

Immunization Newsletter

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Tenth Anniversary of Vaccination Week in the Americas and the First World Immunization Week

This year marks two milestone events in public health: the tenth anniversary of Vaccination Week in the Americas (VWA), and the first ever World Immunization Week (WIW). In the Americas, over the last ten years, VWA has grown to become the largest multinational health initiative in the Region, thanks to the political commitment of governments and the dedication of the Region's health care workers. The objectives of Vaccination Week are: 1) to advance equity and improve access to vaccination for people of all ages through outreach to underserved and marginalized communities; 2) increase vaccination coverage of all antigens to prevent disease outbreaks; 3) raise awareness on how immunization saves lives; 4) to maintain the topic on the political agenda; and 5) to promote the transition from child to family immunization.

More than 365 million children, young people, men, women of childbearing age and older adults have been vaccinated as a result of activities conducted under the framework of VWA over the past nine years. In 2012, under the slogan: "For you, for me, for everyone. Get vaccinated", countries and territories have planned to target more than 44 million people across the age spectrum for vaccination against a wide range of diseases; 45 countries and territories in the Region have committed to celebrating this milestone initiative in 2012.

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PAHO Director, Dr. Mirta Roses Periago and Haiti's Minister of Health and Population, Dr. Florence Guillaume attend a VWA launch in Port-au-Prince, Haiti.

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Haiti launches VWA with Intensive Vaccination Activities Focused on Children

On 21 April 2012, as part of the tenth annual Vaccination Week in the Americas (VWA) and the launch of the first World Immunization Week (WIW), Haiti launched intensive vaccination activities to protect children against diseases including polio, measles and rubella, among others. A launch event was held in Port-au-Prince with the participation of national health authorities, the Pan American Health Organization/World Health Organization (PAHO/WHO), the GAVI Alliance, GAVI Board Chairman, Dagfinn Høybråten; UNICEF Deputy Representative in Haiti, Stephano Savi; Director of the Center for Global Health at the U.S. Centers for Disease Control and Prevention (CDC), Kevin De Cock; and Director-General of Health in Haiti's Ministry of Public Health and Population, Gabriel Thimoté, among others.

The intensive child health activities launched seek to strengthen Haiti's routine immunization program through personnel training, strengthening the cold chain, proper waste disposal, improvements in epidemiological surveillance, and capacity building in program management. The launch featured a flag parade of 194 countries by Haitian school children as part of the first WIW celebration, a PAHO/WHO photo exhibit celebrating ten years of Vaccination Week in the Americas, and a special music and dance performance. Haiti's goal is to vaccinate some 2.5 million children aged nine years and under against polio and 2.3 million aged nine months to nine years against measles and rubella.

Health workers also expect to administer some 1.2 million doses of vitamin A and two million doses of albendazol, an antiparasitic drug. Since its inception, nine years ago, the regional initiative has taken the benefits of vaccination to an estimated 365 million people throughout the hemisphere. ■

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An increasing number of countries use VWA to integrate other preventative health interventions with vaccination campaigns. In 2012, 17 countries and territories have reported plans to integrate activities such as deworming, vitamin A supplements, growth monitoring, cancer screening, distribution of water filters, body mass index screening, and foot care demonstrations for diabetics, as part of the 10th anniversary of VWA.

The launch of the first World Immunization Week and the tenth Vaccination Week in the Americas was done under the framework of this year's Summit of the Americas in Cartagena, Colombia on 13-15 April 2012. Other high profile events were held in Port-au-Prince, Haiti on 21-27 April in a tri-national border area between El Salvador, Guatemala, Honduras and Nicaragua. Simultaneously, dozens of 2012 VWA launching events were carried out

throughout the Region, at the local, national and international level.

The success of Vaccination Week in the Americas has served as a model for other Regions of the World Health Organization. The first World Immunization Week will be celebrated with the participation of more than 180 countries under the slogan: "Protect your world. Get Vaccinated!" ■

Honduras launches Vaccination Week with representatives of the Bill and Melinda Gates Foundation, government officials, and PAHO Assistant Director

On April 25, Honduras launched its Vaccination Week with Health Secretary, Dr. Arturo Bendaña, accompanied by Dr. Socorro Gross, Assistant Director of the Pan American Health Organization and Bill Gates (senior) on behalf of the Bill and Melinda Gates Foundation. The event took place during the tenth Vaccination Week in the Americas and the first World Immunization Week in Tegucigalpa, Honduras.

Vaccination Week in the Americas, the largest multinational health initiative in the Region, became a global initiative this year with the celebration of the first World Immunization Week, which has brought together over 180 countries and regions around the world.

"Vaccines are one of the most successful and cost-effective health interventions we have. They prevent nearly 3 million deaths every year. That is a lot of love," affirmed Gates, who remarked that he was personally moved by the theme "Vaccination is an Act of Love" of this year's Vaccination Week in the Americas. He commented that he helps his son Bill and his wife Melinda run the Foundation, which is guided by the belief that "every life has equal value."

"One of the best ways to do that—to give everyone a chance at a healthy and productive life—is to improve child health worldwide. So that has always been the focus of our foundation. When we got started about a decade ago, we couldn't believe that so many children were dying from preventable diseases," asserted Gates senior. "As we learned more, we discovered that countries like Honduras were already doing something about it, by putting



PAHO Assistant Director, Dr. Socorro Gross places a VWA sticker on a child during vaccination activities in Honduras.

effective immunization programs in place," he added.

The Secretary of Health of Honduras pointed out that prevention activities are stepped up during Vaccination Week through the immunization of children, teenagers, young adults, and pregnant women.

"We have to keep working, making an effort, and taking our policies a step further in order to maintain the benefits that we have achieved thus far with regard to vaccination," asserted Dr. Bendaña. "Vaccines can mean the difference between a smile and a tear, because vaccines save lives," he underscored.

"We join together today to celebrate the tenth anniversary of Vaccination Week in the Ameri-

cas, an activity that unites all nations, border communities, all peoples, regardless of race, religion, and borders," said Dr. Gross. "But also today, we become part of the dream that this week, thousands of health workers and volunteers are vaccinating millions of children around the world, saving lives and bringing health," added PAHO's Assistant Director in reference to World Immunization Week.

Gina Watson, PAHO's representative in Honduras also attended the ceremony, which took place in Francisco Morazán Central Plaza in the Honduran capital. The event, which officially launched the national vaccination campaign as well as the follow-up campaign against measles and rubella, featured an artistic presentation and symbolic vaccinations.

Meanwhile, on 24 April, the PAHO team and staff of the Ministry of Health's Expanded Program on Immunization accompanied Mr. Gates senior on his visit to learn about the health services and the National Center for Biologicals and to assess first-hand the cost-effectiveness of vaccination efforts in the country. Gates also met with Honduran President Porfirio Lobo and with Dr. Bendaña.

On 27 April, Dr. Gross participated in Cross-border Vaccination Day, which took place in Metapán, El Salvador, with the participation of the health authorities of Honduras, El Salvador, Guatemala, and Nicaragua. She was accompanied by Dr. Gina Watson, PAHO/WHO representative in Honduras, and Dr. Cuahtémoc Ruiz and Alba María Roperó, PAHO's advisers on immunization. ■

Vaccine-derived Poliovirus Paralytic Poliomyelitis What is it and what should you do?

In September 1985, during the XXXI Meeting of the Directing Council of the Pan American Health Organization (PAHO), the governments' of PAHO Member States approved a Resolution that set the goal of eradicating wild poliovirus from the Americas [1]. Three years later, in 1988, the World Health Assembly established the global polio eradication goal. Such initiative was centered on the administration of the Oral Polio Vaccine (OPV), also known as Sabin vaccine.

The main components of the strategy to interrupt the transmission of wild poliovirus were [1]:

1. the achievement and maintenance of high vaccination coverage in children under 5. To this end, the routine vaccination services should be complemented with mass OPV vaccination campaigns, for example, the national vaccination days in which when a dose was administered to all children aged less than 5, regardless of their vaccination history, and conduct door-to-door campaigns in areas that had low coverage or still had wild poliovirus transmission;
2. the development of a surveillance system for the early detection and investigation of

cases of Acute Flaccid Paralysis (AFP)—probable cases of poliomyelitis; and

3. the creation of a wild poliovirus surveillance system based on a regional laboratory network.

These strategies reduced the overall incidence of the virus and limited circulation of wild poliovirus. Three regions of the World Health Organization (WHO), comprising 134 countries, areas, and territories with a total population of over 3 million have been declared polio-free by international commissions: the Region of the Americas in 1994, the Western Pacific Region in 2000, and the European Region in 2002. Likewise, type 2 wild poliovirus has not been detected since 1999 [2].

In 2011, the Global Polio Eradication Initiative recorded 650 cases of poliomyelitis caused by wild poliovirus, 341 of which were in endemic countries (Afghanistan, India, Nigeria, and Pakistan) and 309 in non-endemic countries. In February 2012, India was officially taken off the list of polio-endemic countries, as it had not reported a single case since 13 January 2011 [2,3].

The use of the OPV is what has enabled

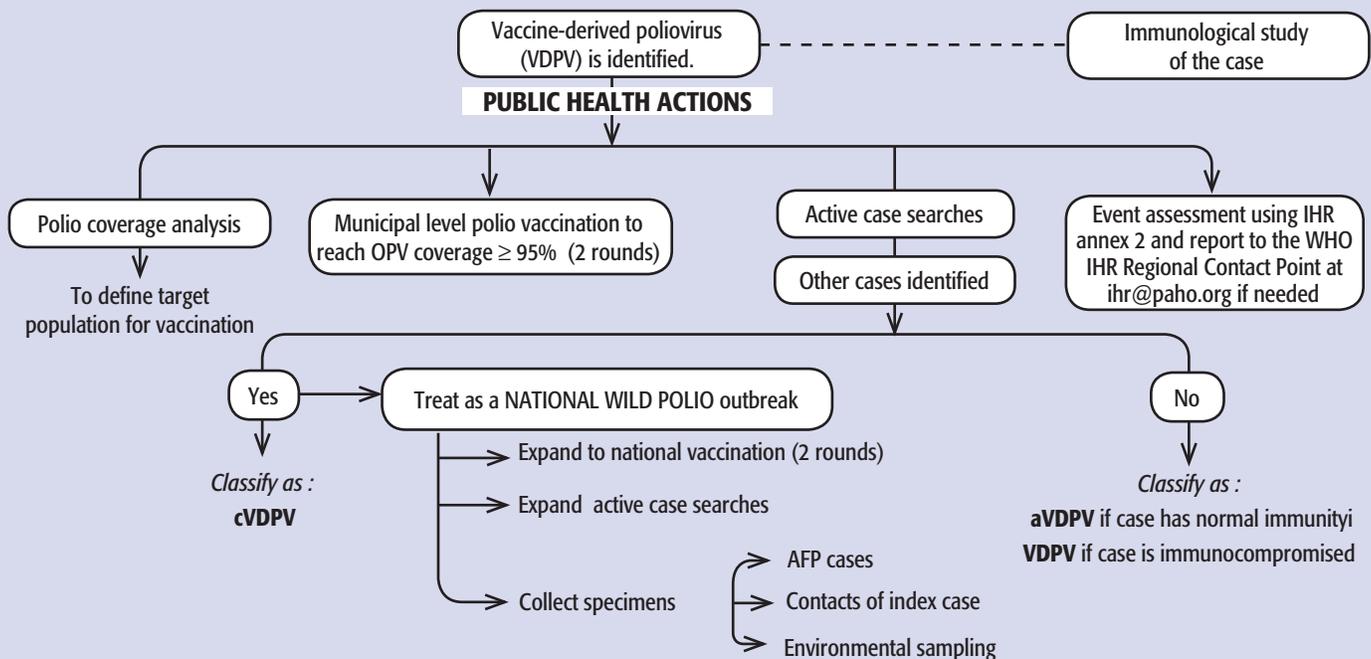
this progress. However, although it is a very safe vaccine, OPV has been associated with some rare adverse events [4], such as cases of vaccine-associated paralytic poliomyelitis (VAPP) and cases of paralytic poliomyelitis caused by vaccine-derived poliovirus (VDPV). This article focuses on the public health response to cases of VDPV.

Paralytic poliomyelitis caused by VDPV is produced by viruses deriving from the oral Sabin vaccine that have lost key attenuating mutations through recombinations or mutations of their viral genome, ending with their similarity to the Sabin strain. These viruses behave like wild viruses and once again acquire characteristics typical of wild poliovirus, such as neurovirulence (the ability to cause paralysis) and transmissibility [5].

VDPVs were first identified in the Americas during an outbreak of paralytic poliomyelitis in Haiti and the Dominican Republic in 2000–2001, with 21 cases caused by type 1 VDPV [6].

The extent of sequence divergence of the VP1 nucleotide region from Sabin strains can be used as a “molecular clock” to estimate the replication of the poliovirus. Genetic muta-

What to do when a VDPV is identified?



* Age of vaccination will be defined depending on the age of the cases. OPV must be given to all children, regardless of previous vaccination status.

tions have been observed to occur with about 1% nucleotide divergence from the vaccine strain in VDPV type 1 and 3 and 0.6% nucleotide divergence in type 2, which is indicative of extensive replication and a much more prolonged replication period than that of the vaccine strain, which is 4 to 6 weeks following oral vaccination. For this reason, a virus is considered to be a **vaccine-derived poliovirus** when the divergence in the genome sequence of the VP1 nucleotide region with the Sabin strain is

- greater than 1% (VDPV) for type 1 and 3 polioviruses
- greater than 0.6% for type 2 polioviruses, since this type of virus has a greater mutation potential [7]

There are three types of vaccine-derived polioviruses [2,3]:

1. Circulating vaccine-derived poliovirus (cVDPV)

On very rare occasions, if a population is seriously under-immunized, there are enough susceptible children for the excreted vaccine-derived polioviruses to begin circulating in the community. These viruses are called circulating vaccine-derived polioviruses (cVDPV).

As with naturally occurring poliovirus, the only protection against cVDPV is full vaccination. Circulating VDPVs in the past have been rapidly stopped with 2-3 rounds of high-quality immunization campaigns. The solution is the same for all polio outbreaks: immunize every child several times with the oral vaccine to stop polio transmission, regardless of the origin of the virus.

2. Immunodeficiency-related vaccine-derived poliovirus (iVDPV)

Prolonged replication of vaccine-derived viruses has been observed in a small number of people with rare immune deficiency disorders. Because they are not able to mount an immune response, these people are not able to clear the intestinal vaccine virus infection, which is usually cleared within six to eight weeks. They therefore excrete immunodeficiency-related vaccine-derived polioviruses (iVDPVs) for prolonged periods. The occurrence of iVDPVs is very rare. Only 42 cases have been documented worldwide. Of these, most stopped excretion within six months or died. Three people excreted the virus for more than 5 years.

3. Ambiguous vaccine-derived poliovirus (aVDPV)

Ambiguous vaccine-derived polioviruses (aVDPVs) are vaccine-derived polioviruses that are either isolated from people with no

known immunodeficiency, or isolated from sewage whose ultimate source is unknown. Very little is known about them.

Since July 2009 there have been reported outbreaks of cVDPV in Afghanistan, Chad, Congo, Ethiopia, India, Niger, and Nigeria. Cases of iVDPV have been reported in Algeria, China, Colombia, India, Somalia, Iraq, Sri Lanka, and Turkey. Cases of aVDPV have been reported in Estonia, Finland, and Israel.

In the Region of the Americas, there have not been any cases of cVDPV since the outbreak on the Island La Hispaniola (the Dominican Republic and Haiti) in 2000–2001. There have been cases of iVDPV in Argentina, Colombia, Peru, and the United States.

Determining the risk of a VDPV or wild poliovirus appearing

Each country should conduct a thorough risk assessment, analyzing the following:

1. the risk of importing a virus (tied to exposure to travelers, migrants, or visitors from areas that have polio)
2. the risk of a VDPV being present in the country
3. the risk that if a wild poliovirus is imported or a VDPV appears, the epidemiological surveillance system might not detect it in a timely manner. Therefore, the country should determine national and subnational compliance with basic AFP surveillance indicators, such as an AFP rate of more than 1 case per 100,000 population aged less than 15 years and more than 80% of AFP cases with adequate stool samples; the identification of silent areas or areas that have not reported in the past five years; analysis of how samples are handled, from collection to the laboratory; and verification that the national reference laboratory, if there is one, has received its annual accreditation from PAHO/WHO.
4. the risk that an imported poliovirus or VDPV will spread or circulate in the population, causing an epidemic. This is related to
 - polio vaccination coverage rates and sanitation levels. Vaccination coverage rates should be analyzed by country, province/department/state, and municipality/district for at least each of the past five years. The number of susceptibles should be calculated (by cohort) and the availability of polio vaccines and the ability to procure them on a timely basis (through loans or purchases) should be known.

- sanitation conditions in the country (percentage of the population with access to clean drinking water and sanitation services)

5. Prepare a contingency plan that considers the political, social, and epidemiological implications of information management when a case of VDPV or imported polio appears.

Action to take in the event of a probable case of VDPV

A case of VDPV in a country should be managed as if it were caused by wild poliovirus.

1. **Comprehensive clinical care:** Comprehensive clinical care should be provided; this includes assessment by a pediatric neurologist and immunologist and all the tests needed to make a diagnosis, including a detailed immunological study, if necessary, the collection and virological study of patient stool samples every four weeks to monitor viral excretion, and comprehensive health care based on the patient's needs and rehabilitation requirements.
2. **Notification of the public health surveillance system:** Notification should follow the country's surveillance standards. Every public health event must also be evaluated as indicated in Annex 2 of the International Health Regulations (IHR, 2005), and the WHO contact point in the Americas (ihr@paho.org) should be notified, if necessary. The WHO contact point should be notified about the isolation of VDPVs from human or nonhuman sources (people without paralysis or environmental samples), since these cases meet at least two of the four IHR reporting criteria: (1) Is the public health impact of the event serious? and (2) Is the event unusual or unexpected? That is, it constitutes a "public health emergency of international concern."
3. **Investigation of cases:** The investigation of cases should follow the country's AFP surveillance protocols. The patient's family, contacts, and health care providers should be visited and interviewed. Questions should be asked about compatible symptoms, and stool samples should be collected from the family and the patient's community contacts. It may also be useful to take samples of wastewater or waste in the vicinity of the home to search for circulation of the virus. After a thorough laboratory, epidemiological, and clinical investigation, the case should also be classified as immunodeficient (i), circulating (c), or ambiguous (a) VDPV.

Important Facts about Vaccine-derived Poliovirus (VDPV)

- The spread of a cVDPV shows that too many children remain under-immunized.
- The lower the population immunity, the longer these viruses survive. The longer they survive, the more they replicate, change, and exchange genetic material with other enteroviruses as they spread through a community.
- If a population is fully immunized against polio, it will be protected against the spread of both wild and VDPV.
- From 2000 to 2010, more than 10 billion doses of OPV were administered to over 2.5 billion children. As a result more than 3.5 million polio cases were prevented. During that time, 18 outbreaks of cVDPVs occurred in 16 countries, resulting in 510 VDPV cases.

4. Active case finding: Active community and institutional case findings are both needed.

- Active institutional case finding entails searching the records of outpatient, emergency, and hospital visits by AFP cases who may have consulted a health facility – cases that may or may not have been reported to the epidemiological surveillance system – based on the definition of AFP found in the protocol. This search should cover at least the previous year. If cases of AFP are found, they should be investigated, and stool samples should be collected for isolation and identification of the viruses, if the specimens are collected within the appropriate time frame. Other institutions that should be included in the search are schools, day care centers, etc.
- Active community case-finding is conducted through interviews in the community, where questions are asked about the presence of cases that meet the definition of AFP in a country's AFP surveillance protocol.

5. Identification of other cases: Probable cases should be reported daily to the surveillance system, as should negative reporting (absence of cases). New cases should be investigated, and proper handling of samples for viral isolation and identification (timely collection, shipment as per biosafety standards, verification of receipt by the laboratory) should be ensured.

6. Rapid monitoring of coverage: These

two methodologies are recommended for monitoring coverage:

- for the areas closest to the case, a census of all dwellings
- for the areas farthest from the case, lot quality assurance sampling (LQAS), PAHO's methodology for rapid monitoring of vaccination coverage, or another methodology used in the country

7. OPV vaccination of all children under 5 in the municipality or its equivalent, regardless of the number of previous doses they have received. The age of the target group can be increased depending on the age of those found to be infected. Coverage in the target group should be over 95% and should be verified immediately through coverage monitoring. If cases are found in other municipalities, the scope of the vaccination campaigns should be expanded to include the municipalities, departments, or even the entire country.

Information, education, and communication:

- **Implementing the contingency plan:** Identify official spokespersons, including those in the scientific community, to provide periodic updates and keep the community informed about the presence or absence of cases.
- **Informing the affected community about necessary environmental sanitation activities.** The importance of the following should be communicated: frequent hand washing with soap and water; proper disposal of human waste so as to prevent people, especially children and the elderly in the home, from coming into contact with it; the need to treat drinking water; improvement of environmental sanitation; and safe food preparation.

8. Prioritizing areas for action. In order to determine the geographical area where the field investigation will be conducted, at least three areas around the case, and possibly a fourth, should be established:

- Area 1: neighborhood, district, or equivalent where the affected individual(s) live(s)
- Area 2: municipality in which the affected individual(s) live(s)
- Area 3: the expansion of the area will depend on the transportation connections and trade between the municipality where the case is found and bordering municipalities.
- Area 4: Depending on the findings of

the investigation into trips the affected individual(s) took over the past 30 days or where his or her visitors came from, the area can be expanded to entire departments or the country as a whole.

9. Evaluation: If cases continue to appear four weeks after the last round of vaccinations, the control strategy should be reassessed and the situation considered a national health public emergency.

PAHO's Technical Advisory Group on Vaccine-preventable Diseases has emphasized the importance of systematic vaccination with OPV to prevent the spread of VDPV. Countries that do not reach at least 95% polio vaccine coverage in every municipality must conduct annual OPV immunization campaigns for children aged less than 5, regardless of their vaccination status. It is also critical that countries maintain certification standards for AFP surveillance in compliance with established surveillance indicators [8]. ■

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Guide to Contraindications and Precautions¹ to Commonly Used Vaccines*

Vaccine	Contraindications	Precautions ¹
BCG	<ul style="list-style-type: none"> • Infants who are known to be HIV infected with or without signs or reported symptoms of HIV infection. • Infants whose HIV infection status is unknown but who have signs or reported symptoms suggestive of HIV infection and who are born to HIV-infected mothers. • If HIV status can be ruled-out with early virological testing, BCG may then be administered^a 	<ul style="list-style-type: none"> • Infant weighing less than 2000 grams (4 lbs, 6.4 oz)
Hepatitis B (HepB)	<ul style="list-style-type: none"> • Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component 	<ul style="list-style-type: none"> • Moderate or severe acute illness with or without fever • Infant weighing less than 2000 grams (4 lbs, 6.4 oz)²
Oral poliovirus vaccine (OPV)	<ul style="list-style-type: none"> • OPV has not been found harmful when administered to asymptomatic HIV-positive children. However, if available, inactivated polio vaccine (IPV) is preferred, especially for symptomatic individuals. IPV is preferred for HIV-positive individuals and their household contacts due to the theoretical risk of OPV's neurovirulent effect on immunocompromised persons. 	
Inactivated poliovirus vaccine (IPV)	<ul style="list-style-type: none"> • Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component 	<ul style="list-style-type: none"> • Moderate or severe acute illness with or without fever
Rotavirus	<ul style="list-style-type: none"> • Severe allergic reaction (e.g., anaphylaxis) after a previous vaccine dose or to a vaccine component 	<ul style="list-style-type: none"> • Moderate or severe acute illness with or without fever • Altered immunocompetence other than Severe Combined Immunodeficiency (SCID) that usually contraindicates • History of intussusception • Pre-existing chronic gastrointestinal disease • Spina bifida or bladder exstrophy
Diphtheria, tetanus, pertussis (DTP, DTaP) Tetanus, diphtheria, pertussis (Tdap)	<ul style="list-style-type: none"> • Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Encephalopathy (e.g., coma, decreased level of consciousness, prolonged seizures) not attributable to another identifiable cause within 7 days of administration of previous dose of DTP or DTaP (for DTP/DTaP); or of previous dose of DTP, DTaP, or Tdap (for Tdap) 	<ul style="list-style-type: none"> • Moderate or severe acute illness with or without fever • Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of tetanus toxoid-containing vaccine • History of arthus-type hypersensitivity reactions after a previous dose of tetanus or diphtheria toxoid-containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus-toxoid containing vaccine • Progressive or unstable neurologic disorder (including infantile spasms), uncontrolled seizures, or progressive encephalopathy until a treatment regimen has been established and the condition has stabilized For DTP/DTaP: • Temperature of 40.5°C or higher (105°F or higher) within 48 hours after vaccination with a previous dose of DTP/DTaP • Collapse or shock-like state (i.e., hypotonic hyporesponsive episode) within 48 hours after receiving a previous dose of DTP/DTaP • Seizure within 3 days after receiving a previous dose of DTP/DTaP • Persistent, inconsolable crying lasting 3 or more hours within 48 hours after receiving a previous dose of DTP/DTaP
Tetanus, diphtheria (DT, Td)	<ul style="list-style-type: none"> • Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component 	<ul style="list-style-type: none"> • Moderate or severe acute illness with or without fever • History of arthus-type hypersensitivity reactions after a previous dose of tetanus or diphtheria toxoid-containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus-toxoid containing vaccine
Influenza, injectable trivalent (TIV)	<ul style="list-style-type: none"> • Severe allergic reaction (e.g., anaphylaxis) after a previous dose of any influenza vaccine or to a vaccine component, including egg protein. • Infants younger than 6 months 	<ul style="list-style-type: none"> • Moderate or severe acute illness with or without fever • History of GBS within 6 weeks of previous influenza vaccine
<i>Haemophilus influenzae</i> type b (Hib)	<ul style="list-style-type: none"> • Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Age younger than 6 weeks 	<ul style="list-style-type: none"> • Moderate or severe acute illness with or without fever
Measles, mumps, rubella (MMR) ⁴	<ul style="list-style-type: none"> • Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Known severe immunodeficiency (e.g., from hematologic and solid tumors, receiving chemotherapy, congenital immunodeficiency, or long-term immunosuppressive therapy⁵ or patients with HIV infection who are severely immunocompromised)⁶ • Pregnancy⁷ 	<ul style="list-style-type: none"> • Moderate or severe acute illness with or without fever • Recent (within 11 months) receipt of antibody-containing blood product (specific interval depends on product)⁸ • History of thrombocytopenia or thrombocytopenic purpura • Need for tuberculin skin testing⁸

Yellow Fever	<ul style="list-style-type: none"> • Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component (eggs, egg products, chicken proteins, gelatin or dry latex rubber). • Children aged under 6 months • Severely immunocompromised persons (thymus disorder, AIDS, primary immunodeficiencies, malignant neoplasms, and transplantation, immunosuppressive and immunomodulatory therapies)^b 	<ul style="list-style-type: none"> • Children 6 to 8 months (can be given in outbreak situations) • Adults aged ≥ 60 years • Asymptomatic HIV Infection with Moderate Immune Suppression • Pregnancy • Breastfeeding
Varicella (Var) ^a	<ul style="list-style-type: none"> • Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Known severe immunodeficiency (e.g., from hematologic and solid tumors, receiving chemotherapy, congenital immunodeficiency, or long-term immunosuppressive therapy⁵ or patients with HIV infection who are severely immunocompromised)⁶ • Pregnancy 	<ul style="list-style-type: none"> • Moderate or severe acute illness with or without fever • Recent (within 11 months) receipt of antibody-containing blood product (specific interval depends on product)⁷ • Receipt of specific antivirals (i.e., acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination, if possible; delay resumption of these antiviral drugs for 14 days after vaccination.
Human papilloma-virus (HPV) ^{9,10}	<ul style="list-style-type: none"> • Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component 	<ul style="list-style-type: none"> • Moderate or severe acute illness with or without fever • Pregnancy¹¹
Pneumococcal Conjugate (PCV)	<ul style="list-style-type: none"> • For PCV, severe allergic reaction (e.g., anaphylaxis) after a previous dose (of PCV) or any diphtheria toxoid-containing vaccine) or to a vaccine component (of PCV or any diphtheria toxoid-containing vaccine) 	<ul style="list-style-type: none"> • Moderate or severe acute illness with or without fever
Pneumococcal polysaccharide (PPSV)	<ul style="list-style-type: none"> • Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component 	<ul style="list-style-type: none"> • Moderate or severe acute illness with or without fever

* Adapted from Immunization Action Coalition and "Table 6. Contraindications and Precautions to Commonly Used Vaccines" found in: CDC. "General Recommendations on Immunization: Recommendations of the Advisory Committee on Immunization Practices (ACIP)." MMWR 2011; 60(No. RR-2), p. 40–41, and from Atkinson W, Wolfe S, Hamborsky J, eds. Appendix A. Epidemiology and Prevention of Vaccine-Preventable Diseases (www.cdc.gov/vaccines/pubs/pinkbook/index.html).

Footnotes

1. Events or conditions listed as precautions should be reviewed carefully. Benefits of and risks for administering a specific vaccine to a person under these circumstances should be considered. If the risk from the vaccine is believed to outweigh the benefit, the vaccine should not be administered. If the benefit of vaccination is believed to outweigh the risk, the vaccine should be administered.
2. Hepatitis B vaccination should be deferred for preterm infants and infants weighing less than 2000 g if the mother is documented to be hepatitis B surface antigen (HBsAg)-neg-ative at the time of the infant's birth. Vaccination can commence at chronological age 1 month or at hospital discharge. For infants born to women who are HBsAg-positive, hepa- titis B immunoglobulin and hepatitis B vaccine should be adminis- tered within 12 hours of birth, regardless of weight.
3. LAIV, MMR, and varicella vaccines can be administered on the same day. If not administered on the same day, these vaccines should be separated by at least 28 days.
4. Substantially immunosuppressive steroid dose is considered to be 2 weeks or more of daily receipt of 20 mg (or 2 mg/kg body weight) of prednisone or equivalent.
5. HIV-infected children may receive varicella and measles vaccine if CD4+ T-lymphocyte count is $> 15\%$. (Source: Adapted from American Academy of Pediatrics. Passive Immu- nization. In: Pickering LK, ed. Red Book: 2009 Report of the Committee on Infectious Diseases. 28th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2009.)
6. Vaccine should be deferred for the appropriate interval if replacement immune globulin products are being administered.
7. Even though in most cases no fetal adverse events have been observed, live vaccines should be generally avoided during pregnancy to prevent the vaccine from being temporally associated with (or blamed for) some event in the newborn.
8. Measles vaccination might suppress tuberculin reactivity temporarily. Measles-containing vaccine can be administered on the same day as tuberculin skin testing. If testing cannot be performed until after the day of MMR vaccination, the test should be postponed for at least 4 weeks after the vaccination. If an urgent need exists to skin test, do so with the understanding that reactivity might be reduced by the vaccine.
9. Following vaccine administration, adolescent individuals should be observed for 15 minutes. While no evidence exists of elevated risk for fainting (syncope) specifically related to HPV vaccines, post-licensure monitoring shows an increased occurrence of post-vaccination fainting among adolescent individuals. This increased occurrence may relate to the specific psychosocial characteristics of adolescents.
10. HPV vaccines may be administered under immunosuppression; previous equivocal or abnormal Papanicolaou (PAP) test; known HPV infection; and history of genital warts, if none of the true contraindications occurs. While limited, available data do not suggest serious adverse outcomes following immunization of HIV-positive children with quadrivalent HPV vaccine.
11. Women should not be vaccinated during pregnancy. This precaution is solely based on relative lack of HPV vaccine safety data in pregnant women. However, no evidence exists either indicating that HPV vaccine are dangerous to the mother or the offspring if a pregnant woman is inadvertently vaccinated. Consequently, pregnancy should never be terminated if a woman was vaccinated inadvertently. The vaccination series should merely be interrupted and concluded after birth giving. Quadrivalent HPV vaccine can be administered to lactating women because available data do not indicate any safety concerns; safety data for lactating women are not available for the bivalent vaccine.

^a BCG - *Weekly Epidemiological Record*, No. 21, 25 May 2007

^b Yellow fever - *Weekly Epidemiological Record*, No. RR-7, 30 July 2010

False Contraindications

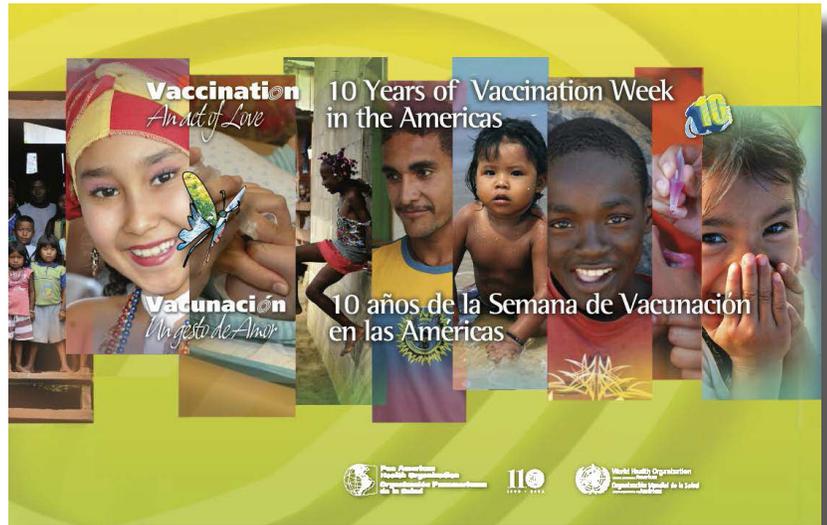
Health personnel commonly misperceive some conditions as contraindications to vaccination, when in fact they are not (so called false contraindications). General to all vaccines, these conditions include: diarrhea; minor upper respiratory tract illnesses with or without fever; mild to moderate local reactions to a previous dose of vaccine; current antimicrobial therapy; and being in the convalescent phase of an acute illness.

Vaccination: An Act of Love, 10 Years of Vaccination Week in the Americas

In celebration of the 10th anniversary of Vaccination Week in the Americas (VWA), the Pan American Health Organization (PAHO) will publish a coffee table book about this initiative, to be presented during the 2012 Pan American Sanitary Conference.

The book is entitled, *Vaccination: An Act of Love, 10 Years of Vaccination Week in the Americas*, and documents the initiative's evolution over the last decade, its organization and planning, and VWA-related results. The book also describes sister Vaccination Week initiatives that have been launched in other WHO regions, which led to the formal endorsement of a World Immunization Week (WIW) during the 2012 World Health Assembly. The book includes photographs and collages depicting the various celebrations of VWA in many countries throughout the Americas.

The success of VWA would not have been possible without the commitment of the Ministries of Health in the Region and the dedication of health care workers to reaching the unreached, bringing life-saving vaccines to people in all corners of the Western Hemisphere. ■



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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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