

# Immunization in the Americas

## 2018 Summary

Comprehensive Family Immunization  
Family, Health Promotion, and Life Course



Pan American  
Health  
Organization



World Health  
Organization

REGIONAL OFFICE FOR THE Americas

# preface

For over 40 years, the success of the Expanded Program on Immunization (EPI) has made the Region of the Americas a global leader in the elimination and control of vaccine preventable diseases (VPD) such as smallpox, polio, rubella, congenital rubella syndrome, measles, and neonatal tetanus. Moreover, since the EPI's creation in 1977, the number of vaccines used in the countries' national vaccination schedules has risen from six to more than 16 on average, providing greater protection for their populations.

Maintaining and furthering these gains, however, requires a firm commitment at every level to strengthen the EPI to achieve high uniform vaccination coverage in our countries and provide a rapid response to VPD outbreaks. We know that this poses serious operational and financial challenges, but we also know that we have no other choice if we are to address these challenges as we should.

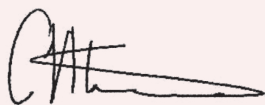
According to the reports provided by the Member States through the 2017 PAHO/WHO-UNICEF Joint Reporting Form (JRF) on immunization, 10% of the countries in the Region reported less than 80% coverage with the first dose of the measles, mumps, rubella (MMR) vaccine. Furthermore, regional coverage with the third dose of the vaccine containing antigens against diphtheria, tetanus, and pertussis (DTP3) fell from 91% in 2016 to 88% in 2017, meaning that nearly 1.8 million children under 1 last year had not received the complete series of this vaccine. This has put the Region at risk during VPD outbreaks, a situation exacerbated by the natural disasters, mass migrations, and other health emergencies of 2017, which affected the most vulnerable populations and impeded access to vaccines.

Nevertheless, we have reason to hope. The EPI has proven successful in the Region. Haiti, one of our priority countries, managed to certify the elimination of neonatal tetanus. Furthermore, the Region is a leader in the use of new vaccines: 35 countries and territories have introduced the pneumococcal vaccine in their national schedules; 21 countries and territories, the rotavirus vaccine; and 32 countries and territories, the human papillomavirus vaccine.

We know that strengthened EPIs are worth fighting for. As stated in a recent article in *Health Affairs*, immunization yields a net return on investment of 16:1 in middle- and low-income countries. Immunization is also a critical aspect of health systems. Usually a child's first contact with the system, it provides an excellent platform for integrating other health actions from infancy to adulthood, making it an indicator of health system performance *par excellence*.

Now more than ever we need resilient EPIs, capable of tackling these challenges in strengthened health services to guarantee universal health. Ministries of health must have legal frameworks and fiscal space for guaranteeing access to vaccines and supplies. It is critically important for the countries to search for innovative strategies to improve EPI surveillance and operations; new training and data analysis and utilization strategies; and strategies for increasing community commitment. The Plan of Action on Immunization, approved by the Member States in 2015, is the platform for following a roadmap to meet this goal, together with the Sustainable Development Goals.

Every country is responsible for maintaining its achievements at the national and regional level, strengthening the EPI, and effectively responding to VPD outbreaks. You can count on collaboration from the Pan American Health Organization/World Health Organization (PAHO/WHO) to fulfill these responsibilities.



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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](http://www.paho.org/immunization/Data).

# demographic and socioeconomic data

	1	2	3	4			5	6		7	8	9		10
	total population (thousands)	population <1 year old (thousands)	population 1 year old (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	national health expenditure as a % of GDP			
	2017	2017	2017	rate	(N)	year	2017	current value	ppp value	2016	public expenditure	private expenditure	2015	2015
<b>The Americas</b>	1,006,697	15,006.3	15,013.3	12.3	163,707		255,080	25,677	31,055	44.8	5.3	5.0		
<b>North America</b>	361,259	4,354.2	4,384.4	5.8	25,249		82,498	56,715	58,733	40.7	8.4	7.8		
Bermuda	71	0.8	0.8	0.0	0	2017	14	106,140 <sup>k</sup>	66,670 <sup>k</sup>	...	...	...	...	...
Canada	36,624	378.4	389.0	4.7	1,794	2014	8,324	42,870	45,750	34.0 <sup>k</sup>	7.7	2.8		
United States of America	324,564	3,974.9	3,994.6	5.9	23,455	2015	74,160	58,270	60,200	41.5	8.5	8.4		
<b>Latin America and the Caribbean</b>	645,438	10,652.1	10,628.9	15.0	138,458		172,581	8,313	15,292	47.3	3.6	3.4		
<b>Latin America</b>	638,096	10,540.9	10,518.3	15.0	136,878		170,666	8,303	15,288	47.3	3.6	3.4		
Mexico	129,163	2,302	2,296.8	12.1 <sup>a</sup>	26,782 <sup>a</sup>	2016	35,238	8,610	17,740	43.4	3.1	2.8		
<b>Central American Isthmus</b>	48,153	998.8	989.8	18.2	16,456		13,026	4,878	8,995	47.5	3.4	3.2		
Belize	375	8.5	8.3	14.5	105	2017	104	4,390	7,890	...	4.1	1.7		
Costa Rica	4,906	67.0	68.5	7.7 <sup>b</sup>	548 <sup>b</sup>	2017	1,289	11,040	16,100	48.7	6.2	2.0		
El Salvador	6,378	115.2	115.4	9.2 <sup>c</sup>	1,031	2017	1,796	3,560	7,540	40.0	4.4	2.3		
Guatemala	16,914	420.4	410.2	21.4	8,366	2016	4,519	4,060	8,000	48.3 <sup>m</sup>	1.8	3.8		
Honduras	9,265	193.7	191.6	22.8 <sup>o,c</sup>	3,427 <sup>o</sup>	2016	2,540	2,250	4,630	50.0	2.9	4.1		
Nicaragua	6,218	116.0	117.9	17.0 <sup>a</sup>	1,933 <sup>b</sup>	2014	1,728	2,130	5,680	46.2 <sup>m</sup>	4.4	3.0		
Panama	4,099	77.9	77.9	13.9	1,046	2016	1,050	13,100	21,890	50.4	4.3	2.6		
<b>Latin Caribbean</b>	38,013	636.3	637.5	32.1	5,058		9,612	6,119	10,879	43.2	1.6	3.0		
Cuba	11,485	125.1	125.2	4.0 <sup>b</sup>	465 <sup>b</sup>	2017	2,699	6,570 <sup>k</sup>	...	...	...	...	...	...
Dominican Republic	10,767	209.6	210.3	21.4 <sup>a</sup>	4,184 <sup>a</sup>	2017	2,794	6,630	15,290	45.3	2.5	3.3		
French Guiana	283	6.5	6.6	7.9	56	2013-15	71	...	...	...	...	...	...	...
Guadeloupe	450	5.0	5.0	8.9	43	2013-15	103	...	...	...	...	...	...	...
Haiti	10,981	248.3	247.9	59.0 <sup>d</sup>	...	2007-12	2,942	760	1,830	41.1 <sup>n</sup>	0.7	2.8		
Martinique	385	3.8	3.9	7.3	88	2014-16	87	...	...	...	...	...	...	...
Puerto Rico	3,663	38.1	38.7	7.8 <sup>b</sup>	222 <sup>b</sup>	2016	916	19,460 <sup>l</sup>	25,240 <sup>l</sup>	...	...	...	...	...
<b>Andean Area</b>	140,885	2,492.8	2,493.0	15.7	36,725		37,341	7,236	13,749	47.2	3.4	2.1		
Bolivia	11,052	243.9	240.9	24.0 <sup>d,c</sup>	13,758	2016	2,853	3,130	7,330	44.6	4.4	1.9		
Colombia	49,066	730.1	730.6	17.1 <sup>f</sup>	7,244	2015	13,300	5,830	14,170	50.8	4.1	1.8		
Ecuador	16,625	321.9	323.5	9.1 <sup>b,c</sup>	3,042 <sup>b</sup>	2016	4,338	5,890	11,350	45.0	4.2	4.3		
Peru	32,165	604.5	604.1	15.0 <sup>d</sup>	3,616 <sup>d,c</sup>	2017	8,459	5,970	12,890	43.8	3.2	2.0		
Venezuela	31,977	592.4	593.9	14.7	9,065	2014	8,391	12,780 <sup>m</sup>	17,440 <sup>m</sup>	...	1.5	1.7		
<b>Brazil</b>	209,288	2,945.8	2,935.6	14.0 <sup>e</sup>	41,333 <sup>e</sup>	2016	57,246	8,580	15,160	51.3 <sup>o</sup>	3.8	5.0		
<b>Southern Cone</b>	72,594	1,164.9	1,165.6	9.5	10,524		18,203	12,428	20,017	44.1	4.9	2.4		
Argentina	44,271	749.8	746.6	9.7	7,093	2016	11,018	13,040	20,270	42.4	4.9	1.9		
Chile	18,055	232.3	235.4	7.0	1,629	2016	4,569	13,610	23,150	47.7 <sup>o</sup>	4.9	3.2		
Paraguay	6,811	135.3	135.9	13.7 <sup>c</sup>	1,522	2016	1,787	3,920	9,180	47.9	4.2	3.6		
Uruguay	3,457	47.5	47.7	6.5	280 <sup>b</sup>	2017	828	15,250	21,870	39.7	6.4	2.8		
<b>Non-Latin Caribbean</b>	7,342	111.2	110.6	16.7	1,580		1,915	9,228	15,601	0.0	3.2	2.5		
Anguilla	17	0.2	0.3	20.7	3	2017	5	...	...	...	...	...	...	...
Antigua and Barbuda	102	1.6	1.6	18.0	20	2017	28	14,170	22,980	...	3.2	1.6		
Aruba	105	1.1	1.1	1.6	3	2016	25	...	...	...	...	...	...	...
Bahamas, The	395	5.3	5.5	16.0 <sup>h</sup>	70 <sup>h</sup>	2016	106	29,170	29,790	...	3.6	3.7		
Barbados	286	3.3	3.4	12.9	37	2015	67	15,540	17,830	...	3.4	3.9		
BES*	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cayman Islands	58	0.7	0.7	9.4	6	2017	14	...	...	...	...	...	...	...
Curaçao	161	2.1	2.1	10.3	16	2017	37	...	...	...	...	...	...	...
Dominica	74	1.1	1.1	15.5	10	2017	18	6,990	10,170	...	3.7	1.6		
Grenada	108	1.9	2.0	10.0	14	2017	28	9,650	14,410	...	1.9	2.8		
Guyana	778	15.7	15.3	19.8 <sup>c</sup>	268	2015	203	4,460	8,120	...	2.3	1.8		
Jamaica	2,890	44.3	43.3	20.9	756 <sup>f</sup>	2016	773	4,750	8,690	...	3.5	2.3		
Montserrat	5	0.1	0.1	0.0	0	2017	2	...	...	...	...	...	...	...
Saint Kitts & Nevis	43	0.7	0.7	23.3	15	2014	11	16,030	26,300	...	2.1	3.5		
Saint Lucia	179	2.2	2.2	16.3	33	2014	50	8,780	13,230	...	2.5	3.1		
Saint Vincent and the Grenadines	110	1.6	1.6	16.6	29	2016	28	6,990	11,770	...	2.9	1.0		
Sint Maarten	42	0.5	0.5	16.0	7	2017	10	...	0	...	...	...	...	...
Suriname	563	10.0	10.0	12.3 <sup>c</sup>	122	2016	145	6,020	14,290	...	3.3	2.7		
Trinidad and Tobago	1,369	17.6	18.2	9.3 <sup>c</sup>	159 <sup>p</sup>	2017	350	15,350	30,520	...	3.2	2.8		
Turks and Caicos Islands	28	0.5	0.5	7.2	4	2017	7	...	...	...	...	...	...	...
Virgin Islands (UK)	28	0.4	0.4	16.5	4	2017	7	...	...	...	...	...	...	...

\*Bonaire, St. Eustatius, and Saba.

(a) special study; (b) preliminary; (c) data has one or more of the following limitations: coverage of infant and neonatal deaths or the number of live births; (d) survey; (e) estimate; (f) adjusted by country;

(g) annual report; (h) census; (k) value 2013; (l) value 2016; (m) value 2014; (n) value 2012; (o) value 2015; (p) public sector only.

# reported immunization coverage

	11	12	13	14	15	16	17	18	19	20	21	22
	percentage of coverage											
	<1 year of age								1 year of age			
	BCG	HepB Birth	IPV1	polio3	DTP1-vc <sup>f</sup>	DTP3-vc <sup>f</sup>	DTP1-3 dropout rate	rotavirus	PCV3	DTP4	MMR1	MMR2 <sup>k</sup>
2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	
<b>The Americas</b>	94	76	94	85	93	88	6.4	73	84	80	90	72
<b>North America</b>	NA	64	97	94	98	95	14.1	73	92	84	92	93
Bermuda	NA	...	92	79	92	79	14.1	72	78	72	87	65
Canada (a)	NA	...	...	91	...	91	...	...	80	77	89	86
United States of America (b)	NA	64	97	94	98	95	...	73	93	85	92	94
<b>Latin America and the Caribbean</b>	94	82	92	82	92	86	6.4	73	81	79	89	63
<b>Latin America</b>	94	82	92	82	92	86	6.4	73	81	79	89	63
<b>Mexico</b>	94	98 <sup>†</sup>	...	85	81	85	-4.6	69	91	91	79	62
<b>Central American Isthmus</b>	88	65	91	88	91	87	5.1	86	89	88	91	85
Belize	90	...	89	88	89	88	-1.6	...	...	79	90	88
Costa Rica	90	87	99	96	99	96	3.0	...	96	97	94	94
El Salvador	83	80	82	95	83	85	-2.0	84	87	90	85	86
Guatemala	81	45	88	81	88	82	7.2	80	84	75	86	81
Honduras	92	81	92	90	92	90	1.8	91	90	100 <sup>c</sup>	98	NA
Nicaragua	100 <sup>c</sup>	...	100 <sup>c</sup>	100 <sup>c</sup>	100 <sup>c</sup>	100 <sup>c</sup>	1.5	100 <sup>c</sup>	100 <sup>c</sup>	100 <sup>c</sup>	100 <sup>c</sup>	84
Panama	100 <sup>c</sup>	87	100 <sup>c</sup>	81	100 <sup>c</sup>	81	21.2	94	97 <sup>b</sup>	95	98	93
<b>Latin Caribbean</b>	86	88	85	75	90	82	8.6	74	64	63	79	48
Cuba	99	99	99	98	100	100	-0.1	NA	NA	100	100	100
Dominican Republic	100 <sup>c</sup>	82	98	80	99	84	15.2	82	64	78 <sup>g</sup>	86	...
French Guiana	...	...	...	...	...	...	...	...	...	...	...	...
Guadeloupe	...	...	...	...	...	...	...	...	...	...	...	...
Haiti	67	...	66	59	78	72	7.5	68	...	32 <sup>g</sup>	63 <sup>h</sup>	25 <sup>g</sup>
Martinique	...	...	...	...	...	...	...	...	...	...	...	...
Puerto Rico	...	...	...	...	...	...	...	...	...	...	...	...
<b>Andean Area</b>	91	75	86	85	92	82	10.0	70	67	67	89	73
Bolivia	93	...	91	83	91	84	8.2	84	83	60	83	NA
Colombia	92	81	94	92	94	92	2.3	90	91	86	93	89
Ecuador	88	61	83	83	84	85	-1.7	85	84	76	81	73
Peru	84	75	90	83	90	83	6.8	85	80	72	83	66
Venezuela	100 <sup>c</sup>	74	70	79	95	66	30.5	18	7 <sup>+</sup>	38	96	59
<b>Brazil</b>	100 <sup>c</sup>	...	100 <sup>c</sup>	75	100	89	11.0	70	84 <sup>+</sup>	80	97	41
<b>Southern Cone</b>	95	77	93	86	94	88	5.3	87	82	76	90	88
Argentina	97	82	93	85	94	88	6.1	88	78	74	90	91
Chile	96	...	98	93	98	93	3.6	...	93	85	93	90
Paraguay	84	52	83	79	83	79	5.1	81	79	69	80	70
Uruguay	98	...	97	95	97	95	2.9	...	94	...	95	92
<b>Non-Latin Caribbean</b>	94	82	93	90	93	91	1.4	95	67	88	94	87
Anguilla	94	...	93	89	93	89	4.7	...	...	81	79	69
Antigua and Barbuda	NA	...	95	94	96	95	1.2	...	...	92	100	95
Aruba	NA	...	99	97	99	97	2.5	...	93	94	97	89
Bahamas, The	NA	...	98	94	98	94	4.1	90	93	72	90	76
Barbados	NA	...	89	91	90	90	-0.3	...	89	80	92	77
BES†	...	...	...	...	...	...	...	...	...	...	...	...
Cayman Islands	85	...	97	95	97	95	2.2	83	94	95	92	94
Curaçao	NA	...	90	85	90	85	1.1	...	74	70	78	59
Dominica	97	71 <sup>d</sup>	98	91	98	91	6.8	...	...	80	77	81
Grenada	NA	78 <sup>d</sup>	91	91	77	83	-8.5	...	...	83	85	79
Guyana	97	...	94	94	97	97	-0.1	97	97	91	100 <sup>c</sup>	93
Jamaica	93	...	95	93	95	93	1.7	...	39	95	95	95
Montserrat	98	100	98	100	98	100	-2.0	...	...	100	100	100
Saint Kitts & Nevis	100 <sup>c</sup>	97	90	97	90	98	-9.3	...	...	95	93	95
Saint Lucia	88	...	89	80	89	80	9.6	...	...	81	87	73
Saint Vincent and the Grenadines	100 <sup>c</sup>	98 <sup>d</sup>	96	100 <sup>c</sup>	95	100 <sup>c</sup>	-9.8	...	...	100 <sup>c</sup>	100 <sup>c</sup>	100 <sup>c</sup>
Sint Maarten	NA	...	91	100	91	100	-7.3	...	85	86	86	...
Suriname	NA	80	88	65	90	81	10.3	...	...	72	97	70
Trinidad and Tobago	NA	...	90	94	87	89	-1.6	...	93	88	93	90
Turks and Caicos Islands	100	...	86	93	86	93	-8.2	...	...	87	88	86
Virgin Islands (UK)	67	90	71	83	71	82	-14.6	...	...	77	87	76

†Bonaire, St. Eustatius, and Saba.

(a) <2years of age; (b) children aged 19-35; (c) reported coverage > 100%; (d) given only if mothers are HepB+; (e) given from 1 month to 2 years, 11 months and 29 days old;

(f) diphtheria-tetanus-pertussis containing vaccine; (g) no data but in schedule; (h) coverage report for measles-rubella vaccine in children < 1 year of age; (k) target age groups vary by country; \*value 2016.



# 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	rubella	CRS		male	female	total				
	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
<b>The Americas</b>	0	895	9	2	13	398	101	543	26,046	872	233	52,360
<b>North America</b>	0	165	9	2	0	2	2	35	19,808	4	39	7,786
Bermuda	0	0	0	0	0	0	0	0	2	0	0	0
Canada	0	45 <sup>b</sup>	0	0	0	2	2	4	3,998	4	17	2,157
United States of America	0 <sup>a</sup>	120 <sup>b,c</sup>	9 <sup>c</sup>	2 <sup>c</sup>	...	...	...	31	15,808 <sup>a</sup>	0 <sup>a</sup>	22 <sup>a,d</sup>	5,629 <sup>a</sup>
<b>Latin America and the Caribbean</b>	0	730	0	0	13	396	99	508	6,238	868	194	44,574
<b>Latin America</b>	0	730	0	0	13	395	99	502	6,234	868	194	44,570
<b>Mexico</b>	0	0	0	0	1	21	6	27	827	0	...	...
<b>Central American Isthmus</b>	0	0	0	0	0	25	6	31	483	0	8	934
Belize	0	0	0	0	0	0	0	0	1	0	0	14
Costa Rica	0	0	0	0	0	0	0	0	58	0	1	54
El Salvador	0	0	0	0	0	0	0	0	17	0	2	163
Guatemala	0	0	0	0	0	3	0	3	62	0	0	539
Honduras	0	0	0	0	0	21	6	27	266	0	1	115
Nicaragua	0	0	0	0	0	1	0	1	74	0	0	2
Panama	0	0	0	0	0	0	0	0	5	0	4	47
<b>Latin Caribbean</b>	0	0	0	0	4	43	8	51	41	77	18	1,910
Cuba	0	0	0	0	0	2	0	2	0	0	17	0
Dominican Republic	0	0	0	0	1	39	7	46	41	1	1	1,910
French Guiana	...	...	...	...	...	...	...	...	...	...	...	...
Guadeloupe	...	...	...	...	...	...	...	...	...	...	...	...
Haiti	0	0	0	0	3	2	1	3	0	76	...	...
Martinique	...	...	...	...	...	...	...	...	...	...	...	...
Puerto Rico	...	...	...	...	...	...	...	...	...	...	...	...
<b>Andean Area</b>	0	727	0	0	8	90	52	142	1,029	786	14	28,445
Bolivia	0	0	0	0	2	4	1	5	7	0	1	9,057
Colombia	0	0	0	0	4	26	11	37	330	0	8	17,835
Ecuador	0	0	0	0	1	27	33	60	60	0	1	1,472
Peru	0	0	0	0	0	20	4	24	611	0	0	...
Venezuela	0	727 <sup>b</sup>	0	0	1	13	3	16	21	786	4	81
<b>Brazil</b>	0	...	...	...	0	202	23	225	1,804	5	120	...
<b>Southern Cone</b>	0	3	0	0	0	14	4	26	2,050	0	34	13,281
Argentina	0	3 <sup>b</sup>	0	0	0	...	...	8	864	0	20	4,396
Chile	0	0	0	0	0	4	4	8	849	0	5	6,069
Paraguay	0	0	0	0	0	10	0	10	44	0	2	1,090
Uruguay	0	0	0	0	0	0	0	0	293	0	7	1,726
<b>Non-Latin Caribbean</b>	0	0	0	0	0	1	0	6	4	0	0	4
Anguilla	0	0	0	0	0	0	0	0	0	0	0	0
Antigua and Barbuda	0	0	0	0	0	0	0	0	0	0	0	0
Aruba	0	0	0	0	0	0	0	0	1	0	0	1
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*	...	...	...	...	...	...	...	...	...	...	...	...
Cayman Islands	0	0	0	0	0	0	0	0	0	0	0	0
Curaçao	0	0	0	0	0	...	...	...	3	...	...	...
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	...	...	5	0	0	0	0
Jamaica	0	0	0	0	0	1	0	1	0	0	0	3
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	0	0	0	0	0	0
Saint Vincent and 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	...	...	...	...	...	...	...
Trinidad and Tobago	0	0	0	0	0	0	0	0	0	0	0	0
Turks and 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

\*Bonaire, St. Eustatius, and Saba.

(a) Morbidity and Mortality Weekly Report (MMWR), National Notifiable Diseases Surveillance System (NNDSS); (b) imported or related to importation; (c) Measles/Rubella Weekly Surveillance Bulletin 2017;

(d) invasive disease (age <5 years).

# program management and financing

	35	36	37	38	39	40	41	42	43	44
	years covered by multi-year plan for immunization	number of NITAG meetings	total number of districts/municipalities	% of municipalities w/ coverage level ≥ 95% DTP3 2017	% of children in municipalities w/ coverage level ≥ 95% DTP3 2017	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
		2017	2017	2017	2017	2017	2017	2017	2017	2017
<b>The Americas</b>			14,852	40	24					
<b>North America</b>			65	...	...					
Bermuda	no	...	1	0	0	...	yes	91	100	yes
Canada	2016-2020	3	13 <sup>a</sup>	8 <sup>c</sup>	...	no	yes	...	...	...
United States of America	...	3	51 <sup>b</sup>	...	...	yes	yes	...	...	no
<b>Latin America and the Caribbean</b>			14,787	40	24					
<b>Latin America</b>			14,634	40	24					
Mexico	2013-2018	3	2,446	29	29	yes	yes	100	100	yes
<b>Central American Isthmus</b>			1,216	38	33					
Belize	2015-2024	...	6	33	23	yes	yes	97	100	yes
Costa Rica	2015-2020	11	81	51	47	yes	yes	100	100	yes
El Salvador	2014-2019	4	262	23	27	yes	yes	43	45	yes
Guatemala	no	14	338	27	16	yes	no	100	100	yes
Honduras	2016-2020	3	298	42	42	yes	yes	84	96	yes
Nicaragua	2016-2020	2	153	80	83	yes	yes	74	73	yes
Panama	yes	10	78	32	10	yes	yes	100	100	yes
<b>Latin Caribbean</b>			465	51	35					
Cuba	2014-2018	12	168	97	97	yes	yes	98	97	yes
Dominican Republic	2018-2021	...	157	29	22	no	yes	98	100	yes
French Guiana	...	...	0	...	...	...	...	...	...	...
Guadeloupe	...	...	0	...	...	...	...	...	...	...
Haiti	2016-2020	0	140	21	19	yes	yes	2	...	no
Martinique	...	...	0	...	...	...	...	...	...	...
Puerto Rico	...	...	0	...	...	...	...	...	...	...
<b>Andean Area</b>			3,811	52	25					
Bolivia	2016-2020	5	339	15	17	yes	yes	94	94	yes
Colombia	2016-2020	1	1,122	44	35	yes	yes	100	100	yes
Ecuador	2017-2021	...	141	21	17	yes	yes	100	100	yes
Peru	2015-2019	10	1,874	71	34	yes	yes	94	100	yes
Venezuela	no	0	335	24	13	no	yes	...	...	yes
<b>Brazil</b>	...	2	5,570	36	15	...	yes	100	100	yes
<b>Southern Cone</b>			1,126	40	18					
Argentina	2017-2018	4	512	31	13	yes	yes	100	100	yes
Chile	2010-2020	7	346	49	34	yes	yes	100	100	yes
Paraguay	2014-2018	10	249	14	14	yes	yes	100	100	yes
Uruguay	2015-2020	5	19	69 <sup>c</sup>	43 <sup>c</sup>	yes	yes	100	100	yes
<b>Non-Latin Caribbean</b>			153	43	26					
Anguilla	2017	...	3	0	0	NA	yes	99	100	...
Antigua and Barbuda	no	...	8	63	63	no	yes	89	100	no
Aruba	no	...	6	100	100	yes	no	...	...	yes
Bahamas, The	...	...	16	NA	NA	yes	yes	100	100	yes
Barbados	no	0	10	30	28	no	yes	98	100	yes
BES*	...	...	0	...	...	...	...	...	...	...
Cayman Islands	no	0	6	33	21	yes	yes	100	100	yes
Curacao	2017-2019	...	1	...	...	yes	yes	100	100	no
Dominica	no	...	7	57	28	yes	yes	100	100	no
Grenada	2016-2025	...	7	0	0	yes	yes	98	100	no
Guyana	2017-2021	...	10	30	17	yes	yes	80	80	yes
Jamaica	no	...	13	38	39	no	yes	99	100	no
Montserrat	no	...	4	100	100	...	yes	...	...	yes
Saint Kitts & Nevis	2018-2022	...	17	82	76	...	yes	63	100	no
Saint Lucia	no	...	8	0	0	no	yes	97	100	...
Saint Vincent and the Grenadines	no	...	9	67	71	no	yes	100	100	no
Sint Maarten	no	0	1	100	100	no	yes	100	100	yes
Suriname	2017-2021	...	10	10	0	yes	no	83	100	yes
Trinidad and Tobago	no	...	9	11	13	no	yes	100	100	yes
Turks and Caicos Islands	no	...	4	50	2	no	no	100	100	no
Virgin Islands (UK)	2017	...	4	0	0	yes	yes	100	100	...

\*Bonaire, St. Eustatius, and Saba.

(a) reports number of provinces and territories; (b) reports number of states; (c) value 2016.

# surveillance indicators

## Acute Flaccid Paralysis (AFP), 2017\*

Country	Number of AFP cases	AFP rate (x 100,000 <15 years old)	% of cases investigated within <48 hours	% of cases with 1 adequate sample	% of cases with 60 days follow-up	Number of compatible cases
Argentina	205	1.87	42	79	1	0
Bolivia	26	0.72	100	85	6	0
Brazil	486	1.02	99	69	30	1
Canada	19	0.33	0	26	0	0
CARPHA	6	0.34	83	100	73	0
Chile	69	1.91	97	71	50	0
Colombia	156	1.34	60	83	10	0
Costa Rica	27	2.53	78	89	92	0
Cuba	17	0.93	0	--	0	0
Dominican Republic	15	0.48	0	87	12	0
Ecuador	38	0.81	97	84	95	0
El Salvador	41	2.52	34	93	60	0
Guatemala	46	0.76	0	72	0	0
Haiti	8	0.22	63	50	0	0
Honduras	48	1.64	48	92	81	0
Mexico	569	1.63	99	83	24	0
Nicaragua	19	1.05	74	95	100	0
Panama	22	2.05	50	95	54	0
Paraguay	30	1.44	83	93	90	0
Peru	52	0.59	73	71	9	0
Uruguay	4	0.55	100	--	75	0
Venezuela	84	0.96	87	80	5	2
TOTAL/AVERAGE	1987	1.22	79	78	27	3

Source: Integrated Surveillance Information System (ISIS), Polio Eradication Surveillance System (PESS), and country reports to FPL-IM/PAHO.  
\*Data as of August 2018.

## Measles/Rubella/CRS Surveillance Indicators, 2017\*

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	357	19	92	62	58	0.8	1.6
Bolivia	62	35	97	75	70	0.6	0.0
Brazil	1853	62	57	57	53	0.0	0.0
CARPHA	175	94	97	11	78	2.3	6.9
Chile	180	33	82	83	95	1.0	5.6
Colombia	1288	80	96	86	95	2.6	0.1
Costa Rica	101	70	94	84	85	2.1	26.0
Cuba	1433	100	100	100	100	12.6	0.0
Dominican Republic	339	1	97	21	23	3.1	0.0
Ecuador	370	98	99	90	95	2.2	0.0
El Salvador	274	69	95	97	90	4.4	0.0
Guatemala	179	16	94	46	60	1.1	0.0
Haiti	158	87	97	59	65	1.4	0.8
Honduras	159	58	100	75	100	1.9	2.2
Mexico	3476	97	98	93	91	2.7	0.0
Nicaragua	228	89	100	94	90	3.7	2.8
Panama	50	82	100	82	94	1.2	0.1
Paraguay	542	81	98	87	97	8.0	0.3
Peru	328	84	94	69	53	1.0	0.0
Uruguay	2	50	50	100	0	0.1	0.0
Venezuela	1379	99	89	39	84	4.3	0.6
TOTAL/AVERAGE	12,933	81	91	76	82	1.7	0.6

Source: Integrated Surveillance Information System (ISIS), Measles Elimination Surveillance System (MESS), and country reports to FPL-IM/PAHO.  
\*Data as of August 2018.

# technical notes and data sources

## Main Data Sources

For detailed information on demographic data and socioeconomic indicators, please visit: [www.paho.org/datastatistics](http://www.paho.org/datastatistics).

**Demographic data:** United Nations, Department of Economic and Social Affairs, Population Division (2017 Revision). World Population Prospects: The 2017 Revision. New York. Accessed 4 July 2018 (<http://esa.un.org/wpp/>). For countries not included in WPP, US Census Bureau International database Accessed 11 July 2018. Women of childbearing age includes women aged 15 to 49 years.

**Infant mortality rate (1,000 lb) or number of deaths (N):** PAHO/WHO. Data provided by ministries of health or health agencies of countries. Washington DC, 2018. As of 15 May 2018. Infant mortality as reported by the countries (ECU, GTM, GUY, PAN, PRY, SLV, SUR, TTO) present limitations due to the coverage of infant and neonatal deaths or the number of live births. An increase may reflect an improvement in data coverage and quality.

**Socioeconomic indicators:** The World Bank (2017). World Development Indicators 2017. Washington, DC; Accessed 5 July 2018. (<http://databank.worldbank.org/data/home.aspx>). Estimates of the national health expenditure: PAHO/WHO. Data compiled by the Department of Health Systems and Services from the Global Health Expenditure Database. Washington DC, 2018. As of 15 May 2018. (<http://www.who.int/health-accounts/ghed/en/>).

**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); 2018.

**Morbidity:** Annual country reports to IM/PAHO via JRF, vaccine-preventable disease specific surveillance reports for measles/rubella and polio; 2017-2018.

**Surveillance indicators:** Vaccine-preventable disease specific surveillance reports for measles/rubella and acute flaccid paralysis/polio to IM/PAHO; 2017-2018.

## 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); (HepB) hepatitis B; (Polio3) third dose of polio vaccine (oral polio vaccine or inactivated; polio vaccine); (DTP1) first dose of diphtheria-tetanus-pertussis vaccine (as DTP or DTP containing vaccine); (DTP3) third dose of diphtheria-tetanus-pertussis vaccine (as DTP containing vaccine); (Rotavirus) last dose of rotavirus vaccine; (PCV3) third dose of pneumococcal conjugate vaccine; (DTP4) first booster dose after the primary series consisting of three doses of diphtheria-tetanus-pertussis vaccine (as DTP or DTP containing 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*; (m) months; (y) years; (IPV) inactivated polio vaccine.

**Country codes:** (ARG) Argentina; (BOL) Bolivia; (BRA) Brazil; (CARPHA) Caribbean Public Health Agency; (CHL) Chile; (COL) Colombia; (DOM) Dominican Republic; (ECU) Ecuador; (SLV) El Salvador; (GTM) Guatemala; (HTI) Haiti; (HND) Honduras; (NIC) Nicaragua; (PAN) Panama; (PRY) Paraguay; (PER) Peru; (SUR) Suriname; (TTO) Trinidad and Tobago; (VEN) Venezuela.

## Technical Notes

**Immunization coverage:** Proportion of children aged <1 year vaccinated with one dose of BCG vaccine, hepatitis B vaccine given <24 hours of birth, first dose of inactivated polio 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 the last dose of rotavirus vaccine (2<sup>nd</sup> or 3<sup>rd</sup> dose depending on the vaccine used), respectively. Proportion of children vaccinated with the 3<sup>rd</sup> dose of PCV in children < or ≥ 1 year according to vaccine schedule of the country. 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 administered minus the number of DTP3 doses administered (among children aged <1 year) divided by the number of DTP1 doses, expressed as a percentage.

**Morbidity:** Number of confirmed cases of wild polio, measles, rubella, CRS, neonatal tetanus, non-neonatal tetanus, 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 2017. NITAGs provide recommendations on immunization practices, including advice on vaccines to be included into the national immunization schedule.

## Selected Information Products from the Comprehensive Family Immunization Unit



- **Immunization Newsletter:** A quarterly 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. Copies of the newsletter are available online at [www.paho.org/immunization/newsletter](http://www.paho.org/immunization/newsletter).



- **Electronic Immunization Registry: Practical Considerations for Planning, Development, Implementation and Evaluation.** This document is designed to support EPI managers and their teams in the implementation of EIR-related information systems, using the various experiences compiled at the global level – and, especially, in the Region of the Americas – as a foundation.

- **Measles/Rubella (MR) and Polio Bulletins:** Weekly epidemiological surveillance bulletins. Available online at [www.paho.org/immunization/MeaslesRubella Bulletin](http://www.paho.org/immunization/MeaslesRubellaBulletin) and [www.paho.org/immunization/PolioBulletin](http://www.paho.org/immunization/PolioBulletin).

- Number of municipalities and number of children living in these municipalities reaching coverage  $\geq 95\%$  for DTP3: Proportion of municipalities and proportion of children living in these municipalities reporting coverage levels equal to or greater than 95% for DTP3, respectively, expressed as a percentage. Municipalities are defined as the third administrative level (country level being first), unless otherwise stated.
- Plan for immunization injection safety: the existence of a plan to ensure the safety of injections, including training, supervision, and 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.

**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](http://www.paho.org/english/ad/fch/im/FieldGuide_Index.htm).

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## Seasonal Influenza Vaccine Use in the Americas, 2017

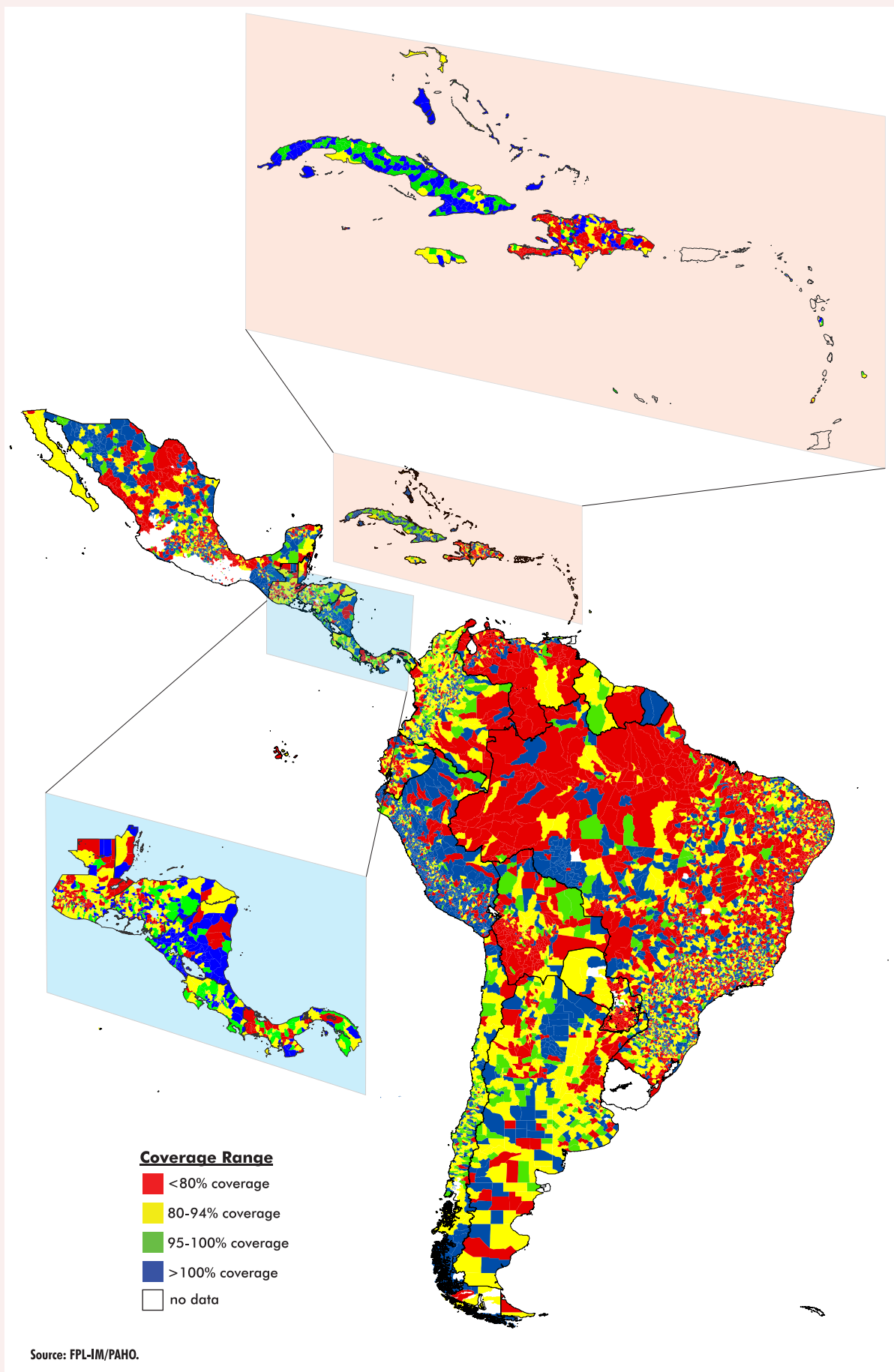
Country	Children		Elderly Adults		Other Risk Groups		
	Schedule	Coverage <sup>e</sup>	Schedule	Coverage (%)	Chronic Disease	Health Workers	Pregnant Women
Anguilla	NA	NA	NA	NA	yes	NA	NA
Antigua and Barbuda	>6m	...	>18y	...	NA	NA	NA
Argentina	6-24m	65	>65y	37	55	97	100 <sup>g</sup>
Aruba	6-2y	2	>60y	...	12	yes	yes
Bahamas	>6m	...	>65y	...	yes	yes	yes
Barbados	NA	NA	>65y	...	NA	yes	NA
Belize	6-23m	73	>65y	2	yes	10	8
Bermuda	>6m <sup>a</sup>	8	>50y	12	4	14	9
BES*	...	...	...	...	...	...	...
Bolivia	6-23m	96	>60y	63	100 <sup>g</sup>	100 <sup>g</sup>	84
Brazil	6m-<5y	72	>60y	88	yes	88	79
Canada	6-59m	22	>65y	71	yes	yes	yes
Cayman Islands	>6m	...	>60y	...	yes	yes	yes
Chile	6m-5y <sup>b</sup>	68	>65y	57	100 <sup>g</sup>	100 <sup>g</sup>	71
Colombia	6-23m	61	>50y	...	yes	NA	60
Costa Rica	6m-<3y	32	>60y	92	yes	88	72
Cuba	>6m-<2y	82	>75y	100	93	100	79
Curaçao	NA	NA	NA	NA	...	...	...
Dominica	6-35m	2	>65y	5	yes	yes	yes
Dominican Republic	6-23m	5	>65y	4	yes	yes	19
Ecuador	6-11m; 1-4y	83	>65y	90	100 <sup>g</sup>	43	55
El Salvador	6m-<5y	62	>60y	35	yes	61	82
Grenada	...	...	yes <sup>f</sup>	...	yes	yes	yes
Guatemala	6-35m	2	yes	...	100 <sup>g</sup>	74	23
Guyana	NA	NA	NA	NA	NA	NA	NA
Haiti	NA	NA	NA	NA	NA	NA	NA
Honduras	NA	NA	>60y	88	100 <sup>g</sup>	100 <sup>g</sup>	78
Jamaica	>6m <sup>d</sup>	1 <sup>d</sup>	$\geq 65y^d$	...	yes	yes	yes
Mexico	6-59m	84	>60y	94	100 <sup>g</sup>	100 <sup>g</sup>	62
Montserrat	NA	NA	65y	NA	NA	NA	NA
Nicaragua	NA	NA	NA	NA	yes	88	51
Panama	<5y	69	>60y	100 <sup>g</sup>	yes	92	58
Paraguay	6m-35m	41	>60y	36	yes	...	...
Peru	2m-<3y	26	>60y	...	yes	yes	yes
St. Kitts and Nevis	NA	NA	>62y	...	NA	NA	NA
St. Lucia	NA	NA	NA	NA	yes	yes	yes
St. Vincent and the Grenadines	NA	NA	NA	NA	NA	NA	NA
Sint Maarten (Dutch part)	NA	NA	NA	NA	NA	NA	NA
Suriname	NA	NA	>60y	...	yes	yes	yes
Trinidad and Tobago	6m-5y	...	>65y	...	yes	yes	yes
Turks and Caicos Islands	...	...	...	...	...	3	...
United States of America**	6m-17y	59	>65y	65	yes	yes	yes
Uruguay	6m-5y	28	>65y	32	yes	50	23
Venezuela	6-23m	8	>60y	...	6	2	10
Virgin Islands (UK)	6m-5y	...	>60y	...	94	24	...

\* Bonaire, St. Eustatius and Saba; \*\* USA data during 2016-2017 influenza season; m-month(s); y-year(s).

(a) optional in schedule; (b) inclusive; (c) no formal policy, however, influenza vaccine is provided to children, based on WHO recommendations; (d) with chronic disease;

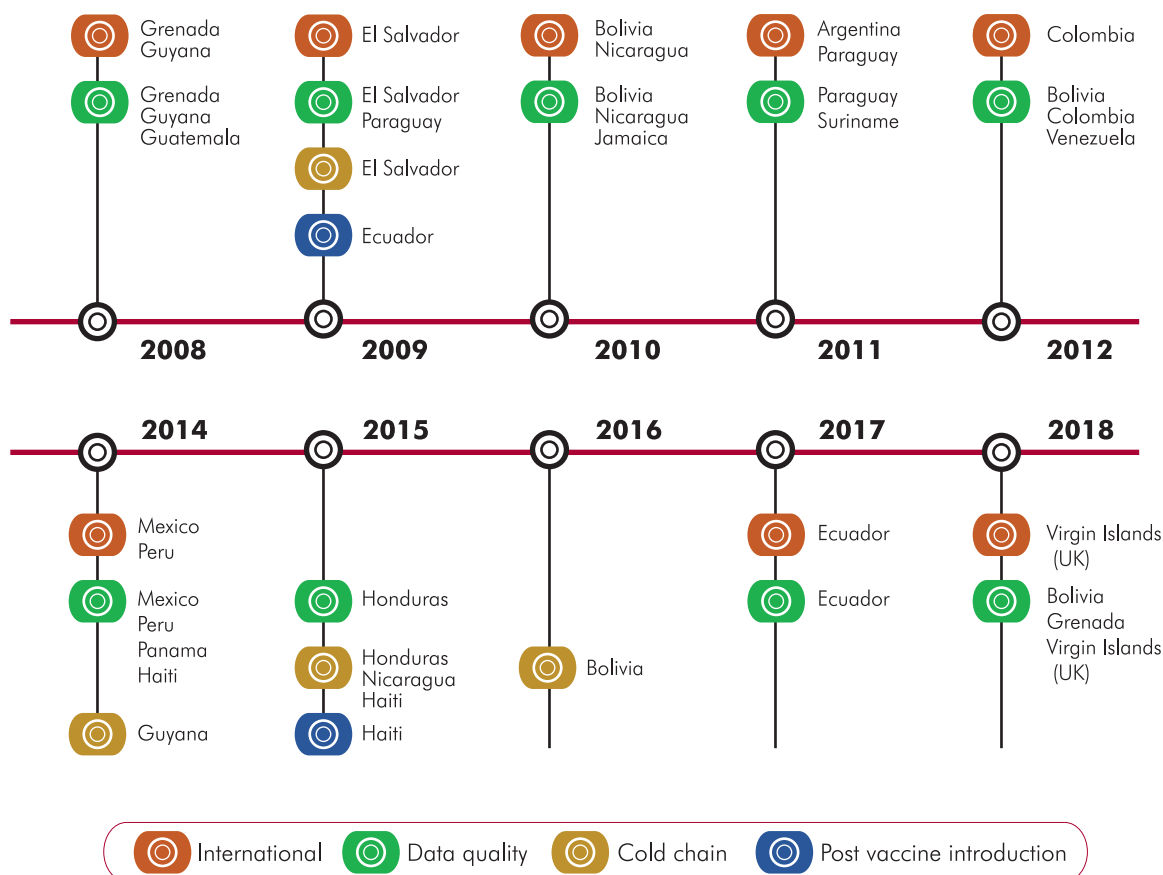
(e) pediatric coverage formula: ((2nd dose + single dose)/denominator)\*100; (f) administered to residents of elderly homes and those wish to be vaccinated; (g) reported coverage >100%.

# DTP3 Vaccine Coverage by Municipalities Latin America and the Caribbean, 2017





# Immunization Evaluations, 2008-2018



Source: FPL-IM/PAHO.

## Dashboard of Selected Regional Immunization Action Plan (RIAP) Objectives in the Americas

General (GO) and Strategic Objectives(SO)	Baseline (2013)	Target (2020)	2017
GO 1.2.1 Number of countries and territories in which endemic transmission of measles or rubella virus has been reestablished	0	0	1* <span style="color: red;">●</span>
GO 2.2.1 Number of countries and territories reporting national average coverage of at least 95% with three doses of DTP vaccine in children under 1 year	19	35	11 <span style="color: red;">●</span>
GO 2.2.2 Number of countries and territories reporting coverage of at least 80% in each district or equivalent with three doses of DTP vaccine in children under 1 year	12	35	13 <span style="color: red;">●</span>
SO 4.2.1 Number of countries and territories that have dropout rates below 5% between the first and the third dose of DTP vaccine	11	35	21 <span style="color: yellow;">●</span>
SO 4.2.2 Number of countries and territories with coverage above 95% for third dose of DTP vaccine sustained for three or more consecutive years	13	35	5 <span style="color: red;">●</span>
SO 4.2.5 Number of countries and territories that have a national system for a computerized nominal immunization registry	3	10	14 <span style="color: green;">●</span>

Source: Country reports through the PAHO-WHO/UNICEF Joint Reporting Form (JRF), 2018 FPL-IM/PAHO.

\* As of 30 June 2018.

## Epidemiological Surveillance Indicators for Diseases Preventable by New Vaccines in Reporting Countries, Latin America and the Caribbean, 2017

### Rotavirus Surveillance, January-December 2017

Data and Indicators	CHL	DOM	GTM	HND	PRY	SLV	SUR	VEN	TOTAL
Number of hospitalizations <5 years old	20,490	371	14,460	30,127	10,137	32,538	2,520	14,691	125,334
Number <5 years old admitted to hospital for diarrhea	1,369	23	1,554	3,174	289	4,000	364	1,222	11,995
Number <5 years old who meet the case definition	836	15	430	2,246	289	2,382	319	541	7,058
Number <5 years old with epidemiological form and stool specimen	836	8	426	1,513	191	2,130	203	415	5,722
Positive cases of rotavirus	302	0	79	399	36	154	16	9	995
Deaths	0	1	5	0	2	1	0	0	9

### Bacterial Pneumonia Surveillance, January-December 2017

Data and Indicators	COL	HND	PRY	SLV	VEN	TOTAL
Number of hospitalizations <5 years old	12,423	13,086	10,137	21,913	578	57,119
Number of suspected cases of pneumonia	1,041	1,172	962	1,953	97	5,097
Number of suspected cases with x-ray and epidemiological form	1,041	917	957	1,874	97	4,779
Number of probable cases of bacterial pneumonia	617	382	411	915	60	2,278
Probable cases with blood specimen	555	234	349	805	0	1,923
Probable cases with pleural fluid specimen	21	0	114	0	0	135
Confirmed cases of Hib	0	0	0	0	0	0
Confirmed cases of Hi (no b)	2	0	4	1	0	7
Confirmed cases of Spn	13	0	59	0	0	72
Confirmed cases caused by other bacteria	11	20	26	5	0	59
Contamination	48	15	3	0	0	66
Deaths	11	3	5	0	10	27

### Bacterial Meningitis Surveillance, January-December 2017

Data and Indicators	COL	HND	PRY	SLV	VEN	TOTAL
Number of hospitalizations <5 years old	12,423	12,911	10,129	11,286	578	46,309
Number of suspected cases of meningitis	48	98	231	21	31	393
Number of suspected cases with cerebrospinal fluid test and epidemiological form	48	92	218	20	27	369
Number of probable meningitis cases	19	49	46	7	10	114
Confirmed cases of Hib	1	1	1	0	0	3
Confirmed cases of Hi (no b)	1	0	0	0	0	1
Confirmed cases of Nm	1	0	0	1	0	2
Confirmed cases of Spn	0	4	6	1	1	12
Confirmed cases caused by other bacteria	7	12	5	1	0	19
Contamination	0	1	0	0	0	1
Deaths	2	1	4	1	2	10

Source: Country reports to FPL-IM/PAHO.