



USAID
FROM THE AMERICAN PEOPLE

 **BASICS**

IMMUNIZATION

BASICS III

Table of Contents

What is immunization and what is it important to child health?.....	1
USAID/BASICS' Involvement	1
What is the implementation process?.....	2
Results	4
What we learned.....	6
What is the way forward?	7

What is immunization and what is it important to child health?

It is estimated that immunization saves two million lives per year. Immunization rates for the six major vaccine-preventable diseases—pertussis (whooping cough), tuberculosis, tetanus, polio, measles, and diphtheria—have risen from less than 10 percent in the 1970s to nearly 80 percent today. However, coverage has leveled off more recently. Worldwide, nearly 30 million children are still not reached each year with routine immunization. Rates in some African countries have dropped to below 50 percent.

Vaccinations for infants are now routinely provided in all developing countries against measles, polio, diphtheria, tetanus, pertussis, and tuberculosis. Women receive vaccinations to protect themselves and their future births against tetanus, a major killer in high-mortality environments.

In addition to this basic package, WHO recommends immunization against hepatitis B; *Haemophilus influenzae* type b, where resources permit its use and the burden of disease is established; and yellow fever in nations at risk for outbreaks. Vaccines against both pneumococcal and rotavirus were introduced into some developing countries starting in 2008.

There are three primary strategies for the routine delivery of immunization services in or from health facilities. A fixed facility strategy refers to the regular delivery of vaccinations in a health facility on specified days of the week and hours of the day. Outreach is the regularly scheduled delivery of services to people who cannot get to health facilities or who can do so only with difficulty. Trips to outreach sites are usually completed within a day and are made by health facility staff on foot or using motorized vehicles, bicycles, or pack animals. A mobile strategy is used to deliver services to people living in remote areas and is usually achieved through trips of more than one day by district or regional health workers.

USAID/BASICS' Involvement

USAID/BASICS provided technical assistance for routine immunization programs in Indonesia and Timor-Leste.

Indonesia

In April 2007, USAID/BASICS established a stand-alone project known as the BASICS Millennium Challenge Corporation Indonesia/Immunization Project. Funded through a two-year USAID Threshold Grant from the Millennium Challenge Corporation, the project assisted the government of Indonesia in its efforts to increase completed diphtheria, tetanus, and pertussis (DPT3) and measles immunization rates nationally.

The work of BASICS targeted 63 districts in seven provinces (East, Central, and West Java; Banten; Jakarta; South Sulawesi; and North Sumatra), where more than 60% of

Indonesian children reside. Reaching BASICS goal of a national average of 80.5% DPT3 and measles coverage of children below one year of age was a key criterion for Indonesia's eligibility for Millennium Challenge Compact funding. USAID/BASICS estimated that if it was to increase national coverage to 80.5%, it would be necessary to achieve at least 84% coverage – reaching 2,540,000 children per year – in the targeted provinces.

Timor-Leste

In Timor-Leste, USAID/BASICS and USAID/IMMUNIZATIONbasics jointly implemented *Timor-Leste Asisténsia Integrada Saúde* (TAIS or Timor-Leste Integrated Maternal and Child Health Care Project). TAIS' work on the Expanded Program on Immunization (EPI) in Timor-Leste was designed to address three significant issues identified by BASICS during a 2005 assessment:

1. Five separate EPI schedules were in circulation, as well as different materials; most of them containing mistakes.
2. Vaccinators repeatedly made poor decisions with respect to immunizations, such as refusing to give multiple antigens and restarting series unnecessarily.
3. Inappropriate population percentages were being used to calculate target groups, resulting in artificially inflated reported coverage. Once the MOH corrected this problem of population estimates, the actual immunization coverage figures were shown to be much lower.

TAIS was an active partner in Timor-Leste's EPI Working Group— together with the Ministry of Health, WHO, UNICEF, and the National Training Institute— working to support a revised and expanded National EPI policy. The project also provided trainers and technical support for nationwide training in 2007 and 2008, and subsequently played a lead role in developing job aids to support vaccinators in areas of need that identified during post-training supportive supervision.

What is the implementation process?

USAID/BASICS' Indonesia program provides a valuable example of implementation in an environment where EPI is functional, but is not achieving desired targets. The overall approach was thus to build on Indonesia's extensive health system network and its demonstrated know-how in the area of immunization.

USAID/BASICS organized a two-pronged strategy. The first comprised a set of technical efforts to revitalize the existing EPI service delivery system in collaboration with the Ministry of Health and donors at the central level and with province and district government health services at decentralized levels. The second was to develop a comprehensive set of complementary advocacy and communications efforts to strengthen community level understanding and demand for immunization along with

expanded commitment to its support from prominent, strategically located non-governmental partners.

Because immunization requires a multi-sector approach (and because the BASICS Millennium Challenge Corporation Indonesia/Immunization Project had an aggressive two-year timeline), BASICS carefully focused its activities on:

- Impact: targeting those provinces and districts with the largest numbers of under-immunized children to achieve maximum results for the effort applied;
- Data: emphasizing program decisions based on monthly data from *Local Area Monitoring*, achieved using simple Excel-based software (developed by the project, but based on the country's existing data collection system) for inputting monthly immunization totals and generating data on coverage and disease trends.
- Total training: training key health personnel in skills that are critical for program management, service delivery, cold chain management, and vaccine forecasting;
- Immediate action with long-term: focusing on rapid increase in immunization coverage while identifying strategies to strengthen the EPI system for sustainability;
- All levels of health system: coordinated, simultaneous efforts at national, province, and district/municipality levels to rapidly scale up immunization coverage while leveraging dedicated continued funding and programming support for immunization from local government; and
- Promotion: advocacy and social mobilization initiatives to engage key public and private stakeholders and build multi-sector support at all levels.

BASICS teams were established in each of the targeted provinces for collaboration with province, district, and subdistrict officials. National level working relationships with CDC/EPI, UNICEF, WHO, and USAID were augmented with agreements with prominent local partner organizations – the Indonesian Midwives Association (IBI), the Indonesian Association of Pediatricians (IDAI), the Scouts (Pramuka), the 'Aisyiyah and Muslimat NU women's arms of Indonesia's two largest faith-based social organizations, and the Family Welfare Movement (PKK) organization headed by government officials' wives that reaches every community and organizes the monthly *Posyandu* (village health post) outreach sessions where most immunization are provided. These partner organizations improved community level awareness, provided support in specific local areas, and contributed actively to the revitalization of the immunization program

Results

Timor-Leste

EPI clearly contributed to improved immunization coverage rates in Timor-Leste. As shown in Table 1, contributions by TAIS and other immunization partners led to reversal of a three-year downward trend in DPT1 and DPT3¹ coverage as nationwide training was implemented in 2007 and 2008.

Table 1
Timor-Leste DPT1 and DPT3 coverage rates, 2003-2007

Year	2008 DPT3	2008 DPT1	2007 DPT3	2007 DPT1	2006 DPT3	2006 DPT1	2005 DPT3	2005 DPT1	2004 DPT3	2004 DPT1	2003 DPT3	2003 DPT1
Coverage	79%	85%	70%	76%	64%	71%	49%	58%	57%	66%	71%	84%

Indonesia

USAID/BASICS invested significant resources during the first year to train *Puskesmas* (Public Health Clinics) and district staff in EPI management, supportive supervision, and Local Area Monitoring. EPI managers from all 2,100 *Puskesmas* of the 68 priority districts were trained. This critical step to accelerate coverage was accomplished in only four months and exceeded the level of effort planned. Table 2 expresses the numbers of health personnel trained through USAID/BASICS.

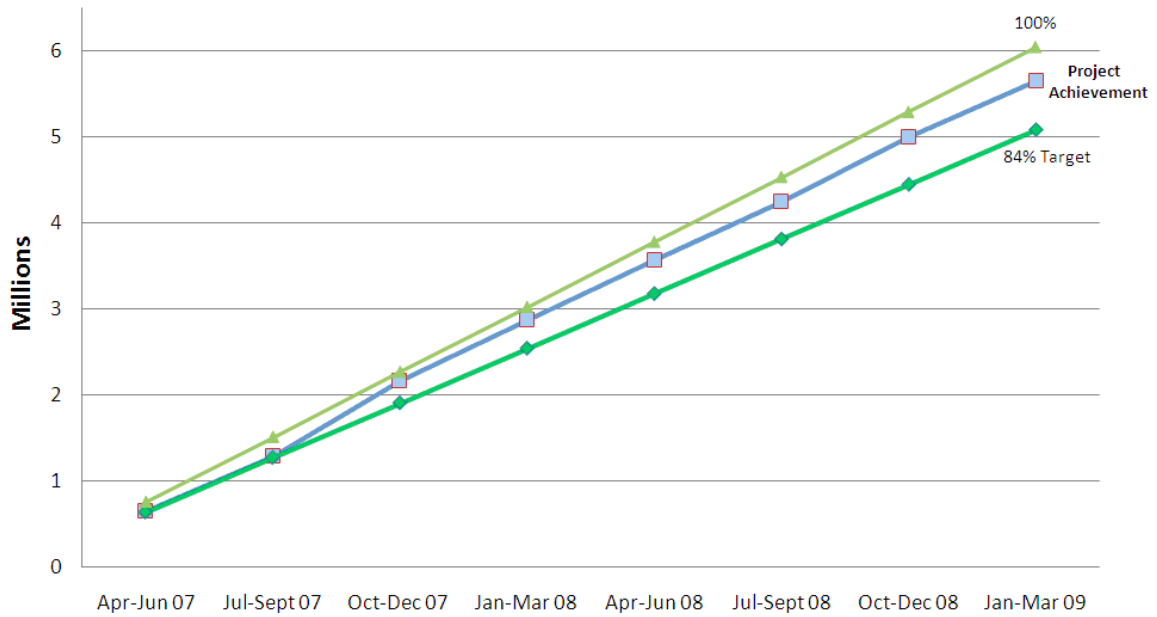
Table 2
Number of people trained and Type of EPI Training Provided, Indonesia

EPI management in Puskesmas	EPI Basics (for Midwives)	Cold chain maintenance	Effective Vaccine and Stores Management	Totals
6,812	4,790	1,508	281	13,391

Overall, and as shown in Figure 1, provision of over 5.5 million DPT3 and measles vaccines during the life of the BASICS Millennium Challenge Corporation Indonesia/Immunization Project helped USAID/BASICS met its project objective of achieving over 84% DPT3 and measles coverage in targeted areas, contributing to a national average of over 84% as well in the short two year time frame. This was a major achievement. The 2008 estimate for USAID/BASICS-supported provinces was 86.26% coverage.

¹ DPT3 is the most widely used international indicator of EPI performance, and DPT1 is often used as an indicator of access to services. Drop-out rates are surprisingly small.

Figure 1
Total Number of Children under One Year of Age Vaccinated with DPT3 and Measles (averaged) in Targeted Province over the Life of the Millennium Challenge Corporation Indonesia/Immunization Project



Click [here](#) to read the USAID/BASICS' Indonesia/MCC Immunization Project final report.

What we learned

USAID/BASICS' Millennium Challenge Corporation Indonesia/Immunization Project provided a number of lessons that apply well across countries:

- In most environments, critical systems are in place for an effective immunization programs. Revitalizing and sustaining them requires advocacy—at the district level in particular—to secure adequate human and financial resources for supportive supervision, and technical direction. The Indonesia experience demonstrated that just revitalizing the best practices of the existing system can achieve a rapid increase in immunization coverage.
- Mobilizing the support of community-based, faith-based, and professional association partners is feasible, effective and essential. This approach needs to be sustained.
- Sustained use of monitoring under the direction of civic leadership and partners involvement can maintain focus on program improvement. At the same time, periodic district level coverage surveys with the support of local universities are feasible and recommended for data validation and advocacy.
- Family-retained immunization records are essential as educational tools for the timely completion of all doses.
- Where practical and appropriate, the focused use of mass media will continue to remind the public of the importance of complete vaccination of infants. In Indonesia, where television viewership is high, catchy visual advertisements were particularly effective.
- All training requires follow up and on-the-job support afterwards. Rapid, mass training intensifies this need.
- Vaccine stock management system is often not reliable. Stock-outs occur and adequate buffer stocks are not in place. Procurement must be consistent with true usage rates, not just estimated usage rates.
- The two-year timeframe of the BASICS Millennium Challenge Corporation Indonesia/Immunization Project was too short. Immunization scale-up programs should include a 3-4 month “start-up” and “close-out” periods to allow for a full 24 months of field activities.

What is the way forward?

In as much as USAID and other health partners considered vaccination (along with oral rehydration solution for the treatment of diarrhea) as one of the “twin engines” of public health programming during the 1980s, efforts to increase woefully low vaccination rates in the developing world were widely successful at the time. But, in many ways, the success achieved two decades ago is a weakness of today’s EPI. That is, routine immunization has been perceived by many decision makers as being successful enough to give way to any number of competing priorities; many of which are considered to be emergency public health needs. Even the extremely limited reemergence of polio in some countries² has appeared to spark a more active response from certain policymakers. This is not to say that polio eradication should be ignored, but it’s essential to remember that 130 million children are born each year and they still need to be immunized. EPI requires continual emphasis.

And, although it is widely reported that immunization programs are well funded, the large majority of financing for immunizations are directed towards disease control as opposed to routine immunization. For example, less than 5% of the WHO/EURO’s immunization budget is available and spent on routine immunizations. Yet, at the same time, some 20% of child mortality is caused by vaccine-preventable illnesses.

In this funding environment, greater prominence is being given to identifying potential synergies and linkages between interventions. Therefore, immunization can be used as a platform for other maternal, prenatal, and child health interventions. For example, *community outreach* was pioneered for immunization and, while clearly advantageous for a range of public health needs, it is rarely used for other interventions. This type of integration not only extends the reach of a wider range of health services, but serves to sustain immunization.

As projects (and not just Ministries of Health) look towards developing synergies, managers must be wary of diluting single technical areas, like immunization. Indeed, the move towards wider-reaching programming is taking place in the USAID sphere, as well as amongst many development agencies that are using the fairly short-term Millennium Development Goals as a foundation for planning.

Ultimately, the goal of EPI has not changed and will not change. Programs must facilitate every child’s status as a *VIP* by ensuring they are vaccinated, immunized, and protected.³ Its importance and the ease with which governments and donors can forget the basics of child health, such as immunizations, as they are attracted to the newest trend or emphasis by one of the multilaterals is a constant danger that requires vigilance in keeping immunizations as a priority of any nation’s child health.

² Fewer than 1,500 were registered globally in 2008 and 2009.

³ It is important to make the distinction between vaccination and immunization. Vaccines may be poorly delivered or inefficient. Thus, in some cases, a child may not be immunized after receiving a vaccine and, thus, may not be protected.