

# Immunization in the Americas

## 2016 Summary

Comprehensive Family Immunization  
Family, Gender and Life Course



Pan American  
Health  
Organization



World Health  
Organization

REGIONAL OFFICE FOR THE Americas

# preface

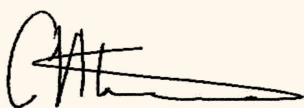
During the 54th meeting of the Pan American Health Organization's [PAHO] Directing Council in September 2015, Member States approved a resolution to adopt the Regional Immunization Action Plan [RIAP] as the guiding framework for immunization in the Americas. The RIAP aims to continue to build on the progress already achieved in the Region, as well as to identify and overcome immunization challenges currently faced by the countries of the Americas. The strategic lines of action of the RIAP include: a) protecting and sustaining current achievements; b) completing the unfinished agenda in order to prevent and control vaccine-preventable diseases; c) addressing new challenges in the introduction of vaccines and assessing their impact; and d) strengthening health services for effective vaccine administration.

During 2015 and 2016, all 32 countries in the Region of the Americas that had previously only used the oral polio vaccine [OPV] introduced at least one dose of the inactivated polio vaccine [IPV] into their routine immunization schedule. Between 17 April and 1 May 2016, 35 countries and one territory in the Americas switched from the trivalent oral polio vaccine [tOPV] to the bivalent oral polio vaccine [bOPV] in a closely coordinated global effort. The successful completion of the switch from trivalent to bivalent oral polio vaccine will be recorded in the annals of public health history as it represents a significant milestone on the road towards global polio eradication. This achievement is the cumulative result of a strong commitment from public health authorities, partner agencies and health workers in every region across the world.

In July 2016, the International Expert Committee [IEC] for Documenting and Verifying Measles, Rubella and Congenital Rubella Syndrome [CRS] Elimination in the Americas reviewed the epidemiological information, proving the absence of endemic transmission of the virus in Brazil and the country was declared as free of measles. Additionally, the ministries of health of all Member States submitted their national sustainability reports, with evidence that the interruption of endemic measles transmission has been maintained in their territories. These reports will be reviewed and approved by the IEC members, who may declare measles elimination in the Region of the Americas before the end of 2016.

According to country data reported to PAHO via the PAHO/WHO-UNICEF Immunization Joint Reporting Forms [JRF] for 2015, coverage in the Region of the Americas for DPT3 and the third dose of the polio vaccine among children less than one year old was 91% and 92%, respectively, while measles and rubella vaccination among children one year old was 93%. In 2015, 20 countries and territories reported a national coverage average of at least 95% with DPT3 among children less than one year old. Out of a total of nearly 15,000 municipalities in Latin America and the Caribbean, 8,456 [56%] reported vaccination coverage with DPT3 below 95%.

The coverage gaps among and within countries present real challenges. However, it is anticipated that the unflinching commitment of stakeholders, together with the integration of immunization with other primary care services, will improve access and reduce coverage gaps.



Carissa F. Etienne  
Director  
Pan American Health Organization

For this publication:

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

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

# demographic and socioeconomic data

|  | 1                               | 2   | 3                                       | 4  |         |         | 5  | 6  |                     | 7                 | 8  | 9    |                       | 10                     |
|--|---------------------------------|---|---|--|---------|---------|--|--|---------------------|-------------------|--|------|-----------------------|------------------------|
|  | total population<br>(thousands) | population<br><5 years old<br>(thousands) | annual births<br>average<br>(thousands) | infant mortality rate<br>(1,000 lb) or<br>number of deaths (N) |         |         | women of<br>childbearing<br>age<br>(thousands) | gross national income<br>(US\$ per capita) |                     | GINI<br>index     | national health expenditure<br>as a % of GDP |      | public<br>expenditure | private<br>expenditure |
|  |                                 |   |   | rate   | (N)     | year    |  | current<br>value                           | ppp<br>value        |                   | 2013   | 2014 |                       |                        |
| <b>The Americas</b>                    | 992,139                         | 75,136                                    | 15,251.7                                | 13.0   | 151,541 |         | 251,450  | 26,077                                     | 29,733              | 46.3              | ...  | ...  |                       |                        |
| <b>North America</b>                   | 357,887                         | 21,653                                    | 4,412.1                                 | 5.9  | 25,259  |         | 81,746   | 54,878                                     | 54,739              | 40.3              | 8.2  | 8.3  |                       |                        |
| Bermuda                                | 70                              | 4   | 0.8                                     | 1.7  | 1       | 2014    | 15   | 106,140 <sup>g</sup>                       | 66,560 <sup>g</sup> | ...               | ...  | ...  | ...                   | ...                    |
| Canada                                 | 35,940                          | 1,942                                     | 386.7                                   | 4.8  | 1,818   | 2012    | 8,314  | 51,630                                     | 44,350              | 33.7 <sup>i</sup> | 7.4  | 3.0  |                       |                        |
| United States of America               | 321,877                         | 19,707                                    | 4,024.6                                 | 6.0  | 23,440  | 2013    | 73,417   | 55,230                                     | 55,900              | 41.1              | 8.3  | 8.9  |                       |                        |
| <b>Latin America and the Caribbean</b> | 634,252                         | 53,483                                    | 10,839.6                                | 15.8   | 126,282 |         | 169,704  | 9,799                                      | 14,529              | 49.9              | ...  | ...  |                       |                        |
| <b>Latin America</b>                   | 627,051                         | 52,948                                    | 10,723.8                                | 15.9   | 124,531 |         | 167,813  | 9,834                                      | 14,586              | 49.9              | ...  | ...  |                       |                        |
| Mexico                                 | 127,017                         | 11,617                                    | 2,345.8                                 | 12.5 <sup>e</sup>  | 28,009  | 2014    | 34,528   | 9,870                                      | 16,840              | 48.1 <sup>k</sup> | 3.3  | 3.0  |                       |                        |
| <b>Central American Isthmus</b>        | 45,723                          | 4,789                                     | 986.3                                   | 17.5   | 10,227  |         | 12,324   | 4,454                                      | 8,395               | 50.1              | ...  | ...  |                       |                        |
| Belize                                 | 359                             | 39  | 8.2                                     | 16.8   | 125     | 2015    | 99   | 4,350 <sup>g</sup>                         | 7,590 <sup>g</sup>  | ...               | 3.9  | 1.9  |                       |                        |
| Costa Rica                             | 4,808                           | 350                                       | 69.8                                    | 7.8  | 557     | 2015    | 1,279  | 10,120                                     | 14,420              | 49.2              | 6.8  | 2.6  |                       |                        |
| El Salvador                            | 6,127                           | 520                                       | 105.3                                   | 10.2 <sup>a, f</sup>   | 1,167   | 2015    | 1,744  | 3,920                                      | 8,000               | 43.5              | 4.5  | 2.3  |                       |                        |
| Guatemala                              | 16,343                          | 2,089                                     | 437.7                                   | 19.0 <sup>a</sup>  | 7,342   | 2014    | 4,280  | 3,430                                      | 7,250               | 52.4 <sup>h</sup> | 2.3  | 3.9  |                       |                        |
| Honduras                               | 8,075                           | 816                                       | 168.9                                   | 24.0 <sup>d</sup>  | ...     | 2007-12 | 2,212  | 2,270                                      | 4,570               | 53.7              | 4.4  | 4.3  |                       |                        |
| Nicaragua                              | 6,082                           | 606                                       | 121.2                                   | 17.0 <sup>d</sup>  | ...     | 2005-10 | 1,687  | 1,870                                      | 4,790               | 45.7 <sup>m</sup> | 5.1  | 3.9  |                       |                        |
| Panama                                 | 3,929                           | 368                                       | 75.1                                    | 13.7 <sup>a</sup>  | 1,036   | 2014    | 1,023  | 11,130                                     | 19,930              | 51.7              | 5.9  | 2.2  |                       |                        |
| <b>Latin Caribbean</b>                 | 37,446                          | 3,192                                     | 654.2                                   | 32.8   | 5,436   |         | 9,540  | 5,777                                      | 12,398              | 54.0              | ...  | ...  |                       |                        |
| Cuba                                   | 11,390                          | 588                                       | 114.7                                   | 4.3  | 535     | 2015    | 2,755  | 5,880 <sup>h</sup>                         | 18,630 <sup>h</sup> | ...               | 10.6   | 0.5  |                       |                        |
| Dominican Republic                     | 10,528                          | 1,062                                     | 215.8                                   | 22.9 <sup>e</sup>  | 4,521   | 2015    | 2,738  | 6,040                                      | 12,600              | 47.1              | 2.9  | 1.5  |                       |                        |
| French Guiana                          | 269                             | 33  | 6.7                                     | 8.2 <sup>c</sup>   | 53      | 2012-14 | 68   | ...  | ...                 | ...               | ...  | ...  |                       |                        |
| Guadeloupe                             | 468                             | 31  | 6.1                                     | 8.4 <sup>c</sup>   | 44      | 2012-14 | 111  | ...  | ...                 | ...               | ...  | ...  |                       |                        |
| Haiti                                  | 10,711                          | 1,238                                     | 263.3                                   | 59.0 <sup>d</sup>  | ...     | 2007-12 | 2,853  | 820  | 1,730               | 60.8 <sup>k</sup> | 1.6  | 6.0  |                       |                        |
| Martinique                             | 396                             | 20  | 4.4                                     | 8.2 <sup>c</sup>   | 38      | 2010-12 | 90   | ...  | ...                 | ...               | ...  | ...  |                       |                        |
| Puerto Rico                            | 3,683                           | 221                                       | 43.2                                    | 7.1 <sup>b</sup>   | 245     | 2014    | 926  | 19,310 <sup>g</sup>                        | 23,960 <sup>g</sup> | ...               | ...  | ...  |                       |                        |
| <b>Andean Area</b>                     | 137,583                         | 12,514                                    | 2,544.8                                 | 18.7   | 25,337  |         | 36,713   | 8,008                                      | 12,939              | 48.9              | ...  | ...  |                       |                        |
| Bolivia                                | 10,725                          | 1,186                                     | 253.3                                   | 50.0 <sup>d</sup>  | 13,758  | 2003-08 | 2,748  | 2,870                                      | 6,290               | 48.1              | 4.6  | 1.8  |                       |                        |
| Colombia                               | 48,229                          | 3,738                                     | 746.6                                   | 17.3 <sup>e</sup>  | ...     | 2013    | 13,204   | 7,970                                      | 12,910              | 53.5              | 5.4  | 1.8  |                       |                        |
| Ecuador                                | 16,144                          | 1,610                                     | 330.8                                   | 8.4 <sup>a</sup>   | 2,821   | 2014    | 4,228  | 6,090                                      | 11,190              | 47.3              | 4.5  | 4.7  |                       |                        |
| Peru                                   | 31,377                          | 3,020                                     | 614.7                                   | 17.0 <sup>d</sup>  | ...     | 2010-14 | 8,310  | 6,360                                      | 11,440              | 44.7              | 3.3  | 2.2  |                       |                        |
| Venezuela                              | 31,108                          | 2,960                                     | 599.4                                   | 14.7   | 8,758   | 2013    | 8,224  | 12,500 <sup>k</sup>                        | 17,700 <sup>g</sup> | 46.9 <sup>n</sup> | 1.5  | 3.7  |                       |                        |
| <b>Brazil</b>                          | 207,848                         | 15,032                                    | 3,016.0                                 | 14.1 <sup>e</sup>  | 43,494  | 2014    | 56,749   | 11,790                                     | 15,570              | 52.9              | 3.8  | 4.5  |                       |                        |
| <b>Southern Cone</b>                   | 71,436                          | 5,803                                     | 1,176.9                                 | 10.3   | 12,028  |         | 17,958   | 13,130                                     | 18,133              | 44.9              | ...  | ...  |                       |                        |
| Argentina                              | 43,417                          | 3,718                                     | 753.4                                   | 10.6   | 8,202   | 2014    | 10,804   | 13,480                                     | ...                 | 42.3              | 2.7  | 2.1  |                       |                        |
| Chile                                  | 17,948                          | 1,170                                     | 234.2                                   | 7.2 <sup>b</sup>   | 1,823   | 2014    | 4,596  | 14,910                                     | 21,320              | 50.5              | 3.9  | 3.9  |                       |                        |
| Paraguay                               | 6,639                           | 674                                       | 140.6                                   | 14.5 <sup>a</sup>  | 1,636   | 2014    | 1,734  | 4,400                                      | 8,470               | 48.3              | 4.5  | 5.3  |                       |                        |
| Uruguay                                | 3,432                           | 241                                       | 48.6                                    | 7.5  | 367     | 2015    | 823  | 16,350                                     | 20,220              | 41.9              | 6.1  | 2.5  |                       |                        |
| <b>Non-Latin Caribbean</b>             | 7,200                           | 535                                       | 115.8                                   | 17.2   | 1,751   |         | 1,891  | 10,092                                     | 15,338              | ...               | ...  | ...  |                       |                        |
| Anguilla                               | 16                              | 1   | 0.2                                     | 12.1   | 2       | 2015    | 4  | ...  | ...                 | ...               | ...  | ...  |                       |                        |
| Antigua and Barbuda                    | 92                              | 7   | 1.5                                     | 13.8   | 17      | 2015    | 26   | 13,300                                     | 21,370              | ...               | 3.8  | 1.8  |                       |                        |
| Aruba                                  | 112                             | 7   | 1.4                                     | 1.8  | 2       | 2012    | 27   | ...  | ...                 | ...               | ...  | ...  |                       |                        |
| Bahamas                                | 388                             | 29  | 5.8                                     | 19.4   | 91      | 2014    | 106  | 20,980                                     | 22,290              | ...               | 3.6  | 4.2  |                       |                        |
| Barbados                               | 291                             | 17  | 3.5                                     | 11.6   | 34      | 2014    | 73   | 15,310 <sup>k</sup>                        | 15,190 <sup>k</sup> | ...               | 4.7  | 2.7  |                       |                        |
| BES*                                   | 0                               | 0   | 0.0                                     | ...  | ...     | ...     | ...  | ...  | ...                 | ...               | ...  | ...  |                       |                        |
| Cayman Islands                         | 56                              | 3   | 0.7                                     | -  | -       | 2015    | 14   | ...  | ...                 | ...               | ...  | ...  |                       |                        |
| Curaçao                                | 148                             | 10  | 2.1                                     | 11.3   | 23      | 2012    | 33   | ...  | ...                 | ...               | ...  | ...  |                       |                        |
| Dominica                               | 74                              | 6   | 1.1                                     | 19.7   | 17      | 2015    | 19   | 6,930                                      | 10,480              | ...               | 3.8  | 1.7  |                       |                        |
| Grenada                                | 111                             | 9   | 1.8                                     | 14.9   | 25      | 2015    | 27   | 7,910                                      | 11,720              | ...               | 2.8  | 3.3  |                       |                        |
| Guyana                                 | 767                             | 67  | 14.8                                    | 23.3 <sup>a</sup>  | 345     | 2014    | 194  | 3,940 <sup>g</sup>                         | 6,940 <sup>g</sup>  | ...               | 3.1  | 2.1  |                       |                        |
| Jamaica                                | 2,793                           | 204                                       | 48.2                                    | 19.1   | 706     | 2014    | 755  | 5,150                                      | 8,640               | 45.5 <sup>o</sup> | 2.8  | 2.6  |                       |                        |
| Montserrat                             | 5                               | 0   | 0.1                                     | 62.5   | 3       | 2015    | 2  | ...  | ...                 | ...               | ...  | ...  |                       |                        |
| Saint Kitts & Nevis                    | 52                              | 4   | 0.7                                     | 23.3   | 15      | 2014    | 14   | 14,920                                     | 22,600              | ...               | 2.1  | 2.9  |                       |                        |
| Saint Lucia                            | 164                             | 11  | 2.3                                     | 16.3   | 33      | 2014    | 44   | 7,260                                      | 10,540              | ...               | 3.6  | 3.1  |                       |                        |
| St. Vincent and the Grenadines         | 103                             | 7   | 1.4                                     | 15.5   | 29      | 2015    | 26   | 6,610                                      | 10,730              | ...               | 4.4  | 4.3  |                       |                        |
| Sint Maarten (Dutch part)              | 41                              | 3   | 0.5                                     | 16.0   | 8       | 2015    | 10   | ...  | ...                 | ...               | ...  | ...  |                       |                        |
| Suriname                               | 543                             | 48  | 9.7                                     | 15.9 <sup>a</sup>  | 159     | 2013    | 140  | 9,950                                      | 17,040              | ...               | 2.9  | 2.8  |                       |                        |
| Trinidad and Tobago                    | 1,360                           | 96  | 19.0                                    | 12.0 <sup>a</sup>  | 225     | 2014    | 353  | 20,070                                     | 31,970              | ...               | 2.9  | 2.8  |                       |                        |
| Turks and Caicos                       | 50                              | 4   | 0.8                                     | 2.3  | 1       | 2015    | 16   | ...  | ...                 | ...               | ...  | ...  |                       |                        |
| Virgin Islands (UK)                    | 33                              | 2   | 0.4                                     | 11.3   | 3       | 2015    | 10   | ...  | ...                 | ...               | ...  | ...  |                       |                        |

\* Bonaire, St. Eustatius, and Saba.

(a) see definitions on maternal and infant mortality; (b) preliminary; (c) average; (d) survey; (e) national estimate; (f) only public sector; (g) value 2013; (h) value 2011; (k) value 2012; (l) value 2010; (m) value 2009; (n) value 2006; (o) value 2004.

# 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 2015 |
|  | < 1 year of age        |                  |                    |                           |                           |                          |                  |                  | 1 year of age |                  |                        |   |
|  | BCG 2015               | HepB Birth 2015  | polio3 2015        | DTP1-vc <sup>f</sup> 2015 | DTP3-vc <sup>f</sup> 2015 | DTP1-3 Dropout Rate 2015 | rotavirus 2015   | PCV3 2015        | DTP4 2015     | MMR1 2015        | MMR2 <sup>k</sup> 2015 |   |
| <b>The Americas</b>                    | 97                     | 83               | 92                 | 97                        | 91                        | 6.4                      | 81               | 89               | 82            | 94               | 83                     | 44  |
| <b>North America</b>                   | NA                     | 72               | 93                 | 98                        | 94                        | 0.0                      | 72               | 92               | 84            | 91               | 84                     | 0   |
| Bermuda <sup>a</sup>                   | NA                     | ...              | 95                 | 95                        | 95                        | 0.0                      | ...              | 90               | 89            | 89               | 84                     | ...   |
| Canada <sup>a</sup>                    | NA                     | ...              | 91                 | ...                       | 91                        | ...                      | ...              | 91               | 77            | 90               | ...                    | 0   |
| United States of America <sup>b</sup>  | NA                     | 72               | 93                 | 98                        | 95                        | ...                      | 72               | 93               | 84            | 92               | ...                    | ...   |
| <b>Latin America and the Caribbean</b> | 97                     | 87               | 91                 | 96                        | 90                        | 6.4                      | 85               | 87               | 82            | 94               | 83                     | 44  |
| <b>Latin America</b>                   | 97                     | 87               | 91                 | 96                        | 90                        | 6.5                      | 85               | 87               | 82            | 94               | 83                     | 44  |
| <b>Mexico</b>                          | 100                    | 98               | 87                 | 100                       | 87                        | 12.6                     | 81               | 100 <sup>c</sup> | 88            | 100 <sup>c</sup> | 96                     | 20  |
| <b>Central American Isthmus</b>        | 94                     | 53               | 89                 | 98                        | 84                        | 14.9                     | 88               | 90               | 91            | 98               | 90                     | 39  |
| Belize                                 | 98                     | ...              | 94                 | 97                        | 94                        | 2.9                      | ...              | ...              | 86            | 96               | 95                     | 67  |
| Costa Rica                             | 83                     | ...              | 92                 | 93                        | 92                        | 0.8                      | ...              | ...              | ...           | 93               | 90                     | ...   |
| El Salvador                            | 100                    | 75               | 92                 | 93                        | 91                        | 1.8                      | 93               | 98               | 92            | 95               | 88                     | 47  |
| Guatemala                              | 89                     | 32               | 84                 | 100 <sup>c</sup>          | 74                        | 29.6                     | 79               | 82               | 86            | 99               | ...                    | 32  |
| Honduras                               | 100 <sup>c</sup>       | 83               | 99                 | 100 <sup>c</sup>          | 99                        | 2.8                      | 100              | 99               | 97            | 98               | ...                    | 59  |
| Nicaragua                              | 100 <sup>c</sup>       | ...              | 100 <sup>c</sup>   | 100 <sup>c</sup>          | 100 <sup>c</sup>          | 2.4                      | 100 <sup>c</sup> | 100 <sup>c</sup> | 99            | 100 <sup>c</sup> | ...                    | 73  |
| Panama                                 | 100                    | 85               | 72                 | 96                        | 73                        | 24.9                     | 87               | 92               | 91            | 100 <sup>c</sup> | 92                     | 14  |
| <b>Latin Caribbean</b>                 | 88                     | 86               | 85                 | 91                        | 82                        | 8.9                      | 68               | 22               | 81            | 81               | ...                    | 49  |
| Cuba                                   | 99                     | 99               | 98 <sup>a, e</sup> | 100 <sup>c</sup>          | 100 <sup>c</sup>          | 1.0                      | ...              | ...              | 95            | 100 <sup>c</sup> | 100 <sup>c</sup>       | 92  |
| Dominican Republic                     | 100 <sup>c</sup>       | 79               | 87                 | 99                        | 85                        | 14.3                     | 83               | 22               | 73            | 90               | ...                    | 29  |
| French Guiana                          | ...                    | ...              | ...                | ...                       | ...                       | 0.0                      | ...              | ...              | ...           | ...              | ...                    | ...   |
| Guadeloupe                             | ...                    | ...              | ...                | ...                       | ...                       | 0.0                      | ...              | ...              | ...           | ...              | ...                    | ...   |
| Haiti                                  | 72                     | ...              | 76                 | 79                        | 72                        | 8.6                      | 55               | ...              | NA            | 64               | ...                    | 19  |
| Martinique                             | ...                    | ...              | ...                | ...                       | ...                       | 0.0                      | ...              | ...              | ...           | ...              | ...                    | ...   |
| Puerto Rico                            | ...                    | ...              | ...                | ...                       | ...                       | 0.0                      | ...              | ...              | ...           | ...              | ...                    | ...   |
| <b>Andean Area</b>                     | 93                     | 84               | 88                 | 94                        | 88                        | 6.1                      | 86               | 73               | 70            | 92               | 70                     | 29  |
| Bolivia                                | 99                     | ...              | 88                 | 97                        | 89                        | 9.1                      | 89               | 86               | 58            | 95               | ...                    | 20  |
| Colombia                               | 90                     | 87               | 91                 | 93                        | 91                        | 1.6                      | 91               | 91               | 93            | 94               | 86                     | 34  |
| Ecuador                                | 88                     | 75               | 84                 | 80                        | 78                        | 2.6                      | 78               | 81               | 59            | 84               | 76                     | 11  |
| Peru                                   | 91                     | 79               | 88                 | 97                        | 90                        | 7.2                      | 87               | 90               | 72            | 92               | 63                     | 27  |
| Venezuela                              | 99                     | 89               | 87                 | 98                        | 87                        | 11.4                     | 84               | 24               | 50            | 92               | 52                     | 46  |
| <b>Brazil</b>                          | 100 <sup>c</sup>       | 91               | 98                 | 97                        | 96                        | 0.6                      | 94               | 94               | 86            | 96               | 80                     | 63  |
| <b>Southern Cone</b>                   | 97                     | 84               | 92                 | 94                        | 93                        | 1.1                      | 64               | 83               | 76            | 88               | 85                     | 53  |
| Argentina                              | 100 <sup>c</sup>       | 84               | 93                 | 94                        | 94                        | 0.3                      | 61               | 82               | 74            | 89               | 87                     | 63  |
| Chile                                  | 93                     | ...              | 96                 | 97                        | 96                        | 0.9                      | ...              | 90               | 90            | 96               | 89                     | 43  |
| Paraguay                               | 84                     | ...              | 80                 | 84                        | 80                        | 4.8                      | 79               | 75               | 64            | 66               | 66                     | 13  |
| Uruguay                                | 98                     | ...              | 95                 | 99                        | 95                        | 4.5                      | ...              | 94               | ...           | 95               | 88                     | 83  |
| <b>Non-Latin Caribbean</b>             | 96                     | 73               | 91                 | 92                        | 93                        | -1.4                     | 75               | 60               | 82            | 93               | 80                     | 56  |
| Anguilla                               | 100 <sup>c</sup>       | ...              | 100 <sup>c</sup>   | 100 <sup>c</sup>          | 100 <sup>c</sup>          | 7.4                      | ...              | ...              | 100           | 97               | 100 <sup>c</sup>       | 100   |
| Antigua and Barbuda                    | NA                     | ...              | 86                 | 100 <sup>c</sup>          | 100 <sup>c</sup>          | 3.1                      | ...              | ...              | 99            | 100 <sup>c</sup> | 0                      | 88  |
| Aruba                                  | NA                     | ...              | 92                 | 98                        | 92                        | 6.3                      | ...              | 93               | 91            | 92               | 92                     | 0   |
| Bahamas, The                           | NA                     | ...              | 95                 | 100                       | 95                        | 5.9                      | 10               | 95               | 91            | 94               | 76                     | 67  |
| Barbados                               | 38                     | ...              | 97                 | 96                        | 97                        | -1.4                     | ...              | 97               | 85            | 96               | 89                     | 60  |
| BES <sup>a</sup>                       | ...                    | ...              | ...                | ...                       | ...                       | 0.0                      | ...              | ...              | ...           | ...              | ...                    | ...   |
| Cayman Islands                         | 75                     | 85               | 93                 | 98                        | 93                        | 4.7                      | 79               | 92               | 79            | 81               | 93                     | 33  |
| Curacao                                | NA                     | ...              | ...                | ...                       | ...                       | 0.0                      | ...              | ...              | ...           | ...              | ...                    | ...   |
| Dominica                               | 100 <sup>c</sup>       | ...              | 98                 | 100                       | 98                        | 1.8                      | ...              | ...              | 93            | 96               | 94                     | 86  |
| Grenada                                | NA                     | 80 <sup>d</sup>  | 99                 | 94                        | 92                        | 1.9                      | ...              | ...              | 91            | 99               | 89                     | 57  |
| Guyana                                 | 99                     | ...              | 92                 | 96                        | 95                        | 1.1                      | 96               | 94               | ...           | 100 <sup>c</sup> | 95                     | 31  |
| Jamaica                                | 100                    | ...              | 91                 | 88                        | 91                        | -3.3                     | ...              | 35               | 80            | 91               | 83                     | 46  |
| Montserrat                             | 79                     | ...              | 100                | ...                       | 100                       | ...                      | ...              | ...              | 100           | 100              | 100                    | 100   |
| Saint Kitts & Nevis                    | 95                     | 100              | 91                 | 92                        | 94                        | -4.9                     | ...              | ...              | 85            | 95               | 90                     | 47  |
| Saint Lucia                            | 100 <sup>c</sup>       | ...              | 100 <sup>c</sup>   | 100 <sup>c</sup>          | 100 <sup>c</sup>          | 5.9                      | ...              | ...              | 83            | 97               | 95                     | 89  |
| St. Vincent and the Grenadines         | 100                    | 100 <sup>d</sup> | 100 <sup>c</sup>   | 100 <sup>c</sup>          | 100 <sup>c</sup>          | -6.3                     | ...              | ...              | 97            | 100 <sup>c</sup> | 99                     | 100   |
| Sint Maarten (Dutch part)              | NA                     | ...              | 100                | 97                        | 100                       | -2.4                     | ...              | 95               | 95            | 98               | 86                     | 100   |
| Suriname                               | NA                     | 65               | 89                 | 90                        | 89                        | 1.7                      | ...              | ...              | 64            | 94               | 28                     | 10  |
| Trinidad and Tobago                    | NA                     | ...              | 88                 | 91                        | 96                        | -5.4                     | ...              | ...              | 84            | 89               | 79                     | 44  |
| Turks and Caicos Islands               | 100                    | ...              | 94                 | 90                        | 94                        | -4.5                     | ...              | ...              | 89            | 95               | 85                     | 75  |
| Virgin Islands (UK)                    | 100 <sup>c</sup>       | ...              | 95                 | 97                        | 97                        | -0.3                     | ...              | ...              | 84            | 100              | 88                     | 25  |

\*Bonaire, St. Eustatius, and Saba.

(a) <2 years of age; (b) children aged 19-35; (c) reported coverage >100%; (d) given only if mothers are HepB+; (e) polio2, as per country schedule; (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.

# 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           |                     |                |                   |                  |
| 2015                                   | 2015                     | 2015               | 2015             | 2015           | 2015             | 2015                   | 2015   | 2015            | 2015                | 2015           | 2015              | 2015             |
| <b>The Americas</b>                    | 0                        | 613                | 3                | 2              | 22               | 421                    | 117    | 554             | 24,334              | 49             | 278               | 18,237           |
| <b>North America</b>                   | 0                        | 384                | 3                | 2              | 0                | 3                      | 1      | 20              | 16,407              | 3              | 60                | 495              |
| Bermuda                                | 0                        | 0                  | 0                | 0              | 0                | 0                      | 0      | 0               | 3                   | 0              | 0                 | 0                |
| Canada                                 | 0                        | 196 <sup>b</sup>   | 0                | 1              | 0                | 3                      | 1      | 4               | 3,510               | 3              | 31                | 65               |
| United States of America               | 0 <sup>a</sup>           | 188 <sup>b,c</sup> | 3 <sup>b,c</sup> | 1 <sup>c</sup> | ...              | ...                    | ...    | 16 <sup>a</sup> | 12,894 <sup>d</sup> | 0 <sup>a</sup> | 29 <sup>a,d</sup> | 430 <sup>d</sup> |
| <b>Latin America and the Caribbean</b> | 0                        | 229                | 0                | 0              | 22               | 418                    | 116    | 534             | 7,927               | 46             | 218               | 17,742           |
| <b>Latin America</b>                   | 0                        | 229                | 0                | 0              | 22               | 416                    | 115    | 531             | 7,919               | 46             | 218               | 17,742           |
| Mexico                                 | 0                        | 1 <sup>b</sup>     | 0                | 0              | 0                | 25                     | 2      | 27              | 1,107               | 0              | 0                 | 3,399            |
| <b>Central American Isthmus</b>        | 0                        | 0                  | 0                | 0              | 2                | 18                     | 8      | 26              | 178                 | 1              | 0                 | 269              |
| Belize                                 | 0                        | 0                  | 0                | 0              | 0                | 0                      | 0      | 0               | 0                   | 0              | 0                 | 0                |
| Costa Rica                             | 0                        | 0                  | 0                | 0              | 0                | ...                    | ...    | ...             | 20                  | ...            | ...               | ...              |
| El Salvador                            | 0                        | 0                  | 0                | 0              | 0                | 4                      | 2      | 6               | 0                   | 0              | 0                 | 0                |
| Guatemala                              | 0                        | 0                  | 0                | 0              | 0                | 0                      | 0      | 0               | 83                  | 1              | 0                 | ...              |
| Honduras                               | 0                        | 0                  | 0                | 0              | 2                | 11                     | 6      | 17              | 30                  | 0              | 0                 | 108              |
| Nicaragua                              | 0                        | 0                  | 0                | 0              | 0                | 3                      | 0      | 3               | 36                  | 0              | 0                 | 29               |
| Panama                                 | 0                        | 0                  | 0                | 0              | 0                | 0                      | 0      | 0               | 9                   | 0              | 0                 | 132              |
| <b>Latin Caribbean</b>                 | 0                        | 0                  | 0                | 0              | 14               | 41                     | 10     | 51              | 73                  | 33             | 20                | 2,087            |
| Cuba                                   | 0                        | 0                  | 0                | 0              | 0                | 0                      | 1      | 1               | 0                   | 0              | 19                | 0                |
| Dominican Republic                     | 0                        | 0                  | 0                | 0              | 1                | 33                     | 4      | 37              | 69                  | 1              | 1                 | 2,087            |
| French Guiana                          | 0                        | 0                  | 0                | 0              | ...              | ...                    | ...    | ...             | ...                 | ...            | ...               | ...              |
| Guadeloupe                             | 0                        | 0                  | 0                | 0              | ...              | ...                    | ...    | ...             | ...                 | ...            | ...               | ...              |
| Haiti                                  | 0                        | 0                  | 0                | 0              | 13               | 8                      | 5      | 13              | 4                   | 32             | 0                 | ...              |
| Martinique                             | 0                        | 0                  | 0                | 0              | ...              | ...                    | ...    | ...             | ...                 | ...            | ...               | ...              |
| Puerto Rico                            | 0                        | 0                  | 0                | 0              | ...              | ...                    | ...    | ...             | ...                 | ...            | ...               | ...              |
| <b>Andean Area</b>                     | 0                        | 5                  | 0                | 0              | 6                | 87                     | 46     | 133             | 1,123               | 0              | 9                 | 8,220            |
| Bolivia                                | 0                        | 0                  | 0                | 0              | 0                | 0                      | 0      | 0               | 11                  | 0              | 1                 | ...              |
| Colombia                               | 0                        | 1 <sup>b</sup>     | 0                | 0              | 3                | 31                     | 17     | 48              | 986                 | 0              | 4                 | 6,573            |
| Ecuador                                | 0                        | 0                  | 0                | 0              | 1                | 26                     | 23     | 49              | 7                   | 0              | 2                 | 1,491            |
| Peru                                   | 0                        | 4 <sup>b</sup>     | 0                | 0              | 2                | 19                     | 3      | 22              | 119                 | 0              | 2                 | ...              |
| Venezuela                              | 0                        | 0                  | 0                | 0              | 0                | 11                     | 3      | 14              | 0                   | 0              | 0                 | 156              |
| <b>Brazil</b>                          | 0                        | 214 <sup>b</sup>   | 0                | 0              | 0                | 228                    | 45     | 273             | 2,920               | 12             | 117               | 0                |
| <b>Southern Cone</b>                   | 0                        | 9                  | 0                | 0              | 0                | 17                     | 4      | 21              | 2,518               | 0              | 72                | 3,767            |
| Argentina                              | 0                        | 0                  | 0                | 0              | 0                | 8                      | 2      | 10              | 975                 | 0              | 61                | 156              |
| Chile                                  | 0                        | 9 <sup>b</sup>     | 0                | 0              | 0                | 7                      | 1      | 8               | 734                 | 0              | 1                 | 1,346            |
| Paraguay                               | 0                        | 0                  | 0                | 0              | 0                | 2                      | 1      | 3               | 32                  | 0              | 2                 | 178              |
| Uruguay                                | 0                        | 0                  | 0                | 0              | 0                | 0                      | 0      | 0               | 777                 | 0              | 8                 | 2,087            |
| <b>Non-Latin Caribbean</b>             | 0                        | 0                  | 0                | 0              | 0                | 2                      | 1      | 3               | 8                   | 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                        | ...                | ...              | ...            | ...              | ...                    | ...    | ...             | ...                 | ...            | ...               | ...              |
| 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               | 0                   | 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               | 8                   | 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                      | 1      | 1               | 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), August 26, 2016 / Vol. 65 / No. 33; (b) imported or related to importation; (c) measles/rubella country elimination report;

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

# program management and financing

|  | 35  | 36                       | 37  | 38  | 39                                     | 40                                | 41  | 42   | 42                                |
|--|---|--------------------------|---|---|--|-----------------------------------|---|--|-----------------------------------|
|  | years covered by multi-year plan for immunization | number of NITAG meetings | total number of districts/ municipalities | 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 |
|  |   | 2015                     | 2015                                      | 2015  | 2015                                   | 2015                              | 2015  | 2015   | 2015                              |
| <b>The Americas</b>                    |   |                          | 15,170                                    |   |  |                                   |   |  |                                   |
| <b>North America</b>                   |   |                          | 64  |   |  |                                   |   |  |                                   |
| Bermuda                                | ...   | ...                      | ...                                       | ...   | no                                     | no                                | 99  | 100  | yes                               |
| Canada                                 | ...   | 3                        | 13 <sup>a</sup>                           | ...   | ...                                    | yes                               | ...   | ...  | ...                               |
| United States of America               | ...   | 3                        | 51 <sup>b</sup>                           | ...   | yes                                    | yes                               | ...   | ...  | no                                |
| <b>Latin America and the Caribbean</b> |   |                          | 15,106                                    |   |  |                                   |   |  |                                   |
| <b>Latin America</b>                   |   |                          | 14,950                                    |   |  |                                   |   |  |                                   |
| Mexico                                 | 2012-2018   | 4                        | 2,457                                     | 2,457   | yes                                    | yes                               | 100   | 100  | yes                               |
| <b>Central American Isthmus</b>        |   |                          | 1,217                                     |   |  |                                   |   |  |                                   |
| Belize                                 | 2015-2024   | 1                        | 6   | 6   | yes                                    | yes                               | 81  | 100  | no                                |
| Costa Rica                             | 2015-2020   | 9                        | 81  | ...   | ...                                    | ...                               | ...   | ...  | ...                               |
| El Salvador                            | ...   | 2                        | 262                                       | 262   | yes                                    | no                                | 100   | 100  | yes                               |
| Guatemala                              | no  | 12                       | 338                                       | ...   | yes                                    | yes                               | 100   | 100  | ...                               |
| Honduras                               | 2016-2020   | 2                        | 298                                       | 200   | yes                                    | yes                               | 77  | 82   | yes                               |
| Nicaragua                              | 2016-2020   | 3                        | 153                                       | 153   | yes                                    | yes                               | 81  | 82   | yes                               |
| Panama                                 | 2019  | 10                       | 79  | 28  | yes                                    | yes                               | 100   | 100  | yes                               |
| <b>Latin Caribbean</b>                 |   |                          | 465                                       |   |  |                                   |   |  |                                   |
| Cuba                                   | 2014-2018   | 3                        | 168                                       | 168   | yes                                    | yes                               | 99  | 99   | yes                               |
| Dominican Republic                     | ...   | ...                      | 157                                       | ...   | yes                                    | yes                               | 94  | 94   | yes                               |
| French Guiana                          | ...   | ...                      | ...                                       | ...   | ...                                    | ...                               | ...   | ...  | ...                               |
| Guadeloupe                             | ...   | ...                      | ...                                       | ...   | ...                                    | ...                               | ...   | ...  | ...                               |
| Haiti                                  | 2011-2015   | ...                      | 140                                       | ...   | yes                                    | yes                               | ...   | ...  | ...                               |
| Martinique                             | ...   | ...                      | ...                                       | ...   | ...                                    | ...                               | ...   | ...  | ...                               |
| Puerto Rico                            | ...   | ...                      | ...                                       | ...   | ...                                    | ...                               | ...   | ...  | ...                               |
| <b>Andean Area</b>                     |   |                          | 3,856                                     |   |  |                                   |   |  |                                   |
| Bolivia                                | 2016-2020   | 10                       | 339                                       | ...   | yes                                    | yes                               | 94  | 97   | yes                               |
| Colombia                               | 2016-2020   | 2                        | 1,122                                     | ...   | yes                                    | yes                               | 100   | 100  | yes                               |
| Ecuador                                | 2010-2016   | 12                       | 222                                       | 222   | no                                     | yes                               | 100   | 100  | yes                               |
| Peru                                   | 2016 - 2019                                       | 10                       | 1,838                                     | 21  | yes                                    | yes                               | 100   | 100  | yes                               |
| Venezuela                              | 2014-2018   | ...                      | 335                                       | 366   | no                                     | yes                               | 100   | 100  | no                                |
| <b>Brazil</b>                          | 2012-2015   | 2                        | 5,570                                     | ...   | yes                                    | yes                               | 100   | 100  | ...                               |
| <b>Southern Cone</b>                   |   |                          | 1,385                                     |   |  |                                   |   |  |                                   |
| Argentina                              | 2011-2016   | 3                        | 511                                       | 130   | yes                                    | yes                               | 100   | 100  | ...                               |
| Chile                                  | 2010-2020   | 4                        | 346                                       | ...   | no                                     | yes                               | 100   | 100  | yes                               |
| Paraguay                               | 2014  | >10                      | 250                                       | ...   | yes                                    | yes                               | 100   | 100  | yes                               |
| Uruguay                                | 2015-2020   | 5                        | 278                                       | 278   | yes                                    | yes                               | 100   | 100  | yes                               |
| <b>Non-Latin Caribbean</b>             |   |                          | 156                                       |   |  |                                   |   |  |                                   |
| Anguilla                               | 2014-2015   | ...                      | 3   | 3   | yes                                    | yes                               | 100   | 100  | ...                               |
| Antigua and Barbuda                    | ...   | ...                      | 8   | 7   | yes                                    | yes                               | 100   | 100  | no                                |
| Aruba                                  | ...   | 0                        | 6   | 0   | yes                                    | yes                               | 100   | 100  | yes                               |
| Bahamas                                | 2010-2020   | ...                      | 16  | 12  | no                                     | yes                               | 100   | 100  | yes                               |
| Barbados                               | ...   | 4                        | 10  | 10  | yes                                    | yes                               | 100   | 100  | yes                               |
| BES*                                   | ...   | ...                      | ...                                       | ...   | ...                                    | ...                               | ...   | ...  | ...                               |
| Cayman Islands                         | ...   | ...                      | 6   | 3   | yes                                    | yes                               | 99  | 100  | ...                               |
| Curacao                                | ...   | ...                      | ...                                       | ...   | ...                                    | ...                               | ...   | ...  | ...                               |
| Dominica                               | ...   | ...                      | 7   | 7   | yes                                    | yes                               | 98  | 100  | yes                               |
| Grenada                                | 2016 -2025  | ...                      | 7   | 6   | yes                                    | yes                               | 68  | 100  | no                                |
| Guyana                                 | 2012-2018   | ...                      | 13  | 13  | yes                                    | yes                               | 89  | 82   | yes                               |
| Jamaica                                | ...   | 0                        | 13  | 13  | yes                                    | yes                               | 94  | 100  | no                                |
| Montserrat                             | ...   | ...                      | 4   | 4   | yes                                    | yes                               | 100   | 100  | yes                               |
| Saint Kitts & Nevis                    | ...   | 9                        | 17  | 17  | no                                     | yes                               | 98  | 100  | ...                               |
| Saint Lucia                            | ...   | ...                      | 9   | 3   | yes                                    | yes                               | 87  | 100  | no                                |
| St. Vincent and the Grenadines         | ...   | ...                      | 9   | 9   | no                                     | yes                               | 87  | 100  | no                                |
| Sint Maarten (Dutch part)              | ...   | 1                        | 1   | 1   | no                                     | yes                               | ...   | ...  | ...                               |
| Suriname                               | ...   | ...                      | 10  | 2   | yes                                    | yes                               | 95  | 100  | yes                               |
| Tinidad and Tobago                     | ...   | 2                        | 9   | 3   | yes                                    | yes                               | 13  | 100  | ...                               |
| Turks and Caicos                       | ...   | ...                      | 4   | 3   | no                                     | no                                | 100   | 100  | ...                               |
| Virgin Islands (UK)                    | 2016  | ...                      | 4   | 4   | yes                                    | yes                               | 100   | 97   | yes                               |

\*Bonaire, St. Eustatius, and Saba.

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

# surveillance indicators

## Acute Flaccid Paralysis (AFP), 2015

| 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 |
|--------------------------|---------------------|--|--|-----------------------------------|-----------------------|-------------------|
| Argentina                | 217                 | 2.14                                   | 57                                       | 82                                | 625                   | 100               |
| Bolivia                  | 35                  | 0.91                                   | 89                                       | 94                                | 3,459                 | 83                |
| Brazil                   | 485                 | 1.03                                   | 97                                       | 71                                | 3,423                 | ...               |
| Canada                   | 23                  | 0.41                                   | ...                                      | 17                                | ...                   | ...               |
| CARPHA                   | 9                   | 0.45                                   | 56                                       | 33                                | 500                   | 85                |
| Chile                    | 70                  | 1.81                                   | 76                                       | 57                                | 529                   | 99                |
| Colombia                 | 135                 | 1.05                                   | 72                                       | 79                                | 5,505                 | 92                |
| Costa Rica               | 22                  | 1.96                                   | 36                                       | 95                                | ...                   | ...               |
| Cuba                     | 8                   | 0.41                                   | 100                                      | 88                                | 168                   | 100               |
| Dominican Republic       | 14                  | 0.46                                   | 14                                       | 93                                | 247                   | 48                |
| Ecuador                  | 24                  | 0.48                                   | 54                                       | 96                                | ...                   | ...               |
| El Salvador              | 31                  | 1.70                                   | 29                                       | 90                                | 1,243                 | 46                |
| Guatemala                | 25                  | 0.59                                   | ...                                      | 60                                | 220                   | 80                |
| Haiti                    | 12                  | 0.31                                   | 75                                       | 67                                | 17                    | 55                |
| Honduras                 | 63                  | 2.0                                    | 25                                       | 82                                | 449                   | 89                |
| Mexico                   | 534                 | 1.54                                   | 99                                       | 81                                | ...                   | ...               |
| Nicaragua                | 20                  | 0.99                                   | 90                                       | 95                                | 185                   | 100               |
| Panama                   | 14                  | 1.29                                   | 86                                       | 86                                | 234                   | 84                |
| Paraguay                 | 26                  | 1.19                                   | 85                                       | 77                                | 1,033                 | 88                |
| Peru                     | 70                  | 0.80                                   | 91                                       | 87                                | ...                   | ...               |
| United States of America | NR                  | NR                                     | NR                                       | NR                                | NR                    | NR                |
| Uruguay                  | 4                   | 0.52                                   | 100                                      | 50                                | ...                   | ...               |
| Venezuela                | 90                  | 1.05                                   | 82                                       | 76                                | 13,092                | 27                |
| TOTAL/AVERAGE            | 1,931               | 1.1                                    | 82                                       | 77                                | 30,929                | --                |

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

## Measles/Rubella/CRS Surveillance Indicators, 2015

| 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          | 413                     | 24                                     | 96                               | 64                                   | 44                               | 0.9   | 1.5  |
| Bolivia            | 115                     | 100                                    | 100                              | 77                                   | 88                               | 1.1   | 3.6  |
| Brazil             | 6,929                   | 80                                     | 89                               | 93                                   | 88                               | 3.3   | 0.1  |
| CARPHA             | 288                     | 97                                     | 95                               | 14                                   | 36                               | 3.8   | 0.6  |
| Chile              | 703                     | 36                                     | 84                               | 95                                   | 31                               | 3.9   | 5.8  |
| Colombia           | 2,228                   | 80                                     | 97                               | 87                                   | 96                               | 4.6   | 8.0  |
| Costa Rica         | 48                      | 52                                     | 46                               | 82                                   | 15                               | 1.0   | 0.0  |
| Cuba               | 1,247                   | 100                                    | 100                              | 100                                  | 100                              | 10.9  | 0.0  |
| Dominican Republic | 129                     | 3                                      | 95                               | 42                                   | 47                               | 1.2   | 0.0  |
| Ecuador            | 337                     | 95                                     | 98                               | 90                                   | 88                               | 2.1   | 0.1  |
| El Salvador        | 282                     | 45                                     | 90                               | 85                                   | 89                               | 4.4   | 3.8  |
| French Guiana      | 2                       | ...                                    | ...                              | ...                                  | ...                              | 0.7   | ...  |
| Guadeloupe         | 1                       | ...                                    | ...                              | ...                                  | ...                              | 0.2   | ...  |
| Guatemala          | 176                     | 3                                      | 96                               | 63                                   | 41                               | 1.1   | 0.5  |
| Haiti              | 170                     | 95                                     | 96                               | 92                                   | 80                               | 1.5   | 1.1  |
| Honduras           | 197                     | 37                                     | 100                              | 72                                   | 48                               | 2.4   | 0.9  |
| Martinique         | 0                       | ...                                    | ...                              | ...                                  | ...                              | 0.0   | ...  |
| Mexico             | 4,645                   | 99                                     | 95                               | 90                                   | 81                               | 3.7   | 0.0  |
| Nicaragua          | 161                     | 95                                     | 98                               | 89                                   | 39                               | 2.6   | 4.0  |
| Panama             | 72                      | 86                                     | 100                              | 71                                   | 97                               | 1.8   | 0.1  |
| Paraguay           | 568                     | 68                                     | 86                               | 91                                   | 90                               | 8.6   | 0.0  |
| Peru               | 668                     | 82                                     | 82                               | 82                                   | 60                               | 2.1   | 0.0  |
| Uruguay            | 10                      | 89                                     | 100                              | 100                                  | 22                               | 0.3   | 0.0  |
| Venezuela          | 667                     | 93                                     | 99                               | 75                                   | 62                               | 2.1   | 0.1  |
| TOTAL/AVERAGE      | 20,056                  | 82                                     | 92                               | 88                                   | 81                               | 3.2   | 0.9  |

Source: Integrated Surveillance Information System (ISIS), Measles Elimination Surveillance System (MESS), and country reports to 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/datastatistics](http://www.paho.org/datastatistics).

**Demographic data:** United Nations, Department of Economic and Social Affairs, Population Division (2015). World Population Prospects: The 2015 Revision. New York. Accessed 30 June 2016 (<http://esa.un.org/wpp/>). WPP 2015: Linear interpolation using the mid-points of the quinquennium as 1 January. 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, 2016. As of 16 May 2016. 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 (2016). World Development Indicators 2016. Washington, D.C.; Accessed 10 June 2016. (<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, 2016. As of 16 May 2016. (<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); 2016.

**Morbidity:** Annual country reports to IM/PAHO via JRF, vaccine-preventable disease specific surveillance reports for measles/rubella and polio; 2015-2016.

**Surveillance indicators:** Vaccine-preventable disease specific surveillance reports for measles/rubella and acute flaccid paralysis/polio to IM/PAHO; 2015-2016.

## 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 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; (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, 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 (2<sup>nd</sup> or 3<sup>rd</sup> 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.

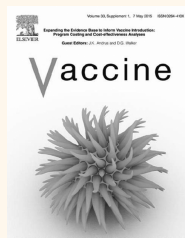
### Immunization program management and financing:

- Multi-year plan for immunization: Existence of an immunization strategic plan for more than one year.

## 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. Copies of the newsletter are available online at [www.paho.org/immunization/newsletter](http://www.paho.org/immunization/newsletter).



• **Expanding the evidence base to inform vaccine introduction: program costing and cost-effectiveness analyses.** Immunization programs have become increasingly costly in recent years as a result of the introduction of new vaccines and an expanding number of recommended target groups. Even so, immunization remains cost-effective and should continue to be considered a public health “best buy,” according to a new series of studies published by the scientific journal Vaccine. The series was coordinated by the Pan American Health Organization/World Health Organization (PAHO/WHO) as part of the ProVac initiative to provide evidence to support policy decisions on vaccine programs. The studies, based on country-led research from around the world, show that with few exceptions, newer vaccines—including pneumococcal, rotavirus, and human papillomavirus (HPV) vaccines—are cost-effective in countries where there is a substantial disease burden or where treatment costs are high, or both, and if the vaccines can be procured at favorable prices. PAHO Member States published important data on the costs, health impact and cost-effectiveness of their new vaccine introduction programs in Argentina, Belize, Honduras, Peru and Paraguay.

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



for more than one year.

- Number of NITAG meetings: Number of times the NITAG met in 2015. 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](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 (CHA/HA), Pan American Health Organization.

## Seasonal Influenza Vaccine Use in the Americas, 2015

| Country                        | Children            |                  | Elderly Adults    |                  | Other Risk Groups  |                  |                  |
|--------------------------------|---------------------|------------------|-------------------|------------------|--------------------|------------------|------------------|
|                                | 6m-23m <sup>a</sup> | 24m-59m          | Schedule          | Coverage (%)     | Health Workers     | Chronic Disease  | Pregnant Women   |
| Anguilla                       | NA                  | NA               | ≥50y              | ...              | yes                | yes              | ...              |
| Antigua and Barbuda            | ...                 | yes              | ...               | ...              | ...                | yes              | ...              |
| Argentina                      | 61                  | NA               | ≥65y              | 100 <sup>e</sup> | yes                | yes              | yes              |
| Aruba                          | NA                  | NA               | ≥60y              | ...              | ...                | ...              | ...              |
| Bahamas                        | yes                 | yes              | ≥50y              | ...              | yes                | yes              | yes              |
| Barbados                       | NA                  | NA               | ≥65y              | ...              | 15                 | NA               | NA               |
| Belize                         | 48                  | ...              | ≥65y              | 3                | 7                  | yes              | yes              |
| Bermuda                        | NA                  | NA               | ≥65y              | 44               | 17                 | yes              | 19               |
| BES*                           | ...                 | ...              | ...               | ...              | ...                | ...              | ...              |
| Bolivia                        | 52                  | NA               | ≥65y              | 71               | 76                 | 100 <sup>e</sup> | 49               |
| Brazil                         | 76                  | yes              | ≥60y              | 89               | 95                 | yes              | 83               |
| Canada                         | ...                 | ...              | ≥50y              | ...              | 69                 | 49               | yes              |
| Cayman Islands                 | 9                   | yes              | ≥50y              | 5                | 15                 | 40               | yes              |
| Chile                          | 65                  | yes              | ≥65y              | 55               | 100 <sup>e,g</sup> | 100 <sup>e</sup> | 72               |
| Colombia                       | 78                  | yes              | ≥50y              | ...              | yes                | yes              | 72               |
| Costa Rica                     | yes                 | yes              | yes               | ...              | yes                | yes              | yes              |
| Cuba                           | 74                  | yes              | ≥65y              | 89               | yes                | 84               | 100 <sup>e</sup> |
| Curaçao                        | ...                 | ...              | ≥60y              | ...              | ...                | ...              | ...              |
| Dominica                       | 16                  | yes              | ≥65y              | 6                | 10                 | 25               | 11               |
| Dominican Republic             | yes                 | yes              | ≥60y              | ...              | yes                | yes              | 83               |
| Ecuador                        | 46                  | yes              | ≥65y              | 88 <sup>f</sup>  | 92                 | 100 <sup>e</sup> | 55               |
| El Salvador                    | 74 <sup>b</sup>     | yes              | ≥60y              | 36               | 78                 | yes              | 72               |
| Grenada                        | ...                 | yes              | ≥60y              | ...              | yes                | yes              | yes              |
| Guatemala                      | 7                   | yes              | ≥60y              | 100 <sup>e</sup> | 100 <sup>e</sup>   | 100 <sup>e</sup> | 41               |
| Guyana                         | NA                  | NA               | NA                | NA               | NA                 | NA               | NA               |
| Haiti                          | NA                  | NA               | NA                | NA               | NA                 | NA               | NA               |
| Honduras                       | yes                 | yes              | ≥60y              | 83               | 92                 | 100 <sup>e</sup> | 94               |
| Jamaica                        | NA                  | NA               | ...               | ...              | yes                | yes              | yes              |
| Mexico                         | 84 <sup>d</sup>     | yes              | ≥60y              | 98               | 97                 | 92               | 95               |
| Montserrat                     | NA                  | NA               | NA                | NA               | NA                 | NA               | NA               |
| Nicaragua                      | 100 <sup>c,e</sup>  | yes <sup>c</sup> | ≥50y <sup>c</sup> | ...              | 100 <sup>e</sup>   | 100 <sup>e</sup> | 77               |
| Panama                         | 28                  | yes              | ≥60y              | 81               | 91                 | 95               | 51               |
| Paraguay                       | 32                  | yes              | ≥60y              | 34               | yes                | yes              | yes              |
| Peru                           | 67                  | NA               | ≥60y              | ...              | 76                 | 95               | 36               |
| St. Kitts and Nevis            | NA                  | NA               | NA                | NA               | NA                 | NA               | NA               |
| St. Lucia                      | NA                  | NA               | ≥50y              | ...              | yes                | 8                | 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               | ...               | ...              | yes                | yes              | yes              |
| Trinidad and Tobago            | ...                 | yes              | ≥50y              | ...              | 20                 | yes              | yes              |
| Turks and Caicos               | yes                 | yes              | ...               | ...              | ...                | ...              | ...              |
| United States of America**     | yes                 | yes              | ≥65y              | 67               | 77                 | yes              | yes              |
| Uruguay                        | 29                  | NA               | ≥65y              | 26               | 33                 | yes              | 29               |
| Venezuela                      | 24                  | yes              | ≥60y              | 14               | 78                 | 13               | 41               |
| Virgin Islands (UK)            | NA                  | NA               | ≥50y              | ...              | yes                | yes              | NA               |

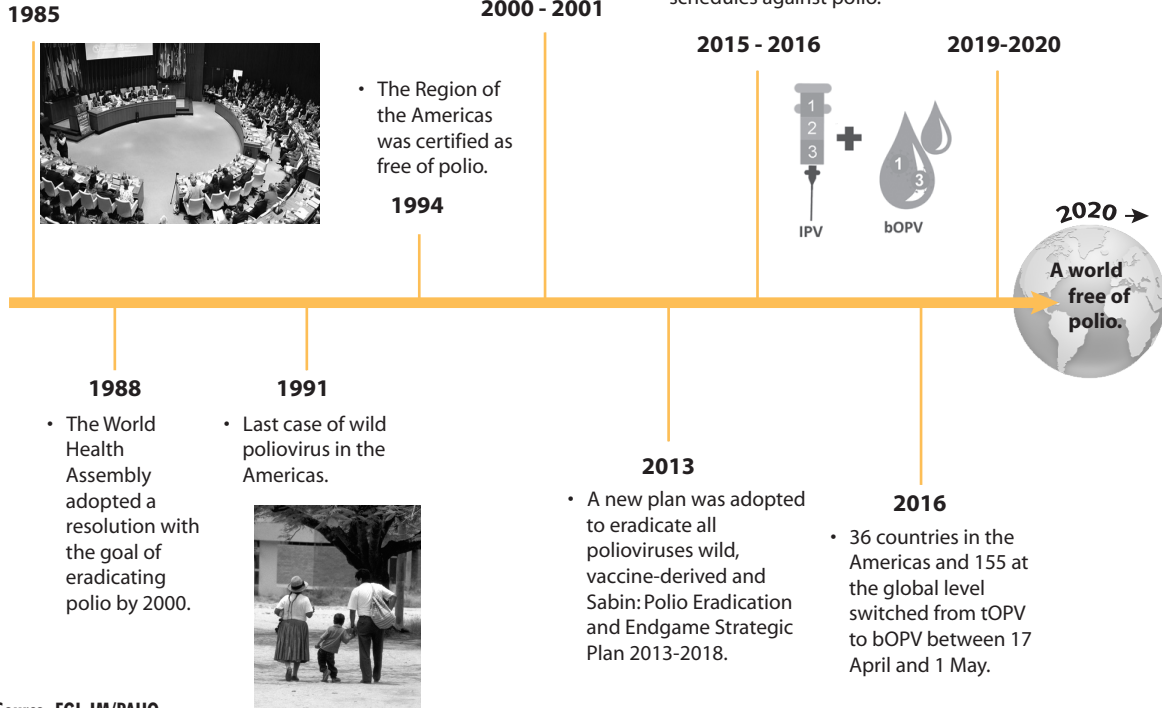
\* Bonaire, St. Eustatius and Saba; \*\* USA data during 2014-2015 influenza season

(a) pediatric coverage formula: ((2nd dose + single dose)/denominator)\*100; (b) given to 6-11 months age group; (c) with chronic disease; (d) given to 6-69 months age group; (e) reported coverage > 100%;

(f) goal of 80%; (g) coverage in chronic patients in control at Public Primary Care Centers.

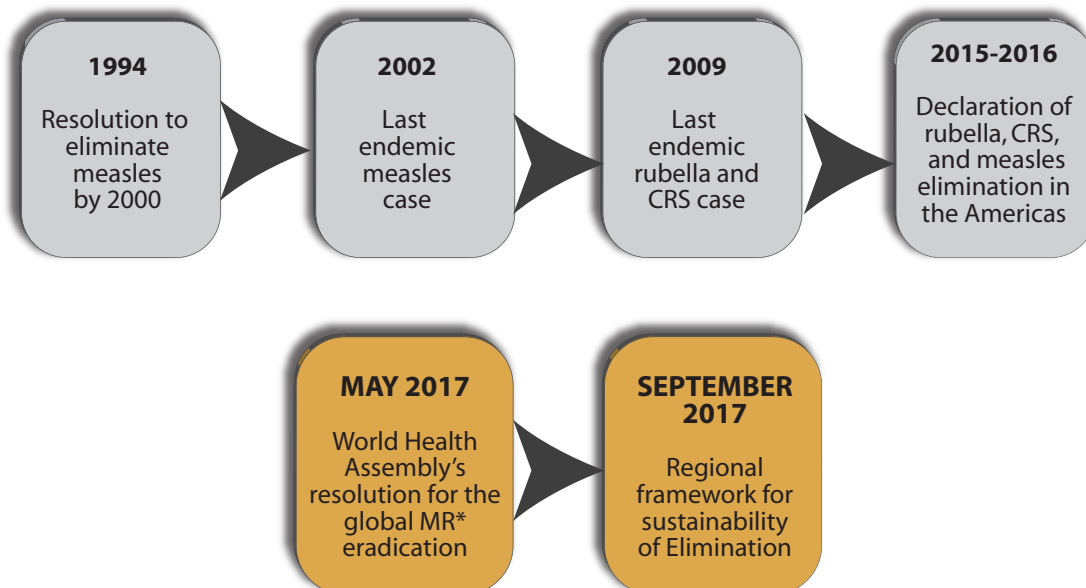
# The Switch from the Trivalent Oral Polio Vaccine (tOPV) to the Bivalent Oral Polio Vaccine (bOPV)

- The countries of the Americas adopted a resolution with the goal of eliminating polio by 1990 at the PAHO Directing Council.
- cVDPV type 1 outbreak in Haiti and the Dominican Republic.
- 32 countries in the Americas and 105 countries at the global level introduced at least one dose of IPV into their routine vaccination schedules against polio.
- After all wild polioviruses have been eradicated, the global use of OPV will be ceased.



Source: FGL-IM/PAHO.

## Timeline of Measles, Rubella and CRS\* Elimination in the Americas and Next Steps in 2017



Source: FGL-IM/PAHO.

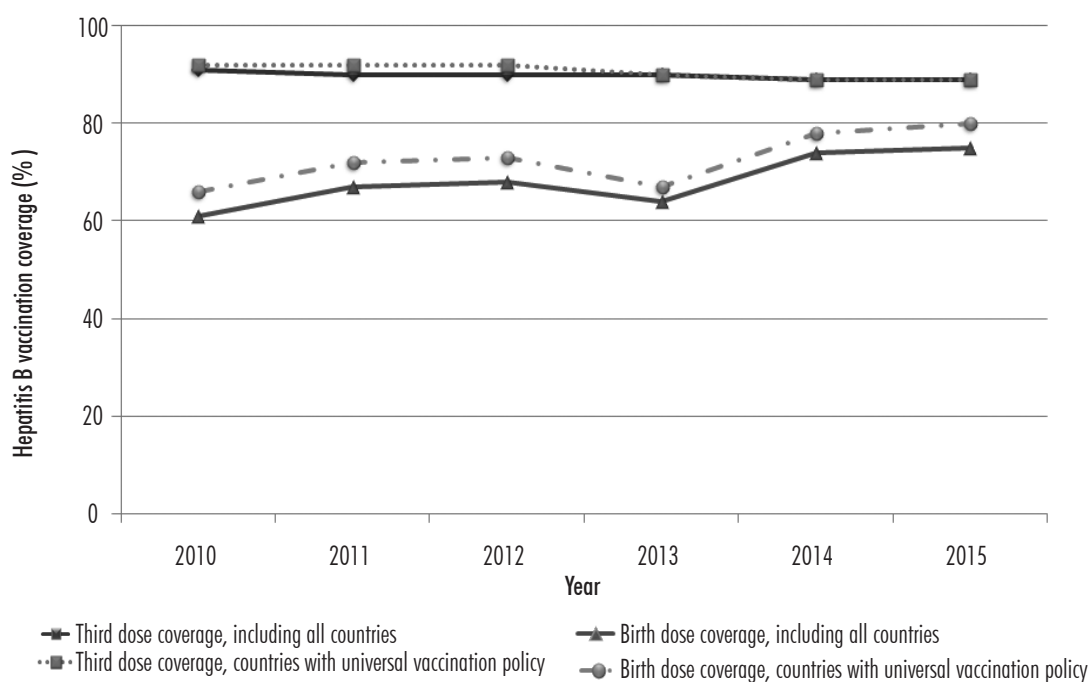
\*CRS-congenital rubella syndrome; MR-measles/rubella

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

| General (GO) and Strategic Objectives(SO)   | Baseline (2013) | Target (2020) | 2015 |
|---|-----------------|---------------|------|
| GO 1.2.1 Number of countries and territories in which endemic transmission of measles or rubella virus has been reestablished   | 1               | 0             | 0    |
| GO 2.2.1 Number of countries and territories reporting national average coverage of at least 95% with three doses of DPT vaccine in children under 1 year               | 19              | 35            | 20   |
| GO 2.2.2 Number of countries and territories reporting coverage of at least 80% in each district or equivalent with three doses of DPT vaccine in children under 1 year | 12              | 35            | 12   |
| SO 4.2.1 Number of countries and territories that have dropout rates below 5% between the first and the third dose of DPT vaccine                                       | 11              | 35            | 26   |
| SO 4.2.2 Number of countries and territories with coverage above 95% for third dose of DPT vaccine sustained for three or more consecutive years                        | 13              | 35            | 10   |
| SO 4.2.5 Number of countries and territories that have a national system for a computerized nominal immunization registry   | 3               | 10            | 4    |

Source: Country reports through the PAHO-WHO/UNICEF Joint Reporting Form (JRF), 2016; FGL-IM/PAHO.

### Hepatitis B Vaccination Coverage Region of the Americas, 2010-2015



Note: • Global target established by WHO for 2020 for third dose of HB is 90%.  
• Global target established by WHO for 2020 for birth dose of HB is 50%.

Source: Country reports through the PAHO-WHO/UNICEF Joint Reporting Form (JRF), 2016.

## Epidemiological Surveillance Indicators for Diseases Preventable by New Vaccines in Reporting Countries, Latin America and the Caribbean, 2015

### Rotavirus Surveillance, January-December 2015

| Data and Indicators  | BOL    | COL   | DOM | ECU   | GTM   | HTI | HND    | NIC | PAN    | PRY   | PER    | SLV    | SUR   | VEN    | TOTAL   |
|--|--------|-------|-----|-------|-------|-----|--------|-----|--------|-------|--------|--------|-------|--------|---------|
| Number of hospitalizations <5 years                          | 10,663 | 4,267 | 962 | 6,114 | 9,837 | 839 | 31,920 | 295 | 10,873 | 9,248 | 18,252 | 41,855 | 3,458 | 12,524 | 161,107 |
| Number <5 years admitted to hospital for diarrhea            | 1,127  | 353   | 81  | 1,231 | 631   | 341 | 4,301  | 24  | 178    | 389   | 1,414  | 3,851  | 621   | 784    | 15,326  |
| Number <5 years who meet the case definition                 | 798    | 342   | 33  | 811   | 343   | 202 | 2,170  | ... | 95     | 389   | 735    | 1,641  | 234   | 365    | 8,158   |
| Number <5 years with epidemiological form and stool specimen | 646    | 342   | 17  | 789   | 341   | 202 | 1,119  | ... | 58     | 285   | 632    | 1,496  | 140   | 329    | 6,396   |
| Positive cases of rotavirus                                  | 177    | 91    | 2   | 74    | 102   | 22  | 173    | 0   | 3      | 59    | 112    | 329    | 25    | 38     | 1,207   |
| Deaths   | 1      | 1     | 0   | 0     | 0     | 0   | 10     | 0   | 3      | 0     | 0      | 1      | 0     | 0      | 16      |

### Bacterial Pneumonia Surveillance, January-December 2015

| Data and Indicators   | BOL   | COL   | ECU   | HND    | PAN    | PRY   | PER    | SLV    | VEN   | TOTAL   |
|---|-------|-------|-------|--------|--------|-------|--------|--------|-------|---------|
| Number of hospitalizations <5 years                           | 5,206 | 1,067 | 6,114 | 16,701 | 17,149 | 9,884 | 13,068 | 30,631 | 9,316 | 109,136 |
| Number of suspected cases of pneumonia                        | 827   | 40    | 1,268 | 1,429  | 2,364  | 950   | 1,536  | 1,709  | 828   | 10,951  |
| Number of suspected cases with x-ray and epidemiological form | 826   | 15    | 1,156 | 873    | 2,363  | 948   | 1,535  | 1,657  | 768   | 10,141  |
| Number of probable cases of bacterial pneumonia               | 287   | 15    | 971   | 713    | 1,869  | 424   | 774    | 1,079  | 483   | 6,615   |
| Probable cases with blood specimen                            | 228   | 15    | 971   | 210    | 1,410  | 377   | 752    | 961    | 130   | 5,054   |
| Probable cases with pleural fluid specimen                    | 10    | ...   | 11    | ...    | 8      | 67    | ...    | 5      | 7     | 108     |
| Confirmed cases of Hib  | 8     | ...   | ...   | ...    | 0      | ...   | 1      | ...    | ...   | 9       |
| Confirmed cases of Hi (no b)                                  | 1     | ...   | ...   | ...    | 0      | 2     | ...    | ...    | 2     | 5       |
| Confirmed cases of Spn  | 7     | ...   | 4     | 1      | 7      | 39    | 14     | ...    | 5     | 77      |
| Confirmed cases caused by other bacteria                      | 10    | ...   | 90    | 12     | 44     | 13    | 27     | 4      | 3     | 203     |
| Contamination   | 3     | ...   | 2     | 5      | 0      | 39    | 4      | ...    | 22    | 75      |
| Deaths  | 6     | ...   | 7     | 52     | 1      | 14    | 4      | 1      | 36    | 121     |

### Bacterial Meningitis Surveillance, January-December 2015

| Data and Indicators  | ARG   | BOL   | ECU   | HTI | HND    | PAN    | PRY    | SLV    | VEN   | TOTAL   |
|--|-------|-------|-------|-----|--------|--------|--------|--------|-------|---------|
| Number of hospitalizations <5 years  | 7,082 | 3,442 | 6,114 | 839 | 16,701 | 17,149 | 10,004 | 30,631 | 9,280 | 101,242 |
| Number of suspected cases of meningitis  | 21    | 27    | 40    | 15  | 107    | 64     | 240    | 107    | 95    | 716     |
| Number of suspected cases with cerebrospinal fluid test and epidemiological form | 21    | 27    | 39    | 11  | 70     | 64     | 228    | 100    | 81    | 641     |
| Number of probable meningitis cases  | 18    | 15    | 39    | 11  | 41     | 11     | 117    | 39     | 53    | 344     |
| Confirmed cases of Hib   | 0     | 1     | ...   | ... | ...    | 0      | 1      | 2      | ...   | 4       |
| Confirmed cases of Hi (no b)   | 1     | 1     | ...   | ... | ...    | 1      | 2      | ...    | ...   | 5       |
| Confirmed cases of Nm  | 3     | ...   | ...   | ... | ...    | 1      | 4      | 1      | ...   | 9       |
| Confirmed cases of Spn   | 1     | 2     | 2     | ... | 5      | 5      | 10     | 1      | 1     | 27      |
| Confirmed cases caused by other bacteria   | ...   | ...   | 6     | ... | 8      | 0      | 4      | 3      | 1     | 22      |
| Contamination  | 1     | ...   | ...   | ... | ...    | 0      | ...    | ...    | 1     | 2       |
| Deaths   | 0     | 1     | 1     | ... | 3      | 1      | 11     | 1      | 8     | 26      |

Source: Country reports to FGL-IM/PAHO.