

Imunizasaun Proteje Labarik Democratic Republic of Timor-Leste



Final Program Report

April 2011 to December 2013

The *Imunizasaun Proteje Labarik* (IPL) program was funded by Millennium Challenge Corporation (MCC), with local oversight by USAID/Dili, for the Ministry of Health, Timor-Leste. The program was managed by the USAID-funded Maternal and Child Health Integrated Program (MCHIP), the USAID Bureau for Global Health's flagship maternal, neonatal and child health (MNCH) program. MCHIP supports programming in maternal, newborn and child health, immunization, family planning, malaria, nutrition, and HIV/AIDS, and strongly encourages opportunities for integration. Cross-cutting technical areas include water, sanitation, hygiene, urban health and health systems strengthening.

MCHIP is implemented by Jhpiego in partnership with John Snow, Inc. (JSI), Save the Children, Johns Hopkins University/Institute of International Programs, ICF Macro, Program for Appropriate Technology in Health (PATH), Broad Branch Associates, and Populations Services International (PSI). IPL was managed and administered by JSI, the lead organization for immunization program implementation.

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MCHIP
Jhpiego
1776 Massachusetts Ave, NW
Suite 300
Washington, DC 20036
Phone: 202.835.3100
Fax: 202.835.3150
Internet: www.mchip.net/

COUNTRY SUMMARY: TIMOR-LESTE



Selected Health and Demographic Data for Timor-Leste

GDP per capita (USD)	\$4,829 (5)
Total population	1,114,000 (3)
Maternal mortality ratio (deaths/100,000 live births)	557 (2)
Skilled birth attendant coverage	30% (3)
Antenatal care, 4+ visits	55 (4)
Neonatal mortality rate (deaths/1,000 live births)	24 (4)
Infant mortality rate (deaths/1,000 live births)	48 (4)
Under-five mortality (deaths/1,000 live births)	57 (4)
Treatment for acute respiratory infection	45 (4)
Oral rehydration therapy for treatment of diarrhea	71 (4)
Diphtheria-pertussis-tetanus vaccine coverage (3 doses)	67% (3)
Modern contraceptive prevalence rate	22 (3)
Total fertility rate	6 (3)
Total expenditure on health as % of GDP (2012)	4 (1)

Sources:

(1) World Bank, (2) Timor-Leste 2009 Demographic and Health Survey, (3) WHO, (4) UNICEF, (5) UN Data

Achievements

- DTP3 and measles coverage combined experienced a sharp increase, which coincided with IPL implementation
- Developed and scaled up effective tools and approaches in seven focus districts and two additional districts (of 13 total): quarterly micro-planning, supportive supervision, community monitoring of infant vaccinations, orientations for community leaders and for students on immunization, support for SISCa (monthly, integrated child health days) and integrated outreach, and provision of training and mentoring
- Helped plan and implement the introduction of pentavalent vaccine in October 2012
- Strengthened partnerships with communities and increased awareness for vaccination by engaging community leaders, schools, and religious leaders
- Improved timeliness of vaccination through implementation of innovative approaches, such as the *my village, my home* tool
- Partnered with local CSO Café Clínica Timor (CCT), expanding community monitoring of vaccinations in 28 sucos
- Achieved sustainable transfer of activities through partner commitments to maintain or expand many of the project's tools



Program Dates	April 1, 2011 – December 31, 2013
Total Mission (MCC) Funding	\$2,639,250
Geographic Focus	Ainaro, Baucau, Dili, Ermera, Liquiça, Manufahi, and Viqueque 2 secondary districts (Oecussi and Manatuto added in 2013) and national-level policy and coordination
Number of CHCs and sucos covered	CHCs: 45 (35 in primary districts and 10 in new districts) Sucos: 297 (250 in 7 focus districts)
Population <1 year olds: nationwide and in project districts	Timor-Leste: 38,915 (2012) 7 focus districts: 26,357 (2012)

ACKNOWLEDGEMENTS

Imunizasaun Proteje Labarik (IPL) wishes to express its sincere appreciation to the project staff and to the institutional supporters: Millennium Challenge Corporation (MCC), the U.S. Agency for International Development (USAID), Maternal and Child Health Integrated Program [MCHIP] and John Snow, Inc. (JSI). We would also like to acknowledge the health workers, community health volunteers (PSFs), community leaders, and sub-district administrators for their active involvement and support. In addition, IPL extends its appreciation to our colleagues the Ministry of Health (MOH), INS (national health training institute), District Health Services (DHS), and the Expanded Program on Immunization (EPI). Finally, we are grateful to the partners, such as WHO, UNICEF, Clinic Café Timor (CCT), and USAID-funded HADIAK program for their coordination and collaboration.

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ACRONYMS AND ABBREVIATIONS

CCT:	Clinic Café Timor
CCVM:	Cold Chain and Vaccine Management
CHC:	Community Health Center
CSO:	Civil Society Organizations
DHS:	District Health Service
DPHO:	District Public Health Officer
DPT3:	Third dose of diphtheria, pertussis and Tetanus Vaccine
EPI:	Expanded Program on Immunization
GAVI:	GAVI Alliance
Hib:	<i>Haemophilus influenzae</i> type b
HIP:	Health Improvement Project (locally known as HADIAK)
HMIS:	Health Management Information System
HP:	Health Post
HSS:	Health System Strengthening
IIP:	Immunization in Practice
INS:	<i>Instituto Nacional da Saude</i> (National Health [training] Institute)
JSI:	John Snow, Inc.
MCC-TPI:	Millennium Challenge Corporation – Threshold Program on Immunization
MCH:	Maternal and Child Health
MCHIP:	Maternal and Child Health Integrated Program
MDM:	<i>Medicos do Mundo</i>
MLM:	Mid-level Management
MOE:	Ministry of Education
MOH:	Ministry of Health
MSI:	Marie Stopes International
NGO:	Non-governmental Organization
PMP:	Project Monitoring Plan
PSF:	<i>Promotor Saúde Família</i> (Community Health Volunteer)
RDTL:	Democratic Republic of Timor-Leste
SISCa:	<i>Serviço Integrado da Saúde Comunitária</i>
SS:	Supportive Supervision
TAIS:	Predecessor USAID-funded child health project
TLDHS:	Timor-Leste Demographic and Health Survey
UNICEF:	United Nations Children’s Fund
USAID:	United States Agency for International Development
WHO:	World Health Organization

EXECUTIVE SUMMARY

Background

The Millennium Challenge Corporation's Threshold Project on Immunization (MCC-TPI) in Timor-Leste was implemented by John Snow, Inc. (JSI), through USAID's global Maternal and Child Integrated Program (MCHIP), from April 2011 to October 2013. Known as *Imunizasaun Proteje Labarik* (Immunization Protects Children or IPL), the project worked with the Ministry of Health (MOH) at national, district, and local levels to increase child immunization coverage.

IPL was an effective project in a difficult environment. At the start of project implementation, Timor-Leste reported the lowest administrative and official immunization coverage in the WHO/SEARO, estimating 66.7% DTP3¹ and 68.2% measles coverage, with a slight downward trend reported by the Ministry of Health in 2011.² The goal of IPL was to raise the national average of DTP3 and measles vaccination in infants from 67.5% to 81.5%. As a practical strategic decision, IPL focused its efforts in the seven (of 13 total) districts with the largest number of unvaccinated children, which were identified based on HMIS data, and in its last six months extended activities to two additional districts. IPL focused activities on various aspects of the immunization system that needed to be strengthened: community participation, local government and Civil Society engagement, communication, SISCa and outreach, health staff capacity and performance, cold chain and logistics, microplanning, and district and national level partnerships. IPL's positive impact was the result of its balanced approach that addressed both the supply (immunization services) and demand (public understanding and participation) deficiencies described in IPL's baseline study.

Achievements in coverage

Various analyses of vaccination coverage, including comparisons between IPL and non-IPL focus districts, and analyses based solely on numbers of children vaccinated (a logical approach, given the unreliability and yearly ups and downs in target populations) show significantly better coverage in IPL districts. The average coverage of DPT3 and measles, based on national coverage, was reported at 61.6% in 2011 compared to 78% in 2012, toward the end of IPL implementation. This increase is very close to achieving the target of 81.5%, but the target could not be attained in large part due to a national stock-out of measles vaccine the first half of 2013. The project had no control over this, but worked diligently with partners to resolve the stock-out crisis. Before IPL implementation, a decline in coverage of all antigens had been reported, reaching a low in 2011. However,

¹ Third dose of diphtheria-pertussis-tetanus containing vaccine

² 2009/10 Timor-Leste Demographic and Health Survey (TL DHS)

data from 2012 illustrated a sharp rise in coverage for all antigens. In IPL focus districts an increase of almost 16 percentage points was reported, while that for non-focus districts was only 7 percentage points. This increase corresponds to the uptake of IPL's field interventions (and also the MOH's determination of a smaller target population, although the changes attributable to IPL support still appear to be significant.) While the individual effects of various project interventions cannot be identified, it seems very likely that together, the package of activities contributed to this increase.

Partnering with communities

At baseline, IPL documented minimal community advocacy for or participation in the delivery of health services. To address this deficiency, IPL implemented various approaches to increase awareness, demand, and use of services. Results were achieved through engaging community and religious leaders, partnering with schools and the Ministry of Education (MOE) to transmit health lessons, and the use of the *Uma Imunizasaun* (*my village, my home*) tool. After receiving training from IPL on immunization and other health topics, community leaders in many low-coverage sub-districts became effective vaccination advocates in their communities. IPL partnered with the MOE to develop health lessons and gave orientations on vaccination and other health topics in middle schools throughout its focus districts. Use of the *Uma Imunizasaun* tool enabled local volunteers to monitor vaccinations of their community's infants and guide home visits to motivate parents when a child fell behind. Use of the tool greatly increased community engagement in vaccination and resulted in more infants being vaccinated as soon as they were eligible. The IPL program review (**Annex C**) found the UI tool was one of IPL's most effective activities. Community respondents said it helps them to track which children are up to date on their immunizations and which are not. It enables them to motivate parents of children who have not received all immunizations to get them immunized. Implementation of this tool was taken up by the local Civil Society Organization (CSO) Clinic Café Timor (CCT), which expanded its use in 28 sub-districts.

Strengthening human resource capacity and planning of services

IPL's baseline survey documented that health workers had not received training on Immunization in Practice (IIP) or Cold Chain and Vaccine Management (CCVM) in recent years. Additionally, the recording and reporting of data were very weak and supportive supervision needed further strengthening. To address these issues, IPL helped revise standard tools for district, sub-district, and outreach supportive supervision (SS) and participated in numerous SS visits. IPL also contributed to involving MOH staff more into SS visits and systematizing SS forms and procedures. The program also mentored local staff and participated in formal in-service training. IPL designed new tools (a *suco*-level vaccination register, an out-of-catchment-area form) and also worked to improve staff skills in registering, reporting, analyzing and using data.



In 2011, IPL documented either an absence or weakness in district and sub-district micro-planning, which, done well, can improve efficiency and effectiveness of immunization. IPL collaborated with national partners to adapt the standard WHO micro-planning guidelines, then helped facilitate annual micro-planning and quarterly updates at district and sub-district levels. Better use of data and mapping, as well as civil society engagement in planning, resulted in better locations and scheduling of vaccination services.

Improving service provision

At baseline, it was discovered that many health facilities could not maintain the cold chain equipment properly nor fix minor problems with their refrigerators. IPL provided training within its focus districts for improved human resource capacity to maintain equipment to keep vaccines potent and safe. IPL also provided resources (new motorcycles and gasoline) as well as practical assistance (transport in project vehicles, help in vehicle management and help in service provision) for delivery of vaccinations and other health services. Motorcycles and vehicles were donated to the MOH at the close of project.

National level and partner engagement

The program participated, with other key national partners, in the high-level national EPI Working Group that provided regular support and guidance to the MOH, reviewing and formulating policy papers, strategic guidelines, and training and communication materials for both EPI and for the wider health system. IPL participated actively in such national immunization activities.

IPL carried out several practical studies, the results of which were immediately used to improve immunization services:

- The baseline study (2011) of the immunization program in IPL's seven focus districts;
- A primarily qualitative study in the national capital, Dili, to understand factors leading to poor coverage despite good access to services (2012); and
- A program review aimed at extracting lessons learned and recommendations for continuing and expanding IPL's tools and approaches (2013).

The project organized closeout workshops in each of the project districts and, with funding from WHO, a national workshop to share project lessons and recommendations as well as to discuss parallel initiatives from other partners. Feedback on IPL's contributions at these workshops was gratifying: there were abundant laments that the project was ending too soon and many commitments from the MOH and partners to continue supporting IPL's tools and activities.

Lessons learned and challenges

Interventions implemented under IPL appearing to have achieved the greatest impact on service delivery and demand generation include: support to SISCa services; mobile and



outreach services with fuel, transport, maintenance, and mentoring; use of the UI tool to increase community participation and stimulate demand; and the introduction and support of micro-planning in districts and sub-districts. There is political will for IPL activities to continue in focus districts and for the other districts to adapt the same package of activities.

IPL's immediate impact on coverage was limited by national weaknesses in personnel and their distribution, the health information system, and vaccine procurement, distribution, and management, as well as by difficulty of providing services for families in hundreds of villages with limited if any road access. These issues present Timor-Leste immunization partners with two challenges:

1. Maintaining political will and allocating human and other resources needed to address supply and demand sides of immunization
2. Addressing the national health system weaknesses that affect immunization as well as other health programs.



1 INTRODUCTION

1.1 Background

The Democratic Republic of Timor-Leste (RDTL), located in South East Asia, is one of the world's newest nations. A former Portuguese colony, Timor-Leste was occupied by Indonesia in 1975, and restored as an independent country on May 20, 2002. The 2010 Timor-Leste Population Census enumerated 1,114,000 people, with 31,219 children under one-year of age and 238,544 women of reproductive age. Seventy percent of the total population lives in rural areas, mostly in small, scattered villages often isolated by mountainous terrain and poor roads.³

RDTL has achieved enormous progress in nation building over its short 11-year history, including a strengthened health sector that has made excellent progress towards achieving MDG 4, having achieved two of the three indicators (under-five mortality rate and infant mortality rate). The Government and Ministry of Health (MOH) are committed to improving the well-being of the Timorese people, especially the poor and marginalized populations, through increased service delivery coverage that includes maternal and child health (MCH) services and other priority programs.

The MOH facilities consist of a national hospital in Dili, five referral hospitals, 67 community health centers (CHCs, at sub-district level), and 213 health posts (HPs). By 2020 each *suco* (the subdivision of sub-districts) is supposed to have at least one HP equipped with one doctor, two midwives, and two nurses to provide family health care to the respective communities.¹ Apparently, there is no longer a “critical shortage” of health workers in Timor-Leste.⁴ The country is getting closer to the WHO benchmark as well as the health worker/population ratios of neighboring countries. However, most HPs operate without skilled midwives, and many facilities lack sufficient transport and necessary medical equipment. The MOH introduced “integrated community health services” or *Servisu Integradu da Saúde Comunitária* (SISCa) in 2008 to make health services more accessible to families who live far from a health facility. As of 2011, SISCa's were being implemented in 474 locations across the country (National Health Statistics 2011). Most immunizations are given at CHCs and during monthly SISCa sessions. The national hospital provides only birth doses of BCG and polio vaccines. The MOH estimated that private clinics (for-profit and nonprofit) deliver one-fourth of basic health services, but few of them offer immunization services.¹

³ The Ministry of Health. National Health Strategic Plan 2011-2030. Dili, Timor-Leste; 2011.

⁴ Democratic Republic of Timor-Leste. Aide Memoire, Technical Mission: Human Resources for Health; November 6-9, 2012



Since the RDTL emerged from decades of turmoil in 2000, its Expanded Program on Immunization (EPI) has made significant progress. Nonetheless, it continues to report the lowest administrative and official immunization coverage in the WHO South East Asia Region. The Timor-Leste Demographic and Health Survey (TLDHS) 2009-2010 showed immunization coverage for one-year olds in Timor-Leste at 66.7% for diphtheria, pertussis and tetanus (DTP3) and 68.2% for measles. A particularly alarming finding from this TLDHS was that 22.7% of one-year-olds had never received a vaccination. This means that many infants and young children are seriously exposed to risks of preventable disease and death.

1.2 Project Overview

The Millennium Challenge Corporation (MCC), through its Threshold Project on Immunization (MCC-TPI), *Imunizasaun Proteje Labarik* (IPL), supported the MOH in Timor-Leste to improve immunization coverage and strengthen routine immunization services. The main project goal was to reach the MCC ‘Immunization Coverage’ target indicator, which is defined as the average of DTP3 and measles coverage rates in a number of countries receiving MCC support. The MCC target indicator to be reached over the project lifetime was an average DTP3/measles coverage rate of 81.5%, from 67.5% at project start-up in 2011. IPL focused its work in the seven (of 13 total) districts that had the largest number of under-vaccinated infants. It also worked actively to strengthen immunization at the national level, and in its last six months extended activities to two additional districts. IPL was funded for a 27-month implementation period, beginning in April 2011. It was later granted a 6-month, no-cost extension, which re-scheduled completion of the implementation phase to 31 October 2013 and the final administrative and financial close-down to 13 December 2013.

To achieve the project’s ambitious goals, IPL worked within the existing health system, collaborating with the MOH to implement the following strategies outlined in the Government of Timor-Leste’s Threshold Country Plan:

- 1) Strengthen service delivery to identify and reach unimmunized children at least five times a year
- 2) Strengthen district and CHC-level program management capacity and technical skills among government health personnel
- 3) Strengthen SISCa as an effectively functioning community-based outreach mechanism for providing immunization and other health services and
- 4) Strengthen program monitoring and reporting through better collection of routine data and the routine analysis and use of data for decision-making and targeted action

IPL’s main mechanism for offering support in the districts and sub-districts was the deployment of a team of field technical officers, with one officer based in each of the seven focus districts. Technical officers were supervised and coordinated by two field coordinators



who covered three or four districts each and who acted as a link between project management in the capital and staff in the districts. One Dili-based technical coordinator supported and monitored the quality of different activities. Field staff generally spent 75% of each month in their respective districts and 25% in Dili, where all project staff would assemble to review progress, discuss issues and plan for next steps. Over the project's two years of operation, all seven project drivers received training and encouragement to develop their skills and expand their roles. In addition to their driving and vehicle maintenance responsibilities, they became active, contributing members of the field-based technical teams (See Annex D, #15 for more information). The management team comprised a project director/MCHIP country representative (known as the 'chief of party'), and a number of administrative, financial and support personnel led by an office manager. For the final six months of IPL's implementation phase, the project had additional support from a volunteer monitoring and evaluation officer from the Australian Red Cross. (See Annex A for details on IPL staff.)

In the final months of IPL's operational phase, IPL extended activities into two more districts – Oecussi and Manatuto. This was done for two main reasons: 1) given the low immunization coverage in both districts, particularly in Oecussi, and its impact on national coverage rates, this was seen as important step towards reaching IPL's national goal; and 2) HADIAK, a sister USAID-funded project with an MCH/RH focus, was already implementing activities in both districts and could support and continue the use of IPL tools beyond the project's lifetime. In collaboration with HADIAK, IPL commenced work in both districts in June 2013 with a rapid assessment at each CHC. Activities undertaken in the two new districts included micro-planning support, community leader training, supportive supervision, school orientations and introducing the project's community-based vaccination monitoring tool. Extra IPL staff were recruited to support the expansion, and IPL assisted HADIAK to prepare a new integrated micro-planning template that included MCH/RH activities.

IPL was an effective project in a difficult environment. Various analyses of vaccination coverage, including comparisons between IPL and non-IPL focus districts and analyses based solely on numbers of children vaccinated (a logical approach, given the unreliability and yearly ups and downs in target populations) show significantly better coverage in IPL districts. Although IPL did not achieve its ambitious goal of raising the national average of DTP3 and measles vaccination in infants from 67.5% to 81.5%, it might have achieved that coverage target in its focus districts and come close nationally had there not been a national stock-out of measles vaccine in the first half of 2013. IPL did not address vaccine procurement and could not prevent this; however, it worked with the MOH and partners to address the situation and expedite a solution.

Several factors contributed to IPL's success. Prior to IPL, the USAID-funded child health project, namely TAIS (*Timor-Leste Asisténsia Integradu Saúde*), supported the MOH from



2005 to 2011 to improve the quality of immunization (and other child health) services. Building on TAIS's work enabled IPL to begin with credibility and good relations with key partners. Of equal importance, TAIS served as a training ground for many of IPL's Timorese staff and its (Bangladeshi) Project Director. The skills, confidence, relationships, and language capabilities of IPL staff grew significantly over the years. A design factor contributing to project success was that it was active at national, district, and local levels. This enabled the project to bring feedback on the effectiveness of IPL and MOH tools and approaches from the field to the national EPI Working Group, in which IPL was an active member. Several tools and approaches developed by IPL to address problems detected in the field were subsequently endorsed and adopted by the national MOH. Finally, it appears that IPL's package of tools and approaches at district level, which focused equally on the supply and demand sides of immunization, was an effective approach.

Beyond raising immunization coverage in the short-term, IPL sought to strengthen the EPI so it would be able to sustain and expand the gains realized beyond this project. The project assisted the MOH improve its ability to achieve the medium-term priorities set out in the comprehensive Multi-Year Plan (cMYP) for Immunization 2011-2015, and in turn to reduce child morbidity and mortality associated with vaccine-preventable diseases.



2 KEY ACCOMPLISHMENTS AND LESSONS LEARNED

A few months after beginning operations in April 2011, IPL conducted a comprehensive baseline assessment of immunization services in all seven districts and all 34 CHCs in the project area. This encompassed interviews with 250 *chefes suco*, 35 sub-district administrators or deputies, and 34 CHC directors and District Public Health Officers (DPHOs). The assessment was required for detailed planning of project activities and initiatives, and also to provide a basis for measuring its progress and achievements.

The baseline assessment highlighted a number of critical weaknesses in existing immunization services, including low (and falling) coverage rates for the key EPI antigens, a situation that resulted in an outbreak of measles while the study was actually in progress. Key reasons identified for low coverage included:

Poor or absent local planning: Only 20% of health facilities or District Health Services (DHSs) had developed micro-plans for 2011; one result was that over 20 percent of SISCa's, designed to reach remote areas, were located within easy walking distance of facilities offering services.

Deficient resources and operational budgets: This resulted in cancelled sessions and many communities having no reasonable access to services.

Additional service delivery problems: While the national EPI policy and Basic Service Package recommended that all antigens be available daily in all CHCs, only 50% of the CHCs were found to do this, while others offered only one or two antigens daily. Staff shortages and fear of running out of vaccine contributed to this situation.

Weak community participation and mobilization for immunization: only 4% of *suco* councils had established health committees, only some 30% of *chefes suco* knew the schedule for the local SISCa, fewer than 10% of family health registers were up-to-date, only some 55% of districts had established District Health Councils. IPL did not work directly to strengthen *suco* councils; however, the project included *suco* council members in some activities while also encouraging CHC's to update *suco* councils.

IPL implemented a series of multi-component, complementary activities that targeted these weaknesses in health services and community demand and engagement that existed at project start-up. This dual approach appeared to have a significant impact on the EPI nationally, and began to address the various shortcomings identified in the IPL baseline study (please see Annex F). In recognition of its collaborative and effective efforts, the MOH and its partners, in particular WHO, supported and funded an orientation workshop on “disseminating lessons learned, familiarizing and understanding the integrated micro-planning and community mobilization tools” for MOH and partner staff. Most of the best practices demonstrated by IPL have been incorporated into the MOH's and other partners'

plans and continued implementation is anticipated to be supported under the upcoming GAVI Health System Strengthening (HSS) funding.

IPL tracked changes in 28 indicators, reflecting the original MCC-TPI project design, through use of a detailed Project Monitoring Plan (please see **Annex B** for the final PMP). Every three months IPL technical officers worked with their district and sub-district counterparts to extract the required data from the Health Management Information System (HMIS) and supportive supervision and project reports. IPL staff reviewed, verified, and analyzed these data together with respective DHS and MOH staff. In 2012, IPL revised some of the PMP formats and indicators to make them more user-friendly, and to put the indicators in line with the standard indicators that MCHIP tracked. Updated and disseminated every quarter, the PMP provided information on a large number of key indicators that reflected the status and progress. Table 1 shows selected indicators for IPL's first quarter and the same quarter two years later, near the end of the project. IPL activities contributed greatly to the improvements shown.

TABLE 1: SELECTED INDICATORS FOR IPL'S 1ST QUARTER (APRIL-JUNE 2011 AND FOR APRIL-JUNE 2012

Indicators	April-June 2011	April-June 2013
Average coverage of DPT3 + measles*	61.6%	78%
% of CHCs with current micro-plans, maps, full service strategies	31%	92%
Improved vaccinator ranking on quality measures	0%	54%
Number of staff in focus districts trained in IIP and CCVM	0	192
% of health facilities with good vaccine management	17%	74%
% of health facilities reporting vaccine stock-out in last 3 months**	8%	73%
Number of teachers and religious leaders who received EPI orientation in the quarter	0	46
% of CHCs with updated list of missed children by suco	0%	31%
% of CHCs holding quarterly micro-plan reviews with wide civil society participation	24%	92%
% of CHCs with active system for identifying and following up left-outs and drop-outs	4%	33%

*National coverage

**National measles stock-out in 2013

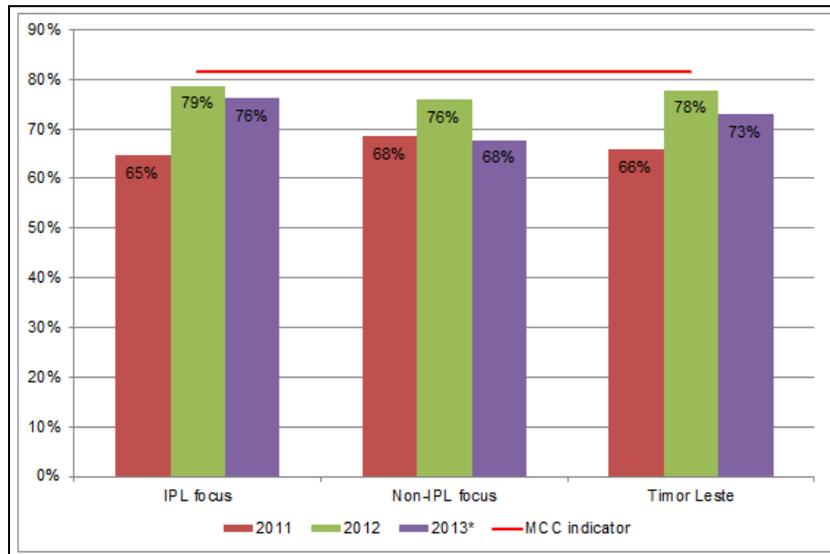
2.1 Changes in immunization coverage

IPL successfully assisted the MOH to increase national immunization coverage rates, although the specific target for IPL's MCC indicator (81.5% average coverage for DPT3/measles immunization nationally) was not met (**Figure 1**). The level of the coverage indicator rose significantly from 2011 to 2012, most rapidly in the IPL districts, but then fell in 2013 due to a three-month national stock-out of measles vaccine. The project was not responsible for procurement of vaccines, and, despite early advocacy efforts and awareness-raising with key stakeholders, was not able to prevent the stock-out, which occurred because of the new Minister of Health's decision to abrogate all existing contracts. Without



the stock-out, it is likely that IPL would have reached its coverage target in its focus districts and possibly at the national level.

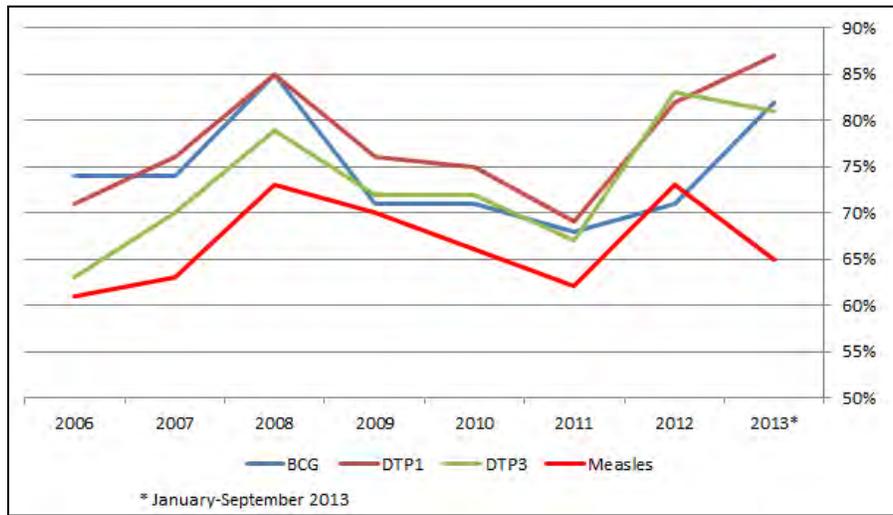
FIGURE 1. MCC 'IMMUNIZATION COVERAGE' INDICATOR



The MCC indicator for all districts shows a rise of some 12 percentage points between 2011 and 2012. The rise in IPL focus districts is 14 percentage points, while that for the non-focus districts is only 8 percentage points. The decline in coverage from 2012 to 2013 reflects the national shortage of measles vaccine for the first half of 2013. The maximum MCC indicator reached for all districts was 77.7%, and for the IPL districts alone was 78.6%, a significant increase over the baseline of 67.5%.

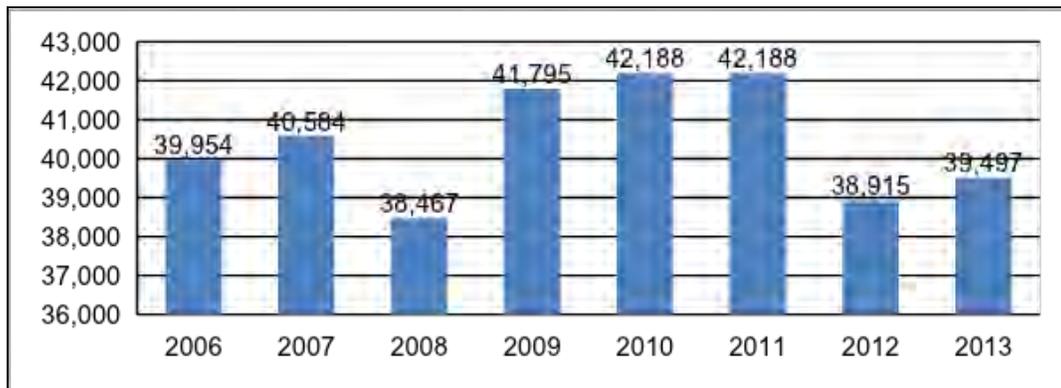
Changes in immunization coverage over several years are shown in **Figure 2**. Prior to the start of IPL activities, rates for all antigens declined each year from the highs reached in 2008 to a low in 2011. The 2012 data show a sharp rise in coverage for all antigens, which coincided with IPL's field interventions. The dramatic fall of measles coverage rates in 2013, as noted above, was due to the nationwide stock-out.

FIGURE 2. NATIONAL IMMUNIZATION COVERAGE, 2006-2013



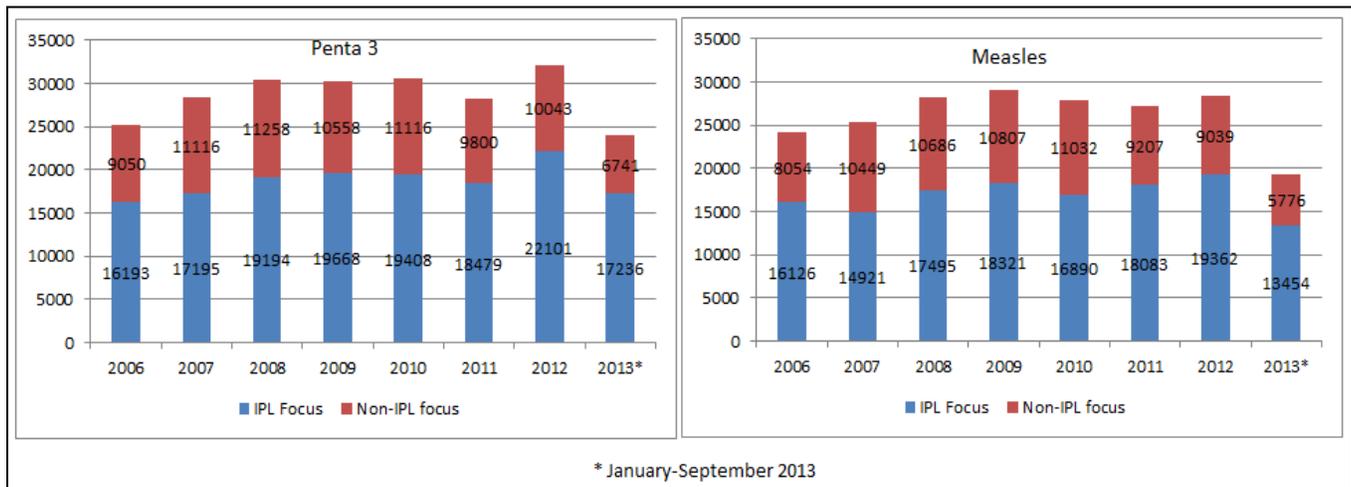
Fluctuations in the official target population are one determinant of annual coverage levels. The Government determines the official target based on annual adjustments to the infants counted in the last census, which is generally acknowledged to have under-counted the population, particularly in certain sub-districts (**Figure 3**). For the IPL districts, approximately half of rise in the MCC indicator seen between 2011 and 2012 was due to a decrease in the target population. For the non-IPL districts, almost all of the increase may be attributed to the reduced target population. Thus, the benefit of IPL support appears to be significant.

FIGURE 3. POPULATION TARGET FOR VACCINATION (< 1 YEAR) BY YEAR



Given the uncertainty over the “real” denominators, IPL analyzed the absolute numbers of children immunized annually. **Figure 4** shows that the total number of children who received DPT3 vaccine in 2012 is significantly higher than in any other year and clearly increased more rapidly in the seven IPL focus districts than in the six non-focus districts. The gains continue into 2013 (first six months) for some antigens, although the rate for penta 3 (i.e., DPT3-HepB3-Hib3) declines in **Figure 1** and only continues to rise in the seven IPL focus districts.

FIGURE 4: ABSOLUTE NUMBER OF CHILDREN VACCINATED: PENTA/DPT3 AND MEASLES



Parabens (congratulations). IPL in Baucau district has exceeded its immunization targets in 2012 for the first time. IPL plans and works together [with us]. Most community leaders in Baucau did not know about immunization and its benefit. Through the community leader training, they understand the benefits and mobilize their communities for immunization.

-Ms. Miza, District Public Health Officer Baucau district, at the national immunization workshop on 14 August 2013

2.2 IPL's major tools and approaches

Following a national project launch ceremony on June 21, 2011, IPL started working with DHSs, CHCs, the MOH and its partners under the umbrella of the EPI Working Group to carry forward its planned activities in its seven focus districts.

IPL supported a series of complementary activities intended to reach its main coverage objective in as sustainable a manner as possible. At district and sub-district level, implementation of the MCC-TPI strategies evolved into the following priority activities:

Micro-planning: IPL collaborated with national partners to adapt the standard WHO micro-planning guidelines, then helped facilitate annual micro-planning and quarterly updates at district and sub-district levels. This meant that, for the first time, local planning was data-based, and done with the participation of civil society representatives. Micro-planning resulted in better placement of existing community-based services and new outreach services. It also engaged local civic leaders, who held health staff accountable when planned services were not provided.

Support to community-based services and outreach: This support included resources (new motorcycles and gasoline) as well as practical assistance (transport in project vehicles, help in vehicle management and providing services).



Performance improvement: IPL helped revise standard tools for district, sub-district, and outreach supportive supervision (SS) and participated in most SS visits. The project also mentored local staff and participated in formal in-service training.

Community monitoring: IPL adapted the My Village Is My Home from India and introduced it in various pilot *sucos*. The tool enables community volunteers to list all infants, record the dates of each vaccination, and make home visits to motivate parents when a child falls behind. The tool helped build a sense of joint responsibility between communities and health staff for ensuring that every child is immunized. Through a partnership with an NGO, IPL expanded the use of the tool to many more *sucos*.

Information and registration: IPL designed new tools (a *suco*-level vaccination register, an out-of-catchment-area form) and also worked to improve staff skills in registering, reporting, analyzing and using data.

Community leader training: IPL developed a one-day training package, including take-home materials (a Q&A booklet and others) for community leaders (elected officials, lay church officers, teachers, and community health volunteers). In many low-coverage *sucos*, these sessions enabled the leaders to become more effective advocates for vaccination in their communities and to respond to widespread concerns over vaccination side effects.

School orientations: In collaboration with the MOH and Ministry of Education (MOE), IPL developed a two-hour orientation on vaccination for middle school students and gave the sessions in most schools in its focus districts. The objectives were to increase students' knowledge and understanding, to encourage them to promote vaccination in their families and communities, and to make students better disposed to have their own children vaccinated in the future.

Advocacy and communication: The project joined other partners, including the EPI, WHO, UNICEF, HADIAK, and INS, as a member of the high-level national EPI Working Group that provides regular support and guidance to the MOH. This body played an active role in reviewing and formulating various policy papers, strategic guidelines, and training and communication materials for both EPI and for the wider health system. IPL participated actively in such national initiatives as the measles catch-up campaign (2011), the introduction of pentavalent vaccine (2012), and advocacy efforts to resolve a national stock-out of measles vaccine (2013).

Table 1 provides a numerical snapshot of these key tools and approaches.



TABLE 2. DETAILED MAJOR ACTIVITIES

Activities	Location	Total sessions	Total participants
Community leaders training	Suco Council Offices	138	2894
<i>Uma Imunizasaun</i> tool at <i>sucos</i>	Suco Council Offices	156	4851
School orientations	Junior High Schools	41	2115
<i>Uma Imunizasaun</i> tool at CHCs	CHCs	87	2303
Micro-planning at CHCs	CHCs	216	-
Health worker training	CHCs	21	401
SISCa, outreach, and mobile clinics supported	Communities	2796 (424 SISCa and 2372 outreach)	-
Total supervision visits at different health facilities	CHCs and HPs	228	-

2.3 Activities at community level

IPL encouraged and helped CHCs to involve civil society leaders and volunteers, in particular the suco council members and community health volunteers (PSFs), who are responsible for promoting healthy behaviors and practices in their communities. The project facilitated multi-sectoral platforms where health staff and community leaders reviewed their immunization situation, analyzed the problems, and developed plans. This section describes major activities that took place at the community level.

Community leader training

With support from the MOH and EPI Working Group, IPL developed a training module and job aids for community leaders focused on immunization, vitamin A, and de-worming. This training was intended to teach leaders about immunization (and other key health interventions) and their importance, and to encourage them to share this information with families in their communities. A “call for action” section of the module invited leaders to mobilize their communities to receive these services. IPL supported DHS’s to organize and facilitate training of trainer sessions to train community leaders in all focus districts. DPHOs/EPI and Assistant DPHOs, all CHC directors and CHC EPI focal points, and partners participated. The project then supported local DHS and CHC health staff to provide training on immunization for *suco* leaders and other

When asked how they followed up their community leader training in their *suco*, one leader from *suco* Bobmeto said:

After the training I went to many households to share information with the community.

Another said:

After the training, I stood up at a meeting and talked about the importance of encouraging the community



prominent community members. *Sucos* with low immunization coverage rates were prioritized. Participants were the *chefes suco*, *chefes aldeia*, teachers, religious educators, youth and women council members and other key members of the community. This training program began in November 2011 and close to the project end had reached 138 out of 250 focus *sucos*.

The IPL program review report found that the community leaders and PSFs interviewed felt that the training had increased their knowledge about basic immunization and made them more capable of answering questions and promoting immunization in their communities (full report can be found in Annex C). They considered this training as one of IPL's highly effective interventions. A number of health managers and vaccinators commented that this activity should be continued. Participants from the national level workshop on micro-planning and community mobilization held on 13-14 November 2013 appreciated the community training module and recommended that the MOH continue its support and allocate funds to use it in other districts.

Community-based tracking of children's vaccinations through the *Uma Imunizasaun* (UI) tool

“Reaching the unreached” to promote equity and increase immunization coverage was a priority task for the project and the MOH as well. IPL used a tool, based on My Village Is My Home from India, called *Uma Imunizasaun* (Immunization House or UI in Timor-Leste), to encourage community participation by enabling community change agents to understand the immunization status of every infant in their community and to mobilize families accordingly. Bearing in mind the principle of “build a strong community by vaccinating all eligible children on time”, IPL introduced the UI tool at a national workshop on the proposed initiative in September 2011, and then phased the tool into nine pilot *sucos* across the seven IPL districts. Use of UI was subsequently expanded via a partnership between IPL and Clinic Café Timor (CCT), which phased the tool into another 26 *sucos* in three districts where CCT has health programs.

IPL developed a series of training materials and job aids to support use of the UI tool. Its introduction included the training of local leaders, health staff and PSFs in its use. PSFs and heads of the *aldeias* listed all community infants on their tool and collected the dates of each child's vaccinations, which they confirmed and updated at monthly updating sessions facilitated by CHC and IPL staff at the *suco* council office. “After our monthly update with IPL, we could see on the *Uma Imunizasaun* that some of the children didn't get a vaccination, so we went to find some of these children,” said Gabriela da Costa a PSF from *aldeia* Bemetan.



The IPL program review (**Annex C**) found the UI tool was one of IPL's most effective activities. Community respondents said that it helps them to track which children are up to date on their immunizations and which are not. It enables them to motivate parents of children who have not received all immunizations to get them immunized. One participant said "It is easy to identify children under 1 year and follow up for the next immunization. We also understand the immunization and interval dates." Many of the volunteers recommended that the tool continue to be used in their *sucos* and that it should be expanded to all *sucos* in Timor-Leste.

Immunization Orientation Program for Schools

In coordination with the MOH and MOE, IPL developed an orientation package for junior high school students on the benefits of immunization. The orientation package was approved by the two ministries, and schools in selected areas received this training. The objective was to increase students' understanding and support for this important health intervention. In two-hour orientation sessions, children learned how immunization works, the types of vaccines provided and their benefits. Students also learned about the schedule of vaccinations in Timor-Leste -- how many times and how frequently a baby should receive vaccinations before reaching one year of age. Near the end of the class, the MOH, MOE and IPL facilitators tested students' understanding of immunization. IPL anticipated that, once sensitized, students would discuss and disseminate information on immunization and other health issues among their families, siblings and communities, and would retain a positive attitude toward immunization in the future when they have their own families. At the end of one session, a teacher from Ermera Sub-district told his students, "You can now all contribute to increasing the immunization coverage in this community by mobilizing parents to vaccinate their children."



Although the short-term contribution to immunization coverage is unknown, most respondents in the program review felt that it would definitely have benefits in the near future. Program-review respondents suggested developing a similar orientation package for parents, expanding the activity to all schools, providing the orientations annually, and including primary schools, as

this information was also useful for students at that age. One health manager said: “Through schools we can spread information to parents and for the students themselves. It’s useful information for when they get older.”

Support to SISCa, mobile clinics, and outreach

Through micro-planning at the CHC level, IPL initiated efforts to go “beyond SISCa” to reach the unreached, as well as to reach more children by analyzing coverage by SISCa and changing their locations as needed. Outreach sites were selected by community leaders and health workers together in the micro-planning sessions, aiming primarily at improving the access of remote areas. IPL supported the operation of mobile health clinics, outreach services, and the SISCAs by providing motorcycles for transport, fuel and maintenance costs for operational activities, and by mentoring health staff to help improve their performance and strengthen services. Health workers, along with IPL technical officers, reached many hard-to-reach communities by various means, including walking, horseback, boat, motorcycles and car – and on occasion by helicopter. IPL equipped vaccinators at different CHCs with 28 motorcycles in order to conduct more outreach sessions in the hard-to-reach *aldeias* and *sucos* that four-wheel vehicles cannot access easily. CHC directors were responsible for managing the use of motorbikes, which were kept at CHCs for the use of staff responsible for immunization. One health manager said: “IPL really helps us with the provision of motorbikes, so now we can reach the unreached.” As IPL ended, the project donated all of the 28 motorcycles to the MOH. The program review report mentioned that many respondents were concerned with who would continue to provide fuel and maintenance after IPL.

IPL tried to utilize every opportunity to have children immunized. The 15th United States Marine Expeditionary Unit arrived in Dili with several helicopters in 2012 for various activities. IPL worked with them and utilized their resources, including helicopters, to reach many underserved and hard-to-reach communities with medical and dental care, including immunization. Vaccinators noted that they could not reach many communities regularly due to poor road and weather conditions, except when such extraordinary resources were available.

2.4 Activities at sub-district and district levels

DHS directors, DPHOs, CHC directors and vaccinators took multiple initiatives to engage communities, deliver quality and timely immunization services, and make immunization services more accessible by reaching the unreached. The major initiatives were as follows:

Introduction and support of micro-planning

IPL, along with EPI Working Group members, such as UNICEF and WHO, helped the MOH to revise and develop national-level micro-planning formats that use of local data and catchment area maps to identify and target areas of low immunization coverage. IPL provided technical and financial assistance to the MOH to conduct micro-planning sessions



at the 35 CHCs in its 7 focus districts almost every quarter. The project also worked with DHS and CHC staff and local leaders to strengthen their skills and involvement in the planning process. NGO partners operating within the sub-district were also involved. The important change of including key persons from the *suco* level helped in building a sense of shared responsibility and accountability for immunizing children and in enabling open communication between health workers and community members. Community leaders and PSFs actively took part in planning locations and schedules of SISCa and outreach sites.

Micro-planning was initially carried out only in the seven IPL focus districts; however, realizing the effectiveness of this activity, the EPI Working Group decided to expand micro-planning to the remaining six non-IPL focus districts in early 2013. National partners,

A chefe aldeia said: Micro-planning is a way to help us to identify which village has low immunization coverage; then we try to find the solution.

The solution is usually scheduling mobile clinics and SISCa in or near low-coverage areas. Mobile clinics and SISCa are conducted by health workers in selected areas that are far from the CHC or that have low immunization coverage. Micro-planning in Atauro sub-district of Dili District resulted in the identification of five new mobile clinic locations that are accessed by boat from Maumeta. During micro-planning sessions, the *chefe suco* agreed that mobile clinics and SISCa offer the best solution to reach unreached areas to immunize children and to increase their chances of living a healthy life. He stated: *This is a good strategy to increase immunization coverage in the village.*

including WHO and UNICEF, agreed to support the activity in these other districts, so micro-planning now takes place quarterly in CHCs of all 13 districts.

The IPL program review found that respondents of all types considered micro-planning as very effective in locating under-immunized communities, informing *suco* councils of SISCa and outreach schedules, re-allocating service points to make them more accessible, and multi-sectoral involvement. Participants in IPL's national closing workshop recommended that the MOH allocate the required budget to continue micro-planning nationwide. GAVI funding (expected to be available early in 2014) is considered to have great potential for continuing and improving micro-planning. The Dili DHS director mentioned during the IPL closing meeting in Dili district, "We will manage funding from the *pasta mutin* [state budget for DHS] to continue micro-planning at CHCs."

Training for health workers: capacity-building initiative

The MOH and INS provide basic and refresher training courses for health staff at different health facilities. IPL carried out a needs assessment of health staff on immunization at the beginning of the project and developed a training plan accordingly. Because UNICEF supported Mid-Level Management (MLM) training, IPL emphasized refresher training on Immunization in Practice (IIP) and Cold Chain and Vaccine Management (CCVM). Contents of the refresher training were informed by findings from supportive supervision (next section). At the MOH's request, IPL helped plan and facilitate refresher training courses for selected health staff from different levels, including CHC directors,

immunization supervisors and vaccinators from HPs and hospitals in each of the seven focus districts. Training programs included IIP and CCVM modules that have been adapted by the MOH. These refresher training sessions were held through a collaborative effort of the MOH, INS, UNICEF, WHO, and IPL. IPL sent one field coordinator, along with four staff members from the EPI section of the MOH, to Jakarta, Indonesia to participate in training on cold chain maintenance and repair.

Supportive supervision (SS) and mentoring of vaccinators

Health workers' poor cold chain management skills and ineffective or poor communication affect immunization coverage and quality in Timor-Leste. IPL's USAID-funded predecessor project (TAIS) worked with the MOH to develop EPI SS system, including an approach, tool, and a simple spreadsheet for compiling and reporting. Together, with the MOH, WHO, UNICEF, HADIAK, and MDM (the NGO *Medicos do Mundo*), IPL helped update this checklist and develop new formats to assess vaccinators' EPI service delivery and skills. The tool covers areas of health service organization, human resource management, provider



skills, quality of care, and vaccines and logistics. New formats were also developed for observations of EPI sessions. A data entry system in Microsoft Excel was created to monitor SS findings. Software in Microsoft Excel computes the results of supervision visits and illustrates the data automatically in both numerical and graphic forms. The overall design and content facilitates participatory decision-

making. All MCH coordinators and relevant personnel were oriented on the SS system through a workshop in August 2012. As IPL ended, SS was conducted quarterly through on-site visits by DPHO/IPL teams using the updated checklists to carry out a detailed assessment of health staff skills and performance and quality of service delivery.

The SS teams provided on-the-job training, mentoring and support for health staff to ensure that service delivery standards were maintained, and IPL assisted supervisors to build trust and confidence with vaccinators on the supportive nature of supervision. The project also conducted training sessions for both supervisors and vaccinators. IPL staff, along with DPHOs and other supervisors, participated in 228 SS visits at different health facilities. The program review report mentions that every vaccinator interviewed felt that SS should continue because the visits taught them new knowledge and skills.

Mr. Izaquil Boaventura de Silva, Assistant District Public Health Officer, Liquica DHS said:

Before supportive supervision, we did not fully understand vaccine management, vaccine storage and how to fill in and use the immunization monitoring chart. Before supportive supervision began, some vaccinators didn't know if immunization coverage was going up or down.

Provision of Indonesian Midwives

Prior to IPL's start-up, the MOH recruited qualified staff from Indonesia to address health personnel shortages, particularly nurses and midwives. The Timor-Leste TPI proposal acknowledged a serious shortage of midwives, and at the MOH's request, IPL provided funding to bring 10 midwives from Indonesia to work in under-staffed CHCs for a period of 17 months. IPL returned all midwives to Indonesia after completion of their temporary assignment in five districts, namely Ainaro, Baucau, Ermera, Manufahi, and Viqueque. The MOH plans to bring all 10 midwives back to their CHCs, supported by DFAT funding and managed by Marie Stopes International (MSI).

Improve reporting and recording

Recording of immunization activities depended on the use of simple tally sheets in the past, and registers were poorly kept. There was no systematic recording of children and their immunization status by *suco*, and monthly reports were often incomplete and late. IPL's baseline study found major differences between immunization coverage for various antigens between the CHC registers and HMIS reports (but neither source consistently higher or lower). Noting these discrepancies, IPL identified data recording and reporting procedures as an area to try to understand and improve. IPL worked with the MOH, DHSs, and CHCs to improve recording and reporting of immunizations by introducing re-designed EPI registers and strengthening routine collection and compilation of performance data. At field level, IPL technical officers assisted health staff to maintain their EPI registers, track immunization coverage, and complete HMIS reporting forms. All CHCs in the seven focus districts adopted EPI registers by *suco*, which is very crucial to analyze during micro-planning. Moreover, three CHCs in Dili introduced EPI registers by *aldeia* because of the large population of infants in some urban *aldeias*

In Dili, approximately 10% of vaccinations are given to children from outside the vaccinating sub-district. This distorted vaccination coverage rates by *suco* and sub-district, making it harder to identify poor-performing *sucos* during micro-planning sessions because of inaccurate numerator data.

The Dili DHS, with the support from IPL, introduced new forms and procedures for recording and sharing data on out-of-catchment-area vaccinations. After field testing, IPL and the DHS trained vaccinators in April 2013 on how to complete the form. IPL printed and distributed the forms to all health facilities, including private clinics in urban Dili. Health workers have found this system very helpful. The immunization registers

After attending an orientation in Laclo Community Health Center in Manatuto District, Ms. Zulmira (the vaccinator in CHC Laclo) very much appreciated this system that identifies unreachable children and dropouts for immunization. She said:

We identified 40 new children, those who were not vaccinated and not registered yet for immunization, by using the small Uma Imunizasaun tool in September 2013.

She added that by using the small *Uma Imunizasaun* tool, EPI coverage for the month of August and September of 2013 increased in CHC Laclo.



can now capture vaccinations that have been given at another CHC. Dili District registers can now record actual numbers of vaccinations for their own sub-district. As a result, CHCs' immunization coverage data reflect more accurate figures for proper planning and resource mobilization.

Introduction of the Uma Imunizasaun (UI) tool at CHC level

IPL introduced a small version of the tool in 143 *sucos* of 21 low-performing sub-districts in June 2013. IPL trained PSFs, health workers, and community leaders (*chefe aldeia and chefe suco*) at CHC level. With monthly support from IPL technical officers, community members began using this tool, which enabled them to monitor their *aldeia's* vaccination status and motivate families to obtain missing vaccinations.

Coordination and collaboration at DHS and CHC levels

Most DHS's have established mechanism for partners' coordination to harmonize the work done in their districts. IPL supported different DHS's to organize program review meetings, planning workshops, and partners' coordination meetings.

2.5 Activities at the national level

IPL worked closely with the MOH and other partners at national level, both informally and through the EPI Working Group.

Expansion of services through developing health partnerships

IPL cooperated with and developed partnerships with a number of organizations and projects, including HADIAK, a sister USAID-funded project with an MCH/RH focus, and Clinic Café Timor (CCT), a coffee-producers' cooperative with a number of health clinics. Active since October 2011, HADIAK implements activities in some of the IPL focus districts and is expected to continue support to some of IPL tools and activities. To facilitate this, IPL assisted HADIAK to develop a template for integrated micro-planning for district use, which includes MCH/RH as well as EPI indicators. This has been used in the two districts through joint IPL and HADIAK support.

CCT clinics were originally established for staff and workers in coffee- growing areas but have since been made accessible to the public. They offer a range of health services, including immunization. IPL cooperated with CCT to expand the use of its UI tool for community monitoring of individual children's vaccinations. Through CCT, the tool was introduced into a further 26 *sucos* in three districts (please see this link for more information <http://www.mchip.net/node/2117>).

Advocacy and strategic contributions

In addition to targeted activities in the seven focus districts, IPL supported the MOH with major national initiatives, including a 2011 country-wide measles catch-up campaign, the 2012 introduction of DPT-HepB-Hib (pentavalent) vaccine to replace the former DPT-HepB, and efforts to resolve the 2012 and 2013 national stock-outs of crucial vaccines. IPL



participated actively, alongside other national partners, on the national EPI Working Group, advising and advocating on issues of national importance. This group normally met at least monthly, frequently met at IPL's office to discuss issues, plan activities, current work, and EPI performance. IPL contributed to developing the GAVI HSS proposal, which was funded and should commence early in 2014. The project also worked with several consultants hired by WHO and UNICEF to carry out various tasks, for example, to conduct a national essential vaccines management assessment in 2011 and revise the national comprehensive Multi-Year Plan for Immunization and national immunization strategy.

Development of tools and guidelines

IPL worked with the MOH and other EPI Working Group members to develop several national tools and documents, for instance, mid-level manager training modules, training modules and job aids for the introduction of pentavalent vaccine, job aids for the measles catch-up activities in 2011, the supportive supervision checklist and data-entry software, and micro-planning formats. In response to an MOH request, IPL printed and provided health facilities with different forms and job aids, such as SS checklists, EPI registers by suco, tally sheets, monitoring graphs, and reports, including the national HMIS report.

Studies, publications, success stories

IPL conducted three studies: the baseline assessment in 2011 (**Annex F**), a mostly qualitative study of factors limiting immunization coverage in urban Dili in 2012 (**Annex G**), and the IPL program review in 2013 (**Annex C**). The extensive baseline study highlighted several gaps and missed opportunities in the EPI and overall health system. The Dili study was conducted to better understand the service- and user-related factors that account for low vaccination coverage in urban Dili, despite high literacy rates and relatively good access to immunization services and communication media. The study findings were presented at different advocacy forums, and the Dili DHS took several corrective measures. Later an article on this study was published in the open-source journal *Global Health: Science and Practice* (November 2013, volume 1, issue 3).⁵ IPL also sponsored an independent program review in September 2013 to assess its main tools and strategies and to determine which could and should be continued and/or replicated in the future. The review sought to document intermediate impacts, outcomes and the lessons learned from IPL's interventions and give recommendations to the EPI working group on the future directions of support to the EPI.

A USAID staff member trained IPL staff on writing success stories (**Annex D**). They later received additional training and mentoring from IPL's Australian Red Cross volunteer, who facilitated the Timorese staff writing of over a dozen stories in English. The following stories were published on MCHIP and JSI websites, and more are expected to be disseminated:

⁵ Amin R, de Oliveira TJCR, Da Cunha M, Brown TW, Favin M, Cappelier K. Factors limiting immunization coverage in urban Dili, Timor-Leste. *Glob Health Sci Pract.* 2013; 1(3):417-427. <http://dx.doi.org/10.9745/GHSP-D-13-00115>

- o Reaching Remote Populations: What Do MCHIP, the US Marines, and Crocodiles Have in Common? [Accessed to <http://www.mchip.net/node/1362>]
- o Organic Coffee Cooperative in Timor-Leste Helps Increase Immunization Coverage" [Accessed to <http://www.mchip.net/node/2117>]
- o Improving data quality in Timor-Leste: Reporting vaccinations outside the catchment area [Accessed to <http://www.mchip.net/content/improving-data-quality-timor-leste-reporting-vaccinations-outside-catchment-area>]
- o In Timor-Leste, drivers become valued, contributing members of technical teams," featured on TechNet21 [Accessed to <http://technet-21.org/news-and-events/blog/entry/in-timor-leste-drivers-become-valued-contributing-members-of-technical-teams>]

Handover of equipment

To address immediate needs in the field, IPL helped equip MOH staff with essential supplies required to deliver good-quality immunization services. As mentioned below, in 2012 IPL provided 28 motorcycles to the vaccinators to conduct regular outreach activities as per their micro-plans. At the end of project, these motorcycles were donated to the MOH. IPL also donated other equipment, including laptops, desktops, photocopiers and furniture to the MOH and DHSs.

Sharing of lessons learned through a national workshop

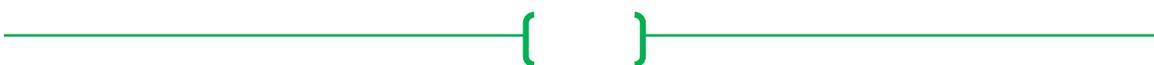
A two-day orientation meeting on micro-planning and community mobilization tools was held in Dili on November 13-14, 2013. Organized by the MOH and supported by WHO, the meeting aimed to orient MOH and partner staff on micro-planning and community mobilization tools. IPL, HADIAC, and other partners and MOH departments shared their experiences and lessons learned on these approaches. Participants, most of whom came from Timor-Leste's 13 districts, included Directors of DHS's and CHCs and DPHOs. Staff from different partners also took part in the meeting.

The presentations, discussions, and handouts were of particular interest to participants from the six districts that were outside of IPL's intensive assistance. Experienced DPHOs and CHC directors, along with partners, shared their experiences and facilitated discussions. Presenters also explained the importance of micro-planning in identifying hard-to-reach communities in order to increase coverage of immunization services as well as of other health services. IPL provided all participants with hard copies of different materials and electronic copies on flash drives.

Many participants asked about the sustainability of micro-planning after the phase-out of IPL. The MOH and other partners have committed to supporting micro-planning in all CHCs. The GAVI HSS project will also support some activities that IPL supported, beginning in two districts and then gradually expanding. Moreover, the MOH will emphasize finalizing the development and implementation of the integrated micro-planning tool, a process that IPL and HADIAC began in 2013. The MOH is also committed to continuing the *Uma Imunizasaun* tool, which allows community volunteers to compile and



maintain a listing of all infants and their vaccinations, as part of an upcoming Supplementary Immunization Week.



3 CROSS-CUTTING THEMES

Several cross-cutting principles underlie IPL's selection of activities and the manner in which they were implemented. These are described briefly in this section.

3.1 *Integration*

Supporting integrated MCH services was the rationale for USAID to create MCHIP. While IPL was intended to be a vertical immunization program, it was able to operate within an existing integrated structure and optimize immunization services through integrated service delivery. IPL sought to promote and provide integrated services wherever possible. This included IPL's support to SISCa (which was designed to offer multiple services) and outreach (which often included other services, limited by the availability of transport and personnel). IPL collaborated with HADIAK to adapt EPI micro-planning steps and formats for integrated MCH micro-planning in two districts. The project also included basic health information beyond immunization in leaders' training and school orientations. Given the difficult access of many Timorese families to health information and services, careful integration where possible was a very logical approach.

3.2 *Equity*

Communities in hard-to-reach areas are often excluded from regular health services. Micro-planning enabled district and sub-district planners to learn the location and size of these underserved communities. By providing mentoring, training, extra hands for service provision, and transportation (including motorcycles and gasoline), IPL enabled CHC staff to reach many previously unreached communities (23% of one year olds had no vaccinations in the last TLDHS). As a result, coverage increased more rapidly in IPL districts than in others. As mentioned, in Dili district IPL undertook a study to learn the causes of relatively low coverage, despite generally good access to services. The findings guided various improvements in service availability, including the revival of SISCa (monthly, community-based MCH services) and outreach to areas with difficult access.

3.3 *Community participation and accountability*

Almost all MOH strategy papers, including the HSS proposal, IMCI strategy paper, SISCa guidelines, and PSF guidelines, emphasize community participation. However, as in many countries, the vision of community participation in health care in Timor-Leste is far different from the reality. IPL took several small steps to bring the vision and reality closer together. To address very low levels of health literacy, IPL gave training and orientation on immunization (and in some cases other health topics) through school orientations, community leader trainings, and training on and use of the community monitoring tool (UI). IPL also encouraged the participation of community leaders in district and sub-district quarterly micro-planning. The micro-planning sessions enabled community leaders to



participate actively in the planning process, and they facilitated a sense of accountability in both parties to execute the planned activities.

3.4 Quality of Care

IPL supported improved quality of immunization services through mentoring, formal training (on IIP, MLM, CCVM), and supportive supervision. Quality was also supported through slow but important improvements in the recording and use of data for planning and management. Although significant performance and service-quality problems persist, supportive supervision has documented many improvements.

3.5 Scale-up and sustainability

IPL worked hard to scale up several innovations (in the Timor-Leste context). The normal steps were to develop a tool or approach in response to a problem, implement it in IPL focus districts, and then share information on feasibility and effectiveness with national partners through the EPI Working Group. For example, IPL played a major role, in adapting standard WHO micro-planning guidelines, then assisted district and sub-district health and other officials in its focus districts to implement the guidelines. Other partners – WHO, UNICEF, and HADIAK noted the utility of micro-planning and then supported it in the six remaining districts. Various formats, developed in whole or part by IPL, have been accepted or are under consideration at national level for nationwide use. These include the EPI supportive supervision checklist and software, suco-level EPI registers, and the form to record of out-of-catchment area vaccinations. While the entire IPL package is unlikely to continue in every district, during district-level closing meetings, the MOH, DHSs and other partners did make a number of specific commitments to maintain or expand many of the tools and approaches.



4 RECOMMENDATIONS AND WAY FORWARD

The MOH and other partners viewed IPL as an effective project both because of its good work and because of its collaborative manner of working at all levels. Key health organizations in Timor-Leste valued the project's quality work and professional integrity. This was manifested in the request of the Director General of the MOH to the USAID Timor-Leste mission to provide IPL with additional funding for two more years.

The IPL program review described the perceived effectiveness of IPL tools and activities and identified the interventions that appeared to have the most impact on achieving gains in coverage. Interventions highlighted were those with a direct impact on service delivery and demand generation, such as support to SISCAs, mobile and outreach services with fuel, transport, maintenance, and mentoring; use of the UI tool to increase community participation and stimulate demand; and the introduction and support of micro-planning in districts and sub-districts. There are very good lessons learned regarding micro-planning activities, the *Uma Imunizasaun* tool, and community leader training, which IPL and health staff implemented in seven districts. There is political will for the activities to continue in the original districts and for the other districts to adapt the same package of activities. There is hope, but not assurance, that the MOH and remaining partners will allocate funds for these activities.

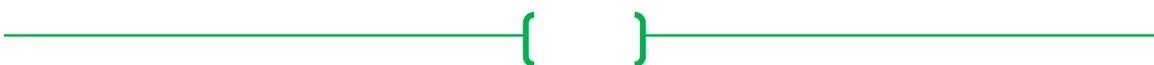
The MOH is considering adopting integrated micro-planning. Finalizing the tool is highly desirable but also challenging because this will require coordination among the different MOH divisions. Clearly, staff training, orientation, and supervision activities are also important supports to quality services, but these will have a less immediate impact on services and immunization coverage, and to this extent, may be seen as being of somewhat lower priority in achieving the MOH's main goals. However, as already noted, it appears that implementing the complete package of interventions has been important to nudging up coverage. Immunization programs are systems that depend on the reasonable functioning of many components, and ignoring any can jeopardize progress.

IPL had many positive achievements. Although there is strong evidence of the project's positive impact on immunization coverage, improvements were limited by national weaknesses in health human resources and their distribution, the health information system, community participation, and vaccine procurement, distribution, and management, as well as by the difficulty of providing services for families hundreds of villages with limited if any road access. Thus, the end of IPL presents Timor-Leste's remaining immunization partners with two challenges:



- 1) Maintaining the political will and allocating the human and other resources needed to maintain IPL's tools and approaches and balanced approach that address both the supply and demand sides of immunization; and
- 2) Addressing the national health system weaknesses that affect immunization as well as other health programs.

The young country of Timor-Leste has come a long way in its first decade of independence. Nonetheless, there is much remaining to do, including continuing to raise and sustain the level of protection of its population from vaccine-preventable diseases.



5 Annex A: IPL Project Staff and Years of Service*

Name	Position	Service period with IPL
Alwati	Midwife	17 Months
Antonio de Oliveira	Driver	25 Months
Ayu Handayani	Midwife	17 Months
Carla SP. Mesquita	Technical Officer	22 months
Carlos Sarmento	Field Coordinator	32 Months
Carmelita M. De Jesus	Technical Officer	31 Months
Clarimundo Gusmao	Technical Officer	5 Months
Cristalina F. Martins	Cleaner	22 months
Dina Mariana	Midwife	17 Months
Dominggos DS Oliveira	Driver	24 Months
Dorine Omenah	Operations Manager	14 Months
Eka Wiwik Mashuri Handayani	Midwife	17 Months
Evilio Antonio De Sousa	Technical Officer	31 Months
Feliciano A. Pereira	Driver	24 Months
Guimar Goncalves	Administration Field Support Officer	16 Months
Herman Jony Oliveira	Driver	19 Months
Honorina da cruz	Admin & Accounting Assistant	16 Months
Is Andriana Ningsih	Midwife	17 Months
Joaninha Coimbra	Admin Officer	22 months
Jose Fernandes	Driver	19 Months
Juvinal Xavier	Technical Coordinator	32 Months
Kurnia Winanti	Midwife	17 Months
Leni Maryana	Midwife	17 Months
Liliana M. Maia	Technical Officer	32 Months
Luis Gaspar	Driver	19 Months
Manuel Mausiry	Field Coordinator	32 Months
Mario Gusmao	Technical Coordinator	32 Months
Miguel Dos Santos	Technical Officer	5 Months
Natalino DA. Salsinha	Technical Officer	24 Months
Netty Herawaty Purba	Midwife	17 Months
Reni Anggraeni	Midwife	17 Months
Ruhul Amin	Chief of Party	33 Months
Santina M.Z. Amaral	Field Accountant	25 Months
Silvia Belo	Technical Officer	6 Months
Suwiin	Midwife	17 Months
Yuliana Ernelia Mau	Technical Officer	32 Months

*Temporary assignment has been excluded.

Annex B – Performance Monitoring Plan (attached)

Annex C – Program review report (attached)

Annex D – Compiled success stories (attached)

Annex E – IPL photos (attached)

Annex F – Baseline assessment report

Annex G – Final manuscript of Dili study “Factors limiting immunization coverage in urban Dili, Timor-Leste”

