

Immunization in the Americas

2012 Summary

Comprehensive Family Immunization
Family and Community Health



**Pan American
Health
Organization**



*Regional Office of the
World Health Organization*



110
1902 - 2012

preface

This year has been very important for global immunization. In May, the 65th World Health Assembly (WHA) endorsed a new Global Vaccines Action Plan (GVAP). This plan highlights immunization as a core component of the human right to health and as a shared responsibility between individuals, communities and governments. Building upon the 2006-2015 Global Immunization Vision and Strategy (GIVS), and recognizing immunization as a driver in the reduction of child mortality, the GVAP reiterates existing goals in the fight against vaccine-preventable diseases and sets new ones for the decade, with the aim of expanding the benefits of vaccines to all people. Additionally, the 65th WHA officially designated the last week of April, as the World Immunization Week (WIW). Recognizing the achievements of Vaccination Week in the Americas – and sister initiatives in other regions of the World Health Organization (WHO) – in promoting immunization, advancing equity in the use of vaccines, and enabling inter-country cooperation, as well as raising vaccination in the political agenda of governments, the Assembly called for the annual implementation of a WIW. In 2012, Vaccination Week in the Americas celebrated its 10th anniversary in synchronicity with all other Regions under the umbrella of what became the 1st WIW; more than 180 countries participated worldwide.

With regards to measles and rubella, the GVAP set a goal to reduce 95% of measles-related deaths by 2015 and eliminate measles and rubella in at least five of the six WHO Regions by 2020. In this context, 194 countries affirmed their commitment to achieving measles and rubella goals. While our Region has made enormous progress in the elimination of both diseases – no indigenous measles case has been reported since November 2002 and no indigenous rubella since February 2009 – in 2011, the Western Hemisphere had the highest number of measles cases since endemic transmission was interrupted, reminding us that the risk of virus reintroduction is very real and that we must keep high measles-rubella coverage and quality surveillance in all communities. To this end, an action plan to maintain measles, rubella and congenital rubella syndrome elimination in the Americas will be presented to the 28th Pan American Sanitary Conference, together with an update on the process of documenting and verifying elimination of these diseases in countries of the Region.

Finally, the 65th WHA declared “the completion of polio eradication to be a programmatic emergency for global public health.” While no wild poliovirus has been identified in the Americas since 1991, and the Region was declared polio free in 1994, the global eradication initiative has struggled to complete the job. The WHA Resolution urges all remaining infected countries to declare polio to be a national public health emergency requiring the implementation of emergency action plans monitored at the highest levels.

In 2012, PAHO's ProVac Initiative also embarked in a global effort and established the ProVac International Working Group. The ProVac Initiative aims at strengthening the national capacity to make evidence-based decisions on new vaccine introduction. After successfully implementing the initiative in Latin America and the Caribbean, PAHO received requests from several partners to implement ProVac in other Regions. Through a partnership with the WHO, the US Centers for Disease Control and Prevention (CDC), Agence de Médecine Préventive of France, PATH and the Sabin Vaccine Institute, the ProVac International Working Group aims to transfer tools, methods, and lessons learned from the PAHO ProVac Initiative to other WHO regions for the promotion of evidence-based policies on new vaccine introduction in low and middle-income countries in the African, Eastern Mediterranean and European WHO Regions.

These WHA Resolutions and the ProVac experience illustrate how the immunization program of the Americas continues to lead the way in global immunization.

The above resolutions and the ProVac initiative all emphasize the importance of using data and indicators to monitor and evaluate progress on immunization, and for policy decision-making based on evidence. I invite you to read *Immunization in the Americas: summary 2012* to accompany the process of monitoring vaccine-preventable diseases and immunization in our Region.



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For this publication:

- Latin America is composed of Mexico, Central American Isthmus, Latin Caribbean, Andean Area, Brazil, and Southern Cone.
- Latin America & Caribbean is composed of Latin America and Non-Latin Caribbean.
- Because of their population size, Brazil and Mexico are shown separately.

The data published in the brochure "Immunization in the Americas" may have been updated by the countries, after publication. To see the most up-to-date data, please visit: www.paho.org/immunization/Data.

demographic and socioeconomic data

	1	2	3	4			5	6		7	8	9		10
	total population (thousands)	population <5 years old (thousands)	annual births average (thousands)	infant mortality rate (1,000 lb) or number of deaths (N)			women of childbearing age (thousands)	gross national income (US\$ per capita)			GINI index (latest available)	national health expenditure as a % of GDP		
	2011	2011	2011	rate	year	(N)	2011	current value	ppp value			public expenditure	private expenditure	
								2011	2011	2011		2011	2011	
The Americas	944,107	76,566	15,576.2	12.4		148,722	241,871	23,154	25,309					
North America	347,504	23,748	4,710.8	6.3		28,324	81,670	48,164	47,994					
Bermuda	69	4	0.8	1.3	2010	1	15	...	...			7.6 ^{a,f}	6.9 ^a
Canada	34,350	1,986	387.6	5.1	2008	1911	8,235	45,560	39,830			7.9 ^h	3.3	
United States of America	313,085	21,757	4,322.4	6.4	2009	26412	73,420	48,450	48,890			9.9 ^{b,f}	5.6 ^b	
Latin America & the Caribbean	596,603	52,818	10,865.4	15.6		120,398	160,202	8,582	11,753					
Latin America	589,460	52,259	10,747.7	15.5		119,034	158,283	8,597	11,773					
Mexico	114,793	10,482	2,194.7	14.1	2010	27,236	31,244	9,240	15,120	48.3 ^a		3.0 ^f	3.1 ^h	
Central American Isthmus	43,225	5,411	1,092.2	18.9		7,162	11,302	3,508	6,238					
Belize	318	39	7.7	20.1	2011	145	86	3,690	6,070			1.0 ^{b,e}	1.3	
Costa Rica	4,727	370	73.4	9.1	2011	666	1,290	7,660	11,950	50.7 ^c		4.3 ^f	3.1 ^h	
El Salvador	6,227	608	125.7	...	...	...	1,735	3,480	6,690	48.3 ^c		3.7 ^f	6.7 ^h
Guatemala	14,757	2,386	473.2	...	...	...	3,660	2,870	4,800	55.9 ^d		2.0 ^f	4.9 ^h
Honduras	7,755	1,006	204.5	24.3	2011	5,441	2,016	1,970	3,840	57.0 ^c		3.6 ^f	3.2 ^h	
Nicaragua	5,870	661	137.9	...	...	...	1,585	1,170	2,840	...		4.6 ^f	4.5 ^h
Panama	3,571	342	69.8	13.4	2010	910	931	7,910	14,740	51.9 ^b		3.9 ^{b,f}	2.7 ^h	
Latin Caribbean	36,286	3,115	657.5	17.7		6,962	9,433	5,192	5,325					
Cuba	11,254	526	109.6	4.9	2011	653	2,954	5,460 ^a	...			10.5 ^{c,e}	...	
Dominican Republic	10,056	1,037	215.5	26.9	2011	5,842	2,618	5,240	9,490	47.2 ^b		2.8 ^{e,g}	4.6 ^h	
French Guiana	237	30	5.7	10.9	2010	66	61	...	...			...	...
Guadeloupe	463	30	6.3	8.7	2009	44	117	...	...			2.1 ^b	...
Haiti	10,124	1,238	266.2	...	...	...	2,634	700	1,190	...		...	3.7
Martinique	407	23	4.8	9.3	2009	...	101	...	...			...	...
Puerto Rico	3,746	233	49.2	8.0	2009	357	947	16,560 ^b	...			...	...
Andean Area	130,518	12,884	2,661.3	17.3		18,157	34,753	6,749	9,915					
Bolivia	10,088	1,281	264.1	...	...	...	2,548	2,040	4,920	56.3 ^a		2.1 ^f	1.6
Colombia	46,927	4,395	910.3	20.1	2009	9,580	12,742	6,110	9,640	55.9 ^b		3.5 ^{c,f,g}	1.5	
Ecuador	14,666	1,444	297.9	...	...	...	3,854	4,140	8,310	49.3 ^b		3.9 ^f	4.1
Peru	29,400	2,831	590.6	16.0	2011	...	7,812	5,500	10,160	48.1 ^b		2.7 ^f	2.3 ^h	
Venezuela	29,437	2,933	598.5	14.4	2009	8,577	7,798	11,920	12,620	44.8 ^d		...	2.4	
Brazil	196,655	14,738	2,996.0	16.2	2010	48,277	54,187	10,720	11,500	54.7 ^c		3.5 ^f	4.1 ^h	
Southern Cone	67,982	5,629	1,146.1	11.5		11,240	17,364	9,830	15,686					
Argentina	40,765	3,390	693.5	11.9	2010	8,961	10,287	9,740	17,250	44.5 ^b		6.2 ^{b,f,g}	3.2 ^h	
Chile	17,270	1,216	245.4	7.4	2010	1,862	4,574	12,280	16,160	52.1 ^c		5.0 ^{f,g}	3.4 ^h	
Paraguay	6,568	783	157.7	16.9	2008	...	1,685	2,970	5,310	52.4 ^b		4.3 ^e	3.1	
Uruguay	3,380	241	49.5	8.9	2011	417	817	11,860	14,740	45.3 ^b		4.5 ^{c,f,g}	5.2 ^b	
Non-Latin Caribbean	7,143	559	117.7	18.9		1,364	1,919	8,511	12,752					
Anguilla	15	1	0.2	...	...	...	4	...	...			4.2 ^{c,e}	2.7 ^c
Antigua & Barbuda	88	7	1.4	20.6	2011	20	25	12,060	15,670			3.2 ^e	0.6	
Aruba	106	6	1.4	...	...	5	27	...	...			...	...
Bahamas, The	347	26	5.3	19.8	2010	100	98	21,070 ^b	29,850 ^b			2.9 ^e	3.2	
Barbados	287	18	3.5	13.4	2010	46	76	12,660 ^c	18,850 ^c			4.6 ^f	4.3 ^h	
BES*	...	...	...	...	...	...	...	...	...			...	...
Cayman Islands	51	3	0.6	5.1	2011	4	13	...	...			1.7 ^{b,e}	...
Curaçao	145	10	2.0	...	...	...	33	...	...			...	...
Dominica	73	6	1.1	29.9	2011	28	19	7,090	12,460			3.4 ^e	2.6	
Grenada	108	9	1.8	10.9	2011	20	28	7,220	10,530			2.9 ^e	3.0	
Guyana	756	64	13.5	...	...	...	199	2,900 ^b	3,460 ^b			2.1 ^{b,e}	2.1
Jamaica	2,751	232	50.1	20.0	2008	850	724	4,980	7,770			2.5 ^{b,f}	2.7	
Montserrat	5	0	0.1	0.0	2011	0	1	...	...			11.1 ^e	1.0
Saint Kitts & Nevis	50	4	0.7	12.0	2011	8	14	12,480	14,490			2.2 ^e	2.5	
Saint Lucia	162	12	2.4	14.3	2008	32	45	6,680	9,080			2.6 ^e	2.7	
Saint Vincent & the Grenadines	104	8	1.5	22.3	2011	39	27	6,100	10,560			3.5 ^e	0.9	
Sint Maarten**	38	2	0.5	...	...	...	10	...	...			...	...
Suriname	529	47	9.6	20.3	2009	199	139	7,640 ^b	7,710 ^b			...	0.4 ^b	
Trinidad & Tobago	1,346	92	19.6	...	2009	...	389	15,040	24,940			3.2 ^f	2.7	
Turks & Caicos Islands	45	4	0.8	0.0	2011	0	14	...	...			2.4 ^b	...
Virgin Islands (UK)	30	2	0.3	6.0	2011	2	9	...	...			1.6 ^e	...
Virgin Islands (US)	106	6	1.2	...	2009	11	25	...	...			1.4 ^e	...

* Bonaire, St. Eustatius, and Saba; ** Dutch part.

(a) value 2008; (b) value 2010; (c) value 2009; (d) value 2006; (e) institutional expenditure; (f) functional expenditure; (g) includes 'obras sociales' (ARG), EPS (COL), ISAPRES (CHL), ARS (DOM), IAMC (URY); (h) includes private health insurance.

reported immunization coverage

	11	12	13	14	15	16	17	18	19	20	21	22
	percentage of coverage									percentage of municipalities with coverage level \geq 95%		total number of districts/ municipalities
	< 1 year of age						1 year of age					
	BCG	polio3	DTP1	DTP3+Hib3	Hep B3	rotavirus	DTP4	MMR1	MMR2 ^m	DTP3	MMR	
2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	
The Americas	96	94	96	94	92	79	84	94	83	60	58	15,121
North America	NA	94	98	95	89	64	84 ^k	92	95	...	...	64
Bermuda	NA	96	98	98	90	NA	...	87	69	...	...	NA
Canada ^a	NA	99	...	95 ^{g,h}	70	NA	...	98	...	...	...	13 ⁿ
United States of America ^b	NA	94 ^g	...	95 ^{g,h}	91 ^g	64 ^g	84 ^g	92 ^g	95	...	...	51 ^o
Latin America & the Caribbean	96	93	96	93	93	86	84	94	78	60	58	15,057
Latin America	96	93	96	93	93	86	84	94	78	60	58	14,898
Mexico	99	97	100	97	98	98	97	98	97	100 ^f	100 ^f	2,456
Central American Isthmus	93	91	94	90	90	77	93	92	81	57	53	1,212
Belize	98	95	98	95	95	NA	93 ^k	98	98	67	100	6
Costa Rica	78	82	87	85	84	NA	...	83	80	30	28	81
El Salvador	91	89	90	89	89	90	93 ^k	90	81	46	44	262
Guatemala	89	86	91	85	85	54	...	87	NA	50	21	335
Honduras	100 ^o	100 ^o	100 ^o	100 ^o	100 ^o	100 ^o	100 ^o	100 ^o	NA	83	84	298
Nicaragua	100 ^o	100 ^o	100 ^o	100 ^o	100 ^o	98	84 ^k	100 ^o	NA	58	80	153
Panama	100	91	100 ^o	87	87	95	...	97	81	52	73	77
Latin Caribbean	92	85	94	87	87		83	77	95	62	57	464
Cuba	99	100 ^d	100 ^o	100 ^o	100 ^o	NA	100 ^o	100 ^o	95	91	92	168
Dominican Republic	100 ^o	84	91	84	80	NA	...	88	NA ^k	24	30	155
French Guiana	...	...	...	...	...	NA	...	...	...	...	...	...
Guadeloupe	NA	...	...	...	...	NA	...	...	...	...	...	...
Haiti ^c	82	79	95	85 ^h	NA	NA	NA ^k	58 ^l	NA ^k	62 ^f	46 ^{l1}	141
Martinique	NA	...	...	...	...	NA	...	...	...	...	...	...
Puerto Rico	NA	...	...	...	...	...	...	...	...	...	...	...
Andean Area	90	86	90	86	86	79	66	90	64	28	32	3,831
Bolivia	90	82	90	82	82	80	13	84	NA	26	28	337
Colombia	83	85	84	85	85	78	80	88	76	24	26	1,123
Ecuador	100 ^o	100 ^o	100 ^o	100 ^o	100 ^o	100 ^o	80	94	92	59	39	170
Peru	91	91	94	91	91	84	68	96	70	28	36	1,834
Venezuela	95	78	90	78	78	66	60	86	26	24	31	367
Brazil	100 ^o	100 ^o	100 ^o	100	98	87	89	100 ^o	71	71	65	5,565
Southern Cone	95	91	92	91	91	72	80	92	84	48	48	1,370
Argentina	100 ^o	93	95	93	93	NA	84	95	91	44	50	511
Chile	91	93	94	94	94	NA	90	91	77	40	30	346
Paraguay	76	75	77	76	76	72	64	77	65	16	16	238
Uruguay	99	95	99	95	95	NA	...	95	...	91	92	275
Non-Latin Caribbean	99	93	93	92	91	77	82 ^k	91	69	59	66	159
Anguilla	100	100	100	100	100	NA	...	97	100	100	100	3
Antigua & Barbuda	NA	99	75	99	99	NA	...	100	89 ^k	88	100	8
Aruba	NA	...	...	...	...	NA	...	...	...	...	...	1
Bahamas, The	NA	97	100 ^o	98	95	NA	94 ^k	90	...	72	92	25
Barbados	NA	91	...	91	91	NA	...	93	94 ^k	...	...	8
BES*	...	...	...	...	...	NA	...	...	...	...	...	...
Cayman Islands	75 ^f	88 ^f	...	88 ^f	75 ^f	NA	...	83 ^f	...	...	...	6
Curaçao	...	...	...	...	...	NA	...	...	...	...	...	...
Dominica	100 ^o	100 ^o	96	98	98	NA	...	99	100 ^o	86	86	7
Grenada	NA	95	92	95	95	NA	83	100 ^o	85	43	71	7
Guyana	97	93	92	93	93	77	...	98	84	31	69	13
Jamaica	100 ^o	93	94	92	92	NA	82 ^k	88	60	54	15	13
Montserrat	100	100	100	100	100	NA	...	100	100	100	100	4
Saint Kitts & Nevis	99	99	97	98	98	NA	...	100 ^o	100 ^o	100	100	17
Saint Lucia	100 ^o	100	100 ^o	100	100	NA	79	91	72	33	22	9
Saint Vincent & the Grenadines	100	96	99	96	96	NA	93 ^k	100 ^o	100 ^o	44	78	9
Sint Maarten**	NA	95	99	95	92	NA	...	...	...	...	...	1
Suriname	NA	86	90	86	86	NA	69 ^k	85	NA	20	20	10
Trinidad & Tobago	NA	91	89	90	90	NA	...	92	100 ^o	33	33	9
Turks & Caicos Islands	98	88	100	87	87	NA	...	91	...	75	75	4
Virgin Islands (UK)	100	92	95	92	92	NA	81 ^k	97	90 ^k	20	40	5
Virgin Islands (US)	NA	...	...	...	...	...	...	...	...	...	...	...

*Bonaire, St. Eustatius, and Saba; ** Dutch part.

(a) <2 years of age; (b) children aged 19-35 months; (c) query about coverage sent to country; (d) polio 2, as per country schedule; (e) reported coverage > 100%; (f) value 2010; (g) value June 2010-July 2011; (h) DTP3, Hib not given; (k) no data but in schedule; (l) coverage report for measles-rubella vaccine in children < 1 year of age; (m) target age groups vary by country; (n) reports number of provinces and territories; (o) reports number of states.

morbidity data

	23	24	25	26	27	28	29	30	31	32	33	34
	number of reported cases											
	confirmed cases				neonatal tetanus	tetanus (non-neonatal)			pertussis	diphtheria	Hib meningitis	mumps
	wild polio	measles ^a	rubella	CRS		male	female	total				
	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011
The Americas	0	1,372	9	1	22	471	104	575	28,011	12	251	31,606
North America	0	1,023	6	1	1	24	14	38	19,287	1	40	688
Bermuda	0	0	0	0	0	0	0	0	1	0	0	2
Canada	0	803	2	1	0	1	1	2	676	1	38	282
United States of America	0	220	4	0	1	23	13	36	18,610	0	2	404
Latin America & the Caribbean	0	349	3	0	21	447	90	537	8,724	11	211	30,918
Latin America	0	348	3	0	21	446	88	534	8,723	11	210	30,914
Mexico	0	3	0	0	1	19	3	22	252	0	0	2,685
Central American Isthmus	0	4	0	0	3	14	10	24	322	0	13	888
Belize	0	0	0	0	0	0	0	0	0	0	0	0
Costa Rica	0	0	0	0	0	1	0	1	79	0	0	1
El Salvador	0	0	0	0	0	7	2	9	7	0	13	632
Guatemala	0	0	0	0	1	1	0	1	0	0	0	0
Honduras	0	0	0	0	2	5	7	12	113	0	0	143
Nicaragua	0	0	0	0	0	0	0	0	87	0	...	1
Panama	0	4	0	0	0	0	1	1	36	0	0	111
Latin Caribbean	0	23	0	0	2	41	3	44	3	4	9	0
Cuba	0	0	0	0	0	1	0	1	0	0	9	0
Dominican Republic	0	2	0	0	2	40	3	43	3	2	0	0
French Guiana	0	5	0	0	...	0	0	0	...	...	...	...
Guadeloupe	0	13	0	0	...	0	0	0	...	...	...	...
Haiti	0	0	0	0	...	...	...	...	...	2	...	...
Martinique	0	3	0	0	...	0	0	0	...	...	...	...
Puerto Rico	0	0	0	0	...	0	0	0	...	...	...	...
Andean Area	0	266	1	0	9	76	19	95	1,072	0	35	20,495
Bolivia	0	0	0	0	1	0	0	0	0	0	0	1,096
Colombia	0	6	1	0	2	26	9	35	1,010	0	34	15,926
Ecuador	0	260	0	0	2	0	0	0	3	0	1	733
Peru	0	0	0	0	1	31	6	37	56	0	0	...
Venezuela	0	0	0	0	3	19	4	23	3	0	0	2,740
Brazil	0	43	0	0	6	279	48	327	2,257	5	131	...
Southern Cone	0	9	2	0	0	17	5	22	4,817	2	22	6,846
Argentina	0	3	1	0	0	0	0	0	1,585	0	15	5,481
Chile	0	6	1	0	0	9	3	12	2,582	0	3	950
Paraguay	0	0	0	0	0	8	2	10	11	2	0	283
Uruguay	0	0	0	0	0	0	0	0	639	0	4	132
Non-Latin Caribbean	0	1	0	0	0	1	2	3	1	0	1	4
Anguilla	0	0	0	0	0	0	0	0	0	0	0	0
Antigua & Barbuda	0	0	0	0	0	0	0	0	0	0	0	0
Aruba	0	0	0	0	0	0	0	0	0	0	0	0
Bahamas, The	0	0	0	0	0	0	0	0	0	0	0	0
Barbados	0	0	0	0	0	0	0	0	0	0	0	0
BES*	0	...	...	...	...	...	...	...	...	...	...	...
Cayman Islands	0	0	0	0	0	0	0	0	0	0	0	0
Curaçao	0	...	...	...	...	...	...	...	...	...	...	...
Dominica	0	0	0	0	0	0	0	0	0	0	0	0
Grenada	0	0	0	0	0	0	0	0	0	0	0	0
Guyana	0	0	0	0	0	0	0	0	0	0	0	0
Jamaica	0	1	0	0	0	1	0	1	1	0	0	4
Montserrat	0	0	0	0	0	0	0	0	0	0	0	0
Saint Kitts & Nevis	0	0	0	0	0	0	0	0	0	0	0	0
Saint Lucia	0	0	0	0	0	0	1	1	0	0	0	0
Saint Vincent & the Grenadines	0	0	0	0	0	0	0	0	0	0	0	0
Sint Maarten**	0	0	0	0	0	0	0	0	0	0	0	0
Suriname	0	0	0	0	0	0	1	1	0	0	1	0
Trinidad & Tobago	0	0	0	0	0	0	0	0	0	0	0	0
Turks & Caicos Islands	0	0	0	0	0	0	0	0	0	0	0	0
Virgin Islands (UK)	0	0	0	0	0	0	0	0	0	0	0	0
Virgin Islands (US)	0	0	0	0	0	0	0	0	0	0	0	0

* Bonaire, St. Eustatius, and Saba; ** Dutch part.
(a) imported or related to importations.

program management and financing

	35	36	37	38	39	40	41	42
	years covered by multi-year plan for immunization	number of NITAG meetings	number of districts with at least 1 supervisory visit	plan for immunization injection safety	national system to monitor ESAVIs	spending on routine immunization financed using gov't funds (%)	spending on vaccine purchases financed using gov't funds (%)	budget line for vaccine purchases
		2011	2011	2011	2011	2011	2011	2011
The Americas								
North America								
Bermuda	no	no	...	...	yes	...	...	...
Canada	2004-2009	3	...	...	yes	...	...	...
United States of America	2010-2020	3	...	...	yes	...	...	...
Latin America & the Caribbean								
Latin America								
Mexico	2007-2012	4	...	yes	yes	100	100	...
Central American Isthmus								
Belize	2010-2016	no	2	yes	yes	91	100	...
Costa Rica	no	...	...	yes	yes	98	100	yes
El Salvador	2009-2014	6	262	yes	yes	99	100	yes
Guatemala	no	0	125	yes	yes	100	100	yes
Honduras	2011-2015	3	250	yes	yes	54	52	yes
Nicaragua	2011-2015	0	153	yes	yes	23	10	yes
Panama	no	14	77	yes	yes	99	100	...
Latin Caribbean								
Cuba	2010-2015	3	168	yes	yes	99	99	yes
Dominican Republic	2010-2015	no	...	yes	no	45	50	...
French Guiana	...	...	...	...	...	...	...	...
Guadeloupe	...	...	...	...	...	...	...	...
Haiti	2011-2015	no	36	no	no	0	0	no
Martinique	...	...	...	...	...	...	...	...
Puerto Rico	...	...	...	...	...	...	...	...
Andean Area								
Bolivia	2010-2015	0	145	yes	yes	100	100	yes
Colombia	2011-2014	2	700	yes	yes	100	100	yes
Ecuador	2011-2015	4	...	yes	yes	100	100	yes
Peru	2011-2015	12	1,834	yes	yes	100	100	yes
Venezuela	no	no	365	yes	yes	99	100	yes
Brazil	2011-2015	3	...	yes	yes	100	100	yes
Southern Cone								
Argentina	2012-2016	5	205	yes	yes	100	100	yes
Chile	no	...	...	no	...	100	100	yes
Paraguay	2012-2016	2	152	yes	yes	97	100	yes
Uruguay	2010-2015	5	...	yes	yes	100	100	yes
Non-Latin Caribbean								
Anguilla	no	no	3	...	...	...	...	...
Antigua & Barbuda	no	no	...	...	yes	...	...	yes
Aruba	no	no	...	...	...	...	...	...
Bahamas, The	2010-2015	no	10	...	yes	...	...	yes
Barbados	no	no	...	yes	yes	100	100	yes
BES*	...	...	...	...	...	...	...	...
Cayman Islands	no	no	...	...	yes	100	100	yes
Curacao	...	...	...	...	...	...	...	...
Dominica	no	no	7	yes	yes	96	100	no
Grenada	2008-2012	no	33	yes	yes	98	100	yes
Guyana	2006-2015	no	13	yes	yes	82	54	yes
Jamaica	no	no	13	yes	yes	97	100	yes
Montserrat	no	no	...	...	...	97	100	yes
Saint Kitts & Nevis	no	no	17	...	...	100	100	...
Saint Lucia	2012-2013	no	9	yes	yes	...	...	yes
Saint Vincent & the Grenadines	no	no	9	no	yes	100	100	yes
Sint Maarten**	...	...	...	...	...	99	100	...
Suriname	no	12	10	yes	yes	97	100	yes
Trinidad & Tobago	2011-2012	no	...	...	yes	...	...	yes
Turks & Caicos Islands	2010-2015	no	4	...	...	...	...	...
Virgin Islands (UK)	no	no	6	yes	yes	100	100	yes
Virgin Islands (US)	...	...	...	...	...	...	...	...

*Bonaire, St. Eustatius, and Saba; ** Dutch part.

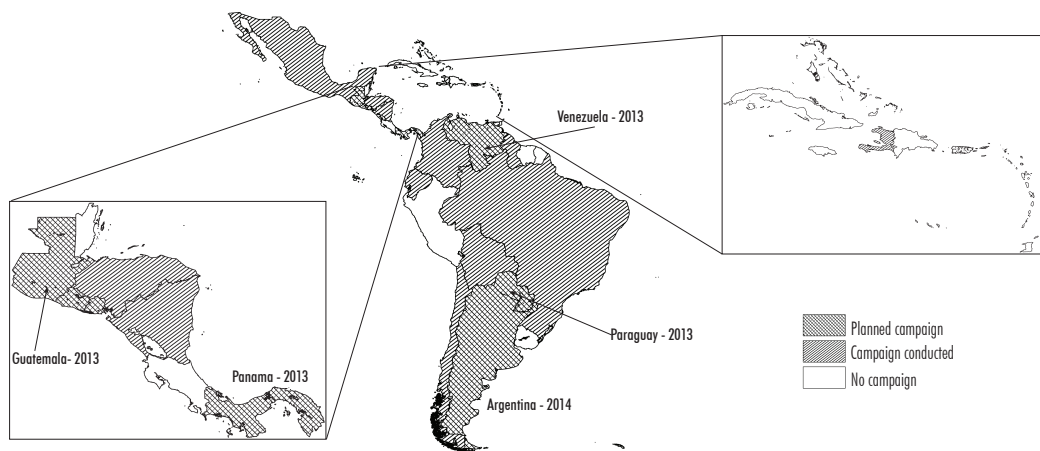
measles/rubella indicators

Measles/Rubella Surveillance Indicators, 2011

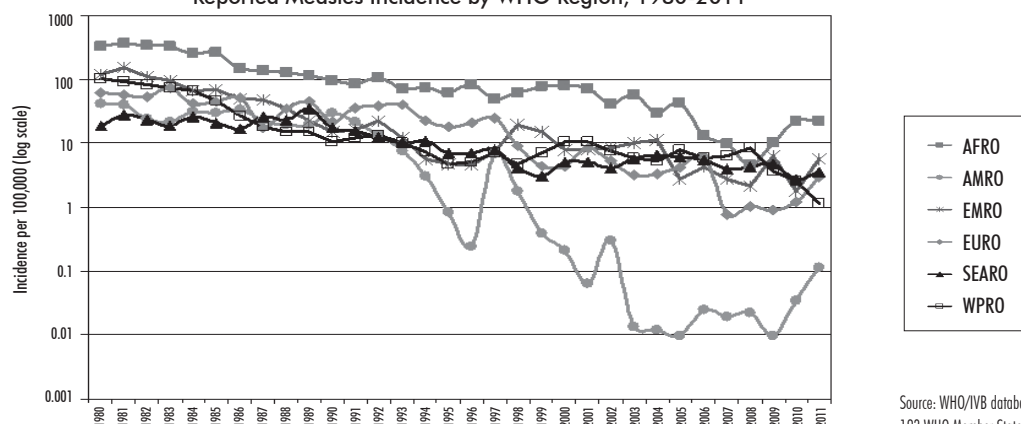
Country	Number of suspect cases	% of cases with adequate investigation	% of cases with adequate samples	% of samples received in lab ≤5 days	% of lab samples results ≤4 days
Argentina	364	7	69	57	35
Bolivia	266	99	98	92	93
Brazil ^a	8,979	77	87	66	88
CAREC	490	91	96	35	95
Chile	493	19	84	80	95
Colombia	3,808	73	96	91	95
Costa Rica	35	29	97	91	63
Cuba	1,144	100	100	100	100
Dominican Republic	135	45	94	66	70
Ecuador	2,369	73	98	84	81
El Salvador	540	49	96	90	61
French Guiana	21	...	...	...	...
Guadeloupe	21	...	...	...	...
Guatemala	283	93	93	76	89
Haiti	35	...	...	...	...
Honduras	86	66	100	80	97
Martinique	10	...	...	...	...
Mexico	7,594	99	...	...	...
Nicaragua	186	95	98	89	92
Panama	263	43	94	88	91
Paraguay	607	58	98	83	88
Peru	1,023	80	93	82	76
Uruguay	56 ^b	2	...	50	...
Venezuela	807	73	99	48	49
TOTAL/AVERAGE	29,615	80	92	76	86

Source: Measles Elimination Surveillance System (MESS), Integrated Surveillance Information System (ISIS), and country reports, FCH/IM, PAHO.
 (a) Preliminary data; (b) Only two of 56 suspect cases of rash-fever were suspected measles; both were studied and discarded by the laboratory.

2011-2012 Measles/Rubella Follow-up Campaigns and 2013-2014 Planned Campaigns in Latin America



Reported Measles Incidence by WHO Region, 1980-2011



Source: WHO/IVB database
 193 WHO Member States

Main Data Sources

For detailed information on demographic data and socioeconomic indicators, please visit: www.paho.org/DataStatistics.

Demographic data: United Nations Population Division. World Population Prospects: The 2010 Revision. New York; 2011. US Bureau of the Census. International Database. Update: June 2012 (<http://www.census.gov/ipc/www/idb>).

Infant mortality rate (1,000 lb) or number of deaths (N): As reported or estimated by countries. An increase in infant mortality rate may reflect an improvement in data coverage and quality.

Socioeconomic indicators: The World Bank. World Development Indicators 2012. Washington DC; 2012. Access 26 July 2012 (www.data.worldbank.org/data-catalog). For national health expenditure data, Technical Reports from HSS/PRWHO/PAHO; 2012. For more information, please go to: www.paho.org/Spanish/DPM/SHD/HP/nhexp-metodos.htm.

Immunization coverage, immunization program management, and financing information: Annual country reports to Comprehensive Family Immunization (IM)/PAHO via PAHO-WHO/UNICEF Joint Reporting Form (JRF); 2012.

Morbidity: Annual country reports to IM/PAHO via JRF, vaccine-preventable disease specific surveillance reports for measles/rubella and polio; 2011-2012.

Surveillance indicators: Vaccine-preventable disease specific surveillance reports for measles/rubella and acute flaccid paralysis/polio to IM/PAHO; 2011-2012.

Symbols and Abbreviations

(pop) population; **(lb)** live births; **(NA)** not applicable; **(...)** not available; **(ppp)** purchase power parity; **(int'l)** international; **(GDP)** gross domestic product; **(BCG)** bacille Calmette-Guérin (anti-tuberculosis vaccine); **(Polio3)** third dose of polio vaccine (oral polio vaccine or inactivated; polio vaccine); **(DTP1)** first dose of diphtheria-tetanus-pertussis vaccine (as DTP or combination vaccine); **(DTP3-Hib3)** third dose of diphtheria-tetanus-pertussis-*Haemophilus influenzae* type b (**Hib**) vaccine (as DTP-Hib or other combination vaccine); **(Hep B3)** third dose of hepatitis B vaccine (as monovalent hepatitis B or combination vaccine); **(DTP4)** first booster dose after the primary series consisting of three doses of diphtheria-tetanus-pertussis vaccine (as DTP or combination vaccine); **(MMR1)** first dose of measles, mumps, rubella vaccine; **(MMR2)** second dose of measles, mumps, rubella vaccine (when offered in the routine program); **(CRS)** congenital rubella syndrome; **(Hib)** *Haemophilus influenzae* type b; **(NITAG)** national immunization technical advisory group; **(ESAVI)** event supposedly attributable to vaccination or immunization; **(gov't)** government. **(Hi)** *Haemophilus influenzae*;

(Spn) *Streptococcus pneumoniae*; **(CSF)** cerebrospinal fluid; **(Nm)** *Neisseria meningitidis*; **(BOL)** Bolivia; **(BRA)** Brazil; **(CHL)** Chile; **(COL)** Colombia; **(ECU)** Ecuador; **(SLV)** El Salvador; **(GTM)** Guatemala; **(GUY)** Guyana; **(HND)** Honduras; **(NIC)** Nicaragua; **(PAN)** Panama; **(PRY)** Paraguay; **(PER)** Peru; **(VCT)** St. Vincent & the Grenadines; **(SUR)** Suriname; **(VEN)** Venezuela; **(AMRO)** American Region; **(AFRO)** African Region; **(EMRO)** Eastern Mediterranean Region; **(EURO)** European Region; **(SEARO)** Southeast Asian Region; **(WPRO)** Western Pacific Region.

Technical Notes

Immunization coverage: Proportion of children aged <1 year vaccinated with one dose of BCG vaccine, the third dose of polio vaccine (oral polio vaccine or inactivated polio vaccine), the first dose of DTP, the third dose of DTP and Hib, the third dose of hepatitis B vaccine, and the last dose of rotavirus vaccine (2nd or 3rd dose depending on the vaccine used), respectively. Proportion of children aged 1 year vaccinated with the first booster of DTP vaccine, and one dose of MMR vaccine, respectively. Proportion of children vaccinated with a second dose of MMR vaccine, as targeted in countries offering a second MMR dose in the routine program. Coverage rates are expressed as a percentage of the corresponding mid-year population, as reported by the country. Reported coverage rates ≥100% are presented as 100% with a footnote. Subregional aggregated data express average values weighted by population aged <1 year, when a figure is available.

Municipalities reaching coverage ≥95% for DTP3 and MMR: Proportion of municipalities reporting coverage levels equal to or greater than 95% for DTP3 and MMR1 vaccines, respectively, expressed as a percentage. Municipalities are defined as the third administrative level (country level being first), unless otherwise stated.

Morbidity: Number of confirmed cases of wild polio, measles, rubella, CRS, NNT, non-NNT, pertussis, diphtheria, Hib meningitis, and mumps. Subregional aggregated data is the sum of the totals. These are not rates; hence, inter-country comparisons may not be appropriate.

Immunization program management and financing:

- Multi-year plan for immunization: Existence of an immunization strategic plan for more than one year.
- Number of NITAG meetings: Number of times the NITAG met in 2011. NITAGs provide recommendations on immunization practices, including advice on vaccines to be included into the national immunization schedule.
- Number of districts with at least one supervisory visit: immunization supervision including all or most aspects of the program, the supervisions of the local level are generally done by region/department/state or national level
- Plan for immunization injection safety: the existence of a plan to ensure the safety

Selected Information Products of the Comprehensive Family Immunization Project



• **Immunization Newsletter:** A bi-monthly publication that includes information on all aspects of program implementation, from scientific articles on vaccine-preventable diseases and vaccines to practical matters related to the day-to-day running of an immunization program.



• **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) in 2012, this coffee table book is designed to document the initiative's evolution over the last decade, its organization and planning, VWA-related results and how sister Vaccination Week initiatives expanded to other WHO regions and grew into a World Immunization Week.

• **Methodology for the international evaluation of the Expanded Program on Immunization:** after a thorough and multidisciplinary review, and considering the extraordinary advances achieved in immunization, PAHO makes available a revised version of this methodology – first developed and implemented by PAHO in the 1980s – to evaluate the development of immunization programs, including its technical and financial capability. The results obtained are used to maintain, correct, or modify different strategies and lines of action that contribute to the strengthening and efficiency of these programs.

• **Cold Chain Module Update:** The third edition of PAHO's Cold Chain Module will be available at the end of 2012. This new version of the Module will help countries plan cold chain and supply chain operations for five to ten years from now, for both the introduction of new vaccines and supporting a growing population. The module includes a brief description of the products that need to be stored and shipped under specific refrigeration conditions as well as management guidelines for strengthening operations in order to ensure that vaccines and other supplies arrive in adequate conditions, right time and place, and in correct quantities.

• **Measles/Rubella and Polio Bulletins:** Weekly epidemiological surveillance bulletins.

of injections, including training, supervision, the proper use of safety boxes. This plan may be part of the annual immunization plan of action.

- National system to monitor ESAVIs: System in place for the reporting and follow-up of ESAVIs.
- Spending on routine immunization financed using government funds: Percentage of all of recurrent immunization-specific spending that was financed using government funds (for all recurrent inputs, including vaccines, injection supplies, salaries and per-diem of health staff working full-time on immunization, transport, vehicles and cold chain maintenance, training, social mobilization, monitoring, and surveillance). This excludes any external financing from donors, but may include loans.
- Spending on vaccine purchases financed using government funds: Percentage of

all vaccine spending that was financed using government funds. This excludes any external financing from donors, but may include loans.

- Budget line for vaccine purchase: Specific line in the national budget for the purchase of vaccines.

Measles/rubella indicators: For measles/rubella definitions refer to PAHO. Measles Elimination: Field Guide. (Scientific and Technical Publication No. 605). Washington DC: PAHO, 2005. Available at <http://www.paho.org/immunization/publications>.

This brochure is published in collaboration with Health Information and Analysis, Pan American Health Organization.

Seasonal Influenza Vaccine Use in the Americas, 2011

Country	Children		Older Adults		Other Risk Groups				
	Schedule	Coverage (%)	Schedule	Coverage (%)	Health Workers	Chronic Disease	Pregnant Women	Poultry Workers	Other
Anguilla			✓ ^a	65 doses	✓				
Antigua and Barbuda	6m-35m	...	≥60y	...					
Argentina	6m-23m ^a	36	≥65y	98	✓	✓ ^c	✓	✓	✓ ^g
Aruba			✓						
Bahamas	6m-36m	12	≥65y	64	✓	✓	✓		
Barbados	6m-23m		✓		✓				✓ ^h
Belize	6m-23m	93	≥65y	17	✓	✓			
Bermuda	6m-18y	14	≥60y	50	✓	✓	✓		✓ ^k
BES*									
Bolivia	6m-23m	39	≥65y	93	✓	✓			
Brazil	6m-23m	90	≥60y	84	✓	✓ ^d	✓		✓ ^l
Canada	6m-23m	45	≥65y	36	✓	✓	✓	✓	✓ ^m
Cayman Islands	6m-4y		>65y		✓	✓	✓		✓ ⁿ
Chile	6m-23m	100 ^c	≥60y		✓	✓	✓	✓	✓ ^o
Colombia	6m-23m	38	≥60y	16	✓	✓			
Costa Rica	6m-8y ^a		≥65y		✓	✓			
Cuba	6m-24y ^b		≥65y		✓	✓	✓	✓	
Curaçao									
Dominica	6m-3y	10	≥65y		✓	✓			
Dominican Republic	6m-3y	12	≥65y	19	✓	✓	✓	✓	✓ ^p
Ecuador	6m-4y	66	≥65y	45	✓	✓	✓		
El Salvador	6m-23m	100	≥60y	80	✓	✓	✓		
Grenada	6m-18y ^a	25 doses	>18y ^a	691 doses	✓	✓		✓ ^f	
Guatemala	NA		>60y		✓	✓			
Guyana	NA		NA						
Haiti	NA		NA						
Honduras	>6m-5y	71	≥60y	72	✓	✓		✓	
Jamaica	6m-18y ^a	...	✓ ^a	...	✓	✓			✓ ^q
Mexico	6m-35m	96	≥60y	99	✓	✓	✓		
Montserrat	<9y	...	✓	NA	✓				✓ ^r
Nicaragua	6m-4y	100	>65y ^a	100	✓	✓	✓		
Panama	6m-5y	64	>60y	90	✓	✓	✓	✓	
Paraguay	6m-35m	18	>60y	96	✓	✓	✓	✓	
Peru	6m-23m	74	≥65y	17	✓	✓	✓		
St. Kitts and Nevis									
St. Lucia	NA		≥65y		✓	✓			
St. Vincent and the Grenadines	6m-2y	...	NA	...					
Sint Maarten**				...					
Suriname	6m-23m	...	✓ ^a	...	✓	✓	✓		✓
Trinidad and Tobago	6m-3y		≥60y		✓	✓	✓	✓	✓ ^s
Turks and Caicos	6m-23m		NA		✓	✓			
United States of America	6m-23m		≥50y		✓	✓	✓		✓ ^t
Uruguay	6m-29m	24	>65y		✓	✓	✓	✓	
Venezuela	6m-23m	23	≥60y	30	✓	✓	✓		
Virgin Islands (UK)	✓		≥65y		✓	✓ ^e			✓ ^u

* Bonaire, St. Eustatius and Saba; **Dutch part.

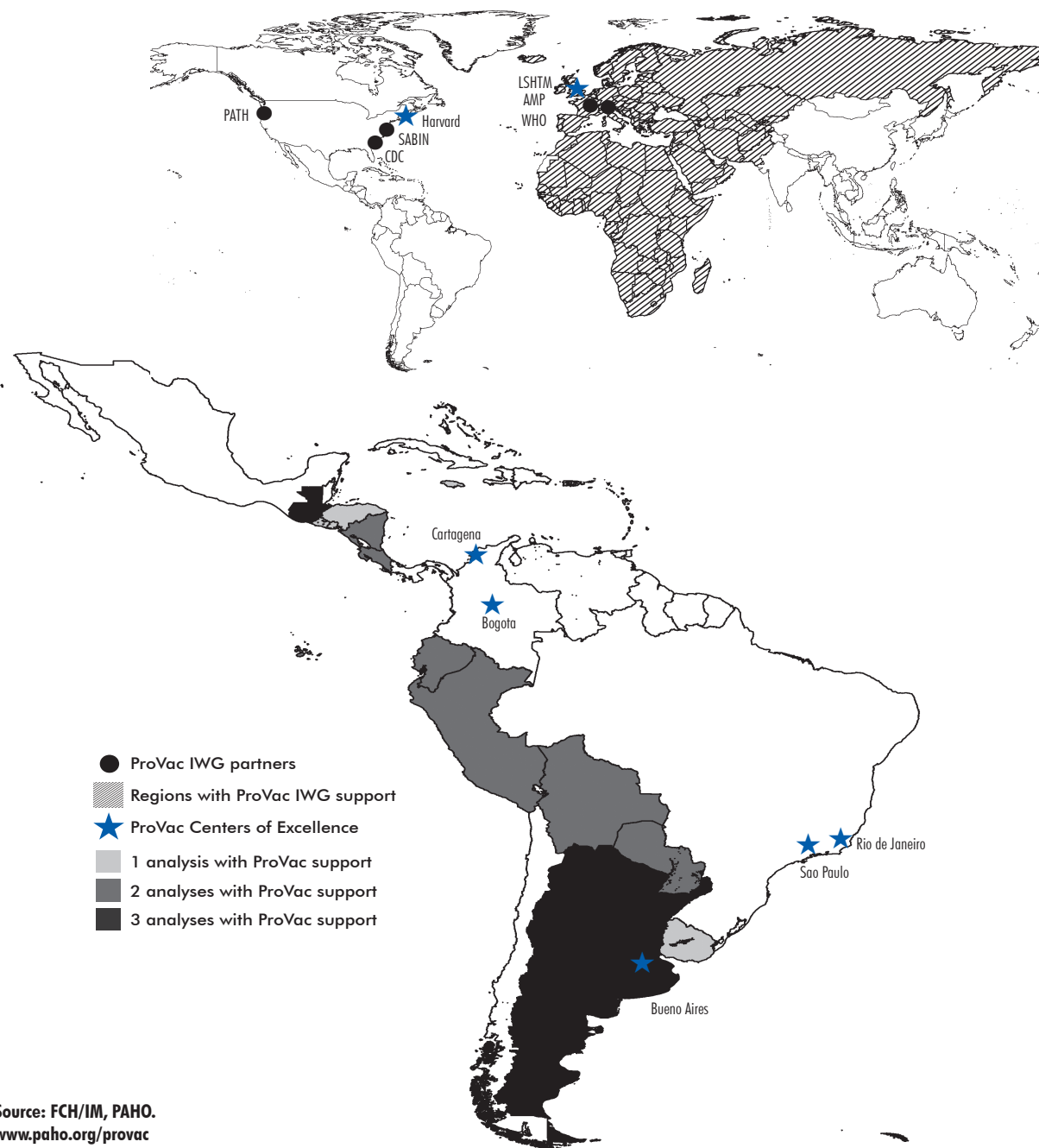
(a) with chronic disease; (b) with asthma/diabetes; (c) persons from 2-64 years with chronic pulmonary disease, cardiovascular disease, chronic renal failure, severe developmental disorders, immune disorders, HIV/AIDS, and oncology and transplant patients; (d) chronic diseases refers to persons with chronic pulmonary disease, cardiovascular disease, HIV/AIDS, and immune disorders; (e) renal dysfunction; (f) police immigration and customs officers and attendants at homes for the elderly; (g) essential services, security forces, educators, those living with oncology patients, those in contact with children <6 months; (h) military and front line staff; (k) others includes children on aspirin therapy, essential workers, travelers, close contacts or caregivers of individuals with chronic disease, and individuals living in crowded conditions; (l) other populations refer to indigenous population including population >6m and incarcerated populations; (m) residents of nursing homes, those in contact with populations at high risk for influenza complications and those who provide essential community services; anyone else aged 2-64 years should be encouraged to get vaccinated; (n) police and fire, children <6m who are at high risk for complications and individuals caring for babies <6 months; (o) egg producers; (p) public safety workers; (q) parliamentarians; (r) high risk workers; (s) national security; (t) people in contact with those at high risk and all persons who want to reduce the risk of becoming ill with influenza or of transmitting it to others; (u) residents of nursing homes

Source: Country reports through the PAHO-WHO/UNICEF Joint Reporting Form (JRF), 2012.

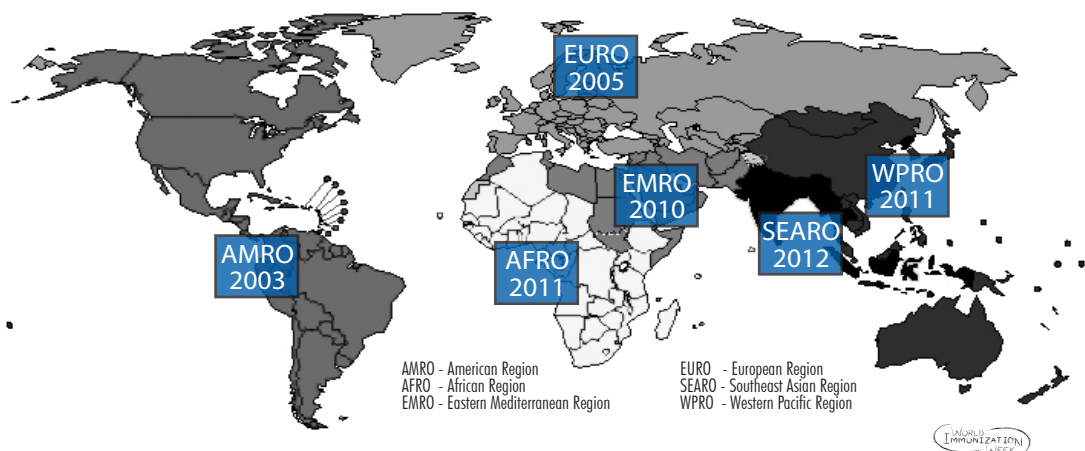
Strengthening Evidence-based Decisions on New Vaccine Introduction: the ProVac Initiative

Progress of the ProVac Initiative to Date

Networks, tools, and training	<ul style="list-style-type: none"> • National Immunization Technical Advisory Group (NITAG) trainings 3 times per year (2009, 2010, 2011). • Guidance for NITAG standardized policies and procedures. • 3 regional workshops on basics for cost-effectiveness: pneumococcal conjugate vaccines (2009), rotavirus vaccines (2010) and human papillomavirus vaccines (2011). • 2 cost-effectiveness tools: TRIVAC (2009) to evaluate Hib, PCV and rotavirus, and CERVIVAC (2011) to evaluate HPV vaccines and cervical cancer screening strategies. • ProVac EPI costing tool (2012) to estimate the total routine program costs and incremental new vaccine costs. • Establishment of a Network of ProVac Centers of Excellence with expertise on economic evaluations. • 6 online learning courses on health economics (2012). • 5 ProVac practical guides for estimating disease burden, program costs, cost of illness and health service utilization associated with rotavirus and pneumococcal disease.
Technical support to country teams	<ul style="list-style-type: none"> • 9 cost-effectiveness analyses on pneumococcal conjugate vaccines. • 2 cost-effectiveness analyses on rotavirus vaccines. • 10 cost-effectiveness analyses on HPV vaccines. • 3 vaccination program costing studies.
ProVac International Working Group (IWG)	<ul style="list-style-type: none"> • Formation of the ProVac International Working Group (IWG) to pilot the ProVac tools and methodology in 3 regions of the world (EURO, EMRO and AFRO) through implementing partners. • 3 regional workshops on basics of cost-effectiveness (EURO, EMRO and AFRO). • 7 cost-effectiveness analyses and 2 program costing studies (EURO, EMRO and AFRO).



Vaccination Week in the Americas (VVA) and the Evolution to a World Immunization Week (WIW)



The year of establishment of Vaccination Week/Immunization Week efforts in each WHO Region

- In 2012, VVA celebrated its 10th anniversary in the Region as an initiative to promote equity and access to vaccination, to maintain immunization on the political agenda, and to advance communication and cooperation between countries.
- Over the history of VVA, more than 400 million individuals have been vaccinated through activities conducted under its framework.
- VVA has served as a model for other Regions of the WHO in the implementation of their own sister efforts. In 2012, more than 180 countries worldwide participated in a Vaccination Week initiative.
- During the 65th World Health Assembly, resolution WHA65.18 was approved by Member States supporting a World Immunization Week to take place each April. WIW will not replace VVA but will serve as the overarching global framework for all Regional efforts.

Source: FCH/IM, PAHO.

Surveillance Indicators Acute Flaccid Paralysis (AFP), 2011

Country	Number of AFP cases	AFP rate (x 100,000 pop < 15 years old)	% of cases investigated within < 48 hours	% of cases with 1 adequate sample	Number of sites	% Sites reporting weekly
Argentina	172	1.68	31	83	645	100
Bolivia	41	1.13	90	85	90	...
Brazil	561	1.20	98	76	3,475	96
Canada	40	0.7	...	33	...	...
CAREC	12	0.55	75	82	507	99
Chile	89	2.3	96	85	327	100
Colombia	157	1.2	62	82	4,722	91
Costa Rica	38	3.15	39	82	70	...
Cuba	32	1.58	100	94	20	100
Dominican Republic	42	1.27	88	84	237	100
Ecuador	39	0.88	31	72	504	86
El Salvador	59	2.44	51	78	140	...
Guatemala	60	0.78	97	78	220	...
Haiti	10	0.17	...	90	89	...
Honduras	63	2.16	100	92	449	95
Mexico	496	1.57	95	56	6,148	100
Nicaragua	28	1.39	96	89	178	100
Panama	9	0.9	78	61	285	87
Paraguay	18	0.9	56	67	180	93
Peru	132	1.58	89	77	20	100
Uruguay	9	1.28	78	78	155	...
USA	...	...	...	...	...	...
Venezuela	71	0.84	72	85	240	...
TOTAL/AVERAGE	2,178	1.30	83	74	18,701	95

Source: Integrated Surveillance Information System (ISIS), Polio Eradication Surveillance System (PESS), and country reports to FCH/IM, PAHO.

Epidemiological Surveillance Indicators for Diseases Preventable by New Vaccines in Reporting Countries, Latin America and the Caribbean, 2011

Rotavirus Surveillance, January-December 2011

Data and Indicators	BOL	BRA	CHL	COL	ECU	SLV	GTM	GUY	HND	NIC	PAN	PRY	VCT	SUR	VEN	TOTAL
Number of hospitalizations <5 years	11,659	90,745	23,874	13,713	21,403	35,444	20,086	13,534	27,733	10,601	10,161	8,216	3,049	29,541	12,730	332,489
Number <5 years admitted to hospital for diarrhea	1,915	10,750	1,927	1,514	3,401	4,963	6,411	1,371	3,315	1,418	890	360	473	3,113	901	43,022
Number <5 years who meet the case definition	1,656	1,651	805	639	1,439	2,396	2,631	94	3,213	155	398	250	38	781	353	16,499
Number <5 years with epidemiological form and stool specimen	1,456	779	793	571	1,015	2,132	2,041	24	2,215	125	88	206	7	180	231	11,863
Positive cases of rotavirus	495	102	78	83	137	0	622	0	547	4	88	51	0	0	47	2,254
Deaths	14	0	0	0	0	...	7	0	1	0	0	0	...	...	0	22
% of positive cases of rotavirus	34%	13%	10%	15%	13%	0%	30%	0%	25%	3%	100%	25%	0%	0%	20%	19%

Bacterial Pneumonia Surveillance, January-December 2011

Data and Indicators	Bolivia	Ecuador	El Salvador	Guatemala	Honduras	Nicaragua	Panama	Paraguay	Peru	Venezuela
Number of hospitalizations <5 years	12,234	20,577	23,284	14,282	10,538	10,676	16,860	10,522	16,504	15,157
Number of suspected cases of pneumonia	1,593	3,168	3,815	2,278	1,303	2,518	2,579	1,434	1,867	1,595
Number of suspected cases with x-ray and epidemiological form	1,530	2,041	3,521	1,761	635	1,861	2,323	1,235	1,601	1,515
Number of probable cases of bacterial pneumonia	387	1,618	1,957	1,749	604	1,643	2,055	1,029	793	1,463
Probable cases with blood specimen	317	1,407	13	1,129	372	1,557	1,605	837	785	601
Probable cases with pleural fluid specimen	26	13	4	2	...	4	90	51	5	38
Confirmed cases of Hib	0	5	0	4	0	0	0	1	2	3
Confirmed cases of Hi (no b)	1	2	0	0	0	0	0	1	0	10
Confirmed cases of Spn	13	35	2	8	2	1	50	34	7	10
Confirmed cases caused by other bacteria	20	127	0	214	73	15	8	16	1	33
Confirmed cases caused by contamination	20	149	0	102	0	174	3	0	0	2
Deaths	10	30	0	37	50	28	47	14	1	17

Bacterial Meningitis Surveillance, January-December 2011

Data and Indicators	Bolivia	Brazil ^a	Ecuador	El Salvador	Guatemala	Honduras	Nicaragua	Panama	Paraguay	Peru	Venezuela
Number of hospitalizations <5 years	12,234	1,172,437	20,595	21,866	15,312	10,565	6,521	16,896	10,522	15,961	16,848
Number of suspected cases of meningitis	73	7,572	91	78	76	96	86	97	138	171	379
Number of suspected cases with cerebrospinal fluid test and epidemiological form	56	6,840	73	77	76	77	80	97	127	161	354
Number of probable meningitis cases	27	2,081	60	68	52	31	57	68	97	20	308
Confirmed cases of Hib	1	0	2	0	1	0	0	0	0	0	0
Confirmed cases of Hi (no b)	0	77	1	1	0	0	0	2	0	0	4
Confirmed cases of Nm	0	845	1	0	0	0	0	1	2	2	1
Confirmed cases of Spn	9	265	10	2	1	1	0	20	4	0	9
Confirmed cases caused by other bacteria	1	894	5	2	11	2	0	8	6	0	15
Confirmed cases caused by contamination	0	0	5	0	6	0	1	0	0	0	
Deaths	4	328	9	0	2	3	3	18	6	0	12

(a) No. of hospitalizations include sentinel hospitals and all other hospitals in the country.

Source: Country reports to FCH/IM, PAHO.