

Immunization in the Americas

2014 Summary

Comprehensive Family Immunization
Family, Gender and Life Course



Pan American
Health
Organization



World Health
Organization

REGIONAL OFFICE FOR THE Americas

preface

It is with a sad heart that I write the preface to this year's data brochure "Immunization in the Americas." On 28 May 2014, Dr. Ciro de Quadros, considered by many as the father of the Expanded Program on Immunization (EPI) in the Americas, passed away. Since being appointed as Head of the Immunization Program at the Pan American Health Organization (PAHO) in 1977, Dr. de Quadros oversaw the implementation of the regional EPI. During his tenure at PAHO, he led the polio and measles elimination initiatives. Understanding the importance of monitoring program performance and of providing timely feedback to countries and the local levels, Dr. de Quadros not only developed acute flaccid paralysis (AFP) surveillance and the regional measles surveillance network, including the set-up of the regional laboratory networks, but also introduced mechanisms for data collection and dissemination, and created the weekly surveillance bulletins and PAHO's flagship publication, the *Immunization Newsletter* (formerly the *EPI Newsletter*). In the same spirit, since 2005, PAHO has been sharing data on EPI performance through the annual publication of "Immunization in the Americas."

Since the inception of the Decade of Vaccines (DoV) initiative and implementation of the DoV's framework, the Global Vaccine Action Plan (GVAP)—another legacy of Dr. de Quadros—monitoring and evaluation have been the focal actions of the global immunization community. The GVAP was endorsed by all Member States of the World Health Organization at the 2012 World Health Assembly (WHA) and annual progress reports were presented to the WHA in 2013 and 2014. The last report highlighted issues related to the availability and quality of the data needed to monitor the achievement of GVAP goals and strategic objectives. During the 2014 WHA, several countries voiced their concern about immunization data. Countries from the Americas not only shared the same concerns about data quality, but also described the steps they are taking to improve data quality and immunization monitoring.

Immunization data quality is a priority for the countries of the Americas and PAHO. In our Region, this issue was first discussed formally by ministers of health in 2002, within the context of a regional resolution on vaccines and immunization approved by PAHO's Directing Council. That same year, PAHO's Technical Advisory Group (TAG) on vaccine-preventable diseases issued recommendations on data quality, urging countries to regularly assess EPI data quality within the context of regular ongoing supervisory activities and to strengthen data analysis capabilities. In its recommendations, the TAG also called for the dissemination of data assessment tools being developed by PAHO in collaboration with its Member States for local adaptation and use. To date, several Latin American and Caribbean countries have conducted immunization data quality assessments and included activities to strengthen data quality in their national EPI plans of action.

I present to you this year's edition of "Immunization in the Americas" highlighting the importance of immunization data quality. This year's brochure likewise pays tribute to Dr. Ciro de Quadros' historic achievements in immunization and public health and his enduring legacy.



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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.

reported immunization coverage

	11	12	13	14	15	16	17	18	19	20	21	22
	percentage of coverage										% of municipalities w/ coverage level ≥ 95% DTP3	total number of districts/municipalities
	< 1 year of age							1 year of age		MMR2 ^l		
	BCG	polio3	DTP1	DTP3 + Hib3	DTP1-3 Dropout Rate	rotavirus	PCV3	DTP4	MMR1		2013	2013
The Americas	93	90	75	90		80	89	81	92	71	45	
North America		93	98	94		69	91		91	82		
Bermuda	NA	81	98	81	17.3	NA	100	...	95	82	...	NA
Canada ^a	NA	96	...	96	...	NA	77	...	95	...	...	13 ^m
United States of America ^b	NA	93	98	94 ^f	4.1	69	92	...	91	...	...	51 ⁿ
Latin America and the Caribbean	93	89	66	88		84	87	81	92	71	45	
Latin America	93	89	66	88		84	88	81	92	70	45	
Mexico	91	83	90	83	6.8	81	84	80	89	76	28	32 ⁿ
Central American Isthmus	89	88	95	88		87	92	81	90	83	42	1,213
Belize	99	95	96	95	0.8	NA	NA	91	99	92	67	6
Costa Rica	79	95	94	95	-0.8	NA	...	...	91	91	64	81
El Salvador	90	90	91	92	-0.8	92	...	...	94	87	50	262
Guatemala	88	84	97	85	12.6	81	...	73	85	NA	30	334
Honduras	87	87	88	87	1.2	87	87	91	89	NA	28	298
Nicaragua	100 ^c	100 ^c	100 ^c	100 ^c	0.3	100 ^c	100 ^c	95	100 ^c	NA	80	153
Panama	94	80	93	80	7.6	87	...	...	92	68	23	79
Latin Caribbean	88	90	91	87		68	87	85	85	100	51	463
Cuba	100	99 ^g	95	100	-0.5	NA	NA	100 ^c	100 ^c	100 ^c	88	168
Dominican Republic	98	82	91	83	9.7	68	NA	77	83	NA	25	155
French Guiana	...	...	...	...	...	NA	...	...	...	...	...	...
Guadeloupe	...	...	...	...	...	NA	...	...	...	...	...	...
Haiti	75	92	90	85 ^h	5.3	NA	NA	NA	80	NA	38	140
Martinique	...	...	...	...	...	NA	...	...	...	...	...	...
Puerto Rico	...	...	...	...	...	NA	...	...	...	...	...	...
Andean Area	90	83	90	87		83	87	86	89	59	25	3,855
Bolivia	85	80	86	80	7.0	77	NA	...	83	NA	22	337
Colombia	85	91	89	91	-1.9	87	87	87	92	68	27	1,122
Ecuador	90	87	87	87	0.0	83	90	79	97	83	21	223
Peru	95	71	97	88	8.8	86	85	...	85	54	26	1,838
Venezuela	95	82	90	82	9.2	77	NA	88	85	38	21	335
Brazil	100 ^c	99	...	95	...	89	93	...	100 ^c	...	59	5,567
Southern Cone	96	86	91	86		70	80	73	89	77	47	1,376
Argentina	100	87	94	87	6.7	NA	81	75	91	79	45	511
Chile	98	90	92	91	1.1	NA	79	...	90	78	20	346 ^d
Paraguay	73	71	73	73	0.0	70	73	62	75	64	12	241
Uruguay	98	95	98	95	3.6	NA	93	...	96	92	84	278
Non-Latin Caribbean	94	91	94	94		93	79	84	94	79	65	215
Anguilla	95	69	100 ^c	100 ^c	0.0	NA	NA	88	96	91	100	3
Antigua and Barbuda	NA	98	98	99	-1.0	NA	NA	...	100 ^c	87	73	15
Aruba	NA	...	...	...	...	NA	NA	...	...	...	...	...
Bahamas, The	NA	97	100	97	3.4	NA	97	89	92	69	71	45
Barbados	NA ^d	88 ^d	...	87 ^d	...	NA	NA	...	90 ^d	90 ^d	...	8 ^d
BES*	...	...	...	...	...	NA	NA	...	...	...	...	...
Cayman Islands	74	95	...	95	...	73	92	...	85	...	...	6
Curaçao	NA	95	97	95	2.1	NA	93	...	93	93	...	...
Dominica	97	96	98	97	1.4	NA	NA	92	93	91	71	7
Grenada	NA	100 ^c	99	100 ^c	-1.0	NA	NA	89	98	85	43	7
Guyana	98	98	98	98	0.5	94	96	...	100	95	54	13
Jamaica	93	86	92	93	-1.2	NA	70	88	94	71	46	13
Montserrat	100 ^d	94 ^d	100 ^d	94 ^d	...	NA ^d	NA	100 ^d	100 ^d	100 ^d	...	4 ^d
Saint Kitts & Nevis	94	97	84	97	-19.3	NA	NA	...	99	94	76	17
Saint Lucia	100 ^c	100 ^c	100 ^c	100 ^c	-1.3	NA	NA	85	100 ^c	62	61	36
St. Vincent and the Grenadines	96	100	96	100	-6.5	NA	NA	100	100	96	89	9
Sint Maarten (Dutch part)	NA	90 ^c	92	92 ^c	5.3	NA	80	78	90	88	...	1
Suriname	NA	87	91	87	4.8	NA	NA	56	93	...	30	10
Trinidad and Tobago	NA	94	94	92	2.0	NA	80	...	91	86	67	9
Turks and Caicos Islands	96	100 ^c	93	100	-7.5	NA	NA	...	99	60	100	4
Virgin Islands (UK)	97	84	82	85	12.2	NA	NA	...	93	77	...	8
Virgin Islands (US)	...	...	...	...	...	...	...	...	...	...	...	...

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

(a) < 2 years of age; (b) children aged 19-35 months; (c) reported coverage > 100%; (d) value 2012; (e) polio 2, as per country schedule; (f) DTP3, Hib not included; (g) no data but in schedule;

(h) DTP-Hib-HepB introduced in 2012; (i) 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				
	2013	2013	2013	2013	2013	2013	2013	2013	2013	2013	2013	2013
The Americas	0	490	11	1	20	359	85	470	42,058	5	303	16,578
North America	0	269	11	1	0	1	1	28	17,084	0	139	507
Bermuda	0	0	0	0	0	0	0	0	0	0	0	0
Canada	0	82	2	0	...	1	1	2	1,261	0	40	92
United States of America	0	187	9	1	0	...	...	26	15,823	0	99 ^b	415
Latin America and the Caribbean	0	221	0	0	20	358	84	442	24,974	5	164	16,071
Latin America	0	221	0	0	20	356	84	440	24,968	5	164	16,071
Mexico	0	0	0	0	0	15	5	20	961	0	1	0
Central American Isthmus	0	0	0	0	0	13	7	20	172	0	4	632
Belize	0	0	0	0	0	0	0	0	6	0	0	0
Costa Rica	0	0	0	0	0	1	0	1	58	0	3	0
El Salvador	0	0	0	0	0	3	1	4	7	0	1	274
Guatemala	0	0	0	0	0	1	1	2	34	0	0	0
Honduras	0	0	0	0	0	8	4	12	25	0	0	158
Nicaragua	0	0	0	0	0	0	1	1	0	0	...	35
Panama	0	0	0	0	0	0	0	0	42	0	0	165
Latin Caribbean	0	0	0	0	15	53	4	57	17	0	9	498
Cuba	0	0	0	0	0	2	0	2	0	0	3	0
Dominican Republic	0	0	0	0	0	51	4	55	17	0	3	498
French Guiana	0	...	...	...	...	...	...	...	...	...	...	...
Guadeloupe	0	...	...	...	...	...	...	...	...	...	...	...
Haiti	0	0	0	0	15	...	...	0	0	0	3	NR
Martinique	0	...	...	...	...	...	...	...	...	...	...	...
Puerto Rico	0	...	...	...	...	...	...	...	...	...	...	...
Andean Area	0	1	0	0	2	81	21	102	15,127	1	30	9,971
Bolivia	0	0	0	0	0	0	0	0	31	0	0	764
Colombia	0	1	0	0	0	26	5	31	13,682	0	29	7,884
Ecuador	0	0	0	0	0	20	7	27	35	0	0	1,308
Peru	0	0	0	0	1	29	6	35	1,373	1	0	0
Venezuela	0	0	0	0	1	6	3	9	6	0	1	15
Brazil	0	220	0	0	3	175	38	213	5,211	4	89	...
Southern Cone	0	0	0	0	0	19	9	28	3,480	0	31	4,970
Argentina	0	0	0	0	0	6	5	11	1,112	0	26	3,772
Chile	0	0	0	0	0	7	3	10	1,964	0	1	821
Paraguay	0	0	0	0	0	6	0	6	81	0	1	172
Uruguay	0	0	0	0	0	0	1	1	323	0	3	205
Non-Latin Caribbean	0	0	0	0	0	2	0	2	6	0	0	0
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	...	...	...	...	...	...	...	...	...	...	...
Bahamas, The	0	0	0	0	0	0	0	0	0	0	0	0
Barbados	0	0	0	0	0	0	0	0	0	0	0	0
BES*	0	...	...	...	...	...	...	...	...	...	...	...
Cayman Islands	0	0	0	0	0	0	0	0	0	0	0	0
Curaçao	0	0	0	0	0	0	0	0	1	0	0	0
Dominica	0	0	0	0	0	1	0	1	0	0	0	0
Grenada	0	0	0	0	0	0	0	0	0	0	0	0
Guyana	0	0	0	0	0	0	0	0	0	0	0	0
Jamaica	0	0	0	0	0	1	0	1	2	0	0	0
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
St. Vincent and the Grenadines	0	0	0	0	0	0	0	0	0	0	0	0
Sint Maarten (Dutch part)	0	0	0	0	0	0	0	0	0	0	0	0
Suriname	0	0	0	0	0	0	0	0	3	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
Virgin Islands (US)	0	...	...	...	...	...	...	...	...	...	...	...

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

(a) imported or related to importations; (b) invasive disease (Age < 5 years).

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
		2013	2013	2013	2013	2013	2013	2013
The Americas								
North America								
Bermuda	no	3	...	no	yes	40	100	yes
Canada	2004-2009	3	...	...	yes	...	...	...
United States of America	2010-2020 ^a	3	...	...	yes ^d	...	...	...
Latin America and the Caribbean								
Latin America								
Mexico	2013-2018	2	2,432 ^a	yes	yes	100 ^a	100 ^a	yes ^a
Central American Isthmus								
Belize	2015	no ^a	3	yes	yes	98	84	no
Costa Rica	no	9	...	yes	yes	100	88	yes
El Salvador	2009-2014	3	262	yes	yes	100	98	yes
Guatemala	no	9	...	yes ^d	yes	100	90	yes
Honduras	2011-2015	3	200	yes	yes	67	79	yes
Nicaragua	2009-2015	1	153	yes	yes	74	45	yes
Panama	no	10	27	yes	yes	87	40	yes ^d
Latin Caribbean								
Cuba	2012-2016	3	168	yes	yes	99	82	yes
Dominican Republic	no	no ^a	155	no	yes	99	97	yes
French Guiana	...	...	...	...	...	...	...	...
Guadeloupe	...	...	...	...	...	...	...	...
Haiti	2011-2015	no ^a	2	yes	yes	...	...	no
Martinique	...	...	...	...	...	...	...	...
Puerto Rico	...	...	...	...	...	...	...	...
Andean Area								
Bolivia	2011-2015	6	110	yes	yes	99	79	yes
Colombia	2014-2019	3	1,122	yes	yes	100	88	no
Ecuador	2015	1	25	no	yes	100	95	yes
Peru	no	12	...	yes	yes	100	100	yes
Venezuela	2013-2018	no ^a	366 ^a	no	yes	100	81	yes
Brazil	2011-2016	2	5,565 ^a	yes	yes	100	97	yes
Southern Cone								
Argentina	2011-2016	3	511	yes	yes	60	95	yes
Chile	no	6 ^a	...	yes	yes	100	95	yes
Paraguay	2012-2016	12	117	yes	yes	99 ^a	100 ^a	yes ^a
Uruguay	2010-2015	3	278	...	yes	100	99	yes
Non-Latin Caribbean								
Anguilla	2013-2014 ^a	no ^a	3	yes	yes	43	100	yes
Antigua and Barbuda	no ^a	no	7	yes ^a	yes ^a	93 ^a	100 ^a	yes
Aruba	no	no ^a	...	...	...	...	...	...
Bahamas	2010-2020 ^a	no ^a	52 ^a	yes	yes	100	95	yes
Barbados	no	no ^a	...	...	...	...	...	yes ^d
BES*	...	...	...	no ^a	no ^a	100 ^a	100 ^a	yes ^d
Cayman Islands	no	1	...	no	yes	100	62	...
Curaçao	...	...	...	...	...	100	34	yes
Dominica	no	no ^a	7	yes	yes	91	95	yes
Grenada	2013-2014	no ^a	25	yes	no	92	68	yes
Guyana	2006-2015	3	13	yes	yes	79	38	yes
Jamaica	no ^a	no ^a	13	yes	yes	100	100	yes
Montserrat	no	no ^a	...	yes ^a	...	...	...	...
Saint Kitts & Nevis	...	no ^a	17	yes ^a	yes ^a	100	100	yes ^a
Saint Lucia	2014-2015	no ^a	2	no	yes	99	100	no
St. Vincent and the Grenadines	no	no ^a	9	yes	yes	100	98	yes
Sint Maarten (Dutch part)	no	2 ^a	...	...	no	100	68	yes
Suriname	no	11	...	yes	yes	95	98	yes
Tinidad and Tobago	2013-2014	no ^a	9 ^a	yes	no	95	100 ^a	yes
Turks and Caicos	no	no ^a	4	no	no	...	43	no
Virgin Islands (UK)	2014	no ^a	8	yes	yes ^a	100	99	yes
Virgin Islands (US)	...	...	...	...	...	...	...	...

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

(a) value 2012.

surveillance indicators

Surveillance Indicators Acute Flaccid Paralysis (AFP), 2013

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	181	1.78	48	74	645	82
Bolivia	50	1.38	96	86	2,997	80
Brazil	432	0.92	94	69	3,435	91
Canada	30	0.53	0	20	NR	NR
CAREC	18	0.89	28	50	567	62
Chile	75	1.94	96	80	338	96
Colombia	147	1.14	37	76	5,573	94
Costa Rica	19	1.66	53	89	70	...
Cuba	16	0.84	100	69	150	90
Dominican Republic	35	1.06	6	80	251	79
Ecuador	21	0.49	0	38	2,401	...
El Salvador	69	4.98	38	81	140	...
Guatemala	32	0.54	0	81	220	13
Haiti	27	0.67	81	44	128	66
Honduras	50	1.58	51	92	449	93
Mexico	542	1.59	48	77	320	...
Nicaragua	20	0.99	70	85	185	100
Panama	12	1.20	75	67	308	82
Paraguay	18	0.83	72	61	921	89
Peru	83	0.99	61	63	7,314	...
Uruguay	2	0.26	0	100	155	...
United States of America	NR	NR	NR	NR	NR	NR
Venezuela	67	0.79	94	69	13,092	...
TOTAL/AVERAGE	1,946	1.16	61	73	39,659	--

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

Measles/Rubella Surveillance Indicators, 2013

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	335	13	91	67	50	0.81	1.67
Bolivia	190	99	98	86	91	1.78	0.80
Brazil	6,015	99	74	74	55	3.00	0.48
CAREC	349	12	90	20	94	4.73	0.00
Chile	174	53	84	91	95	0.99	4.65
Colombia	2,432	76	94	90	95	5.03	3.87
Costa Rica	29	28	72	72	59	0.60	0.00
Cuba	1,137	100	100	100	100	10.18	0.00
Dominican Republic	94	24	97	74	63	0.90	0.00
Ecuador	...	...	...	...	...	...	...
El Salvador	331	66	95	71	80	5.22	0.00
French Guiana	1	...	...	...	...	0.40	0.00
Guadeloupe	2	...	...	...	...	0.43	0.00
Guatemala	317	1	90	68	83	2.05	0.10
Haiti	372	91	99	87	82	3.61	1.89
Honduras	149	51	96	68	98	1.73	3.25
Martinique	0	...	...	...	...	0.00	0.00
Mexico	4,795	98	...	...	...	3.92	0.00
Nicaragua	185	91	99	89	73	3.04	2.68
Panama	155	83	100	69	89	4.01	0.27
Paraguay	461	85	95	94	90	6.78	0.12
Peru	476	91	96	79	46	1.57	0.00
Uruguay	7	86	86	86	71	0.21	0.00
Venezuela	575	82	97	55	47	1.89	0.05
TOTAL/AVERAGE	18,581	88	86	78	71	3.03	0.84

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

technical notes and data sources

Main Data Sources

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

Demographic data: United Nations Secretariat, Population Division. World Population Prospects: The 2012 Revision. New York; 2013. US Bureau of the Census. International Database. Update for countries/territories with population under 300,000 inhabitants. Last accessed on 6 June 2014 at www.census.gov/population/international/data/idb/informationGateway.php. Women of childbearing age includes women aged 15 to 49 years.

Infant mortality rate (1,000 lb) or number of deaths (N): As reported or estimated by countries. Infant mortality rate as reported by the country (ECU, PRY) present limitations due to the coverage of deaths of infants < 1 and the number of live births. 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. The estimates of the national health expenditure refer to the Health Accounts used by WHO and OCED that are organized by function of health, providers and financing schemes. For more information, please go to: <http://apps.who.int/nha/database/DocumentationCentre/Index/en>. Online tool for basic health indicators, Washington DC, 2014. Update: 16 May 2014.

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); 2014.

Morbidity: Annual country reports to IM/PAHO via JRF, vaccine-preventable disease specific surveillance reports for measles/rubella and polio; 2013-2014.

Surveillance indicators: Vaccine-preventable disease specific surveillance reports for measles/rubella and acute flaccid paralysis/polio to IM/PAHO; 2013-2014.

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); (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 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.

Country codes: (BOL) Bolivia; (BRA) Brazil; (CHL) Chile; (COL) Colombia; (ECU) Ecuador; (SLV) El Salvador; (GUT) Guatemala; (GUY) Guyana; (HTI) Haiti; (HND) Honduras; (NIC) Nicaragua; (PAN) Panama; (PRY) Paraguay; (PER) Peru; (SUR) Suriname; (VCT) St. Vincent and 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, the last dose of rotavirus vaccine (2nd or 3rd dose depending on the vaccine used) and the third dose of PCV, 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 $\geq 100\%$ are presented as 100% with a footnote. Subregional aggregated data express average values weighted by population aged <1 year, when a figure is available.

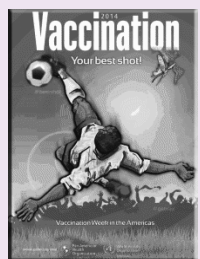
Drop-out rate DTP1-DTP3: Number of DTP1 doses minus the number of DTP3 doses (among children aged <1 year) divided by the number of DTP1 doses, expressed as a percentage.

Municipalities reaching coverage $\geq 95\%$ for DTP3: Proportion of 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.

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:

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.
- **XXII 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 XXII TAG meeting held in July 2014 in Washington, DC, USA is now available in English and Spanish.
- **Evidence base for new vaccine introduction in Latin America and the Caribbean:** The special supplement to the journal Vaccine, contains recent research developed by the ProVac Network of Centers of Excellence aimed at closing the evidence gap for new vaccine introduction.
- **Toolbox for the Integrated Monitoring of Coverage of Vaccination, Preventive Chemotherapy for Soil-transmitted helminthiasis, Vitamin A Supplementation and Other Public Health Interventions among children <15 years.** These modules were developed jointly between PAHO/WHO Units of Immunization and Neglected Tropical Diseases and validated in Nicaragua (November 2013). They organize different methodologies, tools and experiences used in countries of the Americas for analyzing and monitoring coverage with integrated interventions (preventive chemotherapy (PC) for soil-transmitted helminthiasis, vitamin A supplementation, and other public health interventions) aimed at improving the health of children <15 years of age.
- **Tools to facilitate the introduction of the inactivated polio vaccine:** Available on the Web in English and Spanish.
- **Measles/Rubella and Polio Bulletins:** Weekly epidemiological surveillance bulletins.

- 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 2013. NITAGs provide recommendations on immunization practices, including advice on vaccines to be included into the national immunization schedule.
- Number of districts with at least one supervisory visit: immunization supervision including all or most aspects of the program, the supervisions of the local level are generally done by region/department/state or national level
- Plan for immunization injection safety: the existence of a plan to ensure the safety 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-diems of health staff working full-time on immunization, transport, vehicles and

Id 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 the Health Information and Analysis Unit, Department of Communicable Diseases and Health Analysis (HA/CHA), Pan American Health Organization.

Seasonal Influenza Vaccine Use in the Americas, 2013

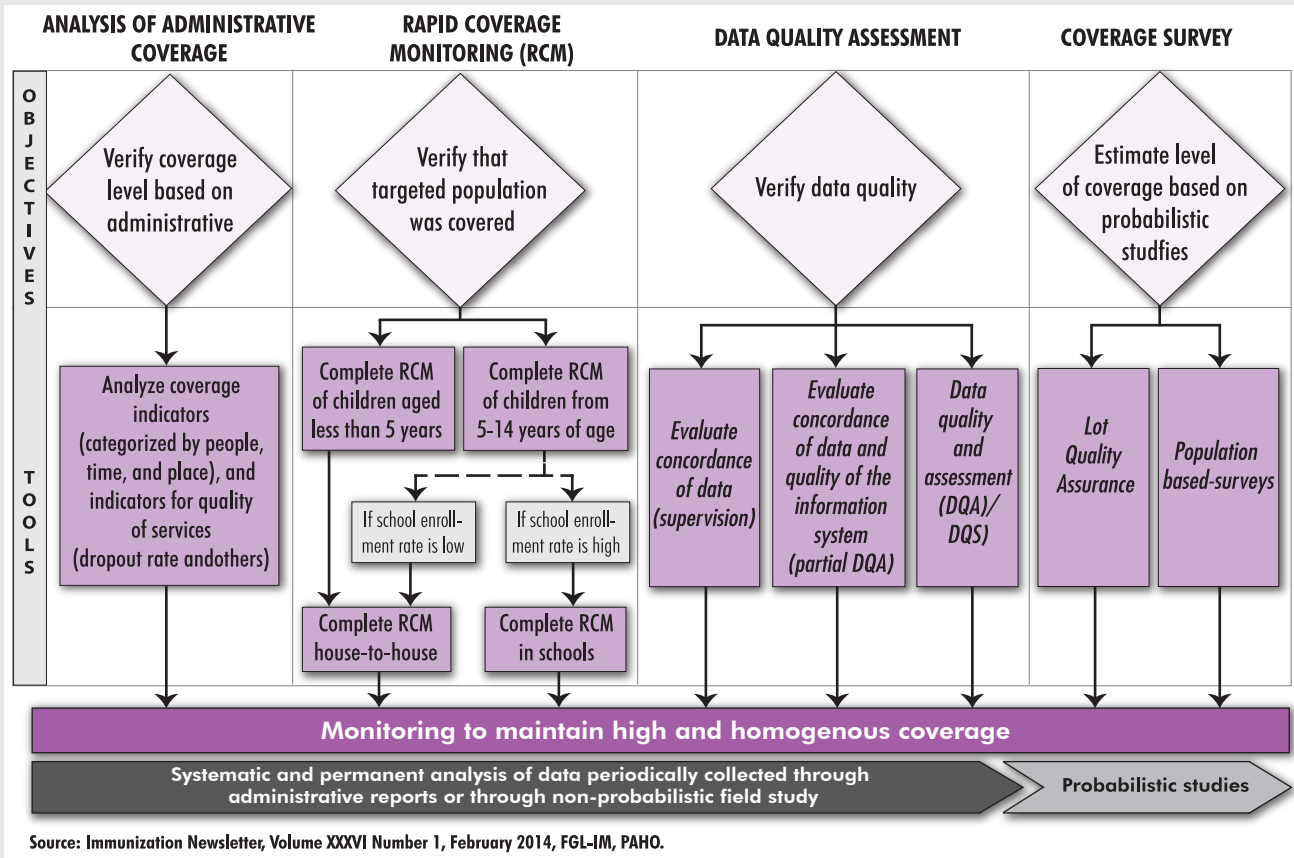
Country	Children		Older Adults		Other Risk Groups			All ages
	Schedule	Coverage (%)	Schedule	Coverage (%)	Health Workers	Chronic Disease	Pregnant Women	
Anguilla	NA	NA	≥65y	NA	NA	NA	NA	
Antigua and Barbuda	6m-35m	...	≥65	...	...	...	...
Argentina	6m-23m	78	≥60y	98	96	97	97	
Aruba	6m-18y ^a	...	≥60y ^a	...	✓	✓	✓	
Bahamas	6m-18y	12	≥50y	...	✓ ^f	✓ ^f	✓ ^f	yes
Barbados	...	...	✓	...	✓	...	...
Belize	6m-23m	75	≥65y	8	28	✓	...	
Bermuda	6m-18y	...	≥50y	...	✓	✓	✓	yes
BES*	6m-18y ^a	...	≥60y ^a	...	✓	✓	...	
Bolivia	6m-23m	65	≥65y	84	✓	✓	45	
Brazil	6m-23m	98	≥60y	88	100 ^e	✓	85	
Canada	6m-59m	45	≥50y	...	✓	✓	✓	
Cayman Islands	6m-18y	...	≥50y	...	✓	✓	✓	yes
Chile	6m-23m	91	≥65y	76	100 ^e	100 ^e	100 ^e	
Colombia	6m-23m	67	≥50y	71	✓	✓	55	
Costa Rica	6m-23m	100 ^e	≥65y	70	64	37	95	
Cuba	**	**	≥65y	100	100 ^e	96	89	
Curaçao	6m-18y ^a	...	≥60y ^a	...	...	✓	...
Dominica	6m-<9y	34	≥65y	49	37	✓	3	
Dominican Republic	6m-23m	13	≥50y	82	✓	✓	17	
Ecuador	6m-18y	81	≥65y	75	100 ^e	✓	73	
El Salvador	6m-35m	14	≥60y	5	✓	✓	90	
Grenada	6m-18y	...	≥50y	...	✓	✓	✓	yes
Guatemala	6m-59m	...	≥60y	...	✓	✓	...	
Guyana	NA	NA	NA	NA	NA	NA	NA	
Haiti	NA	NA	NA	NA	NA	NA	NA	
Honduras	6m-18y ^b	...	≥60y	100 ^e	100 ^e	100 ^e	NA	
Jamaica	6m-35m ^b	28 ^b	...	...	38	28	...	
Mexico	6m-5y	90	≥60y	95	100	✓	100	
Montserrat	NA	NA	NA	NA	NA	NA	NA	
Nicaragua	6m-23m ^b	95 ^b	≥50y ^b	99 ^b	✓	97	97	
Panama	6m-59m	68	>60y	63	87	98	33	
Paraguay	6m-35m ^c	46	≥60y	41	78	100 ^e	32	
Peru	6m-23m ^d	37	≥65y	42	✓	49	✓	
St. Kitts and Nevis	NA	NA	NA	NA	NA	NA	NA	
St. Lucia	NA	NA	≥50y	...	✓	✓	NA	
St. Vincent and the Grenadines	NA	NA	NA	NA	NA	NA	NA	
Sint Maarten**	6m-18y ^a	...	≥60y ^a	...	✓	✓	...	
Suriname	NA	NA	≥65y	...	✓	✓	✓	
Trinidad and Tobago	6m-18y	...	≥50y	...	✓ ^f	✓ ^f	✓ ^f	
Turks and Caicos	6m-18y	27	≥50y	...	...	NA	✓	
United States of America	>6m	57	≥50y	66	72	47	51	yes
Uruguay	6m-47m	23	≥65y	28	41	✓	22	
Venezuela	6m-11m	17	≥60y	9	78	✓	23	
Virgin Islands (UK)	NA	NA	NA	NA	✓	NA	27	

* Bonaire, St. Eustatius and Saba; ** Dutch part; *** Cuba did not vaccinate children in 2013.

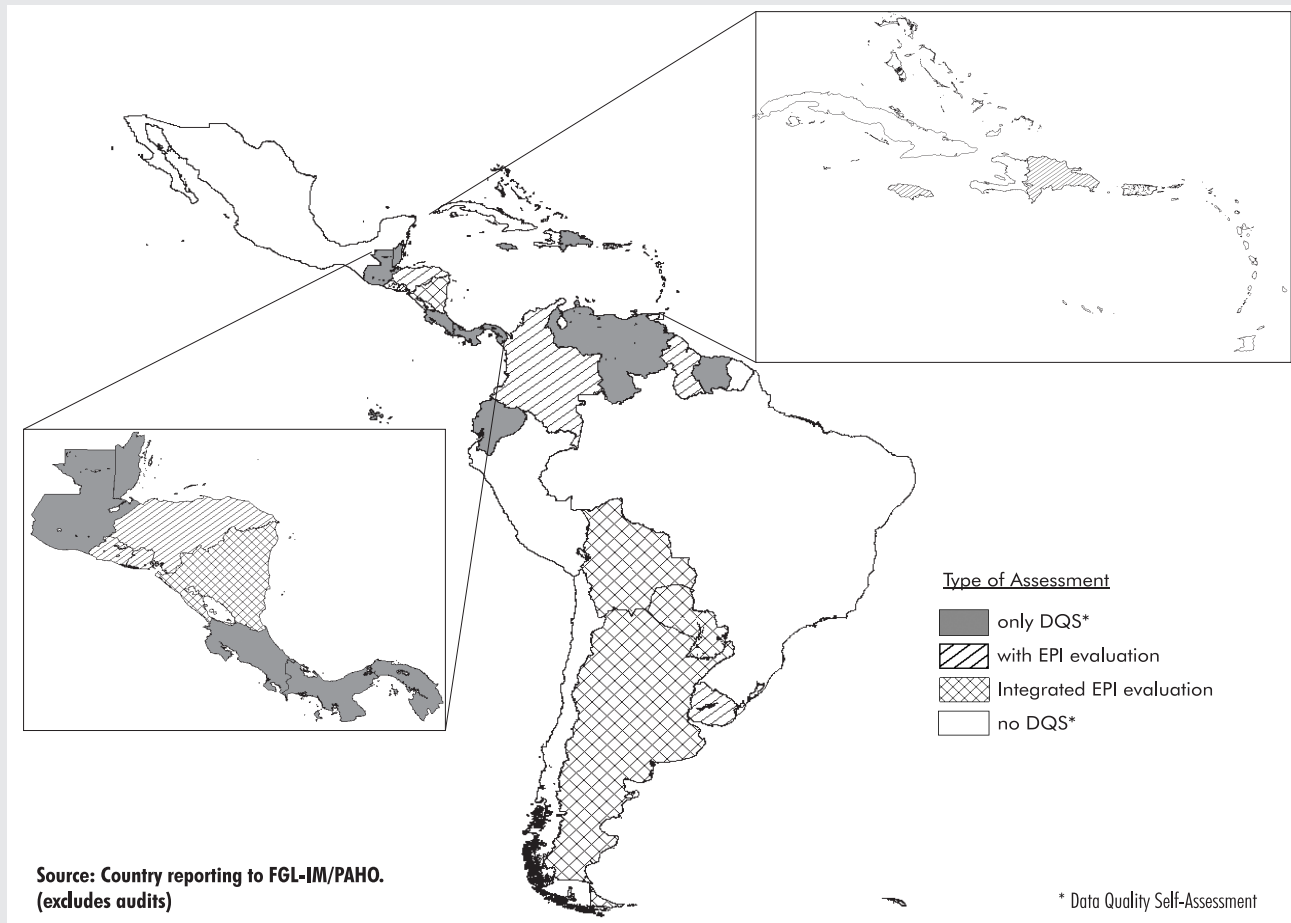
(a) value 2012; (b) with chronic disease; (c) includes chronic disease 36 months-18 years old; (d) chronic disease 24 months-18 years old; (e) reported coverage >100%; (f) not routinely given.

Source: Country reports through the PAHO-WHO/UNICEF Joint Reporting Form (JRF), 2014.

Methods to Monitor Coverage of Integrated Interventions



PAHO-Supported Data Quality Assessments (DQAs) Latin America and the Caribbean, 2005-June 2014




Description of Follow-up Campaigns Results in the Americas, 2009-2013

Country	Interventions	Age Groups (years)	Year of Campaigns	Population Reached	Population Targeted	Reported Coverage(%)
Argentina	MR	1-4	2009	2,766,691	2,814,607	98
Bolivia	MR	2-5	2011	691,291	917,546	75
Bolivia	MMR	1-4	2011-2012	859,785	917,546	93.7
Brazil	MMR	1-7	2011	16,813,465	17,094,519	98.4
Colombia	MR	1-8	2010	6,406,167	6,854,805	93.4
Colombia	MR	10-20	2011-2012	7,752,514	8,766,124	88
Costa Rica	MMR	15m-10	2011	585	630	93
Dominica	MMR	1-3	2013	1,433	1,839	78
Dominican R.	MMR	1-8	2010	1,579,280	1,503,901	100 ^b
Ecuador	MR /MMR	6m-14	2012	4,700,526	4,184,003	100
El Salvador	MMR	4,12 ^a	2012	230,661	251,057	91.9
Haiti	MR	9m-9	2012	2,963,911	2,522,396	100 ^b
Honduras	MMR	1-4	2012	696,712	847,407	82
Jamaica	MMR	1-10	2012	602	801	75
Mexico	MR	1-4	2010	7,563,521	7,303,032	100 ^b
Nicaragua	MR	1-4	2012	521,268	559,985	93.1
Paraguay	MR/MMR	1-8	2009	973,980	1,166,828	83
Peru	MR	1-4	2011	2,353,932	3,025,500	78
St. Kitts and Nevis	MMR	1-4	2011	2,359	2,100	100 ^b

(a) This campaign included only children 4 years old and 12 years old; (b) reported coverage >100%.

Source: Country reports to FGL-IM/PAHO.



PAN AMERICAN HEALTH ORGANIZATION
WORLD HEALTH ORGANIZATION

52nd DIRECTING COUNCIL
65th SESSION OF THE REGIONAL COMMITTEE

Washington, D.C., USA, 30 September-4 October 2013

CD52.R14 (Eng.)
ORIGINAL: ENGLISH

RESOLUTION
CD52.R14

EVIDENCE-BASED POLICY-MAKING
FOR NATIONAL IMMUNIZATION PROGRAMS

THE 52nd DIRECTING COUNCIL,

Having considered the document Evidence-based Policy-making for National Immunization Programs (Document CD52/9);

RESOLVES:

1. To urge Member States, as appropriate within their particular context, to:

(a) take note of the policy approaches described in Evidence-based Policy-making for National Immunization Programs, in order to, in collaboration with the Pan American Sanitary Bureau and other relevant stakeholders, consider:

i. promoting the formal establishment of and strengthening existing National Immunization Technical Advisory Groups or regional policy bodies that serve the same purpose, as is the case of the Caribbean Advisory Committee, which provides recommendations for the whole subregion;

ii. grounding immunization policy-making in a broad national evidence base comprising the technical, programmatic, financial, and social criteria necessary to make informed decisions;

iii. developing technical working groups, where a need is identified, to synthesize and/or generate locally derived evidence to inform the decision-making process; ...

Resolution CD52.R14 Evidence-based Policy-making for National Immunization Programs (Document CD52/9)

In 2013, the 52nd Directing Council passed Resolution CD52.R14. This resolution was built on three pillars:

- i. Expanding the evidence base beyond cost-effectiveness
- ii. Institutionalizing an evidence-based decision-making process for new vaccine introduction
- iii. Integrating policy-making and planning for National Immunization Programs

The Resolution highlights

- The formal establishment of and strengthening existing National Immunization Technical Advisory Groups (NITAGs)
- Supporting and strengthening PAHO's ProVac initiative

*To read the full resolution, go to:
<http://bit.ly/ProVacCDResolution>*

Epidemiological Surveillance Indicators for Diseases Preventable by New Vaccines in Reporting Countries, Latin America and the Caribbean, 2013

Rotavirus Surveillance, January-December 2013

Data and Indicators	BOL	CHL	COL	DOM	ECU	SLV	GTM	GUY	HTI	HND	NIC	PAN	PRY	PER	VCT	SUR	VEN	TOTAL
Number of hospitalizations <5 years	8,737	18,272	3,546	2,871	24,688	43,585	24,777	15,183	463	30,342	21,590	10,799	9,679	20,569	307	1,412	13,596	250,416
Number <5 years admitted to hospital for diarrhea	1,662	1,176	315	259	6,201	5,287	4,729	770	177	3,903	3,439	1,014	503	2,023	47	291	777	32,573
Number <5 years who meet the case definition	1,226	660	291	133	2,322	2,360	1,591	770	139	3,305	1,290	867	464	1,209	40	159	298	17,124
Number <5 years with epidemiological form and stool specimen	1,195	653	286	103	1,972	2,037	1,115	43	139	1,425	314	299	296	898	26	83	263	11,147
Positive cases of rotavirus	233	27	76	7	346	412	522	1	3	294	63	43	108	175	3	18	20	2,351
Deaths	40	0	0	4	88	0	0	1	0	3	0	0	3	2	0	0	0	141
% of positive cases of rotavirus	19%	4%	27%	7%	18%	20%	47%	2%	2%	21%	20%	14%	36%	19%	12%	22%	8%	21%

Bacterial Pneumonia Surveillance, January-December 2013

Data and Indicators	BOL	ECU	SLV	GTM	HND	NIC	PAN	PRY	PER	VEN	TOTAL
Number of hospitalizations <5 years	6,799	24,098	28,816	6,289	16,530	13,278	16,824	7,138	16,008	7,613	143,411
Number of suspected cases of pneumonia	1,452	4,751	4,514	1,498	1,644	3,097	2,907	585	2,193	744	23,385
Number of suspected cases with x-ray and epidemiological form	1,383	4,346	1,136	383	1,185	2,187	2,430	585	1,485	715	15,835
Number of probable cases of bacterial pneumonia	332	3,037	830	383	1,128	1,742	1,908	278	802	681	11,119
Probable cases with blood specimen	296	2,639	221	363	419	1,522	1,461	250	798	578	8,547
Probable cases with pleural fluid specimen	9	39	7	1	2	3	5	28	4	9	107
Confirmed cases of Hib	0	1	1	0	1	0	1	0	3	0	7
Confirmed cases of Hi (no b)	0	0	0	6	0	1	0	0	0	0	7
Confirmed cases of Spn	11	21	2	4	2	3	11	9	10	10	83
Confirmed cases caused by other bacteria	8	62	7	10	59	41	37	14	0	22	260
Contamination	1	14	4	11	0	119	NA	4	0	7	160
Deaths	19	30	7	68	63	34	12	6	3	0	242

Bacterial Meningitis Surveillance, January-December 2013

Data and Indicators	BOL	BRA	ECU	SLV	GTM	HND	NIC	PAN	PRY	PER	VEN	TOTAL
Number of hospitalizations <5 years	10,569	754,069	24,098	29,062	6,289	16,229	16,530	16,824	13,278	13,429	8,121	908,498
Number of suspected cases of meningitis	153	5,427	139	62	29	28	26	94	105	101	100	6,264
Number of suspected cases with cerebrospinal fluid test and epidemiological form	86	4,916	112	54	26	22	21	63	60	88	97	5,545
Number of probable meningitis cases	31	951	103	35	24	12	11	60	60	19	73	1,379
Confirmed cases of Hib	0	0	0	0	0	0	0	5	1	1	1	8
Confirmed cases of Hi (no b)	0	54	0	1	1	0	0	0	0	0	0	56
Confirmed cases of Nm	0	413	1	1	0	0	0	1	0	0	2	418
Confirmed cases of Spn	9	138	10	2	1	0	0	4	2	2	5	173
Confirmed cases caused by other bacteria	2	173	18	0	0	4	4	36	0	0	2	239
Contamination	0	0	7	0	0	0	0	NA	0	0	1	8
Deaths	9	130	1	0	0	0	3	6	0	0	1	150