

Immunization in the Americas



2005 Summary



**Pan American
Health
Organization**



Regional Office of the
World Health Organization

Immunization Unit
Family and Community Health Area

Immunization is one of the most cost-effective interventions available in public health. Immunization plays a significant role in reaching the Millennium Development Goals of reducing child mortality and improving maternal health, and is a key tool for the promotion of socioeconomic development.

In the Americas, the Regional Immunization Program has been successful in eradicating wild poliovirus transmission, interrupting the endemic transmission of measles, and significantly reducing the morbidity and mortality associated with other vaccine-preventable diseases. Strengthening public health infrastructure and promoting equity have been by-products of these accomplishments. In 2003, the Region embarked on rubella and congenital rubella syndrome elimination by 2010. However, in spite of the great strides in the fight against vaccine-preventable diseases, much remains to be done to address the unfinished immunization agenda and to face the new challenges derived both from the sustainability of current national programs and the introduction of new vaccines for all.

The Pan American Health Organization, through the Immunization Unit, promotes and coordinates technical cooperation and partnerships with the public and private sectors and the international community. These activities support countries' efforts to achieve sustainable and equitable reduction of morbidity and mortality of vaccine-preventable diseases through elimination and control strategies. The Unit leads the assistance to countries in improving the performance of vaccination and surveillance programs. It works to enhance country laboratory diagnostic capabilities and regional laboratory networks, promote the political priority and sustainability of immunization programs through policy and legislation, and ensure the timely supply of quality vaccines through the PAHO Revolving Fund for Vaccine Procurement. Specific program strategies are to:

- Maintain polio eradication,
- Maintain measles elimination,
- Eliminate rubella and congenital rubella syndrome,
- Achieve and maintain 95% or more vaccination coverage in every municipality for all vaccines,
- Introduce new and underutilized vaccines, and
- Strengthen information management.

This brochure highlights some of the achievements in immunization and summarizes 2004 key regional data in the Americas. Information availability, consistency, and quality are crucial for decision-making. Data on immunization coverage, vaccine-preventable disease burden, and other program management indicators presented here have been, and remain, critical to guide regional immunization strategies, including new vaccine introduction.

"Immunization in the Americas", is intended to be a periodic publication. We hope you find this information useful.



Mirta Roses Periago
Director

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.

demographic and socioeconomic data

	1	2	3	4	5	6	7	8	9	10
	total population (thousands)	crude birth rate (1,000 pop)	annual births average (thousands)	women of childbearing age (WCBA)	gross national income (US\$ per capita)		annual GDP growth (%)	population below int'l poverty line (%) (latest available)	national health expenditure as a % of GDP	
	2004	2004	2004	2004	current value	ppp value	2003	1995-02	public expenditure	private expenditure
					2003	2003	2003		2002	2002
The Americas	881,089	14.1	16,203	231,159	15,864	18,479	2.0			
North America	327,433	13.6	4,478	81,906	36,561	36,994	3.0			
Bermuda	65	11.8	1	...	35,590 ^a	22,410 ^a	...	...	4.3 ^{fm}	5.2 ^{fr}
Canada	31,958	10.3	330	8,115	24,470	30,040	2.0	...	6.9 ^{sl}	2.7 ^{so}
United States of America	295,410	14.0	4,147	73,791	37,870	37,750	3.1	...	6.3 ^{sl}	6.0 ^{so}
Latin America & the Caribbean	553,656	14.4	11,725	149,253	3,371	7,285	1.4			
Latin America	546,919	14.3	11,603	147,519	3,376	7,318	1.4	10.1		
Mexico	105,699	20.7	2,190	29,409	6,230	8,980	1.3	9.9	2.8 ^{em}	3.2 ^{er}
Central American Isthmus	39,173	28.2	1,115	9,878	2,096	4,586	2.9	21.2		
Belize	264	26.3	7	68	3,370	6,320	9.4	...	4.1 ^{sl}	1.4 ^{so}
Costa Rica	4,253	18.6	79	1,149	4,300	9,140	6.5	2.0	4.9 ^{sl}	3.4 ^{so}
El Salvador	6,762	24.4	166	1,793	2,340	4,910	1.8	31.1	2.0 ^{sl}	3.8 ^{er}
Guatemala	12,295	34.8	434	2,925	1,910	4,090	2.1	16.0	1.4 ^{en}	4.8 ^{lo}
Honduras	7,048	29.0	206	1,736	970	2,590	3.0	20.7	2.0 ^{cm}	2.6 ^{lo}
Nicaragua	5,376	28.2	153	1,369	740	3,180	2.3	45.1	3.8 ^{cm}	3.9 ^o
Panama	3,175	21.9	70	837	4,060	6,420	4.1	7.2	4.2 ^{cl}	2.0 ^{lo}
Latin Caribbean	33,374	20.0	670	8,835	3,071	6,314	1.0			
Cuba	11,245	12.0	135	3,039	...	...	...	...	...	...
Dominican Republic	8,768	23.9	210	2,366	2,130	6,310	-0.4	2.0	1.9 ^l	2.9 ^{lo}
French Guiana	183	23.8	4	45	...	...	...	...	...	...
Guadeloupe	445	15.3	7	117	...	...	...	...	...	...
Haiti	8,407	29.9	253	2,166	400	1,730	0.4	...	...	4.2 ^{lo}
Martinique	394	13.5	5	104	...	...	...	...	...	...
Puerto Rico	3,932	14.1	56	998	10,950 ^c	16,210 ^c	5.6 ^c	...	...	...
Andean Area	120,808	22.6	2,747	31,928	2,185	5,132	0.8	13.3		
Bolivia	9,009	29.1	264	2,203	900	2,490	2.5	14.4	4.3 ^m	2.9 ^o
Colombia	44,915	21.5	969	12,193	1,810	6,410	3.9	8.2	4.0 ^m	2.6 ^o
Ecuador	13,040	22.5	295	3,382	1,830	3,440	2.7	17.7	2.1 ^m	2.9 ^o
Peru	27,562	22.7	629	7,199	2,140	5,080	3.8	18.1	2.1 ^{sl}	2.0 ^{la}
Venezuela	26,282	22.3	590	6,951	3,490	4,750	-9.4	14.3	1.4 ^l	2.7 ^{lo}
Brazil	183,913	20.1	3,711	51,210	2,720	7,510	-0.2	8.2	3.6 ^{em}	3.6 ^o
Southern Cone	63,952	18.2	1,170	16,259	3,692	10,183	6.5	4.2		
Argentina	38,372	17.8	687	9,599	3,810	11,410	8.8	3.3	5.0 ^m	3.9 ^o
Chile	16,124	15.5	250	4,326	4,360	9,810	3.3	2.0	2.6 ^{sl}	3.8 ^o
Paraguay	6,017	28.9	176	1,502	1,110	4,690	2.6	16.4	2.9 ^{cm}	4.1 ^{lo}
Uruguay	3,439	16.5	57	832	3,820	7,980	2.5	2.0	2.0 ^{cl}	10.4 ^{lo}
Non-Latin Caribbean	6,737	18.1	122	1,734	4,699	6,755	4.3			
Anguilla	13	14.5	0	...	...	...	...	...	3.3 ^{sl}	2.5 ^{lo}
Antigua & Barbuda	68	17.7	1	...	9,160	9,730	3.2	...	3.2 ^{sl}	0.7 ^{lo}
Aruba	71	11.5	1	...	...	...	...	...	...	...
Bahamas, The	319	19.2	6	89	14,920 ^d	16,140 ^d	0.7 ^d	...	...	...
Barbados	269	11.9	3	77	9,360	15,060	1.3	...	6.7 ^{sl}	1.9 ^{lo}
Cayman Islands	43	13.1	1	...	...	...	...	...	...	...
Dominica	69	16.3	1	...	3,330	5,020	-0.6	...	4.4 ^{sl}	2.2 ^{lo}
Grenada	89	22.6	2	...	3,710	7,030	5.8	...	3.1 ^{sl}	3.2 ^{lo}
Guyana	750	20.8	16	218	900	3,980	-0.6	3.0	2.1 ^{bm}	...
Jamaica	2,639	19.8	52	698	2,980	3,790	2.3	2.0	1.7 ^{sl}	4.4 ^{lp}
Montserrat	9	17.6	0	...	...	...	...	...	7.7 ^{sl}	1.1 ^o
Netherlands Antilles	181	14.1	3	48	...	...	...	...	...	...
Saint Kitts & Nevis	39	18.3	1	...	6,630	10,740	0.0	...	2.5 ^{sl}	2.2 ^o
Saint Lucia	159	18.8	3	44	4,050	5,310	1.7	25.4	3.4 ^{sl}	1.3 ^{lo}
Saint Vincent & the Grenadines	118	20.3	2	33	3,310	5,870	4.0	...	3.9 ^{sl}	0.6 ^o
Suriname	446	20.7	9	120	2,280	...	5.1	...	1.4 ^{kl}	...
Trinidad & Tobago	1,301	14.3	19	380	7,790	10,390	13.2	...	2.1 ^{kl}	2.8 ^{lo}
Turks & Caicos Islands	20	22.9	0	...	...	...	...	...	...	...
Virgin Islands (UK)	22	15.0	0	...	...	...	...	...	1.7 ^{kl}	...
Virgin Islands (US)	112	14.1	2	27	...	...	...	...	...	...

(a) value 1997; (b) value 2000; (c) value 2001; (d) value 2002; (e) value 2003; (f) value 2004;
(g) value 2001-2002; (h) value 2002-2003; (k) value 2000-2001;
(l) health, as defined in the Classification of Government Expenditures by Functions of Purposes;

(m) health, as defined by the country or author; may refer to budgetary-programatic, institutional expenditures;
(n) health and social assistance, as defined by the country; (o) health and medical care, excluding health insurance;
(p) health and personal expenses; (q) health without detail; (r) country estimate provided by the Ministry of Health.

immunization coverage

	11	12	13	14	15	16	17	18	19	20	21
	percentage of coverage							percentage of municipalities			total number of districts/ municipalities
	< 1 year of age						1 year of age	with coverage level \geq 95%			
	BCG	polio 3	DPT 1	DPT 3	Hib 3	Hep B 3	MMR	DPT 3	polio 3	measles	
2004	2004	2004	2004	2004	2004	2004	2004	2004	2004	2004	2004
The Americas	96	93	95	93	92	91	93				
North America	NA	92	99	96	94	92	93				
Bermuda	NA	95	98	95	95	85	98	...	...	...	1
Canada	NA	88 ^a	...	91 ^a	...	...	95 ^a	...	...	...	13 ^c
United States of America	NA	92	99	96	94	92	93	84.3	9.8	31.4	51 ^d
Latin America & the Caribbean	96	93	93	93	92	92	93	55.6	56.4	58.3	15,025
Latin America	96	93	93	93	92	91	93	55.6	56.4	58.3	14,842
Mexico	99	98	99	98	98	98	96	78.1	78.6	92.5	2,443
Central American Isthmus	95	91	92	91	88	88	92	43.7	43.6	46.2	1,216
Belize	99	95	99	95	97	97	95	100	100	66.7	6
Costa Rica	90	90	89	90	90	89	88	43.2	44.4	37.0	81
El Salvador	94	90	90	90	90	90	93	34.7	34.0	34.7	262
Guatemala	98	95	98	95	NA	NA	95	62.8	63.1	64.7	331
Honduras	93	90	88	89	89	89	92	38.6	38.3	44.0	298
Nicaragua	88	80	80	79	79	79	84	10.5	10.5	20.4	162
Panama	99	99	99	99	99	99	99	77.6	77.6	76.3	76
Latin Caribbean								30.9	52.2	61.6	460
Cuba	99	99	89	89	99	99	99	34.3	96.4	91.1	169
Dominican Republic	97	70	87	81	80	82	61 ^b	22.2	19.5	61.0	158
French Guiana	...	...	...	...	...	...	...	...	...	...	...
Guadeloupe	...	...	...	...	...	...	...	...	...	...	...
Haiti	43	61	47	62	NA	NA	57 ^b	37.0	35.0	25.0	133
Martinique	...	...	...	...	...	...	...	...	...	...	...
Puerto Rico	...	...	...	...	...	...	...	...	...	...	...
Andean Area	93	88	92	88	82	87	90	39.4	38.6	38.8	3,790
Bolivia	86	84	88	84	84	84	90	24.1	24.4	33.1	311
Colombia	92	89	...	89	89	89	92 ^a	36.9	36.4	37.9	1,119
Ecuador	99	93	99	90	90	90	99	56.3	54.5	47.9	167
Peru	91	91	85	91	91 ^a	87	90	40.7	40.7	39.9	1,828
Venezuela	97	83	99	86	61	82	80	45.5	39.5	37.0	365
Brazil	99	98	96	96	96	90	99	61.9	62.6	58.9	5,560
Southern Cone	99	94	89	91	91	90	94	53.5	54.2	58.9	1,373
Argentina	99	96	87	90	90	90	95	54.9	56.5	59.7	522
Chile	96	94	94	94	94	NA	95	59.2	59.2	52.2	341
Paraguay	92	88	88	88	88	88	89	42.0	42.4	40.7	231
Uruguay	99	95	98	94	95	94	95	53.4	53.4	80.6	279
Non-Latin Caribbean	87	82	89	85	85	85	86	51.8	58.5	50.0	183
Anguilla	99	99	99	99	99	99	99	100	100	100	5
Antigua & Barbuda	NA	97	91	97	97	97	97	...	...	...	26
Aruba	...	...	...	...	...	...	...	...	...	...	...
Bahamas, The	NA	92	99	93	93	93	89	...	...	...	62
Barbados	NA	93	...	93	93	93	98	-	100	-	...
Cayman Islands	92	92	96	92	92	77	87	...	...	...	...
Dominica	99	99	99	99	NA	NA	99	...	...	...	...
Grenada	NA	84	87	83	83	83	74	-	-	14.3	7
Guyana	94	91	90	91	91	91	88	23.1	23.1	30.8	13
Jamaica	85	71	86	77	77	77	80	-	-	7.7	13
Montserrat	99 ^a	91 ^a	...	91 ^a	...	...	99 ^a	...	...	...	...
Netherlands Antilles*	NA	67	...	67	67	82	68	...	...	...	...
Saint Kitts & Nevis	89	96	88	96	95	96	98	64.7	64.7	100	17
Saint Lucia	99	91	99	91	91	91	95	25.0	25.0	37.5	8
Saint Vincent & the Grenadines	99	99	99	99	99	99	99	55.6	100	-	9
Suriname	NA	84	92	85	NA	NA	86	...	...	...	10
Trinidad & Tobago	NA	94	93	94	94	94	95	...	55.6	55.6	9
Turks & Caicos Islands	47	94	99	94	94	94	99	75.0	75.0	50.0	4
Virgin Islands (UK)	90	90	90	90	90	90	90	...	...	...	...
Virgin Islands (US)	...	...	...	...	...	...	...	...	...	...	...

* data only available from St. Maarten

(a) value 2003; (b) coverage data for measles vaccine in children < 1 year of age;

(c) number of provinces and territories; (d) refers to number of states.

(e) of the target, which in 2004 was 66% of children < 1 year

morbidity data

	22	23	24	25	26	27	28	29	30	31	32	33
	number of reported cases											
	confirmed cases				neonatal tetanus (NNT)	tetanus (non-neonatal)			pertussis	diphtheria	Hib meningitis	mumps
	wild polio	measles	rubella	CRS		male	female	total				
	2004	2004	2004	2004	2004	2004	2004	2004	2004	2004	2004	2004
The Americas	-	108	3,101	27	93	588	144	825	33,452	181	409	29,869
North America	-	44	10	2	-	21	15	36	28,524	1	79	291
Bermuda	-	-	-	-	-	-	-	-	-	-	-	1
Canada	-	7 ^a	...	1	-	1	1	2	2,697	1	68	32
United States of America	-	37 ^b	10	1	...	20	14	34	25,827	-	11 ^c	258
Latin America & the Caribbean	-	64	2,791	25	93	567	129	789	4,928	180	330	29,578
Latin America	-	64	2,791	25	93	558	127	778	4,923	180	303	29,573
Mexico	-	64	699	5	4	55	13	68	137	-	9	8,425
Central American Isthmus	-	-	44	2	4	21	9	30	521	-	43	3,359
Belize	-	-	-	-	-	-	-	-	-	-	-	...
Costa Rica	-	-	-	-	-	-	-	-	13	-	2	66
El Salvador	-	-	1	-	1	7	-	7	1	-	...	501
Guatemala	-	-	36	2	1	2	1	3	391	-	37	2,164
Honduras	-	-	1	-	1	5	8	13	104	-	-	516
Nicaragua	-	-	6	-	-	5	-	5	-	-	-	-
Panama	-	-	-	-	1	2	-	2	12	-	4	112
Latin Caribbean	-	-	28	-	38	42	7	49	97	159	6	279
Cuba	-	-	18	-	-	-	-	-	-	-	6	279
Dominican Republic	-	-	7	-	5	42	7	49	53	122	-	-
French Guiana	...	-
Guadeloupe
Haiti	-	-	3	...	33	-	-	-	44	37	...	...
Martinique
Puerto Rico	-	-	-
Andean Area	-	-	1,991	1	28	42	10	120	947	2	49	4,387
Bolivia	-	-	12	-	4	...	...	29	6	2	8	...
Colombia	-	-	45	-	8	...	...	...	25	-	34	1,545
Ecuador	-	-	79	...	12	...	...	4	-	-	...	...
Peru	-	-	1,759	1	4	42	10	52	201	-	7	-
Venezuela	-	-	96	...	-	...	...	35	715	-	...	2,842
Brazil	-	-	319	16	14	378	85	463	1,146	15	151	...
Southern Cone	-	-	10	1	5	20	3	48	2,075	4	45	13,123
Argentina	-	-	6	-	-	...	...	25	976	-	23	11,438
Chile	-	-	3	-	-	7	3	10	1,059	-	11	1,491
Paraguay	-	-	1	1	5	12	-	12	40	4	10	194
Uruguay	-	-	-	-	-	1	-	1	-	-	1	...
Non-Latin Caribbean	-	-	-	-	-	9	2	11	5	-	27	5
Anguilla	-	-	-	-	-
Antigua & Barbuda	-	-	-	-	...	-	-	-	...	-	-	-
Aruba
Bahamas, The	-	-	-	-	-	-	-	-	-	-	1	-
Barbados	-	-	-	...	-	-	-	-	-
Cayman Islands	-	-	-	...	-	-	-	-	4
Dominica	-	-	-	...	-	-	-	-	1	-
Grenada	-	-	-	...	-	-	-	-	-
Guyana	-	-	-	-	-	-	-	-	-	-	7	-
Jamaica	-	-	-	-	-	9	2	11	5	-	12	1
Montserrat	-	-	-
Netherlands Antilles
Saint Kitts & Nevis	-	-	-	-	-	-	...
Saint Lucia	-	-	-	-	-	-	1	-
Saint Vincent & the Grenadines	-	-	-	-	-	-	-	-	-	-	-	-
Suriname	-	-	-	-	-	-	-	-	-	-	5	-
Trinidad & Tobago	-	-	-	...	-	-	-	-	-	-	-	-
Turks & Caicos Islands	-	-	-	-	-	-	-	-	-	-
Virgin Islands (UK)	-	-	-	-
Virgin Islands (US)

(a) due to importation; (b) of which 23 cases are imported;
(c) of 19 invasive Hib disease cases reported.

surveillance indicators

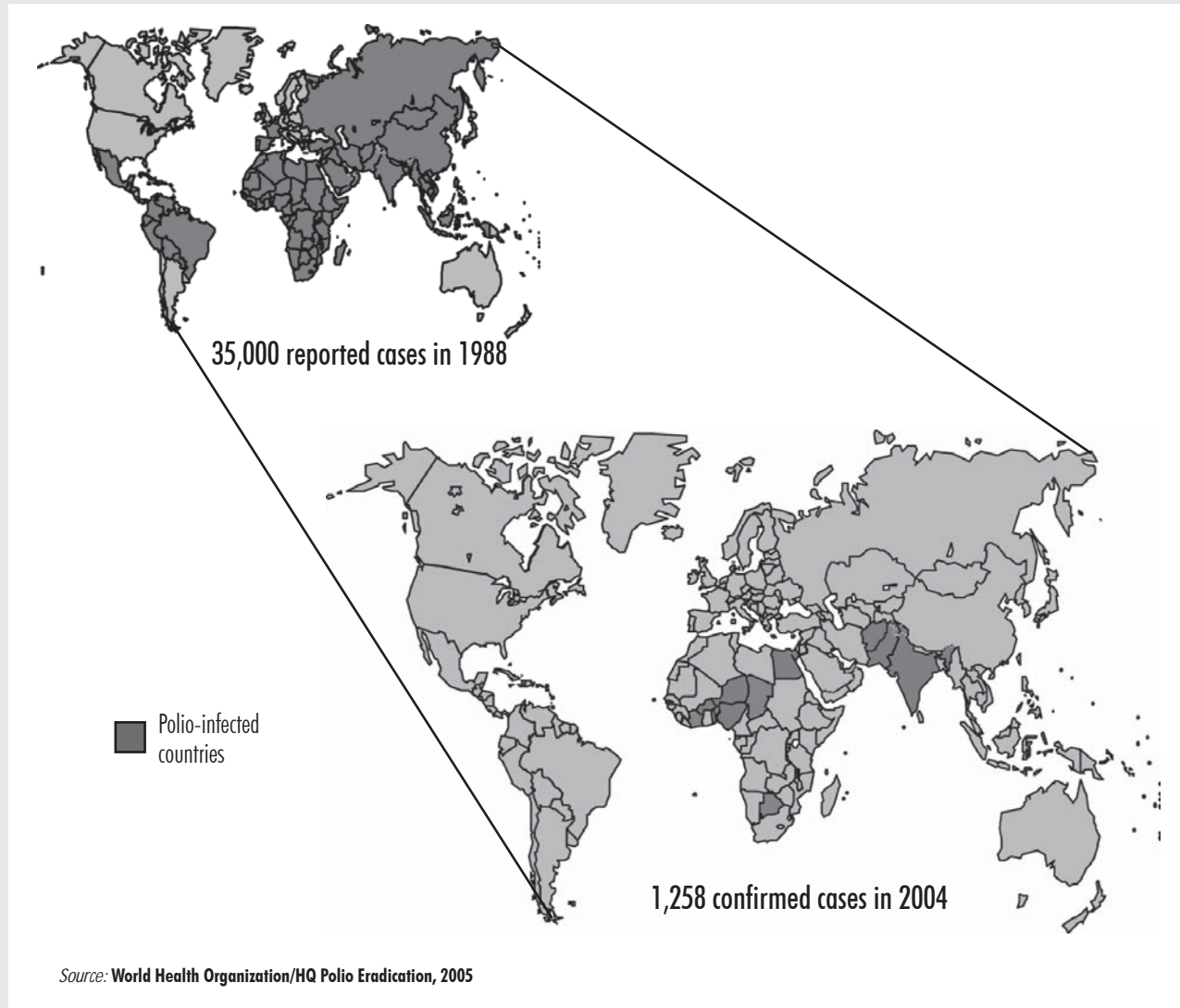
Acute flaccid paralysis (AFP) for the period between epidemiological weeks 01 to 52, 2004

Country	Number of AFP cases	AFP rate per 100,000 <15 years old	% cases investigated <48 hours	% with 1 sample taken within 14 days of onset	% of sites reporting
Argentina	130	1.27	85	69	72
Bolivia	80	2.26	90	83	...
Brazil	641	1.24	98	70	91
Canada	...	...	...	...	...
CAREC	15	0.77	73	47	98
Chile	84	1.95	94	81	96
Colombia	197	1.41	76	83	92
Costa Rica	8	0.65	75	100	66
Cuba	18	0.79	100	100	99
Dominican Republic	26	0.86	92	73	77
Ecuador	22	0.51	95	95	90
El Salvador	103	4.43	99	83	77
Guatemala	108	2.37	88	81	60
Haiti	17	0.53	65	29	0
Honduras	65	2.32	94	95	93
Mexico	465	1.43	95	80	98
Nicaragua	30	1.29	100	100	100
Panama	13	1.34	92	92	91
Paraguay	35	1.67	91	80	90
Peru	92	1.02	92	89	99
Uruguay	4	0.49	100	67	41
United States of America	...	...	...	...	...
Venezuela	132	1.59	89	88	84
TOTAL	2,285	1.38	92	79	92

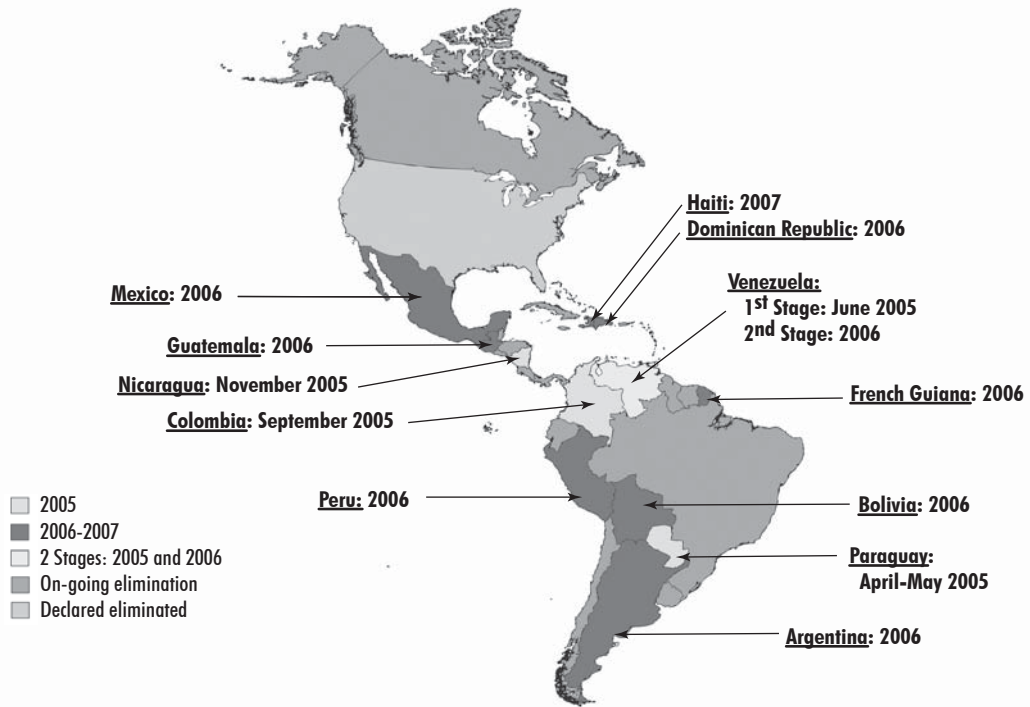
Measles for the period between epidemiological weeks 01 to 52, 2004

Country	% of sites reporting weekly	% of cases with timely home visits	% of cases with adequate samples	% lab samples received ≤5 days	% lab samples results ≤4 days	% of cases discarded by lab
Argentina	84	18	92	71	83	99
Bolivia	...	100	98	83	83	98
Brazil	86	91	84	49	85	99
Canada	...	...	...	...	...	...
CAREC	99	100	93	29	99	79
Chile	98	61	92	79	93	99
Colombia	92	56	96	73	89	98
Costa Rica	80	88	100	82	94	94
Cuba	100	100	100	...	98	96
Dominican Republic	77	96	99	47	88	97
Ecuador	90	45	97	82	92	99
El Salvador	74	27	97	92	95	100
French Guiana	...	...	...	...	...	100
Guadeloupe	...	...	...	...	...	...
Guatemala	63	99	99	83	86	96
Haiti	...	...	...	...	...	...
Honduras	92	97	97	72	94	100
Martinique	...	...	...	...	...	...
Mexico	92	97	98	84	73	99
Nicaragua	100	83	100	72	76	99
Panama	91	77	98	62	94	98
Paraguay	90	73	100	91	100	100
Peru	96	97	96	85	80	93
Puerto Rico	...	...	...	...	...	...
Uruguay	23	30	90	100	60	100
United States of America	...	...	...	...	...	...
Venezuela	85	96	99	51	83	100
TOTAL	92	90	90	61	83	98

Global Progress Toward Polio Eradication, 1988-2004

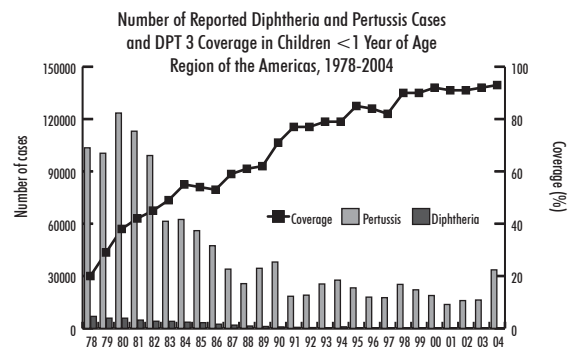
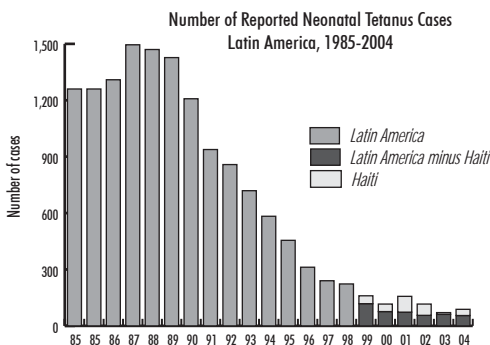
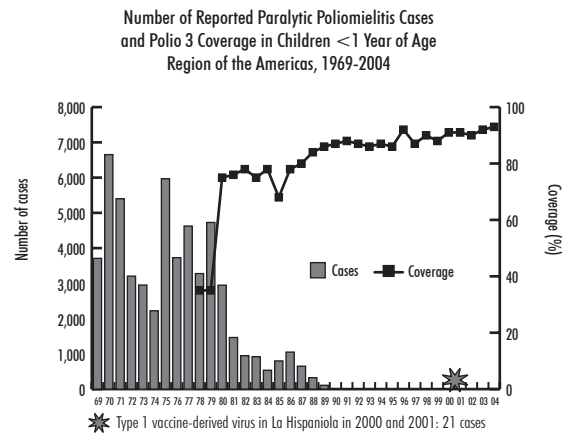
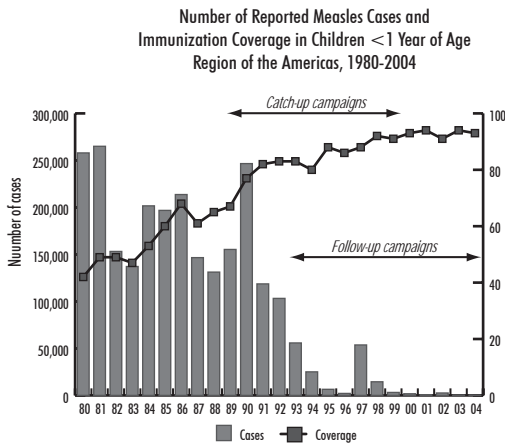


Rubella and Congenital Rubella Syndrome Elimination Status and Planned Immunization Campaigns in the Americas



Source: Country reports to IM/PAHO as of November 2005

Umbrella of Protection in the Americas



Source: Country reports to IM/PAHO

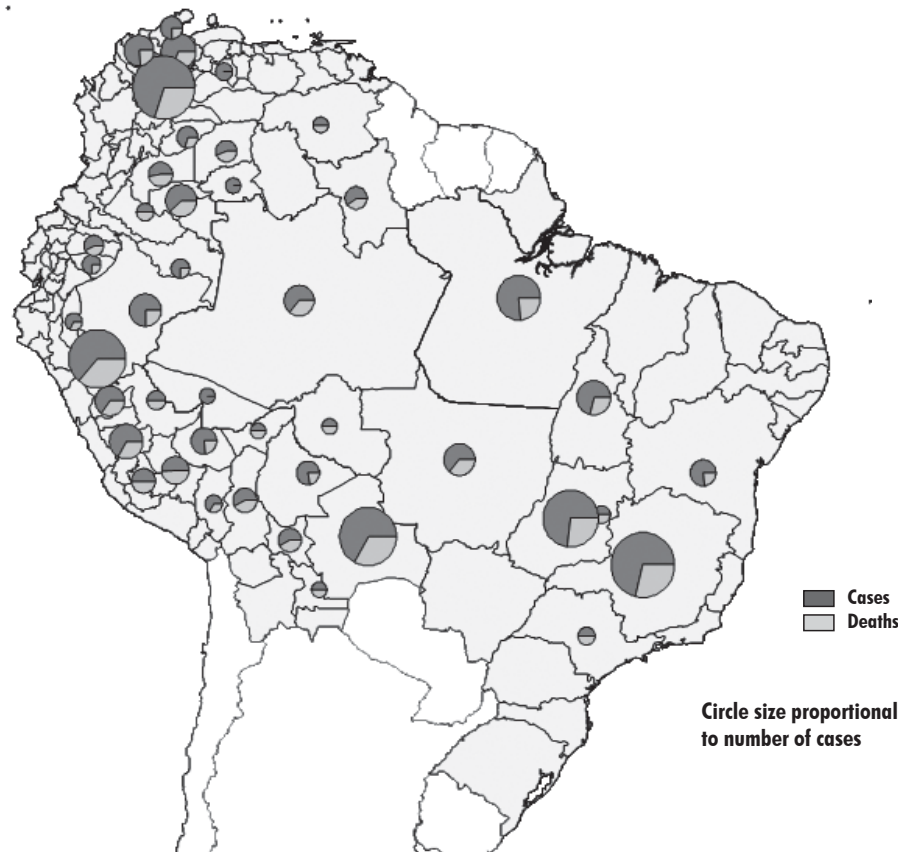
Vitamin A Supplementation in Relation to Immunization in Selected Countries

Country	Target Population		Supplementation with Immunization in 2004	
	Children 6-59 months	Post-partum women	Routine	Campaigns
Belize	Yes	Yes	Yes	No
Bolivia	Yes	Yes	Yes	Yes
Dominican Republic	Yes	No	Yes	No
Ecuador	Yes	No	Yes	...
El Salvador*	No	No	No	No
Guatemala	Yes**	No	Yes	...
Haiti	Yes	No	Yes	Yes
Honduras	Yes	Yes	Yes	Yes
Mexico	Yes	No	Yes	...
Nicaragua	Yes	Yes	Yes	...
Panama	Yes	Yes	Yes	...
Peru	Yes***	Yes***	Yes	...

- * Sugar fortification is provided
- ** Vitamin A supplementation targets children 6-35 months
- *** Vitamin A supplementation is done at sub-national level

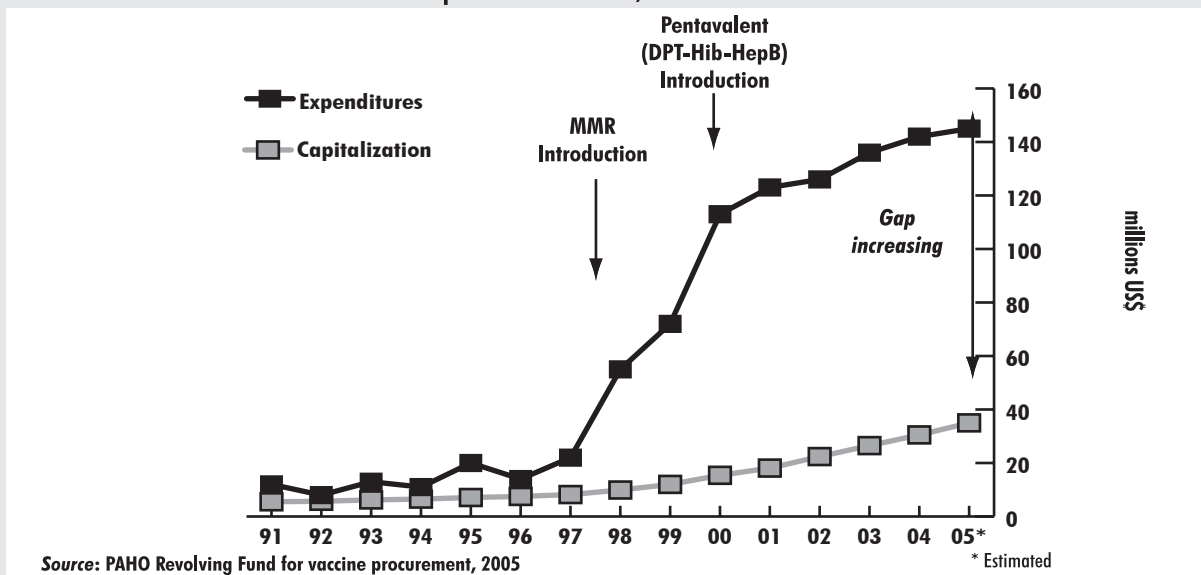
Source: Annual country reports to IM/PAHO via JRF, and Nutrition Unit, PAHO, 2005

Distribution of Cases and Deaths due to Jungle Yellow Fever in Enzootic Areas of the Americas, 1999-2004

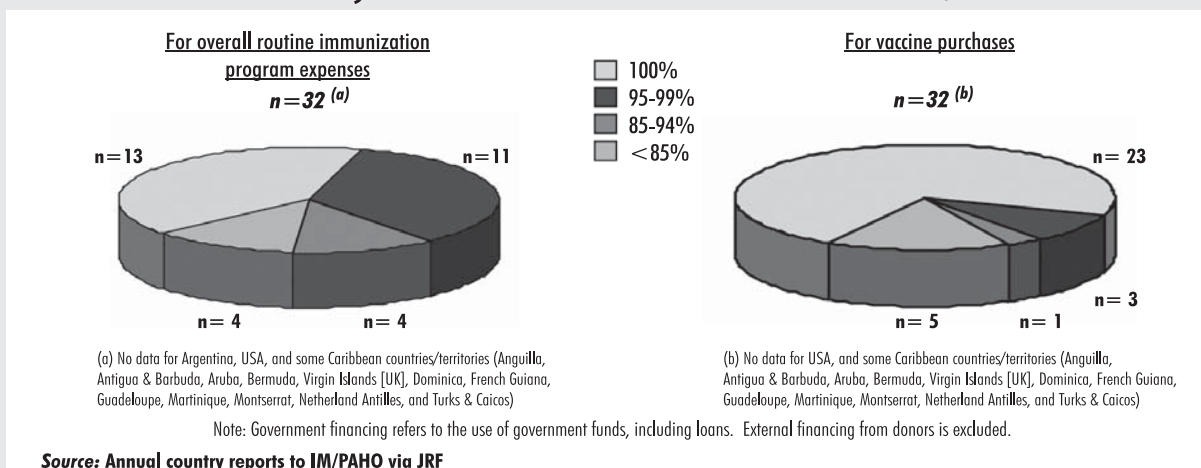


Source: Country reports to Communicable Diseases Unit, PAHO

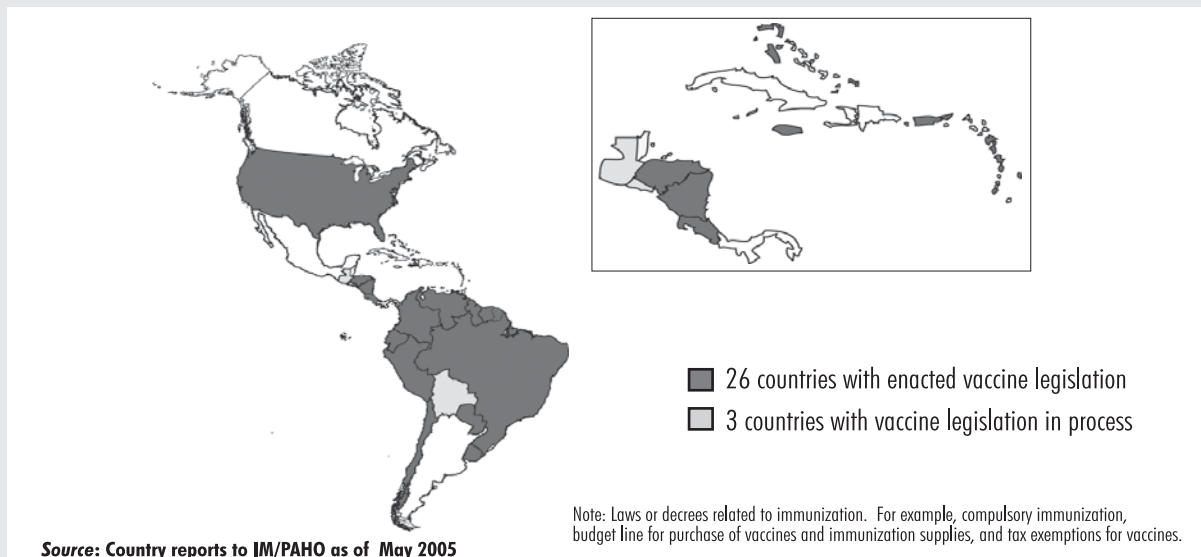
PAHO Revolving Fund: Growth in Volume and Capitalization, 1991-2005



Percentage of Routine Immunization and Vaccine Purchases Financed by the Government in the Americas, 2004



Countries with Enacted Vaccine Legislation in the Americas, 2005



Main Data Sources

Demographic data: United Nations Population Division. World Population Prospects: The 2004 Revision (linear interpolation of indicators). New York; 2005, and US Bureau of the Census. International Database, 2005. 4-26-2005. Update for countries/territories with populations under 100,000 inhabitants.

Socioeconomic indicators: The World Bank. 2005 World Development Indicators. Washington DC; 2005. For national health expenditure data, Technical Reports from WHO/PAHO Regional Units; 2005.

Immunization coverage, immunization program management indicators, financing, and legislation-related information: Annual country reports to Immunization Unit (IM)/PAHO via EPI tables PAHO-WHO/UNICEF Joint Reporting Form (JRF); 2005.

Morbidity: Annual country reports to IM/PAHO via JRF, vaccine-preventable disease specific surveillance reports for measles/rubella and polio; 2005.

Surveillance indicators: Vaccine-preventable disease specific surveillance reports to IM/PAHO for measles/rubella and acute flaccid paralysis/polio; 2004.

Symbols and Abbreviations

...	not available
NA	not applicable
-	magnitude zero
pop	population
GNI	gross national income
ppp	purchase power parity
GDP	gross domestic product
int'l	international
BCG	bacille Calmette-Guérin (anti-tuberculosis vaccine)
Polio 3	third dose of polio vaccine (oral polio vaccine or inactivated polio vaccine)
DPT 1	first dose of diphtheria-pertussis-tetanus vaccine (as DPT or combination vaccine)
DPT 3	third dose of diphtheria-pertussis-tetanus vaccine (as DPT or combination vaccine)
Hib 3	third dose of <i>Haemophilus influenzae</i> type b (Hib) vaccine (as monovalent Hib or combination vaccine)

Hep B 3	third dose of hepatitis B vaccine (as monovalent hepatitis B or combination vaccine)
MMR	measles, mumps, rubella vaccine
NNT	neonatal tetanus
Hib	<i>Haemophilus influenzae</i> type b
CRS	congenital rubella syndrome
ICC	interagency coordinating committee for immunization
NCIP	national committee on immunization practices
AD syringes	auto-disable syringes
ESAVI	event supposedly attributable to vaccination or immunization
CAREC	Caribbean Epidemiology Centre

Technical Notes

For detailed information on demographic data and socioeconomic indicators, please visit: <http://www.paho.org/English/dd/ais/coredata.htm>

Immunization coverage: Proportion of children <1 year of age vaccinated with one dose of BCG vaccine, three doses of polio vaccine (oral polio vaccine or inactivated-injectable polio vaccine), one and three doses of DPT, three doses of Hib vaccine, and hepatitis B vaccine, respectively. Proportion of children aged 1 year vaccinated with one dose of MMR vaccine. Coverage rates are expressed as a percentage of the corresponding mid-year population as reported by the country. Reported coverage rates $\geq 100\%$ are presented as 99%. Subregional aggregated data express average values weighted by population <1 year, when figure available.

Municipalities reaching coverage $\geq 95\%$ for DPT 3, Polio 3, and measles: Proportion of municipalities reporting coverage levels equal to or greater than 95% for DPT 3, Polio 3 and measles (usually as MMR) vaccines respectively, expressed as a percentage. Municipalities are defined as the third administrative level (country level being first), unless otherwise stated.

Morbidity: Number of reported cases of wild polio, confirmed measles, confirmed rubella, confirmed congenital rubella syndrome, neonatal tetanus, non-neonatal tetanus, pertussis, diphtheria, Hib meningitis, and mumps. The sum of the totals is presented for absolute numbers. These are not rates; hence, inter-country comparisons may not be appropriate.



Selected Information Products of the 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.
- **Measles/Rubella and Polio Bulletins:** Weekly epidemiological surveillance bulletins.
- **Immunization Field Guides:** Six practical field guides presenting the most recent techniques, coupled with useful illustrations, to help health workers in their efforts to control, eliminate, or eradicate diseases such as poliomyelitis, measles, rubella, yellow fever, tetanus, neonatal tetanus, diphtheria, pertussis, *Haemophilus influenzae* type b, and hepatitis B.
- **Training Course on Effective Management of EPI:** Designed for use in training workshops for human resources of the Expanded Program on Immunization (EPI); updated versions reflect changes to basic aspects of the EPI, such as supervision, monitoring, safe vaccination, identification of at-risk municipalities, decentralization, social mobilization, management, and administration.
- **Safe Vaccination Training Modules:** Designed to give health workers the information they need to guarantee the use of quality vaccines, safe injections, and the monitoring of ESAVIs and to address public concerns regarding the potential risks of vaccines and adverse events following vaccination.

Please visit the Immunization page : <http://www.paho.org/English/ad/fch/im/vaccines.htm>

Immunization program management:

- Multi-year strategic plan: Written strategic plan regarding the immunization program and its activities for multiple years, usually covering 5 years.
- ICC meetings: ICCs channel efforts by international agencies, governments, and the civil society to help countries strengthen their immunization programs and control vaccine-preventable diseases. ICCs are charged with the task of ensuring coordination of all inter-agency inputs.
- NCIP meetings: NCIPs provide recommendations on immunization practices, including advice on vaccines to be included into the national immunization schedule.
- Updated inventory of all refrigeration equipment in 2004: Update can refer to a new inventory or regular status reports.
- Activity workplan for immunization injection safety: Written plan listing activities regarding injection safety.
- AD syringe use: Auto-disable syringes used for all, some, or none of routine immunization (excluding reconstitution syringes).
- National system to monitor ESAVIs: System in place for the reporting and follow-up of ESAVIs.

- ESAVIs monitored during campaigns: System in place for the reporting and follow-up of ESAVIs during vaccination campaigns.

Surveillance indicators: For definitions refer to: PAHO. Measles Elimination: Field Guide. (Scientific and Technical Publication No. 605). Washington DC: PAHO, 2005; and PAHO. Poliomyelitis Eradication: Field Guide. (Scientific and Technical Publication No. 607). Washington DC: PAHO, 2005.

Both publications are available at:

http://www.paho.org/english/ad/fch/im/FieldGuide_Index.htm

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