Liberia

Routine Immunization Overview

Routine Immunization Coverage Trends

Indicators

(WHO/UNICEF, 2011, See notes 1 and 2)

|  |  |
| --- | --- |
| Total population | 4,129,000 |
| Infant mortality rate | 74 |
| Surviving Infants | 144,000 |
| Infant DTP1 | 61% |
| Infant DTP3 | 49% |
| Infant measles | 40% |
| Unimmunized (by DTP3) | 56,160 |

The DHS conducted in 2007 pointed to coverage rates in Liberia that were significantly lower than official country reports. Despite an increasing trend between 2004 and 2009, WHO/UNICEF estimates illustrate a sharp decrease in coverage over the last two years. In 2011, Liberia’s immunization program failed to reach 39% (or 56,160) of its target population of children under one year of age with even a first dose of the DTP vaccine. Twelve percent of the children who began the DTP vaccination series did not complete it (drop out rate between DTP1 and DTP3), as shown in the graph below. Drop-out rates that are higher than 10% typically indicate problems with how immunization services are being delivered, perceived (e.g. friendly and reliable services) and used. The population’s use of routine immunization services is determined by the availability of, access to, demand for, and acceptance of those services.

Infant DTP3 Coverage, 1999-2011 (Official Country, WHO/UNICEF and Survey Estimates)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Source** | **1981** | **1986** | **1995** | **2000** | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** | **2011** |
| Official Country (3) | 39% | 15% | 45% | 48% | 87% | 88% | 88% | 92% | 92% | 75% | 77% |
| **WHO/UNICEF** (1) | **--** | **--** | **--** | **46%** | **60%** | **60%** | **60%** | **64%** | **64%** | **47%** | **49%** |

2007 DHS: 47%

(4) 2006 DHS: 50%

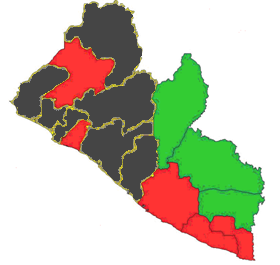
2011 DTP Left-out (accessibility) and Drop-out rates (availability/use) (5) (WHO/UNICEF estimates 2011)

**Left-outs** = 39% of surviving infants (DTP1)

**Drop-out rate** = 12% of infants who received DTP1 did not complete DTP series

**39% left-outs**

**12% drop-out rate**

DTP3 Coverage by County, January – August 2009 (based on administrative reports/service statistics)

National coverage estimates often mask sub-national differences in performance. In the visual mapping of Liberia’s DTP3 coverage for January-December 2011, clear variations in coverage are evident across the country's 15 counties. As can be seen on this map, five counties reported DTP3 coverage rates below 80% in the first half of 2009—three of them clustered in the south-western part of the country, yet seven counties reported coverage over 100% in the northern half of the country. Similar maps showing the numbers of unimmunized children, drop-out rates, vaccine stock outs and other program indicators by county are helpful in identifying specific performance problems requiring attention. This type of mapping exercise should be done at least annually, using administratively reported data. Immunization managers should also use administrative reports to make day-to-day program decisions. Even when those reports overestimate coverage, as is the case in Liberia, they can be used effectively to track and compare immunization performance by administrative unit. Routinely calculating and comparing performance indicators makes it possible for program managers to take action before problems become acute. The newly released population census figures may lead to a revision of immunization target population figures.

DTP3 <80% DTP3 80-100% DTP3 > 100%

Liberia and the GAVI Alliance (as of May 2011)

Current comprehensive Multi-year Plan (cMYP): 2011–2015; Current Health Sector Plan dates: 2012-2015

Through mid 2011, Liberia had been approved for just over $17 million in [GAVI Alliance](http://www.gavialliance.org) support. GAVI enabled Liberia to introduce the yellow fever vaccine in 2000 and the pentavalent vaccine (DTP, Hepatitis B, Haemophilus influenzae type b [Hib]) in 2008. GAVI’s new vaccine support comes with a co-financing requirement; Liberia has co-financed the yellow fever vaccine since 2007 and is committed to co-financing approximately $232,000 between 2012 and 2015. In 2008, GAVI approved Liberia to receive pentavalent vaccine. Liberia has committed to contributing approximately $426,000 between 2012 and 2015 to the cost of this important new vaccine. Because of GAVI’s revised eligibility criteria for new and underutilized vaccines (requiring ≥70% DTP3 coverage based on WHO/UNICEF estimates), Liberia can not yet apply for new vaccine support against pneumococcus and rotavirus.

|  |  |  |  |
| --- | --- | --- | --- |
| Type | Dates | Support $ | |
| **Injection Safety Support (INS)** | | | |
|  | 2006-2008 | 360,500 | (in progress) |
| **Immunization Services Support (ISS)** (6) | | | |
|  | 2000-2003, 2006-2013 | 2,188,750 | (completed) |
| **Health System Strengthening Support (HSS)** (7) | | | |
|  | 2007-2014 | 9,490,000 | (in progress) |
| **New Vaccine Support (NVS)** (8) | | | |
| Yellow Fever | 2001-2015 | 1,911,237 | (in progress) |
| Penta (9) | 2008-2015 | 10,410,412 | (completed) |

In addition to support for new and underused vaccines, Liberia also received GAVI Injection Safety (INS) commodities from 2006-2008 and Immunization Services Support (ISS) since 2000. Due to security concerns, there was an interruption in GAVI ISS funding from 2003-2006 because Liberia was unable to conduct a data quality audit.

USAID’s global Maternal and Child Integrated Program (MCHIP) would like to encourage USAID/Liberia (and its partners), if not already doing so, to support efforts to strengthen country inter-agency coordination (ICC) for immunization—as a focus within the Child Health ICC. USAID’s global investment in immunization through the GAVI Alliance and others will only be protected with your continuous involvement and support.

Notes and Resources

(1) WHO/UNICEF coverage estimates consider population-based survey results as well as Official Country Estimates. They are generated and published annually and used to track coverage trends.

<http://www.who.int/immunization_monitoring/en/globalsummary/timeseries/tswucoveragebycountry.cfm?country=LBR>

Infant mortality rate: the probability of dying between birth and exactly one year of age. The infant mortality rate is expressed as the number of infant deaths per 1,000 live births.

Surviving infants: the number of children who have survived beyond their first year of life. Source: WHO/UNICEF.

Unimmunized infants (DTP3): Calculated as the number of surviving infants X (1.00 – DTP3 coverage per WHO/UNICEF).

(2) The third dose of DTP (DTP3) is commonly used as a surrogate indicator for routine immunization coverage. DTP vaccine is predominantly offered in fixed health facilities and routine (commonly) monthly outreach sessions. Polio and measles vaccines are frequently given during campaigns, as well as in fixed health facilities and during routine outreach sessions. Completion of the DTP series by one year of age requires vaccination services to be offered on multiple occasions and for those services to be accessible, available, acceptable to and sought by the target population.

(3) Official Country Estimates of immunization coverage come from the annual Joint Reporting Form (JRF) that each country submits to WHO and UNICEF. These estimates are most often based on administrative reports from health facilities. <http://www.who.int/immunization_monitoring/en/globalsummary/timeseries/tscoveragedtp3.htm>

(4) Liberia Demographic and Health Survey (DHS). All collected data on children 12-23 months of age by card and history. The DHS estimates in this table are for DTP3 coverage by 12 months of age, as documented by card and applied to coverage by recall. All DHS and standard immunization coverage surveys describe the coverage situation at least one year before they were conducted, thus the positioning of the blue markers, (marker placement is either in the middle of the year prior to year of survey, or on the border of the survey year when a gap in years exists in the table). <http://www.measuredhs.com/countries/country_main.cfm?ctry_id=22&c=Liberia>

(5) Drop-out rates reflect infants who begin the vaccination schedule but do not complete it (measured by DTP3). Left-outs are infants who were never reached for vaccination (measured by DTP1). <http://www.immunizationbasics.jsi.com/Resources_General.htm> (pp.47-50)

(6) Immunization Services Support (ISS) payments are disbursed according to Annual Progress Reports and are contingent on countries increasing the number of children immunized each year. These payments are called reward payments because the country is being paid a reward of $20 for each child immunized. Countries are allowed to apply for ISS for the duration of the comprehensive Multi-Year Plan (cMYP).

(7) Health System Strengthening (HSS) payments are allocated based on the birth cohort and the GDP per capita of the country. Countries are allowed to apply for HSS for the duration of their Health Sector Plan (or equivalent).

(8) New vaccines are delivered to countries based on the target population and the co-financing paid by each

country. All countries are being approved until 2015, but the actual number of vaccine doses disbursed is revised each year when the country submits its Annual Progress Report.

(9) Pentavalent vaccine protects against diphtheria, pertussis, tetanus, hepatitis B, and *Haemophilus influenzae* type b.

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