHO Core Group on Hepatitis was established in December 2015.

- During March 2016, a PAHO concept note for the Elimination of Perinatal Hepatitis B in the Americas was circulated among TAC members and various stakeholders.
- PAHO also elaborated a model for the feasibility of the perinatal elimination of Hepatitis B, which was presented at the experts' consultation during May 9-10, 2016.
- PAHO has also developed a field guide for Maternal and Neonatal Immunization that includes guidance on newborns and the Hepatitis B vaccine (vaccination during the first 24 hours of life).

#### **Next steps:**

Inclusion of eliminating the perinatal transmission of HBV infection in different PAHO regional initiatives such as:

- Elimination of the perinatal transmission of HBV infection through the EMTCT+ platform, to be presented to PAHO's Directing Council in September 2016 as part of the 2016-2021 Regional Plan for HIV and STI
- Inclusion of the progress of the elimination of perinatal transmission in the Regional Immunization Action Plan (2017-2022), to be presented to PAHO's Directing Council in 2017.
- In other maternal and child health regional plans initiatives, if foreseen.

#### **Recommendations**

- The TAG supports that the PAHO Directing Council formally sets a goal for the elimination of MTCT of Hepatitis B by 2020.
- The TAG assesses that EMTCT of Hepatitis B is feasible in the Americas by ensuring vaccination coverage equal or greater than 95% with one dose of Hepatitis B vaccine among all newborn babies within 24 hours of birth and with the third dose of Hepatitis B among children <1 year, respectively.
- The TAG reaffirms the recommendations on Hepatitis B vaccination made at the meeting in 2015 and notes the progress made towards the evaluation of the feasibility of Hepatitis B elimination.
- PAHO should establish a comprehensive plan to achieve the elimination goal, including strengthened surveillance and targeted sero surveys for all countries. The TAG recommends that PAHO provides special technical support to those countries with the highest prevalence of HBsAg and those which have not introduced yet the birth dose in their routine schedule, for example some countries in the Caribbean and Central America, among others.
- The TAG recommends that measures to eliminate MTCT of Hepatitis B be integrated with efforts to eliminate MTCT of HIV and congenital syphilis and with other maternal, neonatal and infant health initiatives.

### Terms of Reference for the TAG

- Regional TAG Meetings will be held every two years.
- Sub-regional meetings will be held on alternate years. TAG members will be invited to participate based on availability, interest or expertise.
- There will be virtual TAG meetings held for urgent issues.
- Revised Terms of Reference for TAG Members will be circulated. They are now aligned with the SAGE's Terms of Reference.

### Yellow Fever

At the request of the TAG Chair, a short briefing was given on the current global situation on yellow fever:

#### 1. Global Epidemiological Situation

There are several ongoing yellow fever outbreaks in the AFRO Region. As of May 11 2016, Angola has reported 2267 suspected cases and 293 deaths. Of these, 696 have been confirmed by laboratory. Three countries have reported importations stemming from this outbreak, including the Democratic Republic of Congo (39 cases plus two autochthonous cases), the People's Republic of China (11 cases) and Kenya (two cases). Additionally, 51 suspected cases have been reported in Uganda, including seven that were laboratory confirmed.

#### 2. Epidemiological Situation in the Americas

Epizootics due to yellow fever have been reported in Brazil, Peru and Ecuador. One human case has been reported in the municipality of Bady Bassit (Sao Paulo) 400 kilometers from the urban center of Sao Paulo, Brazil. This case is most likely a case of a jungle yellow fever, as this municipality is included in a risk area for the disease and vaccination is recommended for all residents of the zone. The vaccination status of this case, however, is unknown.

On April 22, PAHO issued an Epidemiological Alert in light of the circulation of yellow fever in the Region and in consideration of the current global situation. In this alert, PAHO advised Member States to maintain their capacity to detect and confirm cases of yellow fever, provide updated information for health professionals and training to allow them to properly detect and manage cases. PAHO also encouraged countries to maintain high vaccination coverage among at-risk populations.

#### 3. Yellow Fever Vaccination Coverage in the Americas

Vaccine coverage in the Region among children at one year of age is around 70%. This coverage has been negatively affected by the current global vaccine shortage. Countries

are receiving around 50% of their estimated vaccine requirements. PAHO is therefore encouraging countries to build up national vaccine stockpiles in order to respond to potential outbreaks.

#### **4. Communication from PAHO's Director**

In light of the above facts, on 13 May 2016, PAHO's Director sent a letter to all ministries of health, updating them on this critical situation and reinforcing the current recommendations, especially given the close commercial relationship between Angola and Brazil, the possible risk of yellow fever case importation and the risk of the re-urbanization of this disease in the Americas.