

Immunization in the Americas

2013 Summary

Comprehensive Family Immunization
Family, Gender and Life Course



Pan American
Health
Organization



World Health
Organization

REGIONAL OFFICE FOR THE Americas

preface

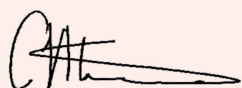
A year after the World Health Assembly endorsed the Global Vaccine Action Plan (GVAP), the World Health Organization (WHO) and its partners have made significant progress in defining a Monitoring and Accountability Framework to oversee implementation of the GVAP and document its impact. The Framework is being adapted to the immunization program needs of the 194 WHO Member States located in six different regions.

The GVAP Framework will track compliance with 16 indicators corresponding to the six GVAP strategic objectives and 11 indicators corresponding to the five GVAP goals; the latter includes goals to be realized in 2015 and 2020. Most of these indicators are based on information that is routinely collected through the PAHO/WHO-UNICEF Joint Reporting Form (JRF) on immunization, with the exception of vaccination coverage rates broken down by income level and the evaluation of the public's confidence in vaccines. For these indicators, special studies will complement the annual data collection process.

Vaccination, seen as a universal right, is framed within the values of equity, universal access, solidarity, and inclusion. The GVAP emphasizes the importance of extending vaccination to all; correspondingly, strategic objective 3 aims to ensure that the benefits of immunization are equitably extended to all people. Vaccination Week in the Americas, which was celebrated for the 11th time in 2013 and which paved the way for World Immunization Week, has provided the rallying cry for this right. To ensure vaccination equitably reaches all those who need it in the Americas and document progress towards achieving this objective, major advances have been achieved in monitoring vaccination coverage at sub-national levels. Challenges remain, however, in understanding the factors that limit universal access to vaccination and the ability to monitor the vaccination status of every individual and community. To this end, many countries in the Americas are actively working to establish nominal immunization registries.

The need to closely monitor each geographic area and population group is becoming increasingly urgent, both in the context of the final steps of the documentation and verification process of regional elimination of measles, rubella, and congenital rubella syndrome, as well as for the emergency plan to keep the Region of the Americas free from these diseases. The plan was approved by the Governing Bodies of the Pan American Health Organization (PAHO) in 2012. The large measles outbreaks in Canada and Ecuador in 2011-2012 clearly demonstrate that our Region remains vulnerable to importations. Only by monitoring vaccination coverage and vaccination inequalities will we be able to identify areas at risk and unprotected communities requiring intensified vaccination efforts, and thus prevent the reintroduction of viruses already eliminated from the Western Hemisphere, such as measles, rubella, and poliovirus.

Fulfilling its mandate to disseminate health data, PAHO has published the annual brochure "Immunization in the Americas" since 2005. It has served as the main tool for benchmarking and sharing data on immunization and epidemiological surveillance of vaccine-preventable diseases from the countries of the Americas. This year, we have added new indicators included in the GVAP Monitoring and Accountability Framework, such as vaccination drop-out rates and the existence of national immunization technical advisory groups. Our current challenge is to monitor the performance of immunization programs with more precision and greater levels of disaggregation. I invite you to use this brochure as a model for measuring immunization progress in your country and join us in monitoring regional progress toward achieving immunization goals.



Carissa F. Etienne
Director
Pan American Health Organization

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		
	2012	2012	2012	rate	(N)	year	2012	current value	ppp value	2012	public expenditure	private expenditure
	2012	2012	2012	rate	(N)	year	2012	2012	2012	2012	2012	2012
The Americas	969,414	77,161	15,758.6	12.9	144,586		249,210	25,125	26,829			
North America	352,412	22,594	4,617.4	6.0	26,458		83,023	50,215	49,826			
Bermuda	69	4	0.8	...	...	2011	15	106,920 ^b	...	...	...	...
Canada	34,838	1,967	390.9	4.9	1,872	2009	8,268	50,970	42,690	...	8.0 ^d	3.3
United States of America	317,505	20,623	4,225.7	6.1	24,586	2010	74,740	50,120	50,610	...	...	5.1
Latin America and the Caribbean	617,002	54,567	11,141.2	16.2	118,128		166,187	9,229	12,086			
Latin America	609,770	53,955	11,020.0	16.3	117,711		164,280	9,278	12,105			
Mexico	120,847	11,405	2,269.0	13.7	30,922	2011	33,616	9,740	16,630	47.2 ^b	2.8 ^d	...
Central American Isthmus	44,239	5,300	1,105.1	18.5	6,997		11,604	3,996	6,833			
Belize	324	38	7.7	15.7	113	2012	88	4,180	6,880	...	...	...
Costa Rica	4,805	361	73.6	8.5	624	2012	1,306	8,740	12,590	50.7 ^b	...	3.1 ^c
El Salvador	6,297	639	127.6	...	...	...	1,770	3,580	6,790	48.3 ^b	4.3 ^{c,d}	5.0
Guatemala	15,083	2,215	474.4	...	...	...	3,760	3,120	4,960	55.9 ^k	2.4 ^{c,d}	3.6
Honduras	7,936	989	207.8	24.0	5,289	2012	2,074	2,070	3,890	57.0 ^b	...	2.8
Nicaragua	5,992	690	138.8	...	...	...	1,626	1,650	3,960	...	5.3 ^e	4.7 ^c
Panama	3,802	369	75.1	13.2	971	2011	980	9,910	17,830	51.9 ^g	...	1.9 ^g
Latin Caribbean	36,525	3,160	652.4	34.3	6,681		9,491	5,372	5,548			
Cuba	11,271	532	108.4	4.6	581	2012	2,915	...	...	...	...	...
Dominican Republic	10,277	1,063	217.7	26.0	5,616	2012	2,688	5,470	9,820	47.2 ^b	3.3 ^{d,f}	4.4
French Guiana	243	30	5.8	8.6	54	2011	63	...	...	...	...	...
Guadeloupe	464	33	6.3	7.9	35	2009-11	116	...	...	...	...	...
Haiti	10,174	1,250	264.9	59.0	...	2012	2,671	760	1,240	...	...	3.3 ^c
Martinique	403	23	4.6	8.7 ^a	42	2010	100	...	...	...	...	...
Puerto Rico	3,694	229	44.8	8.3	353	2010	939	18,000	...	...	...	...
Andean Area	133,636	13,255	2,713.7	17.1	17,320		35,527	7,386	10,349			
Bolivia	10,496	1,264	272.8	...	...	...	2,660	2,220	4,960	56.3 ^h	3.5 ^{c,d}	1.5 ^c
Colombia	47,704	4,521	911.5	18.4	8,355	2010	12,915	6,990	10,110	55.9 ^g	...	1.5
Ecuador	15,492	1,594	327.6	...	...	...	4,054	5,190	9,590	49.3 ^g	...	3.7
Peru	29,988	2,925	600.3	17.0	...	2012	7,980	5,880	10,240	48.1 ^g	2.9 ^d	2.1
Venezuela	29,955	2,951	601.4	15.1	8,965	2010	7,917	12,470	13,120	44.8 ^k	...	2.4 ^c
Brazil	198,656	14,563	3,008.5	15.3	44,572	2011	54,631	11,630	11,720	54.7 ^b	...	3.7
Southern Cone	68,634	5,659	1,150.1	10.6	11,219		17,503	11,499	16,947			
Argentina	41,087	3,436	695.0	11.7	8,878	2011	10,372	...	...	44.5 ^g	...	3.2
Chile	17,465	1,225	245.5	7.7	1,908	2011	4,593	14,280	21,590	52.1 ^b	...	3.4
Paraguay	6,687	753	160.1	...	...	...	1,719	3,290	5,610	52.4 ^g	4.9 ^e	3.2 ^g
Uruguay	3,395	245	49.5	8.9	433	2012	819	13,510	15,570	45.3 ^g	5.4 ^{c,e,f}	5.2 ^c
Non-Latin Caribbean	7,232	612	121.2	13.8	417		1,907	8,530	15,606			
Anguilla	15	1	0.2	...	...	...	4	...	...	...	...	2.3
Antigua and Barbuda	89	7	1.4	15.3	18	2012	25	12,640	19,260	...	3.2 ^e	1.6
Aruba	108	6	1.4	1.8	2	2012	27	...	...	...	...	1.9 ^c
Bahamas, The	372	29	5.7	16.2	81	2011	104	21,280	29,740	...	3.0 ^e	3.3
Barbados	288	18	3.5	18.1	60	2011	75	12,380 ^c	18,400 ^c	...	4.4 ^d	2.1
BES*	...	...	...	...	...	...	...	...	...	...	...	...
Cayman Islands	53	3	0.6	4.0	3	2012	13	...	...	...	...	...
Curaçao	146	10	2.0	8.0	15	2009	34	...	...	...	...	...
Dominica	73	6	1.1	17.8	17	2012	19	6,460	12,190	...	3.6 ^e	2.4
Grenada	109	9	1.8	9.0	15	2012	28	7,110	10,300	...	3.1 ^e	1.8
Guyana	795	89	16.4	...	...	...	202	3,410	3,400	...	...	2.4
Jamaica	2,769	254	50.3	...	...	...	732	5,140	...	...	2.5 ^d	2.8 ^c
Montserrat	5	0	0.1	-	-	2011	1	...	...	...	...	1.0
Saint Kitts & Nevis	51	4	0.7	9.4	6	2012	14	13,330	17,280	...	1.7 ^e	2.0
Saint Lucia	162	12	2.3	...	...	...	45	6,530	11,020	...	...	1.6
St. Vincent and the Grenadines	104	8	1.5	22.3	39	2011	27	6,380	10,810	...	...	...
Sint Maarten**	39	2	0.5	...	...	...	10	...	...	...	...	...
Suriname	535	46	9.6	15.1	147	2011	140	8,480	8,500	...	...	0.9 ^g
Trinidad and Tobago	1,337	97	19.7	...	...	...	359	14,400	22,400	...	...	...
Turks and Caicos Islands	46	4	0.8	2.1	1	2012	15	...	...	...	...	...
Virgin Islands (UK)	31	2	0.3	-	-	2012	9	...	...	...	...	...
Virgin Islands (US)	105	6	1.1	...	13	2010	25	...	...	...	...	...

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

(a) value 2009-2011; (b) value 2009; (c) value 2011; (d) functional expenditure; (e) institutional expenditure; (f) includes 'obras sociales' (ARG), EPS (COL), ISAPRES (CHL), ARS (DOM), IAMC (URY); (g) value 2010;

(h) value 2008; (k) value 2006.

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	DTP1-3 Dropout Rate 2012	rotavirus	DTP4	MMR1	MMR2 ^l	DTP3			MMR
2012	2012	2012	2012	2012	2012	2012	2012	2012	2012	2012	2012	
The Americas	96	93	96	93		82	85	94	77	50	55	15,213
North America	0	94	99	94		67	84 _h	93	94	...	...	64
Bermuda	NA	98	98	98	2.5	NA	...	90	64	...	...	NA
Canada ^a	NA	99	99	95	...	NA	...	98	94	...	...	13 ^m
United States of America ^b	NA	93 ^e	...	94 ^g	...	69 ^e	83 ^e	91 ^e	...	53 ^e	10 ^e	51 ⁿ
Latin America & the Caribbean	96	93	96	93		87	86	95	76	50	55	15,149
Latin America	96	93	96	93		87	86	95	76	50	57	14,897
Mexico	99 ^c	99 ^c	...	99 ^c	...	99 ^c	99 ^c	99 ^c	92 ^c	66	83	2,432
Central American Isthmus	93	93	96	93		87	85	94	93	47	54	1,211
Belize	98	98	96	98	-2.3	NA	96	96	93	100	67	6
Costa Rica	78	90	92	91	...	NA	...	90	98	46	46	81
El Salvador	90	92	92	92	-0.2	93	...	93	95	53	57	262
Guatemala	94	94	100 ^d	96	6.9	81	80	93	NA	47	39	334
Honduras	89	88	88	88	0.1	87	90	93	NA	28	55	298
Nicaragua	100 ^d	100 ^d	100 ^d	100 ^d	-0.1	100 ^d	...	100 ^d	100 ^d	75	80	153
Panama	100 ^d	87	99	85	14.4	92	98	98	72	47	51	77
Latin Caribbean	87	83	97	86		21	100	80	100	52	48	467
Cuba	100	98 ^f	100 ^d	100 ^d	-5.1	NA	100 ^d	100 ^d	100 ^d	90	90	168
Dominican Republic	100	85	93	85	7.7	21	...	88	NA _h	30	30	155
French Guiana	NA	...	...	...	...	...	...	...	...	...	...	...
Guadeloupe	NA	...	...	...	...	...	...	...	...	...	...	...
Haiti	70	76	99	81	18.1	NA	...	66 ^k	NA _h	33	18	144
Martinique	NA	...	...	...	...	...	...	...	...	...	...	...
Puerto Rico	NA	...	...	...	...	...	...	...	...	...	...	...
Andean Area	93	88	94	90		86	71	92	61	34	37	3,850
Bolivia	87	79	85	80	6.3	76	11	84	NA	20	31	337
Colombia	89	91	92	92	0.0	87	86	94	80	40	43	1,122
Ecuador	100 ^d	100 ^d	100 ^d	100 ^d	-1.2	100 ^d	74	100 ^d	55	86	66	220
Peru	95	94	100	95	4.6	91	85	94	63	29	32	1,836
Venezuela	96	73	90	81	10.1	76	60	87	33	26	31	335
Brazil	100 ^d	97	100 ^d	94	6.8	86	91	100	71	55	61	5,565
Southern Cone	95	88	91	89		72	77	90	82	49	54	1,372
Argentina	100	90	94	91	7.9	NA	80	94	90	45	53	511
Chile	92	90	90	90	0.5	NA	...	90	74	27	13	346
Paraguay	75	74	76	74	2.7	72	62	74	62	14	11	240
Uruguay	99	95	98	95	2.8	NA	...	96	...	89	96	275
Non-Latin Caribbean	96	94	93	94		90	83	91	81	82	16	252
Anguilla	100 ^d	79	100 ^d	100 ^d	-3.0	NA	...	100 ^d	100 ^d	100	100	3
Antigua & Barbuda	NA	97	90	98	-0.5	NA	...	98	90	86	100	7
Aruba	NA	...	...	...	...	NA	...	...	...	...	...	...
Bahamas, The	NA	99	99	98	1.7	NA	58	91	73	95	38	91
Barbados	NA	88	...	87	...	NA	...	90	90	...	...	8
BES*	...	100	100	100	16.7	NA	...	100	100	100	100	...
Cayman Islands	76	94	...	94	...	70	...	90	96 _h	...	...	6
Curaçao	NA	...	...	...	...	...	...	...	...	...	...	...
Dominica	98	97	98	97	0.7	NA	96	99	94	100	71	7
Grenada	NA	98	90	97	-8.0	NA	88	94	75	71	43	7
Guyana	98	97	99	97	1.9	91	...	99	90	62	69	13
Jamaica	96	96	95	96	-0.9	NA	84	93	76	69	69	13
Montserrat	100	94	100	94	5.6	NA	100	100	100	0	100	4
Saint Kitts & Nevis	95	100 ^d	96	100 ^d	-7.1	NA	0 ^h	95	90	88	76	17
Saint Lucia	100 ^d	98	100 ^d	98	2.4	NA	100 ^d	100 ^d	80	44	33	36
Saint Vincent & the Grenadines	97	96	94	96	-2.4	NA	97	94	92	89	56	9
Sint Maarten**	NA	91	91	91	-0.2	NA	...	91	86 _h	...	...	0
Suriname	NA	84	80	84	-4.7	NA	...	73	...	...	...	10
Trinidad & Tobago	NA	91	87	92	0.3	NA	...	85	85	56	33	9
Turks & Caicos Islands	98	95	93	95	-2.6	NA	100 ^d	98	82	100	0	6
Virgin Islands (UK)	98	97	100 ^d	98	45.9	NA	...	95	96 _h	40	...	6
Virgin Islands (US)	NA	...	...	...	...	...	...	...	...	...	...	...

* Bonaire, St. Eustatius, and Saba (with data); ** Dutch part.

(a) < 2 years of age; (b) children aged 19-35 months; (c) preliminary data; (d) reported coverage > 100%; (e) children born during January 2006-May 2011; (f) polio 2, as per country schedule; (g) DTP3, Hib not included; (h) no data but in schedule; (k) coverage report for measles-rubella vaccine in children < 1 year of age; (l) target age groups vary by country; (m) reports number of provinces and territories; (n) 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				
	2012	2012	2012	2012	2012	2012	2012	2012	2012	2012	2012	2012
The Americas	0	143	15	3	11	433	107	540	71,091	2	121	22,801
North America	0	65	11	3	1	25	15	40	52,541	2	35	283
Bermuda	0	0	0	0	0	...	...	0	3	0	0	0
Canada	0	10	2	0	...	1	3	4	4,845	1	25	54
United States of America	0	55	9	3	1	24	12	36	47,693	1	10	229
Latin America & the Caribbean	0	78	4	0	10	408	92	500	18,550	0	86	22,518
Latin America	0	78	4	0	10	403	91	494	18,547	0	86	22,516
Mexico	0	0	2	0	0	15	13	28	978	0	0	5,683
Central American Isthmus	0	0	0	0	2	24	10	34	647	0	2	802
Belize	0	0	0	0	0	0	0	0	44	0	0	2
Costa Rica	0	0	0	0	0	1	0	1	130	0	0	30
El Salvador	0	0	0	0	0	6	1	7	37	0	1	351
Guatemala	0	0	0	0	0	0	0	0	273	0	0	143
Honduras	0	0	0	0	2	11	4	15	48	0	0	138
Nicaragua	0	0	0	0	0	1	0	1	68	0	0	4
Panama	0	0	0	0	0	5	5	10	47	0	1	134
Latin Caribbean	0	0	0	0	1	39	3	42	11	0	8	0
Cuba	0	0	0	0	0	3	0	3	0	0	6	0
Dominican Republic	0	0	0	0	1	36	3	39	11	0	2	0
French Guiana	0	...	...	...	...	...	...	...	...	...	...	...
Guadeloupe	0	...	...	...	...	...	...	...	...	...	...	...
Haiti	0	0	0	0	...	...	...	...	0	0	0	0
Martinique	0	...	...	...	...	...	...	...	...	...	...	...
Puerto Rico	0	...	...	...	...	...	...	...	...	...	...	...
Andean Area	0	74	1	0	4	61	17	78	4,524	0	46	10,176
Bolivia	0	0	0	0	0	0	0	0	0	0	0	0
Colombia	0	1	1	0	2	38	10	48	3,289	0	41	9,377
Ecuador	0	72	0	0	1	0	0	0	54	0	0	799
Peru	0	0	0	0	0	13	4	17	1,173	0	0	...
Venezuela	0	1	0	0	1	10	3	13	8	0	5	0
Brazil	0	2	0	0	2	250	41	291	4,744	0	...	...
Southern Cone	0	2	1	0	1	14	7	21	7,643	0	30	5,855
Argentina	0	2	1	0	0	5	5	10	1,239	0	22	4,619
Chile	0	0	0	0	0	6	0	6	5,762	0	4	876
Paraguay	0	0	0	0	1	3	2	5	44	0	0	247
Uruguay	0	0	0	0	0	...	...	0	598	0	4	113
Non-Latin Caribbean	0	0	0	0	0	5	1	6	3	0	0	2
Anguilla	0	0	0	0	0	...	...	0	0	0	0	0
Antigua & Barbuda	0	0	0	0	0	...	...	0	0	0	0	0
Aruba	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	0	0	0	0	...	...	0	0	0	0	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	2
Guyana	0	0	0	0	0	0	0	0	0	0	0	0
Jamaica	0	0	0	0	0	3	1	4	2	0	0	0
Montserrat	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	0	0	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	1	0	1	0	0	0	0
Suriname	0	0	0	0	0	1	0	1	1	0	0	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	...	...	...	...	...	...	...	...	...	...	...

*Bonaire, St. Eustatius, and Saba (with data); ** Dutch part.

(a) imported or related to importations.

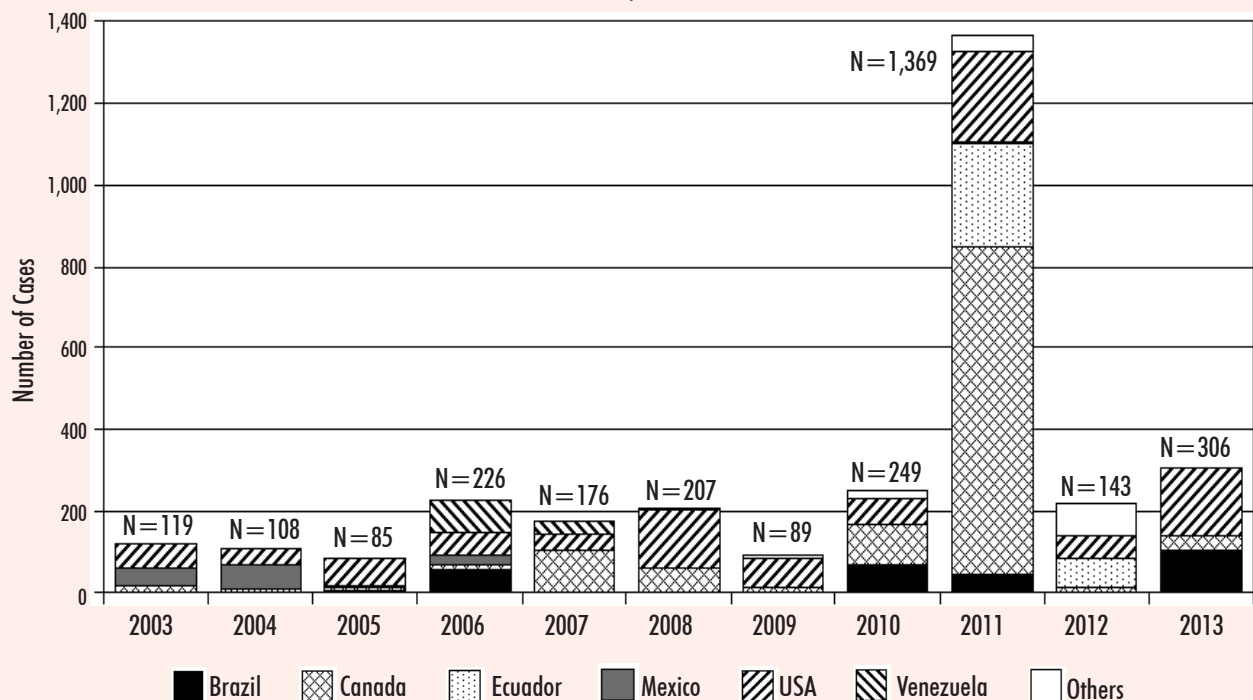
program management and financing

	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
		2012	2012	2012	2012	2012	2012	2012
The Americas								
North America								
Bermuda	no	4	...	no	yes	...	...	...
Canada	...	3	...	...	yes	...	...	...
United States of America	2010-2020	3	...	...	yes	...	...	...
Latin America & the Caribbean								
Latin America								
Mexico	2012-2018	6	2,432	yes	yes	100	100	yes
Central American Isthmus								
Belize	2010-2016	no	4	yes	yes	95	100	no
Costa Rica	no	...	...	...	...	100	100	yes
El Salvador	2009-2014	4	...	yes	yes	99	100	yes
Guatemala	2012-2016	0	...	yes	yes	99	100	yes
Honduras	2011-2015	5	112	yes	yes	61	49	yes
Nicaragua	2011-2015	0	153	yes	yes	39	19	yes
Panama	no	18	58	yes	yes	99	100	yes
Latin Caribbean								
Cuba	2011-2012	4	168	yes	yes	99	99	yes
Dominican Republic	2010-2015	no	127	no	yes	99	100	yes
French Guiana	...	...	...	...	...	...	...	...
Guadeloupe	...	...	...	...	...	...	...	...
Haiti	2011-2015	no	...	yes	no	...	0	no
Martinique	...	...	...	...	...	...	...	...
Puerto Rico	...	...	...	...	...	...	...	...
Andean Area								
Bolivia	2010-2015	...	337	yes	yes	80	75	...
Colombia	2010-2014	3	...	no	yes	100	100	yes
Ecuador	2011-2016	0	51	yes	yes	100	100	yes
Peru	2011-2015	12	...	...	yes	100	100	yes
Venezuela	no	no	366	no	yes	100	100	yes
Brazil	2011-2015	2	5,565	yes	yes	100	100	...
Southern Cone								
Argentina	2010-2015	4	...	yes	yes	100	100	yes
Chile	no	6	...	yes	yes	100	100	yes
Paraguay	2012-2016	...	224	yes	yes	99	100	yes
Uruguay	2010-2015	3	275	...	...	...	...	...
Non-Latin Caribbean								
Anguilla	no	no	3	yes	yes	100	100	yes
Antigua & Barbuda	no	no	...	yes	yes	93	100	yes
Aruba	no	no	...	...	...	...	...	...
Bahamas, The	2010-2020	no	52	yes	yes	100	100	yes
Barbados	no	no	...	...	...	...	...	yes
BES*	...	...	...	no	no	100	100	yes
Cayman Islands	no	no	...	...	yes	100	100	...
Curaçao	...	...	...	...	...	...	...	...
Dominica	2011-2012	no	7	no	yes	92	100	yes
Grenada	2011-2012	no	33	yes	no	95	100	yes
Guyana	2006-2015	3	13	yes	yes	71	57	yes
Jamaica	no	no	13	yes	yes	99	100	yes
Montserrat	no	no	...	yes	...	...	...	...
Saint Kitts & Nevis	no	no	17	yes	yes	100	100	yes
Saint Lucia	2013-2014	no	36	yes	yes	93	100	yes
Saint Vincent & the Grenadines	no	no	9	yes	yes	100	100	yes
Sint Maarten**	...	2	...	...	...	99	100	yes
Suriname	no	5	...	yes	yes	100	100	yes
Trinidad & Tobago	2012-2013	no	9	yes	yes	100	100	yes
Turks & Caicos Islands	2010-2015	no	6	no	no	...	...	yes
Virgin Islands (UK)	no	no	6	yes	yes	100	100	yes
Virgin Islands (US)	...	...	...	...	...	...	...	...

*Bonaire, St. Eustatius, and Saba (with data); ** Dutch part.

measles/rubella surveillance

Distribution of Confirmed Measles Cases Following the Interruption of Endemic Transmission, the Americas, 2003-2013*



Source: Country reports to FGL-IM, PAHO.

* Data as of epidemiological week 37/2013.

Measles/Rubella Surveillance Indicators, 2012

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	Rate of suspected MR cases/100,000 population	Rate of suspected CRS cases/10,000 live births
Argentina	696	34 ^a	96 ^a	88 ^a	59 ^a	1.73	1.56
Bolivia	215	100	100	74	98	2.05	0.38
Brazil	6,094	74	...	78	86	3.07	0.51
CAREC	554	86	96	26	96	7.33	0.00
Chile	183	73	96	85	90	1.05	3.30
Colombia	2,707	78	95	93	95	5.81	3.25
Costa Rica	34	20	89	80	54	0.71	0.00
Cuba	1,249	100	100	100	100	11.08	0.00
Dominican Republic	136	54	99	68	71	1.32	0.00
Ecuador	1,826	73	98	84	81	11.79	0.47
El Salvador	440	62	98	71	74	6.99	10.20
French Guiana	13	...	...	...	...	5.35	...
Guadeloupe	5	...	...	...	...	1.08	...
Guatemala	386	9	97	70	85	2.56	0.00
Haiti	130	19	95	49	12	1.28	0.11
Honduras	97	58	99	81	89	1.22	5.68
Martinique	2	...	...	...	...	0.50	...
Mexico	5,844	99	...	...	...	4.84	0.00
Nicaragua	129	93	99	85	95	2.15	0.00
Panama	123	59	95	79	88	3.50	0.14
Paraguay	699	78	98	96	99	10.53	0.00
Peru	642	81	94	81	56	2.14	0.00
Uruguay	10	0	30	100	67	0.29	0.00
Venezuela	640	69	98	12	10	2.14	0.00
TOTAL/AVERAGE	22,854	81	97	80	84	3.70	0.80

Source: Measles Elimination Surveillance System (MESS), Integrated Surveillance Information System (ISIS), and country reports, FGL-IM, PAHO.

(a) indicators calculated using preliminary data; incomplete reporting from jurisdictions.

technical notes and data sources

Main Data Sources

For detailed information on demographic data and socioeconomic indicators, please visit: http://new.paho.org/hq/index.php?option=com_content&task=view&id=2470&Itemid=2003.

Demographic data: United Nations Population Division. World Population Prospects: The 2012 Revision. New York; 2013. US Bureau of the Census. International Database: Update for countries/territories with populations under 300,000 inhabitants. Last accessed on 18 June 2012 at www.census.gov/ipc/www/idbacc.html.

Infant mortality rate (1,000 lb) or number of deaths (N): As reported or estimated by countries. For some countries due to the small number of events, the rate does not meet standards for reliability and precision and number of deaths are presented. An increase in infant mortality rate may reflect an improvement in data coverage and quality.

Socioeconomic indicators: The World Bank. 2013 World Development Indicators. Washington DC; 2013. For national health expenditure data, Technical Reports from HSS/RF-WHO/PAHO; 2013.

Immunization coverage, immunization program management, and financing information: Annual country reports to Comprehensive Family Immunization Unit (IM)/PAHO via PAHO-WHO/UNICEF Joint Reporting Form (JRF); 2013.

Morbidity: Annual country reports to IM/PAHO via JRF, vaccine-preventable disease specific surveillance reports for measles/rubella and polio; 2012–2013.

Surveillance indicators: Vaccine-preventable disease specific surveillance reports for measles/rubella and acute flaccid paralysis/polio to IM/PAHO; 2012–2013.

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*; (**Nm**) *Neisseria meningitidis*; (**AIA**) Anguilla; (**DMA**) Dominica; (**ECU**) Ecuador; (**GTM**) Guatemala; (**GUY**) Guyana; (**HND**) Honduras; (**NIC**) Nicaragua; (**PAN**) Panama; (**PER**) Peru; (**SLV**) El Salvador; (**VCT**) St. Vincent & the Grenadines; (**VEN**) Venezuela.

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, 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.

Drop-out rate DTP1-DTP3: Number of DTP1 doses minus the number of DTP3 doses (among children aged <1 year) divided by the number of DTP1 doses, expressed as a percentage.

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.

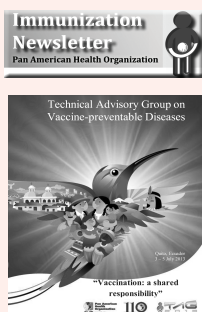
Morbidity: Number of confirmed cases of wild polio, measles, rubella, CRS, NNT, non-NNT, pertussis, diphtheria, Hib meningitis, and mumps. Subregional aggregated data is the sum of the totals. These are not rates; hence, inter-country comparisons may not be appropriate.

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 2012. NITAGs provide recommendations on immunization practices, including advice on vaccines to be included into the national immunization schedule.

Selected Information Products of the Comprehensive Family Immunization Unit

- **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.
- **XXI TAG Meeting Report:** PAHO's Technical Advisory Group (TAG) on Vaccine-preventable Diseases functions as the leading regional forum to review and promote regional goals and strategies for immunization. Specifically, the TAG reviews national immunization program progress and results, assists in identifying research needs, and oversees the progress of ongoing research efforts. The report of the XXI TAG meeting held in July 2013 in Quito, Ecuador is now available in English and Spanish.
- **New Methodology to Assess Missed Opportunities for Vaccination:** PAHO recently updated a methodology for the evaluation of missed opportunities for vaccination (MOV) in children under 5 years of age in health facilities, as well as to assess immunization knowledge, attitudes and perceptions among health care workers. This field guide aims to promote the use of a standardized MOV methodology in Latin America and the Caribbean. It draws on improvements in survey design and implementation and on lessons learned from implementing vaccination-related studies during the last 20 years.
- **Case-studies on Yellow Fever Vaccine-associated Viscerotropic Disease:** PAHO has recently launched a set of case studies on Yellow fever vaccine-associated viscerotropic disease (VTD). They aim to familiarize health personnel with case definition, detection and with the epidemiological investigation of suspect VTD cases. The case-studies were built based on the experiences surrounding a cluster of VTD cases that occurred in 2007, following a yellow fever vaccination campaign. The case studies are available in Spanish and English, and include manuals for both facilitators and participants.
- **Measles/Rubella and Polio Bulletins:** Weekly epidemiological surveillance bulletins.



Please visit the Comprehensive Family Immunization page at www.paho.org/immunization

© Pan American Health Organization, 2013, All rights reserved.

- 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 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-diems 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.

Surveillance indicators: For measles/rubella definitions refer to PAHO. Measles Elimination: Field Guide. (Scientific and Technical Publication No. 605). Washington DC: PAHO, 2005. For acute flaccid paralysis definitions refer to PAHO. Poliomyelitis Eradication: Field Guide. (Scientific and Technical Publication No. 607). Washington DC: PAHO, 2005. Available at http://www.paho.org/english/ad/fch/im/FieldGuide_Index.htm.

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

Seasonal Influenza Vaccine Use in the Americas, 2012

Country	Children		Older Adults		Other Risk Groups				
	Schedule	Coverage (%)	Schedule	Coverage (%)	Health Workers	Chronic Disease	Pregnant Women	Poultry Workers	Other
Anguilla	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antigua and Barbuda	6m-35m	300 ds	...	450 ds	...	...	...	...	...
Argentina	6m-24m	76	≥65y	68	✓	✓	✓		✓
Aruba	6m-18y ^a	...	>60y	...	✓	✓			✓
Bahamas	6m-36m ^b	...	≥65y ^b	...	✓ ^b	✓ ^b	✓ ^b		✓ ^b
Barbados	NA	NA	✓ ^f	...	✓				✓
Belize	6m-23m	98	≥65y	20	✓	✓			
Bermuda	6m-18y	...	>65	50	✓		✓		
BES*	6m-18y ^a	...	>60y	...	✓	✓			✓
Bolivia	6m-23m	36	≥65y	32	✓				
Brazil	6m-23m	96	≥60y	82	✓	✓	✓		✓
Canada	6m-59m ^c	45	≥65y	53	✓	✓	✓	✓	✓
Cayman Islands	6m-35m	...	✓	...	✓				✓
Chile	6m-23m	98	≥65y	73	✓	✓	✓	✓	✓
Colombia	6m-23m	86	>60y	20	✓				
Costa Rica	<10y ^d	...	≥65y	...	✓	✓	✓		
Cuba	6m-24y ^d	...	≥65y	100	✓	✓	✓		✓
Curaçao	6m-18y ^a	...	>60y	...	✓	✓			✓
Dominica	6m-35m	...	≥65y	...	✓	✓	✓		✓
Dominican Republic	6m-3y	...	≥65y	...	✓		✓		
Ecuador	6m-59m	83	>55y	54	✓	✓	✓		✓
El Salvador	6m-59m	...	≥60y	...	✓	✓	✓		
Grenada	6m-18y ^d	88 ds	✓ ^g	159 ds	✓	✓			✓
Guatemala	6m-59m	...	>60y	...	✓	✓			
Guyana	NA	NA	NA	NA	NA	NA	NA	NA	NA
Haiti	NA	NA	NA	NA	NA	NA	NA	NA	NA
Honduras	>6m-9y ^d	...	>60y ^d	73	✓	✓		✓	✓
Jamaica	6m-9y ^d	...	✓	...	✓	✓			
Mexico	6m-35m	95	>50y	93	✓	✓	✓		✓
Montserrat	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nicaragua	6m-23m	100	>50y ^d	...	✓	✓	✓		
Panama	6m-<5y	83	>60y	69	✓	✓	✓	✓	✓
Paraguay	6m-35m	35	>60y	41	✓	✓	✓		✓
Peru	6m-23m	59	≥65y	37	✓	✓	✓		
St. Kitts and Nevis	NA	NA	NA	NA	NA	NA	NA	NA	NA
St. Lucia	NA	NA	≥65y	...	✓	✓			✓
St. Vincent and the Grenadines	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sint Maarten**	6m-18y ^a	...	>60y	...	✓	✓			✓
Suriname	NA	NA	≥65y	...	✓	✓	✓		✓
Trinidad and Tobago	6m-9y	...	>65y	...	✓	✓	✓		✓
Turks and Caicos	6m-17y	59	>55y	76	✓	✓			✓
United States of America	>6m	52 ^e	≥50y	65 ^e	✓	✓	✓		✓
Uruguay	6m-48m ^d	26	>65y ^d	30	✓	✓	✓		
Venezuela	6m-23m	27	≥60y	8	✓	✓	✓	✓	
Virgin Islands (UK)	✓	...	✓	...	✓	✓			✓

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

(a) receiving salicylates for extended time; (b) not routine; (c) 1-2 doses given; (d) with chronic disease; (e) value 2011-2012; (f) in long stay facilities; (g) at risk groups; (ds) doses.

Source: Country reports through the PAHO-WHO/UNICEF Joint Reporting Form (JRF), 2013, TAG meeting 2013, and country websites.

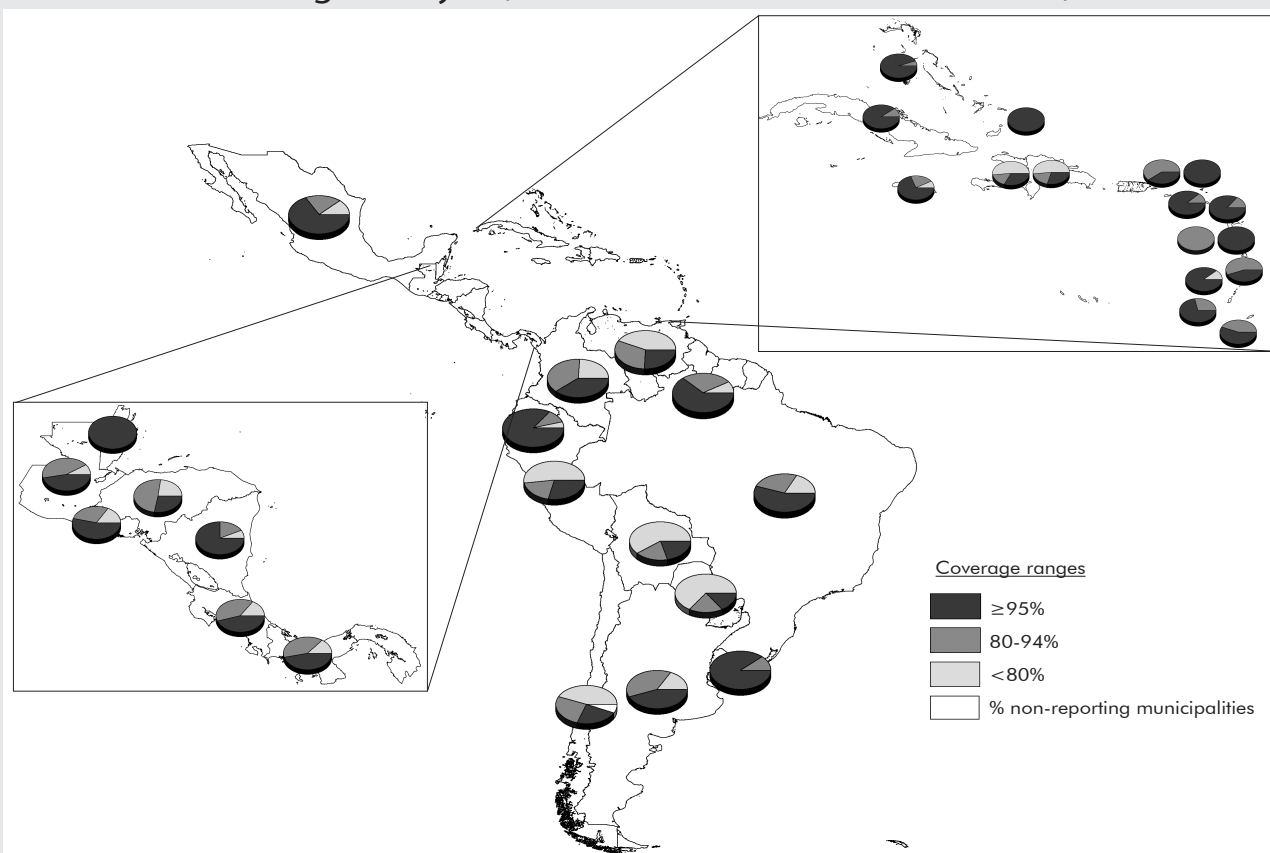
The Global Vaccine Action Plan (GVAP) Proposed Strategic Objective-Level Indicators

STRATEGIC OBJECTIVE		
1 ALL COUNTRIES COMMIT TO IMMUNIZATION AS A PRIORITY.	2 INDIVIDUALS AND COMMUNITIES UNDERSTAND THE VALUE OF VACCINES AND DEMAND IMMUNIZATION BOTH AS A RIGHT AND A RESPONSIBILITY.	3 THE BENEFITS OF IMMUNIZATION ARE EQUITABLY EXTENDED TO ALL PEOPLE.
INDICATORS	INDICATORS	INDICATORS
<ul style="list-style-type: none"> Domestic expenditures for immunization per person targeted Presence of an independent technical advisory group that meets defined criteria 	<ul style="list-style-type: none"> Percentage of countries that have assessed (or measured) confidence in vaccination at subnational level¹ Percentage of un- and under-vaccinated in whom lack of confidence was a factor that influenced their decision¹ 	<ul style="list-style-type: none"> Percentage of districts with 80% or greater coverage with three doses of diphtheria-tetanus-pertussis containing vaccine Reduction in coverage gaps between lowest and highest wealth quintile and another appropriate equity indicator
4 STRONG IMMUNIZATION SYSTEMS ARE AN INTEGRAL PART OF A WELL-FUNCTIONING HEALTH SYSTEM.	5 IMMUNIZATION PROGRAMMES HAVE SUSTAINABLE ACCESS TO PREDICTABLE FUNDING, QUALITY SUPPLY AND INNOVATIVE TECHNOLOGIES. ²	6 COUNTRY, REGIONAL AND GLOBAL RESEARCH AND DEVELOPMENT INNOVATIONS MAXIMIZE THE BENEFITS OF IMMUNIZATION.
INDICATORS	INDICATORS	INDICATORS
<ul style="list-style-type: none"> Dropout rate between first dose and third dose of diphtheria-tetanus-pertussis containing vaccines Sustained coverage of diphtheria-tetanus-pertussis containing vaccines 90% for three or more years Immunization coverage data assessed as high quality by WHO and UNICEF Number of countries with case-based surveillance for vaccine-preventable diseases that meet quality standards 	<ul style="list-style-type: none"> Percentage of doses of vaccine used worldwide that are of assured quality 	<ul style="list-style-type: none"> Progress towards development of HIV, TB, and malaria vaccines Progress towards a universal influenza vaccine (protecting against drift and shift variants) Progress towards institutional and technical capacity to carry out vaccine clinical trials Number of vaccines that have either been re-licensed or licensed for use in a controlled temperature chain at temperatures above the traditional Number of vaccine delivery technologies (devices and equipment) that have received WHO pre-qualification compared to 2010

(1) Provisional indicator to be finalized based on outcomes of pilot assessment in selected regions; (2) The report on progress will also include a narrative report on progress with vaccine supply, pricing, and procurement.

Source: Immunization Newsletter, Volume XXV, Number 1, February 2013, FGL-IM, PAHO.

Percent of Municipalities with Different DTP3 Coverage Levels in Children Aged <1 year, Latin America and the Caribbean, 2012*



Source: Country reports through the PAHO-WHO/UNICEF Joint Reporting Forms (JRF), 2013.

* Mexico: provisional data

New Vaccines in National Immunizations Programs Region of the Americas, March 2013



Source: Country reports to FGL-IM, PAHO.

Surveillance Indicators Acute Flaccid Paralysis (AFP), 2012

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	Total Number of sites	% Sites reporting weekly
Argentina	182	1.76	48	79	645	100
Bolivia	44	1.22	86	91	90	...
Brazil	502	1.10	98	74	3,392	96
Canada	46	0.81	0	11	NR	NR
CAREC	5	0.25	80	40	790	77
Chile	99	2.56	96	77	344	98
Colombia	124	0.96	64	88	320	91
Costa Rica	23	2.01	48	91	70	...
Cuba	20	1.05	100	85	150	89
Dominican Republic	38	1.15	21	87	300	59
Ecuador	34	0.79	35	76	2,401	55
El Salvador	50	2.14	78	96	140	...
Guatemala	47	0.80	15	79	220	21
Haiti	3	0.07	33	67	157	65
Honduras	59	1.91	100	90	449	93
Mexico	594	1.75	72	80	320	92
Nicaragua	31	1.54	90	87	185	100
Panama	8	0.80	100	100	312	77
Paraguay	21	0.96	76	81	180	...
Peru	99	1.19	75	73	206	...
Uruguay	2	0.26	0	50	155	...
United States of America	NR	NR	NR	NR	NR	NR
Venezuela	79	0.94	89	81	13,092	85
TOTAL/AVERAGE	2,110	1.29	75	78	23,918	--

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

Epidemiological Surveillance Indicators for Diseases Preventable by New Vaccines in Reporting Countries, Latin America and the Caribbean, 2012

Rotavirus Surveillance, January-December 2012

Data and Indicators	AIA*	DMA*	ECU	GTM	GUY	HND	NIC*	PAN	PER	SLV	VCT*	VEN*	TOTAL
Number of hospitalizations <5 years	55	431	23,056	18,017	1,292	28,992	20,245	11,729	16,065	39,794	359	5,887	165,922
Number <5 years admitted to hospital for diarrhea	4	15	3,627	5,548	618	3,416	3,300	1,298	1,938	5,244	96	413	25,517
Number <5 years who meet the case definition	0	15	1,649	2,424	618	2,976	650	1,256	1,598	3,502	83	174	14,945
Number <5 years with epidemiological form and stool specimen	0	12	1,560	2,195	45	1,780	403	1,256	1,300	2,255	43	174	11,023
Positive cases of rotavirus	0	0	221	714	8	419	108	22	400	543	16	52	2,503
Deaths	0	0	0	0	0	1	0	0	0	0	0	0	1
% of positive cases of rotavirus	0%	0%	14%	33%	18%	24%	27%	2%	31%	24%	37%	30%	23%

Bacterial Pneumonia Surveillance, January-December 2012

Data and Indicators	Bolivia*	Ecuador	El Salvador*	Guatemala*	Honduras	Nicaragua*	Panama*	Peru	Venezuela	TOTAL
Number of hospitalizations <5 years	3,936	22,144	25,234	2,538	15,329	11,897	18,629	14,403	10,962	125,072
Number of suspected cases of pneumonia	725	2,767	2,546	721	1,344	2,820	3,149	2,178	1,149	17,399
Number of suspected cases with x-ray and epidemiological form	717	2,394	1,197	102	1,006	1,596	2,987	1,374	1,118	12,491
Number of probable cases of bacterial pneumonia	217	2,122	310	101	878	1,338	2,281	792	1,101	9,140
Probable cases with blood specimen	185	1,408	184	34	538	778	1,772	792	899	6,590
Probable cases with pleural fluid specimen	13	1	56	2	1	4	27	10	11	125
Confirmed cases of Hib	0	2	0	0	0	0	2	2	0	6
Confirmed cases of Hi (no b)	0	2	0	0	0	0	1	0	0	3
Confirmed cases of Spn	9	10	2	2	0	1	28	6	0	58
Confirmed cases caused by other bacteria	1	38	0	6	73	14	45	11	67	255
Contamination	8	170	3	3	1	55	0	1	5	246
Deaths	3	27	0	87	89	34	64	4	17	325

Bacterial Meningitis Surveillance, January-December 2012

Data and Indicators	Bolivia*	Ecuador	El Salvador	Guatemala*	Honduras	Nicaragua*	Panama*	Peru	Venezuela*	TOTAL
Number of hospitalizations <5 years	1,064	22,144	26,834	2,062	15,391	11,897	17,837	14,548	7,284	119,061
Number of suspected cases of meningitis	13	73	94	47	64	122	96	158	109	776
Number of suspected cases with cerebrospinal fluid test and epidemiological form	13	44	94	40	51	96	65	152	109	664
Number of probable meningitis cases	3	37	70	40	15	68	56	34	107	430
Confirmed cases of Hib	0	0	0	0	0	1	0	2	0	3
Confirmed cases of Hi (no b)	0	0	0	0	1	1	0	0	0	2
Confirmed cases of Nm	0	0	0	1	0	0	0	0	0	1
Confirmed cases of Spn	0	3	2	0	2	1	7	0	4	19
Confirmed cases caused by other bacteria	0	1	0	5	2	2	15	4	4	33
Contamination	0	5	0	0	0	0	0	0	0	5
Deaths	0	8	10	5	1	1	8	0	1	34

(*) Partial data reported.

Source: Country reports to FGL-IM, PAHO.