



Immunization Newsletter

Pan American Health Organization

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Sixth Vaccination Week in the Americas: 19–26 April 2008

This year, Vaccination Week in the Americas (VWA) is celebrating its 6th anniversary. The Regional initiative seeks to revitalize political commitment to vaccination and promote a culture of prevention. VWA remains focused on reaching the most vulnerable and hard-to-reach communities, often left behind by the routine services. These include rural areas, urban fringes, border regions, indigenous communities, and low coverage municipalities. In the words of WHO Director-General, Dr. Margaret Chan, the underlying objective of the week “is to promote equity and access to vaccination”, an objective that, according to Dr. Chan, is part of the core business of the World Health Organization.

Multiple VWA celebratory events were planned on bi-national border areas in the US/Mexico, Central America, and Panama throughout the week. These events highlight the importance of vaccination, promote Pan Americanism, and underscore the importance of international cooperation for public health. In other sub-regions, countries have planned their own local activities, in accordance with their public health needs and goals. In all, 44 countries and territories from the Western Hemisphere will be vaccinating against diseases such as measles, rubella, polio, tetanus, diphtheria, yellow fever, influenza, rotavirus, hepatitis B, and whooping cough.

The success of VWA has become a model for other Regions of the World Health Organization. This year Europe celebrates the 3rd anniversary of European Immunization Week (EIW), to be held simultaneously with the Americas. Looking ahead, the growing success of these Regional initiatives and the support of the World Health Organization, pave the way towards a Global Vaccination Week, with a clear strategy in mind for achieving the Millennium Development Goals. ■

PAHO-CIII Partnership: Supporting Vaccination in Haiti

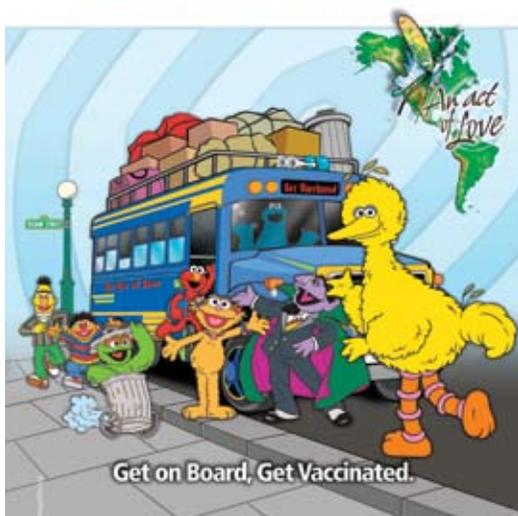
The Canadian International Immunization Initiative (CIII) is a partnership of the World Health Organization (WHO), the US Centers for Disease Control and Prevention (CDC), the Pan American Health Organization (PAHO), the United Nations Children’s Fund (UNICEF), Global Health Research Initiative (GHRI), and the Canadian Public Health Association (CPHA). CIII’s objective is to promote collaboration between Canadian experts and organizations around the world to strengthen immunization programs in low- and middle-income countries and to support global efforts towards polio eradication, measles elimination, and control of other vaccine-preventable diseases.

CIII is currently in its second phase (2003-2008). Since its inception in 1998, it has developed a database of highly skilled immunization professionals. Technical assistance for CIII is managed by CPHA. It is designed to respond quickly to requests from partners in developing countries for the deployment of Canadian consultants with specific immunization expertise. Both phases have been funded by the Government of Canada, through the Canadian International Development Agency.

The PAHO-CIII partnership began in 2004 with the initiation of CIII’s Phase II. The partnership has grown significantly, as CIII has provided technical expertise through the STOP (Stop Transmission of Polio) program and Canadian consultants have volun-

Vaccination
Vaccination Week in the Americas 2008

Vaccination
Vaccination Week in the Americas 2008



PAHO-CIII from page 1

teered for three-month missions to assist with polio eradication and measles elimination efforts in the Americas. Among WHO Regions, 28% of CIII's technical assistance missions have been to the Americas (Figure 1).

In the past four years, CIII has financed 25 technical assistance missions to the Region of the Americas. A total of 16 missions (86%) were conducted in Haiti and focused on strengthening the National Immunization Program. With support from CPHA and other partners, several significant results have been achieved, in spite of the considerable level of political instability and lack of resources at all levels. Some of those achievements in Haiti are listed below:

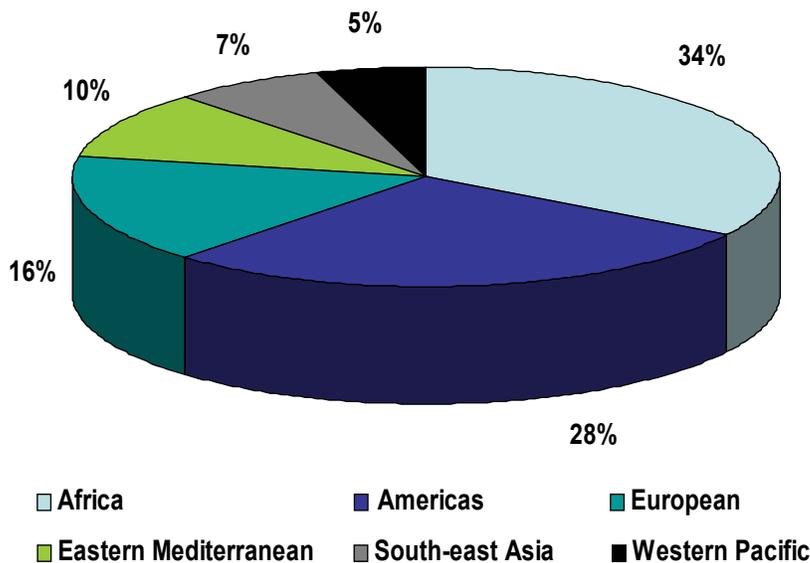
- Development of training modules on EPI standards and procedures and on epidemiological surveillance for service providers;
- Set up of an epidemiological surveillance system integrating all notifiable diseases in Haiti, including those targeted by the EPI;
- Rubella and congenital rubella syndrome have been added to the list of notifiable diseases in Haiti;
- All departmental epidemiologists and EPI staff have been trained or re-trained in EPI management and surveillance. They are now able to provide training and supervision to staff in charge of institutions under their authority;
- Training of the national EPI team on epidemiological surveillance and statistics has made program monitoring possible (twice a year), resulting in an improvement of EPI activities and surveillance of notifiable diseases; and
- Mass vaccination campaign against polio,

measles, and rubella that also provides vitamin A supplements and antiparasitic in schools.

The PAHO-CIII partnership has been very successful to date. It is anticipated that with continued funding of CIII, the focus of future missions will remain on decreasing vaccine-preventable diseases and strengthening disease surveillance systems. CIII is renewing the contract of three consultants currently in Haiti who help with

monitoring and surveillance activities during the ongoing rubella vaccination campaign. CIII would like to see the sharing of expertise from Canadian consultants in Haiti continue, and be extended to other countries within the PAHO Region. The partnership between PAHO and CIII has been extremely rewarding to Canadian consultants who have been able to share their immunization expertise, while learning a great deal themselves. ■

Figure 1. Geographical Distribution of CIII Phase 2 Technical Missions Among WHO Regions



Source: Canadian Public Health Association.

Certification of Polio Laboratory Containment in the Americas

The American Regional Commission for Certification of Poliovirus Laboratory Containment and Verification of Polio-free Status (AMR RCC) was established by the Director of the Pan American Health Organization (PAHO) in February 2004 to independently document that the requirements for wild poliovirus laboratory containment have been fulfilled and to verify that the polio-free status of the Region remains unchanged. At its first meeting, in March 2004, the AMR RCC established terms of reference and regional standards in accordance with Phase I of the WHO Global Action Plan for laboratory containment of wild

polioviruses (2003).¹ This work will help national governments in achieving high quality, comprehensive laboratory surveys and documenting findings from their National Certification Committees (NCCs).

The second meeting of the AMR RCC was convened in Brasilia, Brazil, on 28-29 February 2008. Commission members from Argentina, Brazil, Guyana, Haiti, and the USA participated. The purpose of the meeting was to review Regional

¹ WHO Global Plan for laboratory containment of wild poliovirus (2nd Edition), WHO/V&B/03.11, available at www.who.int/vaccines-documents/DocsPDF03/www729.pdf.

progress since 2004 and accelerate Regional completion of Phase I by the end of 2008.

Many countries in the American Region initiated Phase I activities as early as 2001-2003. Unanticipated delays in global eradication, lapses in completion of Phase I, and the passage of time since the last polioviruses were isolated in the Americas are challenges the Region must face to meet global survey and reporting standards. Many responsible personnel have retired or moved to other important health positions. Some NCCs have been inactive while the membership of others has been altered. Some national surveys initially received by the Regional Commission proved to be inadequate. Nearly every country in the Region faces some kind of challenge to completing Phase I in 2008. Never-

theless, the Commission is confident that countries can build on previous experience and that,

through concerted national and Regional efforts, the 2008 goal can be met.

Note: The reports of the AMR RCC meetings can be consulted at <http://www.paho.org/english/ad/fch/im/Polioomyelitis.htm>.

Second AMR RCC Meeting: Conclusions and Decisions

The AMR RCC concluded that countries could be divided into two general groups based on the assessment of available information and compliance with Phase I requirements:

- Group A includes countries that have completed or nearly completed the survey: Bolivia, Canada, the Caribbean, Chile, Costa Rica, the Dominican Republic, El Salvador, Haiti, Honduras, Mexico, Nicaragua, and the USA.
- Group B includes countries where much work remains: Argentina, Brazil, Colombia, Cuba, Ecuador, Guatemala, Panama, Paraguay, Peru, Uruguay, and Venezuela.

The decisions taken by the AMR RCC at its second meeting are listed below.

- Group A countries should prepare a final report, using the model format, for submission to PAHO no later than 31 July 2008.
- Group B countries should prepare a progress report, using the model format, for submission to PAHO no later than 31 July 2008. The report should address country-specific RCC conclusions, provide an update on work that has been completed, and describe plans for finalizing the survey and inventory by 31 December 2008.
- The Secretariat should implement the following actions:
 - Preparing a plan of action, including resource allocations, to complete Phase I in

the Region by the end of 2008, with RCC review of the final reports scheduled for March 2009;

- Clarifying with WHO's European Region (EURO) the reporting channels for Caribbean islands with health ties to European countries;
- Investigating the recruitment of an additional person or persons to support the Regional containment process;
- Holding a Phase I workshop in May 2008 for relevant Group B countries; and
- Scheduling the 3rd AMR RCC meeting for the second week of October 2008. ■

New Algorithm for Poliovirus Testing

The eradication of polio from the Western Hemisphere was achieved in 1991 and the Region was certified free of indigenous wild poliovirus circulation in 1994. Although remarkable progress has been made towards achievement of global polio eradication, endemic transmission of wild poliovirus 1 and 3 has never been interrupted in four countries: Afghanistan, India, Nigeria, and Pakistan [1].

In 2007, wild polioviruses were isolated from 1,308 patients with paralytic poliomyelitis in 13 countries. Transmission is endemic in 4 of those 13 countries. Vaccine-derived polioviruses (VDPVs) were isolated from 72 patients in two countries [2]. Over 60% of all polio cases reported globally in the last years has been due to imported poliovirus into polio-free areas. The detection of wild poliovirus importation from endemic areas to countries previously polio-free and the VDPV outbreaks underscore the risks posed to countries when they fail to maintain high polio immunization coverage.

In 2005, to accelerate and secure the interruption of the wild poliovirus and VDPV transmission worldwide, the Second Meeting of the Advisory Committee on Poliomyelitis Eradication (ACPE) recommended, as one of the strategic priorities, the reduction of the time for laboratory confir-

mation of polio cases. The ACPE endorsed the establishment of a Working Group on Accelerating Laboratory Confirmation of Poliovirus to refine and introduce a shortened algorithm for specimen processing and virus identification [3].

Timeliness can be affected by field conditions, shipment, and laboratory performance. Specimen shipping is a major factor affecting timeliness of results. Therefore, great efforts have been made to reduce shipping time, but they have resulted in limited success. In the laboratory, timely detection of poliovirus in acute flaccid paralysis stool samples is crucial because it allows public health interventions to stop transmission chains of wild poliovirus and VDPVs. Attempting to reduce the time between paralysis onset in patients and laboratory confirmation of poliovirus infection, the Working Group on Accelerating Laboratory Confirmation of Poliovirus proposed that the test algorithm currently used be reduced to two steps: (1) observation time of cell culture inoculated with stool specimens, and (2) neutralization used for virus serotype.

The new algorithm was evaluated in three laboratories in India and Pakistan, and at the Centers for Disease Control and Prevention in Atlanta (USA). Tests showed that reporting times could potentially be reduced with equivalent or better

sensitivity when compared with current test protocol [4].

In 2005, the average time for completing laboratory procedures using the traditional algorithm was 45 days in polio-endemic areas of WHO's African Region, 25 days in polio-endemic areas of the Eastern Mediterranean Region, and 30 days in polio-endemic areas of the South-East Asia Region. In the Region of the Americas, the average time for completing laboratory procedures was 42 days. The new algorithm allows a 50% reduction on overall laboratory target test time from the current 42 days to 21 days.

The implementation of the new algorithm should occur in three phases, depending on the geographical and epidemiological priorities for global polio eradication and availability of infrastructure for testing [4].

Although the Americas are free of wild poliovirus, the polio laboratory network continues to be fully functional and provides results that are critical for monitoring and verifying virus circulation into the Region. Considering that the new algorithm was designed to reduce the time for laboratory results and to increase the sensitivity of poliovirus detection, a concern was raised about the possibility of loss of sensitivity for non-polio enteroviruses (NPEV) isolation. Therefore, the new algorithm was piloted in the Americas at the end of 2006 to evaluate whether the new algorithm was adequate for the current status

of Region, where the poliovirus isolation rate is lower than the NPEV isolation rate.

Results from the first evaluation were presented during the Regional Polio Laboratory Meeting, in May 2007. The laboratory network in the Americas concluded that the new algorithm improved the sensitivity for poliovirus detection, requiring less time without losing sensitivity for NPEVs. However, an increase in workload in reagents was noted. The mean time for polio results was 12 days and ranged from 18 to 27 days for NPEVs.

The new algorithm is being implemented in the laboratory network and the new target for reporting time will change from $\geq 80\%$ of polio and negative results within 14 days and $\geq 80\%$ of ITD (intratypic differentiation) results or NPEV reported within 21 days. ■

References:

1. World Health Organization. Conclusions and recommendations of the Advisory Committee on Poliomyelitis Eradication, Geneva, 27-28 November 2007. *Wkly Epidemiol Rec*, No. 3, 2008, 83:25-36.

2. World Health Organization. Wild Poliovirus Weekly Update. Available from the Global Polio Eradication Initiative webpage at <http://www.polioeradication.org/casecount.asp>.
3. World Health Organization. Conclusions and recommendations of the Advisory Committee on Polio Eradication. Geneva 11-12 October 2005. Available at http://www.polioeradication.org/content/meetings/FinalReport_ACPE_12Oct05Meeting.pdf
4. World Health Organization. Summary and recommendations of the 12th informal consultation of the WHO Global Polio Laboratory Network, June 2006. *Wkly Epidemiol Rec*, No. 44, 2006, 81:417-424.

Surveillance of Bacterial Pneumonia and Meningitis in the Americas

Pneumonia is one of the main causes of hospitalization and death in children aged <5 years in the Region. In developing countries, the etiology of pneumonia is usually bacterial. According to World Health Organization (WHO) estimates, 1.6 million deaths due to pneumonia infections were recorded in 2005, and 0.7 to 1 million of those occurred in children aged <5 years. In addition, bacterial meningitis, although not as frequent, is always a serious disease due to the risk of sequelae and high mortality.

The Pan American Health Organization (PAHO), with support from PneumoADIP and other partners, is promoting the implementation and/or strengthening of epidemiological surveillance of bacterial pneumonia and meningitis at country level in children aged <5 years. The analysis of data generated by the surveillance will support decision-making for the inclusion of new vaccines in national immunization schedules, help with the evaluation of vaccine impact, and orient the rational use of antimicrobial drugs

Methodology

Sentinel surveillance in hospitals is recommended. Hospitals in countries must be selected according to criteria such as availability of a radiography service, bacteriology labs that perform specimen testing, and adequate human and logistical resources for surveillance activities.

Case definitions for bacterial pneumonia and meningitis are the following:

- **Pneumonia case:** Any child aged <5 years hospitalized with clinical suspicion of pneumonia confirmed with a compatible X-ray.
- **Meningitis case:** Any child aged <5 years hospitalized with clinical suspicion of men-

ingitis confirmed with CSF¹ compatible with bacterial meningitis, i.e., cloudy; increased leucocytes ($>100/\text{mm}^3$); or leucocytes between 10-100 mm^3 and increased protein level ($>100 \text{ mg}^3$) or decreased glucose levels ($<40 \text{ mg}^3$).

In both cases, final confirmation must be obtained through laboratory studies (identification or culture of the bacteria in blood or CSF).

Activities

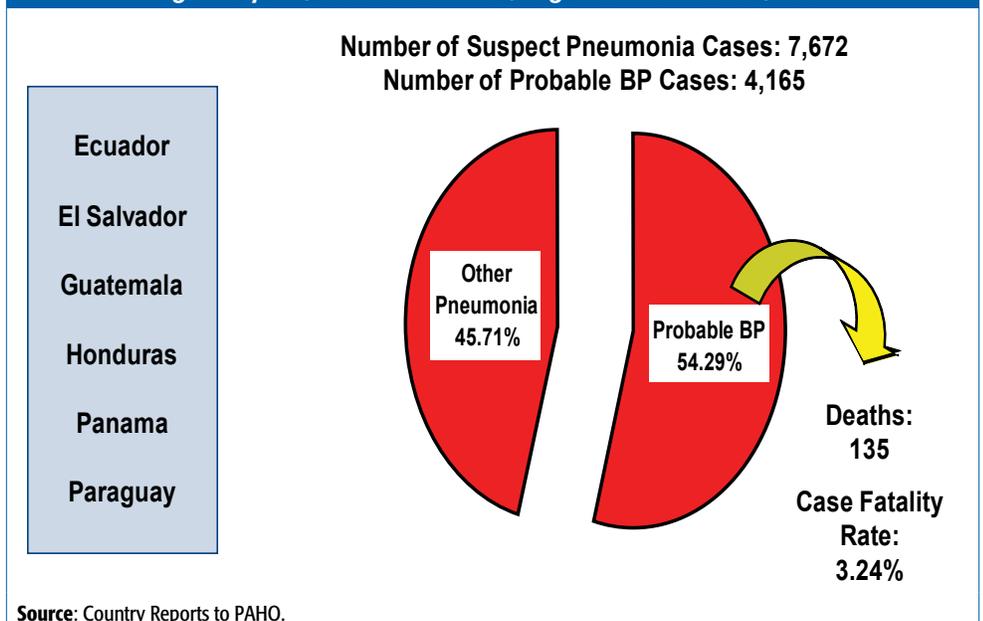
PAHO has developed a regional Field Guide for the systematic implementation of hospital sen-

¹ Cerebrospinal fluid.

tinel surveillance for bacterial pneumonia and meningitis. PAHO has also held several meetings on surveillance of diseases for which new vaccines are available. Several subregional meetings on new vaccine introduction were organized in 2007 (in Costa Rica and Chile) and 2008 (in Colombia and Venezuela). Another one is planned for November 2008 in the English-speaking Caribbean. Two national meetings were held in Brazil and Peru as well. The meetings were organized with support from the Sabin Vaccine Institute, the US Centers for Disease Control and Prevention, and PneumoADIP, and gathered representatives from health ministries and professional staff from sentinel hospitals throughout Latin America.

PAHO staff have visited participating countries to provide support while establishing national sentinel surveillance networks, to assist with adapt-

Figure 1. Hospital Sentinel Surveillance of Bacterial Pneumonia (BP) in Children Aged <5 years, Selected Countries, Region of the Americas, 2007



ing the Regional guidelines to national context to standardize data collection and establish report frequency, and to strengthen the integration between national epidemiological surveillance and laboratory surveillance (SIREVA II).

As of the end of 2007, 12 Member States had expressed their commitment to implement surveillance systems and have adapted the Regional guidelines. Six countries in the Region have started systematic and monthly reporting of surveillance data. In addition, Pro-Vac, another PAHO initiative to enhance national capacity to make evidence-based decisions, will provide countries with technical support to strengthen the reporting of epidemiological data. These data will then be used to conduct cost-effectiveness studies to assist with new vaccine introduction.

Results

Ecuador, El Salvador, Guatemala, Honduras, Panama, and Paraguay have reported surveillance data during 2007. A total of 49,143 hospitalizations in children aged <5 years were reported by sentinel hospitals, of which 15.6% (7,672) were suspect pneumonia cases. Of the suspect cases, 54.3 % (4,165) were classified as probable cases of bacterial pneumonia and the reported case fatality of bacterial pneumonia infections was 3.2% (Figure 1). Only 6.4% (267) of bacterial pneumonia infections were confirmed with positive isolation. Of those confirmed cases, 20.6% (55) corresponded to *Streptococcus pneumoniae* strains.

Conclusions

It is essential for countries that have implemented surveillance to continue improving the quality of their data. Countries that have not already implemented surveillance should do so in at least one sentinel hospital. Surveillance is fundamental to learn about the epidemiological profile of bacterial pneumonia and meningitis, contribute data for economical studies, follow patterns of antimicrobial resistance, and assist with measuring the impact of interventions. ■

References:

1. Immunization Newsletter. Paving the Road for Pneumococcal Vaccine Introduction. Vol.XXX (1).
2. Immunization Newsletter. PAHO's Pro-Vac Initiative. Vol. XXIX (6).
3. PAHO Field Guides available at http://www.paho.org/english/ad/fch/im/FieldGuide_Index.htm.

Joint Regional Efforts Towards Global Polio Eradication

In February 2007, Dr. Margaret Chan, Director-General of the World Health Organization (WHO), convened an urgent meeting of all donors and stakeholders involved in the global poliomyelitis eradication efforts. The objective of the meeting was to provide a forum for discussion on how WHO administrative and managerial capacity could be strengthened to ensure the attainment of the polio eradication target. At the same time, Dr. Chan requested that polio-free Regions provide support to countries and Regions where the virus is still circulating (Figure 1).

In response to Dr. Chan's request, Dr. Mirta Roses, Director of the Pan American Health Organization (PAHO), the WHO Regional Office for the Americas, initiated a process for the mobilization of resources on our continent, with the primary objective to support polio eradication activities in Africa. The cooperation between WHO and its Regional Offices in Africa (AFRO) and the Americas has yielded the following achievements:

- PAHO staff participated in two joint WHO/AFRO meetings in Brazzaville, Congo, to review the management process of the polio eradication initiative.
- Cuba sent 21 professionals for a six-month period to provide support to Angola. Given the outstanding support received, Angola and AFRO have requested that support be extended for two additional months.
- A professional from El Salvador provided support to Nigeria for three months at the begin-

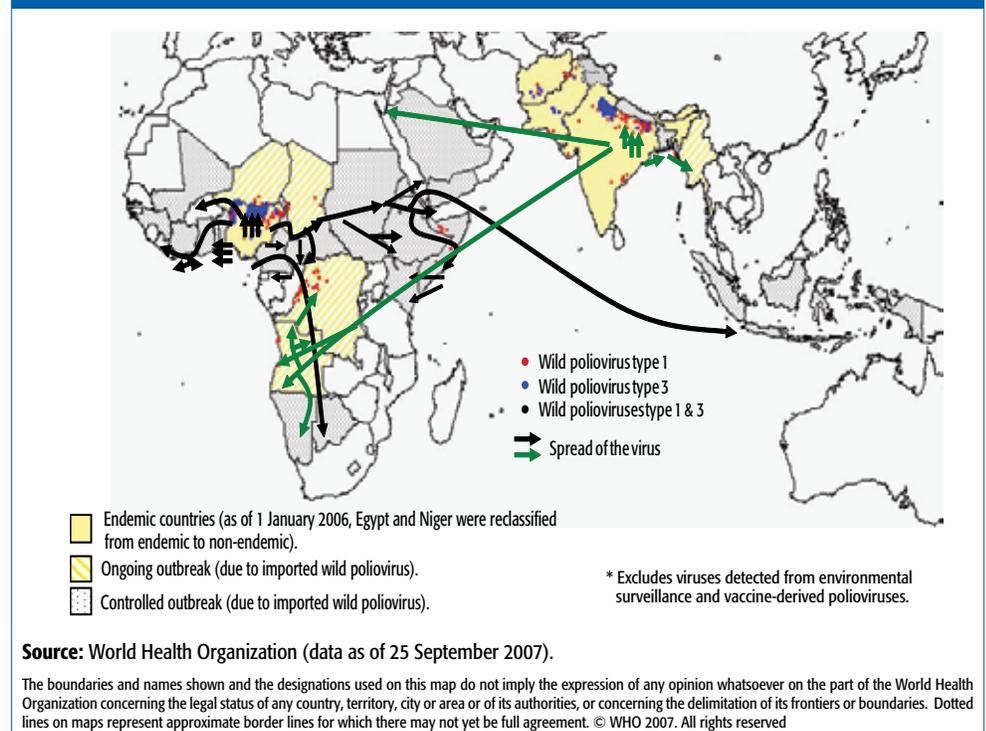
ning of 2008. Nigeria and AFRO are currently finalizing administrative steps to grant her a two-year contract.

- The UN Foundation and WHO have conducted joint visits to Latin American diplomatic missions in Geneva and Washington, in search of political and financial support.

- Negotiations are underway to include the topic of global poliomyelitis eradication on the agenda of the meeting of Non-aligned Countries in Geneva in May 2008 and the Ibero-American Summit in El Salvador in October 2008.

Medium-term activities are also programmed, among them the search for financial resources, the mobilization of additional Latin American countries to provide support for French-speaking African countries, and field visits to Angola and Nigeria. ■

Figure 1. Wild Poliovirus Spread,* 2003-2007



Vaccines and Immunization in the Americas: 1977-2007 Milestones

- 1977** • PAHO Directing Council Resolution establishes the EPI in the Americas.
- Resolution also establishes the PAHO Revolving Fund for Vaccine Procurement.
- 1978** • All countries appoint a National EPI Manager.
- PAHO initiates training courses for EPI Managers.
- 1979** • Pan American Sanitary Conference authorizes capitalization of the Revolving Fund.
- US \$2.5 million vaccine purchases through the Revolving Fund.
 - First issue of *EPI Newsletter* is published.
- 1980** • PAHO develops a methodology for multidisciplinary program evaluation/reviews.
- First multidisciplinary program evaluation/review conducted in Bolivia.
- 1981** • PAHO Scientific Publication *Immunization and Primary Health: Problems and Solutions*, provide road-map for PAHO's technical cooperation on EPI.
- First EPI Managers' Regional Meeting and First Cold Chain course held in Ecuador.
 - PAHO publishes the position paper on immunization delivery, outlining the role of combining vertical and horizontal approaches in immunization programs.
- 1983** • Countries begin using planning tools to improve performance of immunization programs, later known as national Plans of Action.
- 1984** • The Americas are the first Region to develop and use of *Days of Tranquility* to conduct immunization campaigns in conflict areas in Central America—a concept widely used worldwide.
- 1985** • PAHO declares the goal of polio eradication in the Western Hemisphere by the year 1990.
- Technical Advisory Group is appointed by PAHO Director.
 - Regional Inter-Agency Coordination Committee (ICC) is created by PAHO, with participation of USAID, UNICEF, IDB, and Rotary International, and equivalent representatives at country level.
 - US \$110 million are mobilized from ICC partners.
- 1986** • Neonatal tetanus control is accelerated.
- 1987** • Following PAHO's recommendations, Cuba launches the first measles elimination campaign in the Region.
- 1991** • Last case of indigenous polio is detected in Peru.
- US \$60 million are mobilized from ICC partners.
- 1994** • The Americas are certified polio-free and goal of measles elimination is set by PAHO.
- 1996** • Introduction of new vaccines (MMR, HepB, Hib) is accelerated.
- US \$32 million are mobilized from ICC partners.
- 1999** • US \$85 million in vaccine purchases through the Revolving Fund.
- New partners: Centers for Disease Control and Prevention, the World Bank, and the March of Dimes.
- 2001** • Over US \$110 million in vaccine purchases through the Revolving Fund.
- Following PAHO's recommendations, countries initiate accelerated control of rubella and prevention of congenital rubella syndrome (CRS).
- 2002** • US \$7.6 million dollars are mobilized.
- Revolving Fund capitalization reaches over US \$23 million.
 - PAHO Resolution emphasizes accountability and sustainability of national immunization programs.
 - Conference on Vaccines, Prevention and Public Health: A Vision for the Future.
- 2003** • First Vaccination Week in the Americas: 19 countries participated and 16,825,888 persons were vaccinated.
- PAHO Resolution establishes the goal of rubella and CRS elimination by 2010.
- 2004** • Declaration of Mexico City on Rotavirus Prevention.
- Prevention Effectiveness: Decision Analysis and Economic Evaluation. Introductory course for practitioners who conduct prevention effectiveness studies.
 - Second Vaccination Week in the Americas: 35 countries participated and 43,749,720 persons were vaccinated.
 - US \$20.8 are mobilized.
- 2005** • Field Guides (Measles, Polio, Neonatal Tetanus, Yellow Fever, and Pentavalent vaccine diseases) published.
- First *Immunization in the Americas* brochure published.
 - PAHO EPI Tables merge with the WHO/UNICEF Joint Reporting Forms.
 - *EPI Newsletter* becomes *Immunization Newsletter*.
 - Partnership formed for the introduction of the human papillomavirus vaccine.
 - Revolving Fund capitalization reaches over US \$35 million.
- 2006** • TAG focuses on the transition from child to family immunization.
- PAHO introduces the Pro-Vac initiative: a five-year comprehensive strategic plan to strengthen national capacity to make evidence-based decisions for new and underutilized vaccine introduction; a Region-wide workshop is held at PAHO Headquarters.
 - PAHO Resolution urges countries to expand legal and fiscal space, and identify new revenue sources to sustainably finance immunization program development and introduce new vaccines.
 - *Recent Advances in Immunization* (2nd ed.) is published, a reference for all health professionals.
 - EURO joins PAHO's efforts: First Immunization Week in Europe.
 - Only 11 countries remain to conduct mass rubella vaccination campaigns to achieve rubella elimination.
- 2007** • Rotavirus vaccine is first offered through the Revolving Fund.
- Revolving Fund capitalization reaches over US \$45 million and vaccines in amount of US \$211 million are purchased.
 - PAHO Resolution recognizes partners' support for rubella and CRS elimination efforts, and urges countries to establish national commission for documentation of elimination.
 - US \$23 are mobilized.
 - By the end of the year, 8 countries have introduced the rotavirus vaccine

Annual Summary of AFP and Measles/Rubella Indicators, 2007*

Acute Flaccid Paralysis (AFP) Surveillance Indicators (Period Between Epidemiological Weeks 01 to 52, 2007)

Country	Number of Cases	AFP Rate per 100,000 <15 Years Old	% Cases Investigated <48 Hours	% with 1 Sample Taken Within 14 Days of Onset	% Sites Reporting
Argentina	133	1.30	86	83	93
Bolivia	22	0.60	91	82	78
Brazil	636	1.16	98	76	93
Canada	33	0.59	...	...	...
CAREC	42	2.08	83	43	100
Chile	165	4.17	82	73	99
Colombia	149	1.17	70	77	88
Costa Rica	33	2.68	91	67	0
Cuba	21	0.96	100	90	100
Dominican Republic	16	0.50	63	81	82
Ecuador	39	0.91	95	79	63
El Salvador	44	1.88	98	89	75
Guatemala	85	1.87	87	78	0
Haiti	13	0.32	92	77	83
Honduras	54	1.80	93	94	94
Mexico	485	1.54	96	82	96
Nicaragua	27	1.32	96	89	100
Panama	11	1.10	64	82	91
Paraguay	20	1.00	90	65	91
Peru	91	1.08	97	65	0
Uruguay	12	1.47	33	50	65
USA	...	...	...	...	...
Venezuela	51	0.61	90	80	77
Total[§]	2,182	1.27	91	78	90

... Not reporting § Excluding Canada and USA

Measles/Rubella Surveillance Indicators (Period Between Weeks 01 to 52, 2007)

Country	% Sites Reporting Weekly	% Cases with Adequate Investigation	% Cases with Adequate Sample	% Lab. Received ≤ 5 Days	% Lab. Result ≤ 4 Days	% Cases Discarded by Lab.
Argentina	89	24	89	65	82	99
Bolivia	78	98	99	77	75	100
Brazil	78	61	73	44	71	95
Canada	...	...	...	...	...	...
CAREC	99	74	97	25	95	98
Chile	98	29	71	73	97	98
Colombia	87	66	97	80	90	98
Costa Rica	...	56	92	80	75	***
Cuba	98	100	100	95	100	100
Dominican Republic	82	68	99	50	69	100
Ecuador	66	61	99	88	81	98
El Salvador	81	51	80	91	80	98
French Guiana	...	...	...	...	...	...
Guadeloupe	...	...	...	...	...	...
Guatemala	...	96	97	76	84	96
Haiti	82	97	100	29	35	94
Honduras	92	95	95	83	95	99
Martinique	...	...	...	...	...	...
Mexico	93	99	98	86	80	98
Nicaragua	100	77	99	78	88	99
Panama	91	77	98	66	94	99
Paraguay	91	59	100	88	100	99
Peru	100	96	98	94	18	97
Puerto Rico	...	...	...	...	...	...
Uruguay	56	24	71	95	74	90
USA	...	...	...	...	...	...
Venezuela	76	87	98	66	77	100
Total/Average	87	67	80	55	72	96

[§] Also includes information on active case-searches

... Not reporting

Source: PESS and MESS and country reports to FCH-IM/PAHO.

* Data as of 5 May 2008

PAHO Revolving Fund: Syringe Prices, 2008

Prices for vaccines offered through the PAHO Revolving Fund for Vaccine and Syringe Procurement were published in our issue dated February 2008.¹ Table 1 at right shows prices for syringes offered in 2008. ■

**Table 1. Prices for Syringes Purchased Through the PAHO Revolving Fund, 2008
(Prices shown in U.S. Dollars)**

Disposable Syringes, Plastic with Attached Needles		
Size	Packed per Box	Unit Cost
1cc 22G x 1-1/4"	100	\$0.0430
1cc 22G x 1-1/2"	100	\$0.0385
1cc 23G x 1" *	100	\$0.0375
		\$0.0313
1cc 25G x 5/8"	100	\$0.0365
	150	\$0.0510
1cc 26G x 3/8"	100	\$0.0450
1cc 27G x 3/8"	100	\$0.0490
5cc 22G x 1-1/2"	100	\$0.0525

Auto-disable Syringes, Plastic with Attached Needles		
Size	Packed per Box	Unit Cost
0.5cc 23G x 1" *	100	\$0.0540
		\$0.0415
0.5cc 23G x 1"	200	\$0.0540
0.5cc 25G x 5/8"	100	\$0.0540
	200	\$0.0580
0.1cc 27G x 3/8"	100	\$0.0728

¹ Immunization Newsletter. 2008 PAHO Revolving Fund Vaccine Prices. Vol.XXX (1).

* Syringes offered through two different providers.

The *Immunization Newsletter* is published every two months, in English, Spanish, and French by the Immunization Unit of the Pan American Health Organization (PAHO), Regional Office for the Americas of the World Health Organization (WHO). The purpose of the *Immunization Newsletter* is to facilitate the exchange of ideas and information concerning immunization programs in the Region, in order to promote greater knowledge of the problems faced and possible solutions to those problems.

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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