THE COMMUNITY MINE CONTINUATION AGREEMENT (CMCA) MIDDLE SOUTH FLY HEALTH PROGRAM (CMSFHP) IS A HEALTH PROGRAM IN WESTERN PROVINCE, PAPUA NEW GUINEA (PNG). THE PROGRAM WORKS IN PARTNERSHIP WITH CURRENT HEALTH CARE PROVIDERS TO IMPROVE HEALTH OUTCOMES FOR PEOPLE IN THE CMCA AREAS OF THE MIDDLE AND SOUTH FLY DISTRICTS OF WESTERN PROVINCE.

IMPROVEMENTS IN INDICATORS DETECTED IN THE FIRST 2.5 YEARS OF IMPLEMENTATION

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2012</th>
<th>2015</th>
</tr>
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<tbody>
<tr>
<td>Antenatal 1st Visit Coverage (%)</td>
<td>29%</td>
<td>43%</td>
</tr>
<tr>
<td>Outpatient visits per person per year</td>
<td>1.3</td>
<td>1.5</td>
</tr>
<tr>
<td>Couple years protection for contraception</td>
<td>726</td>
<td>916</td>
</tr>
<tr>
<td>Outreach clinics per 1000 children &lt;5 yrs</td>
<td>4</td>
<td>27</td>
</tr>
<tr>
<td>Pentaivalent vaccination coverage</td>
<td>7%</td>
<td>30%</td>
</tr>
<tr>
<td>Malaria incidence per 1000 population</td>
<td>126</td>
<td>36</td>
</tr>
</tbody>
</table>

CMSFHP PROGRAM HIGHLIGHTS 2013-15

| Health Workers Completed Obstetric Care Training | 31   |
| Health Radios Installed                          | 12   |
| Facilities Had Solar Lighting Installed          | 21   |
| On the Job Training Sessions Conducted with Health Workers | 222  |
| Vaccine Fridges Installed                        | 13   |
| Ice Pack Freezers Installed                      | 12   |
| Dinghies and Outboard Motors Provided to Facilities | 76   |
| Patrol Boxes Distributed, to each Health Centre and Sub Health Centre | 8    |
| Essential Medical Equipment Kits Distributed     | 20   |
| Staff Houses Built, with plans for an additional 7 to be completed in 2016 | 5    |

15,000+
VACCINATIONS ADMINISTERED TO CHILDREN UNDER 5 YEARS OLD

1,132
VACCINATIONS ADMINISTERED DURING EMERGENCY RESPONSE TO WHOOPING COUGH OUTBREAK AT LAKE MURRAY, JANUARY 2015

96,000+
Attendances at Community Awareness Sessions on Important Health Topics

19,000+
Outpatients Seen during Outreach Clinics and Clinical Attachments

375
Outreach Clinics Conducted in Remote Villages in the 5 CMCA Regions

32
Communities Mobilised to Become CMCA Model Villages

76
Users Maintained on a Closed User Group, Improving Communication Between Health Service Providers, Health Workers and Program Team
**NFHSDP Program Highlights 2009-15**

The North Fly Health Services Development Program (NFHSDP) is a community health program working in partnership with existing health providers to improve the health of people in North Fly District, Western Province, Papua New Guinea (PNG).

**Improvements in health indicators from prior to baseline year in 2007 to 2014**

- **Antenatal 1st Visit Coverage (%)**
  - 2007: 57%
  - 2014: 108%

- **Malaria Incidence per 1000 Population**
  - 2007: 479
  - 2014: 152

- **Outreach Clinics per 1000 Children <5yrs**
  - 2007: 17
  - 2014: 46

- **Measles Vaccination Coverage**
  - 2007: 45%
  - 2014: 80%

- **Pentavalent Vaccination Coverage**
  - 2007: 55%
  - 2014: 79%

- **Per Cent of Months with Nil Medical Supplies Shortages**
  - 2007: 68%
  - 2014: 90%

**Attendances at Community Awareness Sessions on Various Health Topics**

- **84,000+**

**Vaccinations Administered to Children under 5 Years Old**

- **31,000+**

**Area Wide Services Team Continue to Work Across Maternal and Child Health, HIV and TB, Malaria, and Environmental Health**

**Scholarships Awarded for 18 Different Courses**

- **86**

**Vaccine Fridges Installed**

- **21**

**Vaccine Fridges Repaired**

- **12**

**Health Radios Installed**

- **21**

**Staff Houses Built**

- **10**

**Solar Lighting Installations**

- **28**

**Strategic Facility Refurbishment Works**

- **6**

**Facility Water Catchment Improvements**

- **5**

**Community Members Trained as Village Health Volunteers**

- **10**

**Provider-Initiated Counselling and Testing Services Accepted**

- **3,322**

**Outpatients Seen at Tabubil Urban Clinic Since 2011**

- **70,300+**

---

1. **Coverage of over 100% can occur if either the expected number of births is lower than actual or women from outside the district are accessing antenatal care services in North Fly. The latter may be the case in North Fly as people tend to travel from along the Fly River in Middle Fly to North Fly to access services at higher level facilities such as Kiunga Hospital.**
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# Acronyms and Abbreviations

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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASR</td>
<td>Annual Sector Review</td>
</tr>
<tr>
<td>BSP</td>
<td>Bank of South Pacific</td>
</tr>
<tr>
<td>CHS</td>
<td>Catholic Health Services</td>
</tr>
<tr>
<td>CMCA</td>
<td>Community Mine Continuation Agreement</td>
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<tr>
<td>CMSFHP</td>
<td>CMCA Middle and South Fly Health Program</td>
</tr>
<tr>
<td>CYP</td>
<td>Couple Years Protection</td>
</tr>
<tr>
<td>CUG</td>
<td>Closed User Group</td>
</tr>
<tr>
<td>ECPNG</td>
<td>Evangelical Church of Papua New Guinea</td>
</tr>
<tr>
<td>KRA</td>
<td>Key Result Area</td>
</tr>
<tr>
<td>NDoH</td>
<td>National Department of Health</td>
</tr>
<tr>
<td>NHIS</td>
<td>National Health Information System</td>
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<tr>
<td>NFHSDP</td>
<td>North Fly Health Services Development Program</td>
</tr>
<tr>
<td>OBM</td>
<td>Outboard motor</td>
</tr>
<tr>
<td>OTDF</td>
<td>Ok Tedi Development Foundation</td>
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<tr>
<td>OTML</td>
<td>Ok Tedi Mining Limited</td>
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<tr>
<td>PHA</td>
<td>Provincial Health Authority</td>
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<tr>
<td>PNG</td>
<td>Papua New Guinea</td>
</tr>
<tr>
<td>TB</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>WPHSC</td>
<td>Western Province Health Steering Committee</td>
</tr>
<tr>
<td>VHV</td>
<td>Village Health Volunteer</td>
</tr>
</tbody>
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Foreword

The Honourable Governor Ati Wobiro and the Fly River Provincial Government are committed to improving health services for the people of Western Province. While there have been significant improvements in health services in enclaves across the province the current services are not meeting the aspired standards set through the National Government. We remain determined to continue to improve these services.

The establishment of public private partnerships has been identified as a mechanism to improve services. This report highlights a partnership with Ok Tedi Mining Limited (OTML) and Ok Tedi Development Foundation Limited (OTDF) that has made significant steps forward over many years to strengthen health services, and lays the foundation to expand the partnership to donors and other resource operators in Western Province.

I commend the commitment of the OTML Board who in 2008 provided the necessary funding to establish the North Fly Health Services Development Program. A Program that continues today in line with national delivery standards with partners including the North Fly District Government, Catholic Health Services and the Evangelical Church of Papua New Guinea. This report highlights significant improvements in the areas of malaria prevalence, increased levels of immunisation rates of our children, improvements in infrastructure and the availability of medical supplies.

In 2013, OTDF with funding from the Community Mine Continuation Agreement (CMCA) portion of the Western Province Peoples’ Dividend Trust Fund invested PGK 43 million into improving health services along the mine affected corridor of the Middle and South Fly. Again working in partnership with the existing health providers this report highlights significant improvements in a short period of time. Over 15,000 children have been immunised through the program alone, over 19,000 outpatients have been cared for, new staff houses continue to be constructed and health facilities renovated, and essential equipment and medical supplies are now available for the people. As a member of OTDF’s Board I am proud of the achievements of this program and applaud the foresight of the CMCA leaders to conceive the program.

It is clear that OTML and OTDF cannot continue to make the same levels of investment into health care across the Province when the existing program s conclude in 2018. It is essential that the limited resources available for health care are used effectively through one coordinating mechanism, being the Provincial Government with OTDF as the preferred delivery vehicle. I will be working with my senior health team to establish the necessary governance framework that promotes the sustainability of the programs and enables donors and resource companies to contribute to build upon the achievements to date.

In closing I would like to thank my staff and all partners who contribute to the provision of health services across the province. Although Government resources are limited I am committed to working with all partners to support the provision of improved health services for the people of Western Province.

Yours sincerely,

Provincial Administrator
Western Provincial Administration
22 March 2016
Western Province health services are strengthened through two programs, the North Fly Health Services Development Program (NFHSDP) and the Community Mine Continuation Agreement (CMCA) Middle and South Fly Health Program (CMSFHP). Both Programs are delivered through a partnership with the existing health service providers: government health services, Evangelical Church of Papua New Guinea and Catholic Health Services. NFHSDP commenced in 2009 and is an initiative of and funded by Ok Tedi Mining Limited and managed through Ok Tedi Development Foundation. CMSFHP commenced in July 2013, is an initiative of and managed by Ok Tedi Development Foundation (OTDF) and funded through the CMCA portion of the Western Province People’s Dividend Trust Fund.

The total funds committed for NFHSDP and CMSFHP are K67 million and K43 million respectively. Both Programs are implemented by Abt JTA and due to end in 2018.

This report provides an update of the progress of both Programs, including a midline evaluation of CMSFHP; future directions for Program implementation; and principles of an exit strategy for sustaining achievements in health service delivery after the completion of the Programs.

Both Programs are aligned with the Papua New Guinea National Health Plan 2011-2020. The Programs aim to improve the health services in the respective Program catchment areas through a range of activities. Broadly the Programs’ activities include:

- Coordination of support through a partnership with existing health service providers;
- Provision of outreach clinics to communities including outpatient clinics, immunisation, antenatal care, provision of family planning methods, health promotion, and child nutrition checks and counselling;
- Provision of essential medical equipment including vaccine refrigerators;
- Support for ordering, distributing and managing medical supplies;
- Infrastructure improvements to health facilities including rehabilitation of water supply, renovations and construction of staff housing and provision of transport and communications;
- Coordination of health worker training through formal training and on-the-job training;
- Support management capacity and clinical patient care at health facilities; and
- Implementation of community-based initiatives such as Village Health Volunteer Program and Healthy Village concept.

About this Report

For both NFHSDP and CMSFHP, periodic evaluations have been included in the Monitoring and Evaluation Plan. Overall, this progress report has the following objectives:

- Review progress to date on Program activities, outputs and outcomes, including progress towards achieving the national targets as detailed in the National Health Plan Monitoring and Evaluation Framework;
- For CMSFHP, assess the effectiveness of the partnership model and coordination mechanisms;
- Identify lessons learned and recommendations for improving overall Program performance to achieve outcomes by 2018 and beyond.
Chapter 1 describes the health services in Papua New Guinea and more specifically in Western Province, providing a context in which the Programs operate.

Chapter 2 describes the progress of NFHSDP. NFHSDP covers the North Fly District and parts of the Nomad Local Level Government in Middle Fly District. The Program has contributed to improvements in health infrastructure, equipment, transport and workforce development in North Fly. The improvements in health indicators from the baseline year in 2007 to 2014 suggests that the Program, with the Kiunga Hospital redevelopment initiative and through the partnership, has contributed to positive outcomes for service delivery, these include:

- Antenatal first visit coverage has increased from 57% to 108%;
- Malaria incidence has declined from 479 cases per 1000 population to 152;
- Outreach clinics per 1000 children less than 5 years of age increased from 17 to 46;
- Pentavalent vaccine has increased from 55% to 79% and similarly measles vaccination has increased from 45% to 80%; and
- The proportion of months that facilities have no stock-outs of essential medical supplies increased from 68% to 90%.

In several instances improvements in indicators were achieved when national trends were stagnant or declining.

Chapter 3 covers the midline evaluation of CMSFHP. CMSFHP covers five CMCA Trust Regions: Middle Fly, Suki Fly Gogo, Manawete, Dudi and Kiwaba. The Program has similarly made early improvements to health infrastructure, equipment, transport and workforce development and generally has been positively received by communities and health workers. There have already been improvements in indicators detected in the first 2.5 years of implementation. Between the baseline year of 2012 and 2015:

- Outpatient visits per person per year increased from 1.3 to 1.5;
- Outreach clinics per 1000 children less than 5 years of age increased from 4 to 27;
- First dose pentavalent vaccination coverage increased from 34% to 71% and third dose pentavalent vaccination coverage increased from 7% to 30%;
- Immunisation numbers for children greater than 1 year increased from 294 to 1,851 for pentavalent vaccine, 1,524 to 1,943 for sabin vaccine and from 1,213 to 1,439 for measles vaccine;
- Couple years protection for contraception increased from 726 to 916; and
- Antenatal first visit coverage increased from 29% to 43%.

The attribution of these improvements is both from the services provided by the Program team through outreach clinics and increased service delivery at facilities.

Chapter 4 describes the process for integrating NFHSDP and CMSFHP into one program. Given a majority of the NFHSDP and CMSFHP partners are the same, both Programs are managed through the OTDF and the approach to implementation is similar, the logical next step is to integrate the Programs. The integration will create efficiencies so that more resources can be funnelled directly into supporting Program activities. Integration started in 2015 with many Program staff now working across both Program areas. Complete integration will be achieved in 2016.

Chapter 5 summarises the findings from the progress reports of NFHSDP and CMSFHP for informing implementation.

Chapter 6 details the future directions for Program implementation to ensure achievements are maintained beyond the life of the Programs. As the Programs are nearing completion, activities will move from direct inputs to working with the Program partners to identify impediments to achieving sustainable health services and developing mitigation measures. These include:

- Support access to other funding sources to reduce the dependence on Program funding. Other sources could include Health Service Improvement Program, District Service Improvement Program, District Development Authority, Tax Credit Scheme, and private organisations.
- Support the province and districts to effectively plan and utilise limited resources.
- Support the development of health facilities in priority geographic locations. The locations will reflect nominated provincial and growth centres where significant development and other projects are expected.
- Support provision and maintenance of equipment to national standards, including asset management and maintenance.
- Support workforce strengthening through the provision of funding for in-line positions at priority locations, in order to reopen and maintain health services at these locations.
- Strengthen health information management through National Health Information System training, facilitating more communication and encouraging feedback between all levels of health information management.
- Support development of district medical stores to reduce reliance on visits to Area Medical Stores.
Health Services in Papua New Guinea

CHAPTER 1

Papua New Guinea (PNG) has a decentralised health system. The National Department of Health (NDoH) is responsible for policies, standards and guidelines and the procurement of medical supplies and managing provincial hospitals, regional hospitals and the national referral hospital. Provincial Health Services are responsible for rural health services. The Provincial Health Authorities Act, enacted in 2007, provides the structure for an authority which will have responsibility for not only the rural health services but the provincial hospital as well. Many of the 22 provinces have either transitioned to a Provincial Health Authority or will do so in the near future.

There are challenges in all areas of the health system in PNG. According to government policy, all primary health care services are free of charge (1). However, delays in funding for service delivery mean that user fees are charged in order to afford basic supplies and provide services (2). There are multiple challenges with the health workforce with an insufficient number of health workers, inadequate staff skills and a lack of staff in rural areas (3). Supervision from the province and district to sub-district level is poor with some health workers receiving little or no supervision (4). Availability of medical supplies has been a barrier for providing health services. There has been an improvement in the proportion of months that a facility has adequate medical supplies to 87% at the national level in 2014, although stock outs still occur (5, 6). Health facility infrastructure is, in many cases, in need of major repair and the lack of equipment inhibits provision of basic services (2). The
National Health Information System (NHIS) is a paper-based monthly reporting system and there are issues with completeness (84% in 2014) and quality of the data (6, 7).

There are seven levels of health services which are, from one to seven: aid posts, health sub-centres, health centres, district hospitals, provincial hospitals, regional hospitals and the national referral hospital. The Health Vision for 2050 describes the replacement of aid posts and health sub-centres with community health posts over the coming years (8). The National Health Service Standards (NHSS) 2011-2020 clearly delineate the roles and services to be provided at each level of health services. Progressively, NDoH is also defining the standards for infrastructure and equipment at each level of facility. The health facilities are largely run by the Government or faith-based organisations with a small number of facilities run by private providers.

There was mixed performance in meeting service delivery targets at the national level in 2014. Outreach clinics, an important activity for increased service coverage, was 39 per 1,000 children under 5 years of age, lower than the target of 46. Family planning was the poorest performing indicator for health system outputs at 66 couple years protection (CYP) per 1,000 women of reproductive age, far below the target of 120. The proportion of women who received at least one antenatal care visit has been stagnant over the past five years and was 67% in 2014, below the target of 75%. The proportion of pregnant women who had a supervised delivery has been stable over the last five years and was 44% in 2014, slightly higher than the target of 42%. Measles vaccination coverage for children less than one year was 58%, below the target of 66% (6).

In an analysis of data from 2001-2008, the leading causes for admissions to hospitals and rural facilities were communicable diseases and obstetric and maternal conditions. The most common causes for admissions for communicable diseases were malaria, tuberculosis and pneumonia (9). While malaria incidence has been declining across the country, tuberculosis remains a challenge with an incidence of 346 per 100,000 population in 2013 (6). In Western Province tuberculosis is of particular concern where rates are estimated to be 500 per 100,000 with multi-drug resistant and extensively drug resistant cases detected. Data on the burden of non-communicable diseases are limited (10).

**Western Province**

The 2011 census estimated the population in Western Province to be 201,351. There were 62,850 residents in North Fly District, 79,349 in Middle Fly District, and 59,152 in South Fly District. The average household size is 6.4 people, higher than the national average of 5.3 people. The population growth rate from 2000-2011 was 2.5%, lower than the national growth rate of 3.1% for the same time period (11).

The geography in Western Province creates challenges for health service delivery. North Fly is mountainous in the north of the District to plains and flood plains in the south, with high annual rainfall of 4,000-8,000 mm and altitude varying from 50-3,000 metres. The Middle Fly consists of plains, flood plains and hills and includes the Fly and Strickland Rivers. Annual rainfall ranges from 2,100-4,000 mm and altitude ranges from sea level to 400 metres. South Fly has plains and flood plains and includes the Fly River delta. Rainfall ranges from 1,500-2,200 mm per annum and altitude ranges from sea level to 100 metres (12).
outside of the larger towns of Daru, Kiunga and Tabubil, there are limited roads. A highway maintained by Ok Tedi Mining Limited (OTML) runs from the port in Kiunga to the mining town of Tabubil. Additional roads have been established recently by Ok Tedi Development Foundation (OTDF) from Lake Murray to Aiambak in Middle Fly, and from Pampenai to Kiunga in North Fly. Outside of this limited road network travel is largely by dinghy on the various river systems, the largest being the Fly River running through all three districts. Additionally, there are commercial flights to Kiunga, Daru, Tabubil and Balimo. An OTML charter service and Mission Aviation Fellowship both fly to smaller destinations on an ad hoc basis.

Economic development and population growth has occurred due to the presence of resource companies operating in the province. In North Fly, people travel from within PNG and internationally for work within the resource sector, particularly for OTML and to a lesser extent for liquified natural gas exploration operators. Many people who work in the resource sector work on a fly in, fly out roster in that they frequently travel in and out of the district. Tabubil and Kiunga in North Fly have experienced population growth due to the presence of the resource operators and the resultant increased demand for services such as trade stores and accommodation.

Health Services in Western Province

Western Province has not yet transitioned to the Provincial Health Authority structure which means the Provincial Health Office, based in the provincial capital of Daru, oversees the rural health services while the provincial hospital, Daru Hospital, is managed by the NDoH. There are 205 health facilities in Western Province, the majority of which are aid posts (164, 80%). However, only 60% of these aid posts are open. There are 37 health centres/urban clinics or health sub-centres. There are six hospitals in the Province; three of these are located in North Fly District – Tabubil Hospital, Rumginae Rural Hospital and Kiunga Hospital, two are located in Balimo in Middle Fly District, and Daru is located in South Fly District (13).

Health services are operated by the government, Evangelical Church of Papua New Guinea (ECPNG) and Catholic Health Services (CHS). Additionally the following organisations support health services:

- Australian Aid managed by the Department of Foreign Affairs and Trade supports Western Province through the Health and HIV Program and the Water, Sanitation and Hygiene Project
- Callan Services provides rehabilitation services for people with disabilities
- Mercy Works supports training of Village Health Volunteers (VHV) in North Fly
- World Vision and Burnet Institute support the Stop TB Program in Western Province
- Australian Doctors International provides doctors on a temporary basis
- Mission Aviation Fellowship provides flights services for health needs such as emergency evacuations and transport of building materials
- OTDF through NFHSDP and CMSFHP and other initiatives
- OTML through Tabubil Hospital and community health initiatives
- Resource operators in Western Province provide outreach and statics clinics in localised areas
- The Youth With a Mission Medical Ship has visited Western Province annually since 2012
About the Programs

The North Fly Health Services Development Program (NFHSDP) is an initiative of and funded by OTML, managed by OTDF and implemented by Abt JTA. The Program commenced in 2009 initially for five years but was extended for another five years until the end of 2018. The Community Mine Continuation Agreement (CMCA) Middle and South Fly Health Program (CMSFHP) is funded through the CMCA portion of the Western Province Peoples’ Dividend Trust Fund and is managed by OTDF and implemented by Abt JTA. The Program commenced in mid-2013 and is funded for five years.

Both programs are aligned with the PNG National Health Plan 2011-2020. The Programs aim to improve the health services in the respective Program catchment areas through a range of activities. Broadly the Programs’ activities include:

- Coordination of support through a partnership with existing health service providers;
- Provision of outreach clinics to communities including outpatient clinics, immunisation, antenatal care, provision of family planning methods, health promotion and child nutrition checks and counselling;
- Provision of essential medical equipment including vaccine refrigerators;
- Support for ordering, distributing and managing medical supplies;
- Infrastructure improvements to health facilities including rehabilitation of water supply, renovations and construction of staff housing and provision of transport and communications;
- Coordination of health worker training through formal training and on-the-job training;
- Support management capacity and clinical patient care at health facilities; and
- Implementation of community-based initiatives such as VHV Program and Healthy Village concept.

Village Health Volunteer and Healthy Village Programs

The VHV Program is an initiative of the National Department of Health and is being implemented in the Program catchment area by the Program. The VHV Program involves the mobilisation of communities prior to implementation of the VHV Program, training VHV Trainers to train VHVs using a cascade model, training of two VHVs per village, and ongoing supervision of the VHVs. The VHVs are to be the conduit between the village and the health facilities for health matters and work with the community to create a healthy village. VHVs may encourage community members to seek care, such as assisting pregnant women to give birth at the health facility, form Village Health Committees, and lead initiatives such as village clean-ups or construction of pit toilets.

The Healthy Village concept is a development process and approach which aims to build healthy communities in a healthy environment. Health issues are identified and resolved by the community through a partnership with the community itself and other government and non-government organisations (14). The health issues identified can be varied and include, but are not limited to; nutrition, waste management, housing, reproductive health, substance abuse and water supply and sanitation facilities. The Healthy Village concept is supported through the Programs and links in with the VHV Program.
North Fly Health Services Development Program

CHAPTER 2

The NFHSDP commenced implementation in January 2009, initially as a five year program to December 2013. It was funded by OTML to a value of K20 million, plus in-kind logistical support, taking the total contract value to K25 million. The Program is a partnership and a key principle is to support the existing health system, rather than developing a new or parallel system. The main partners are Western Provincial Health Office, North Fly District Health Services, CHS and ECPNG, with Abt JTA as the implementation partner. The Program covers the entire North Fly District as well as the northern Middle Fly communities in Nomad Local Level Government area, due to easier access from North Fly compared to other parts of Middle Fly. In April 2012, the Program was extended to include management support to Kiunga Hospital. At the same time OTML and the Western Provincial Administration invested funding from the Tabubil and Kiunga Health Agreement to priority projects, including engagement of medical officers and infrastructure development.

In November 2013, OTML granted an extension to the Program for a further five years to December 2018; the total value of the 10 year program is K58 million. The second phase of five years has seen a greater focus on using a primary health care approach. The Program office relocated from the mining town of Tabubil to Kiunga, which is closer to partners and provided opportunities for greater collaboration. The Program Charter, originally signed in 2009 was reviewed in 2014. The five year extension was designed to consolidate the achievements of the previous five years and to continue to revitalise and embed the primary health care approach in North Fly District.

The Program was designed with a multi-faceted approach to support and strengthen partners’ health service delivery. The Program team is structured with staff working in specialist component areas: management and administration, Tabubil Urban Clinic, Area Wide Services, logistics, health information, education, and infrastructure. While the Tabubil Urban Clinic and Area Wide Services teams focus on service delivery, the other positions focus on strengthening the foundations, or ‘enablers’ of a quality health service: ensuring medical supplies.
“OTML, through a variety of direct and indirect funding and implementation mechanisms, has presided over the development of an extensive network of high-quality health interventions that have improved the health status of the population of North Fly.”

Mining Companies and Health Service Delivery in Papua New Guinea: Ok Tedi Mining Limited Case Study – Mining Health Initiative. Submitted to AusAID
are available, that health workers have the right skills, that health facility buildings and staff housing are suitable for their purpose, and that health information is captured and accurately reported in the appropriate systems.

In addition to the funding for NFHSDP, OTML has committed K8.6 million to the redevelopment of Kiunga Hospital, which is managed under NFHSDP. Kiunga Hospital is the government-run district hospital for North Fly and its performance is vital to improving health outcomes in the district.

Methodology and evaluation

A desk-top evaluation was performed for NFHSDP to review progress and evaluate outcomes. As per previous evaluations for NFHSDP, the National Department of Health Sector Performance Annual Reviews containing the District level data for Western Province were used to evaluate performance against key indicators from 2007 to 2014. The Health Sector Performance Annual Review indicators used in this report are calculated from the NHIS. Typically, the data from a year (a year is the 12 months from October to September) is extracted in March of the following year. The NDoH makes an adjustment for missing reports for all indicators that are a rate or percent calculated from the health facility catchment population. Pneumonia case fatality rate, total malnutrition, percentage of births that are low birth weight and percent of months that there are nil stock outs of medical supplies are not adjusted.

In addition, Program documentation was reviewed including Program Annual Reports, the Mid-Term Review and Quarterly Reports.

Limitations

There are several limitations with the analysis of Program progress and achievements. The Program relies on the NDoH Annual Sector Review data for evaluating achievement of Program objectives. The Annual Sector Review (ASR) indicators used in this report are calculated from the NHIS. The data for that ASR for each year is extracted in March of the following year. Additional data may be reported after March through the NHIS, changing the indicators. As with any information system, there are issues with the data quality, as demonstrated by the unusually low reporting of births from Kiunga Hospital and Tabubil Hospital in 2014. Additionally, the indicators are based on estimated populations which may not be accurate.

Results

Partnerships and Coordination

NFHSDP introduced the partnership concept to health service organisations in Western Province. The Program started in 2009 with great scepticism from partners, including OTML health staff, with hesitation about the Program’s intentions, fear that the Program was coming to take over their operations, and reluctance to share information. Abt JTA's existing presence at Tabubil Hospital helped in alleviating some of the reluctance from partners to engage in the program. However, significant time was invested in building the partnership to a platform where organisations were willing to communicate and work together. The development of the Program Charter provided the framework for the partnership, and it was reviewed in 2014 upon the Program’s extension. Additional partner organisations were included in the revised Charter and overall the partnership principles were endorsed for the second five years of the Program.

One of the early achievements of the Program was the establishment of an Implementation Coordinating Committee which brought together all partners in the one place. This was key to the partnership, as although the organisations were working in the same geographical area of North Fly District, at that time there was no collaboration. The Implementation Coordinating Committee was set up for managers to meet monthly. In addition Program Activity Groups for Education, Infrastructure and Logistics, Maternal and Child Health, Malaria and Environmental Health and TB and HIV provided a forum for frontline staff to meet and plan activities across the district. The Implementation Coordinating Committee and Program Activity Groups were an early success for the Program, and in the 2010 Annual Report the ECPNG medical superintendent noted that “the greatest benefit from NFHSDP has been the development of the partnership, the improved cooperation between providers which should remain long past the life of NFHSDP”.

In 2013 the Implementation Coordinating Committee transitioned to a District Health Management Committee, with the then District Administrator assuming the chairmanship. Scheduled meetings continue and in 2015 with the integration of NFHSDP and CMSFHP, every third meeting is combined with the CMSFHP quarterly stakeholder coordination committee.

The Program Activity Groups continue to provide a platform for coordination of activities across all partners. The schedule of meetings was revised in
2013 in recognition of strengthened coordination and busy workloads; and progress is being made in handing over chair and secretariat roles to partner representatives as they become confident to do so. All Program Activity Group minutes continue to be submitted to the District Health Management Committee for endorsement and decision-making where required.

The partnership of health service providers has moved from strength to strength in the eight years of the Program. Collaboration between partners has seen improvements in health indicators for North Fly District over the life of the program so far. In the five-year independent review of the program in 2014, stakeholders identified the most important achievement to be the way the program has supported and reinforced the partnership framework, which has been a critical element supporting the health system.

"The core strength of NFHSDP has been the way in which it has pursued and strengthened the partnership approach through the collaborative and effective way its staff and notably the senior management team have worked with and engaged with partners"

Annamaree O’Keeffe, Independent Reviewer 2014
The partnership has faced challenges over the years. In 2013, partners from Catholic Health Services (CHS) formally expressed their dissatisfaction with components of the Program, including respect within the partnership, communication, planning and budgeting and financial reporting. In response, a stakeholder workshop was held to discuss the issues and determine a way forward. A matrix of the issues and responses was developed along with a communications protocol to guide interaction between all partners; these are regularly monitored during partner meetings.

A Steering Committee with membership of OTML and Abt JTA has met quarterly since the inception of the Program. This committee reviews progress and sets the Program's strategic direction. In 2013 the then District Administrator joined the Steering Committee, and in February 2015 when the Program moved to the stewardship of OTDF, the Steering Committee was merged with the Contract Management Group for the CMSFHP.

The Program is committed to sharing experiences and contributing to knowledge of public private partnerships for health in the resources sector, in development and in PNG. Examples include the Western Province Health Capacity Diagnostics Mission, Mining Companies and Health Service Delivery in PNG. In addition, the program has delivered several program presentations at health and mining conferences in PNG and Australia.

Western Province Health Capacity Diagnostics Mission

This Western Province Health Capacity Diagnostics Mission was conducted in 2012 by the PNG NDoH and AusAID. It focused on visiting health facilities, collecting data and interviewing stakeholders to gauge their perceptions of existing capacity in an effort to identify where there may be future need. The report includes NFHSDP and highlights that “much can be learnt from this model” and (15):

“The NFHSDP is an innovative attempt to introduce privately provided management and appropriately skilled health personnel services into the District health structure. The performance indicators show improved health system performance in the North Fly District. This improvement is partially attributable to the activities of the NFHSDP, as well as the activities of the existing providers”. (Report of the Health Capacity Diagnostic Mission 2012)

Mining Companies and Health Service Delivery in PNG

In 2012 OTML was the subject of a case study commissioned by AusAID and conducted by Mining Health Initiative (Montrose and Health Partners International) which examined the health initiatives of OTML in terms of how they engage with government on the planning, implementation and oversight of their health programs as well as the programs’ impact and sustainability (16). The report discussed some of the challenges in North Fly and suggested:

“By providing services directly and working at the health facility/health worker/community level – which is producing rapid results as has been documented for the past three years, the challenges for the NFHSDP will be to continue to invest the appropriate time and resources into developing the capacity of the higher level partners who are in fact responsible for the oversight, management and strategic direction of the Western Province health system in general, and North Fly in particular, in the long run.”

The report also highlighted that;

“Preliminary health achievements by the NFHSDP and Tabubil Hospital indicate that for a number of health outcomes, the North Fly catchment population has improved past National rates.”

Enablers for Health Care

This section describes the progress towards improving the fundamental enablers of health care: transport, medical supplies, medical equipment, workforce training and infrastructure.

Medical Supplies

The Program focuses its support on improving the availability of medical supplies through assisting the ordering and distribution of medical supplies from the government medical supplies system, with minimal procurement of supplementary medical supplies. In the early years of the Program supplementary medical supplies were procured, with over K1.7 million spent in the first five years on procuring vaccines. This was at a time when national vaccine stocks were low and Program demands were high due to vaccine catch-up activities. The Program Logistics Officer travels with nominated staff from Program partners each quarter to the Area Medical Stores in Port Moresby to pack orders for health facilities in North Fly ready for delivery. Medical supplies availability has been relatively stable at the National level with a large improvement in 2014. In
all districts in Western Province, including North Fly, medical supplies availability has been increasing, with a large drop in 2013 followed by an improvement in 2014 (Figure 2.1). While data for this indicator suggest medical supplies availability is improving, the Program team has still reported issues with medical supplies stock outs, for example national stock outs of vaccines.

Figure 2.1: Per cent of months that health facilities have adequate supplies per year, 2007-2014
Medical Equipment

In 2010 the Program supported the procurement and distribution of equipment kits to health facilities in line with national standards. The Mid-Term Review noted improvements in basic medical equipment compared to baseline for example the proportion of facilities surveyed that had a stethoscope increased from 53% in 2009 to 82% in 2011 and similarly for thermometers from 87% to 100% (17). The number of health facilities with a vaccine refrigerator has increased since the commencement of the Program. A total of 12 new vaccine refrigerators were installed and 15 repaired. There are currently 25 facilities supported by the Program with vaccine refrigerators. A total of 21 health radios were installed including five that were replacements. There are now health radios in 31 Program supported health facilities, as well as the North Fly District Health Office. One hundred percent of health sub-centres and higher level facilities in the Program area now have both vaccine refrigerators and health radios installed, as required by the NHSS.

"Since the NFHSDP commenced, they have helped us to improve our drug distribution to health facilities, improved arrangements in getting drugs into North Fly through ships and our data collection has improved."

John Lari, District Health Officer
Transport

Transport is vital for health services to access remote communities, facilitate patient referrals and generally undertake work. In terms of transport, the Program has provided the following:

- Tabubil Urban Clinic received a troop carrier;
- Tarakbits, Haewenai and Atkamba health facilities received a dinghy with outboard motor;
- CHS received two dinghies, an outboard motor (OBM) and two troop carriers; and
- ECPNG received a truck, Callan Services received a utility vehicle and District Maternal and Child Health Services received a troop carrier.

“Drug supplies were followed up by NFHSDP so we had good supplies last year (2012). There were some drugs we were short of like vaccines and anti-malarials so we asked NFHSDP to help. We got equipment too, aurosopes and stethoscopes that were sent out to facilities (scales were sent by NFHSDP in previous years)”

Sr. Cathy Yaki, Officer in Charge Catholic Health Services
Workforce Development

The NFHSDP Baseline Study conducted in 2009 highlighted the need for extensive reskilling of the health workforce. A focus group discussion with nurses at Kiunga Hospital noted that the nurses had not had any substantial education or in-service training since their initial undergraduate training.

The Program contributes to workforce development through a number of activities, the largest being the coordination of formal training. Trainings have been identified and scheduled through the Education Program Activity Group. There have been more than 55 trainings for a range of health workers including Community Health Workers, Nursing Officers, Health Extension Officers, Environmental Health Officers and Health Information Officers. The trainings have covered a range of priority topics including maternal health, child health, TB, HIV and other sexually transmitted infections, health information, health administration, basic computer skills and maintenances of radios. The total number of participants for all of these trainings is over 1,000 and, as the number of health workers in North Fly is much less, this indicates the many health workers that attended multiple trainings over the years.

The Program also provides scholarships to individuals from the Program area wishing to pursue higher-level studies in healthcare. A total of 86 scholarships have been awarded over the life of the Program, with many spanning more than one year of study. Students have applied and been accepted to 18 different courses at various institutions around the country, including literacy and numeracy, community health worker, and medical laboratory assistant courses. To date 50% of recipients have completed their studies and an additional 30% are scheduled to either finish at the end of this year or continue into 2016.

“North Fly has helped with more training for the health worker so they know how to do their work, how to manage medicine properly. We have waited a long time for this training”

Sr Phillomena, Catholic Health Services (2010)
Infrastructure

While the 2009 Baseline Study highlighted the poor state of health facilities and staff housing, the Program was not designed nor funded to correct all infrastructure deficiencies across the district. However, given the high expectations from partners for visible changes, strategic infrastructure development, decided in consultation with partners, has included:

- At Rumginae Rural Hospital the TB Ward was refurbished and incinerator installed.
- At Matkomnai Health Sub-Centre a multi-purpose building was constructed.
- Maintenance was carried out on the North Fly District Health Office, maternity wards at Mougulu and Ningerum Health Centres and at Haewenai Health Sub Centre.
- Solar lighting has been installed at 27 health facilities.
- The water catchment has been improved at Golglobip Aid Post, Bolivip Aid Post, Ningerum Health Centre, Rumginae Rural Hospital and Timinsiriap Aid Post.
- A staff house has been built at Ningerum Health Centre, Matkomnai Health Sub-Centre, Mougulu Health Centre, Kiunga Hospital, two houses at Bolivip Aid Post, and four staff houses built at Rumginae Rural Hospital.

“Since the 1980s when the first missionaries came and built this aid post the health workers worked in the dark during the night and it was very difficult. After 30 years we now have lights being installed and it’s a great relief for the people of Suabi.”

Suabi Community Health Worker
Tabubil Urban Clinic
Case Study

The Tabubil Urban Clinic commenced operation in January 2011. The facility was built by NFHSDP to treat less acute outpatients in a cost effective environment and to reduce demand at Tabubil Hospital, while also providing health services closer to the villages accessing them. Tabubil Urban Clinic is registered as a government health facility under the National Department of Health and is managed and operated by NFHSDP, including provision of the full staffing complement. It is hoped that this facility will be managed and staffed by the government in the future. The Clinic has provided crucial support to Tabubil Hospital since opening by providing services to villages on the outskirts of Tabubil, including Wangbin and 7 Kona settlements, as well as to facilities and villages along the Tabubil-Kiunga Highway.

Tabubil Urban Clinic provides daily outpatient services from Monday to Friday, seeing on average 45 patients per day since opening in 2011. To ensure continuity of care, antenatal, well-baby and child health clinics are conducted at Tabubil Hospital, however the Clinic does practice opportunistic immunisations as children present to the outpatient clinics. Additionally, as of January 2015, Tabubil Urban Clinic now runs a regular family planning clinic on Friday mornings and encourages close by and highway communities to seek family planning services. Apart from daily outpatient services, the Clinic also gives provider-initiated counselling and testing for HIV, outreach services, and community awareness sessions. Tabubil Urban Clinic has also played and continues to play a large role in emergency response in Tabubil and the surrounding areas, and support to Tabubil Hospital.

Outpatient Clinic

Historically, people in the laydown areas of Tabubil would have gone to Tabubil Hospital for outpatient services, or would simply have not sought health services, but it is evident that the opening of Tabubil Urban Clinic has relieved much of the pressure from the outpatient department at Tabubil Hospital. Each month, the majority of patients visiting the Clinic are from the OTML preferred area and the Tabubil Urban Clinic catchment area, demonstrating the communities are clearly using this much needed facility.
Outreach Services

In addition to outpatient services at the clinic, Tabubil Urban Clinic health workers also provide regular outreach services to communities in the settlements as well as along the highway down to Ningerum. Maternal and child health clinics are held in several villages every 1-2 months, while a Health Extension Officer from Tabubil Urban Clinic visits health facilities at Ningerum and Matkomnai at least once per quarter to provide clinical care and supervision to health workers. These visits provide crucial clinical care to patients in communities without higher level health workers and have been of particular importance when there was no Health Extension Officer employed at Ningerum. In the past, outreach to settlement communities has also included water and sanitation inspections. In addition to these regular visits, the Health Extension Officer at the Clinic conducts health radio supervisory consultations with the Ningerum and Matkomnai health facilities, as well as other remote facilities such as Olsobip.

Community Awareness

Each day at Tabubil Urban Clinic begins with community awareness sessions for patients who are waiting for the morning clinic. The sessions vary based on the common health issues seen at the clinic in previous days or weeks, and includes topics such as TB, pneumonia, and family planning. Sanitation, clean water and diarrhoea prevention are regular topics as the majority of patients live in the settlements where living conditions are crowded and sanitation is generally poor. Over 3,235 people attended sessions in 2014, and over 3,427 were reached through health promotion in 2015.

“\textit{We thank the (Tabubil) Urban Clinic staff for providing this service to assist our work load in Tabubil Hospital General Outpatients. The staff are doing a good job down there. We appreciate what is done there and continue to work with them}”

\textit{Sister Guli Kepa, Team Leader, Outpatients Department at Tabubil Hospital}
Service Delivery

The goal of NFHSDP is to strengthen primary health care and improve service delivery. Implemented through the partnership, there should be an improvement in the indicators for service delivery with the range of activities supported by the Program. This section describes the trends in key health service delivery and outcome indicators in North Fly from prior to the commencement of the Program to 2014 (2007-2014). Data for 2015 were not available at the time of the report. A summary of performance of specific indicators at baseline and 2014 with comparison to national level is detailed on page 37.

The Area Wide Services team works across maternal and child health, HIV and TB, malaria and environmental health, and works with partners on outreach and patrol planning and implementation. The focus on maternal and child health activities has been increased immunisation coverage, improved access to antenatal care, and family planning and outpatient services. The HIV and TB related support provided has been centred on increased community access to testing and treatment. On commencement, the Program implemented the National strategy for HIV testing, including Voluntary Confidential Counselling and Testing. Activities included preparing health facilities for accreditation as Voluntary Confidential Counselling and Testing sites, and facilitating training for health workers in testing, counselling and treatment. There was also considerable community awareness raising and health promotion undertaken, along with condom distribution, in order to reduce the stigma associated with HIV and AIDS. In more recent years, the national policy has changed focus to Provider-Initiated Counselling and Testing, and the Program has organised and funded opportunities for health workers in North Fly to participate in this national training program.

Health promotion and other prevention strategies continue. Activities related to TB control and prevention have been, and continue to be, conducted in collaboration with Partners that have a specific focus on TB, such as World Vision and the Australian government-funded Health and HIV Program. Activities have included training for health workers on diagnosis and treatment, developing a TB workplace policy, community-based screening, diagnosis and contact tracing, and training for TB Treatment Supporters. More recently the Program has supported infrastructure improvements, for example the construction of a multi-purpose building at Matkomnai Health Sub-Centre for use as a testing centre and laboratory, renovations to the Kiunga Hospital TB ward and clinic, and to the TB ward at Rumginae Rural Hospital.

Outreach

Outreach clinics, where clinics are held in villages, serve as an important mechanism for increasing access to services where travelling to health facilities for community members can be costly, time consuming and physically difficult. The clinics can provide a range of services from immunisations, child health checks, antenatal care and outpatient clinics. In North Fly, Program team members accompany the existing health service providers on outreach clinic patrols. The reliance on the Program for support to outreach clinics has changed significantly since commencement. In the initial years of the Program, there was a dependence on the Program from all partners for support, whether additional staffing, logistics, medical supplies or funding. Over time this has changed, as the capacity within partner organisations has improved. In 2014 and 2015 ECPNG requested that the Program support its outreach clinics through chartering a light aircraft to deliver vaccines to health facilities while ECPNG staff would conduct the outreach clinics themselves. CHS has similarly reduced its reliance on Program support, although Program staff are still involved in planning patrols and are welcome to join them. District Health Services remains heavily dependent on the Program for outreach, particularly for funding, staffing and logistics.

Over the life of the Program there has been a significant increase in the number of outreach clinics conducted annually (Figure 2.6). The rate of outreach has increased since the commencement of the Program and was 46 per 1,000 children in 2014, meeting the national target and exceeding the national rate of 39.

![Figure 2.6: Number of clinics conducted in the North Fly District](image)
Maternal health can be improved through quality antenatal care and a delivery supervised by a skilled health worker (18). The proportion of women who have had at least one antenatal care visit has generally been trending upwards and higher than the national level and both Middle and South Fly Districts (Figure 2.7). In 2014 antenatal care coverage was 108%. Coverage of over 100% can occur if either the expected number of births is lower than actual or women from outside the district are accessing antenatal care services in North Fly. The latter may be the case in North Fly as people do tend to travel from along the Fly River in Middle Fly to North Fly to access services at higher level facilities such as Kiunga Hospital.

The proportion of pregnant women who have a birth supervised by a skilled health worker was much higher in North Fly than Middle Fly, South Fly and the national level (Figure 2.8). However, there was a large drop in supervised deliveries in 2014. On closer inspection of the data, anomalies were found at the two largest facilities in North Fly: Tabubil Hospital and Kiunga Hospital. From 2010-2013, these facilities were responsible for 66-75% of all supervised deliveries in North Fly. In 2014, the number of supervised deliveries recorded from these two facilities reduced dramatically from a combined total of 1,735 in 2013 to 224 in 2014 (Figure 2.9). From discussions with the hospital administrators of these hospitals, there appears to be an error in the number of supervised deliveries recorded in the NHIS as, according to hospital records, supervised deliveries have remained high. Therefore the true coverage for supervised deliveries is likely to be much higher than the 44% shown in 2014.
Childhood vaccination

The Program assists with improving vaccine coverage through the installation and maintenance of vaccine refrigerators at health facilities to maintain the cold chain; working with the health facilities and NDoH to ensure facilities order and receive regular supplies of vaccines; and providing immunisation services when participating in outreach clinics with Program partners. Measles vaccination coverage, while remaining similar to national levels from 2007 to 2012, has improved in the last two years reaching 80% coverage (Figure 2.10). Pentavalent vaccine is a vaccine against diphtheria, tetanus, pertussis, Haemophilus influenza type B and Hepatitis B. Pentavalent vaccine replaced the triple-antigen vaccine in 2009 which contained only diphtheria, tetanus, and pertussis. Third dose pentavalent vaccine coverage has remained well above national levels since 2010 and reached the highest coverage in 2014 with 79% (Figure 2.11).

In late 2013, there was an outbreak of measles in several provinces in PNG, including Western. The outbreak in Western Province was first detected through a case in North Fly with recent travel history to a province with an ongoing outbreak. The Program, in conjunction with the Program partners launched a vaccination campaign along the Kiunga-Tabubil highway. The NDoH recommended a mass measles immunisation campaign in 2014 targeting people from the age of six months to 20 years. These efforts would have likely contributed to the increase in coverage for the 9-11 month age group in 2014, with 80% coverage which far exceeds the 2014 target of 66% and the national average of 58%.

While these immunisation indicators reflect the on-time immunisation of children, the children who are not vaccinated within the specified age group may still receive a vaccination when greater than one year of age. On-time immunisation can be challenging, particularly as the child must present to a health facility or at an outreach clinic within the specified age range. For measles vaccine coverage, calculated as the proportion of children at 12 months of age who receive a measles dose at 9-11 months of age, there is a very narrow age range of three months. However, there has been a substantial increase in the number of children greater than one year of age who have received Sabin (oral polio vaccine) and Pentavalent vaccinations since the commencement of the Program (Figure 2.12).
Communicable diseases

NFHSDP has supported a number of activities targeted at reducing malaria transmission. On establishment of NFHSDP it was recognised that there was an effective malaria control program operating in Tabubil township, however it was not replicated across the district. The control program included source reduction, extensive community education, bed net distribution and effective treatment and diagnosis. Through the Malaria Program Activity Group, NFHSDP worked closely with Tabubil Hospital and other partners to improve malaria control across the district. Initiatives have included partnering with Rotarians Against Malaria in bed net distribution, with over 90,000 bed nets distributed with support of the Program since 2009, and supporting the training for the introduction of the new malaria treatment protocol and rapid diagnostic testing. North Fly District was one of the first districts in PNG to have health workers trained in the new national treatment protocol, with over 120 participants trained in 2011. The training was organised and funded by NFHSDP.

Malaria has been declining in all districts in Western Province and at the national level (Figure 2.13). In 2009, soon after Program commencement, the Program responded to a malaria outbreak in Mougulu and was able to contain the outbreak and provide the community with key prevention strategies. Community leaders expressed their appreciation through a formal letter.

Conversely the incidence of childhood diarrhoea has increased, particularly in 2014, and is higher than the National incidence (Figure 2.14). It is difficult to determine the causes of the rise in incidence of childhood diarrhoea. A decline in the quality of water sources or availability of sanitation facilities such as toilets may contribute to an increase in diarrhoea incidence. Increased awareness of diarrhoeal illness may also improve health care seeking behaviour of parents. The Program has conducted awareness sessions on diarrhoea and assisted some villages in the establishment of clean water supplies and pit toilets. The Program has responded to outbreaks of diarrhoeal diseases in almost every year of operation: NFHSDP staff were at the forefront of the response to the province-wide cholera outbreak in 2010-2011 and the typhoid outbreak in Tabubil in 2013.

95,664
Bed nets distributed with RAMS

33,237
People reached through malaria awareness

154
Health Workers trained in malaria treatment and testing protocols
Community support

In the early years of the Program the focus of support was on strengthening service delivery in health facilities partly in recognition of the approach of some partners. However as the Program has progressed there has been greater acceptance and implementation of community based initiatives. These initiatives have focused on environmental health and healthy lifestyles, with the implementation of National policies such as Healthy Village, VHVs and Health Promoting Schools. Environmental health incorporates water, sanitation and hygiene, and activities in North Fly occurred at both the community and health facility levels.

In accordance with the NDoH model of Healthy Villages, Community Action and Participation training has been facilitated in North Fly. Some of the training has been in collaboration with the Mercy Works Kiunga Program, an organisation that works closely with CHS. Following the community training, each village identifies their Village Health Committee which is responsible for organising activities to further progress Healthy Village projects. Over 500 community members in nine villages have been reached through the training.

The communities of Timinsiriap and Rudmesuk established Village Health Committees and progressed their identified projects of improving sanitation and hygiene, with 17 Ventilated Improved Pit toilets completed in Timinsiriap and the construction of a safe water catchment dam; and 15 Ventilated Improved Pit toilets constructed in Rudmesuk. Other communities have also made progress in constructing toilets and identifying projects for village improvement. The Program supports these projects with practical training on how to build a pit toilet, as well as purchasing and delivering materials and equipment where a community provides co-funding.

In collaboration with CMSFHP, the Program and communities identified 10 community members from five villages who were trained as VHVs. The six-week training was held in October-November 2014 and required the trainees to complete a clinical attachment component in a health facility and a practical component in their respective villages. Further VHV training was scheduled for 2015 but was postponed due to the drought and related budget reductions. Mercy Works Kiunga Program has an established network of VHVs and in 2011 the NFHSDP Program conducted an evaluation of its VHV and Safe Motherhood project. Still with a focus on VHVs, the Maternal and Child Health Program Activity Group led the organisation and hosting of a two-day Village Health Management Forum which brought together stakeholders from across the district, province and country to explore how village health programs in North Fly could be strengthened and sustained, and based on best practice.

Another important community based initiative is identifying and supporting schools to become a Health Promoting School. Pampenai and Gasuke schools have self-nominated to become Health Promoting Schools following information provided to the school boards. The Program has supported the schools with health talks to children, teachers and their families, and further support to develop healthy policies within the schools will be continued.

NFHSDP has provided access to clean water, assisting CHS to install six water tanks at Kungim: four at staff houses and two installed at the Health Sub Centre, providing a clean and safe water supply to the delivery room. Safe water was also the subject of another community based activity: World Handwashing Day. The Program has introduced and demonstrated the construction and use of the Tippy Tap at schools and villages.

Further sanitation activities have been implemented with food-handler training co-facilitated and funded by NFHSDP in 2013 for over 120 retail and street vendors, and for first year Community Health Worker students at Rumginae Community Health Worker School.

“We are so grateful for the timely help that your workmen have given to us (the Bedamunis) during the last past week. They’ve being working tirelessly without any complains or grumbling. We have watched them working willingly to care for sick patients, doing diagnostic tests, giving doses and verbally advising the people to living healthy lives and healthy practices”

Letters from the Bedami (Biami) Tribes People to NFHSDP, November 2009
North Fly District Performance

The Program has contributed to improvements in infrastructure, equipment, transport and workforce development in North Fly. The improvements in indicators suggest that the Program, with the Kiunga Hospital redevelopment initiative, has contributed to positive outcomes for service delivery. Overall, eight of the 12 targets were met or exceeded in North Fly in 2014. For three of these indicators, outpatient visits rate, couple years of protection, and supervised deliveries, the 2014 target had already been achieved prior to the Program starting (baseline year 2007). Five of these indicators, malaria incidence, outreach rate, measles vaccination, antenatal care, and medical supplies availability, did not meet the 2014 target in the baseline year. Furthermore, for three of these indicators, outreach, Pentavalent vaccine coverage, and antenatal care coverage, North Fly showed improvements despite stagnant or declining performance at the national level. The achievement in North Fly contrasts with performance at the national level where only five out of the 12 targets were met in 2014.

The indicators that were not met in North Fly and had a negative trend were pneumonia case fatality rate, proportion of births that are low birth weight and childhood diarrhoea. This likely reflects the complex nature of these health outcomes, and that there may be a lag between improving the health system outputs and achieving outcomes.

In terms of sustainability of achievements there are two important changes that have occurred. Firstly, the Implementation Coordination Committee transitioned to the government-led District Health Management Committee, chaired by the District Administrator, and Program Activity Groups have been established and continue to meet. These structures serve a vital function in effective coordination of health activities in the district. Secondly, over the life of the Program there has been a reduction of support required for outreach clinics, particularly for ECPNG and CHS. While this reduction in support has occurred, the rate of outreach clinics has remained high. As the Program winds up, a detailed transition plan (see Chapter 6 for more details) will be implemented to enable partner organisations to sustain outcomes.
### SUMMARY: PROGRESS TOWARDS NATIONAL HEALTH PLAN 2020

#### Total malnutrition

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<td>2007</td>
<td>29%</td>
<td>26%</td>
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<tr>
<td>2014</td>
<td>24%</td>
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Notes: There has been a slight decline in childhood malnutrition but the target has not been met.

#### Per cent of births that are low birth weight

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<td>2007</td>
<td>8%</td>
<td>10%</td>
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<td>2014</td>
<td>9%</td>
<td>11%</td>
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Notes: No detectable change in the proportion of births that are low birth weight and target not met.

#### Measles vaccination coverage

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<td>2007</td>
<td>50%</td>
<td>45%</td>
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<tr>
<td>2014</td>
<td>66%</td>
<td>80%</td>
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Notes: Measles vaccination coverage has increased, particularly in 2013 and 2014 and has exceeded the 2014 target.

#### Pentavalent vaccination coverage

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<td>2007</td>
<td>67%</td>
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</tr>
<tr>
<td>2014</td>
<td>56%</td>
<td>79%</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Increase in pentavalent vaccine coverage. No target defined.

#### Proportion of births that are supervised

<table>
<thead>
<tr>
<th></th>
<th>National</th>
<th>North Fly</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>41%</td>
<td>51%</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>42%</td>
<td>51%</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Facility births have generally increased and exceeded the 2014 target.

#### Antenatal 1st visit coverage (%)

<table>
<thead>
<tr>
<th></th>
<th>National</th>
<th>North Fly</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>69%</td>
<td>57%</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>75%</td>
<td>108%</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Increasing trend in antenatal care coverage, exceeding the 2014 target. The value over 100% in 2014 may be due to inaccuracies with population data.

## Malaria incidence per 1000 population

<table>
<thead>
<tr>
<th></th>
<th>National</th>
<th>North Fly</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>278</td>
<td>190</td>
<td>Decline in malaria incidence, meeting the 2014 target.</td>
</tr>
<tr>
<td>2014</td>
<td>108</td>
<td>152</td>
<td></td>
</tr>
</tbody>
</table>

## Diarrhoea cases per 100 children <5yrs

<table>
<thead>
<tr>
<th></th>
<th>National</th>
<th>North Fly</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>4%</td>
<td>2.6%</td>
<td>Increase in childhood diarrhoea incidence, well above the 2014 target.</td>
</tr>
<tr>
<td>2014</td>
<td>732</td>
<td>291</td>
<td></td>
</tr>
</tbody>
</table>

## Outreach clinics per 1000 children <5yrs

<table>
<thead>
<tr>
<th></th>
<th>National</th>
<th>North Fly</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>25</td>
<td>17</td>
<td>Increase in rate of outreach clinics, meeting the 2014 target.</td>
</tr>
<tr>
<td>2014</td>
<td>46</td>
<td>46</td>
<td></td>
</tr>
</tbody>
</table>

## Couple years protection per 1000 WRA

<table>
<thead>
<tr>
<th></th>
<th>National</th>
<th>North Fly</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>78</td>
<td>346</td>
<td>While the 2014 target is met, the trend is declining.</td>
</tr>
<tr>
<td>2014</td>
<td>66</td>
<td>227</td>
<td></td>
</tr>
</tbody>
</table>

## Outpatient visits per person

<table>
<thead>
<tr>
<th></th>
<th>National</th>
<th>North Fly</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>1.6</td>
<td>1.7</td>
<td>While the 2014 target has been exceeded and rate is the same in 2007 and 2014, there is a declining trend for the reporting period.</td>
</tr>
<tr>
<td>2014</td>
<td>1.2</td>
<td>3.1</td>
<td></td>
</tr>
</tbody>
</table>

## Per cent of months with nil shortages

<table>
<thead>
<tr>
<th></th>
<th>National</th>
<th>North Fly</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>54%</td>
<td>68%</td>
<td>The availability of medical supplies is increasing and the 2014 target has been exceeded.</td>
</tr>
<tr>
<td>2014</td>
<td>87%</td>
<td>90%</td>
<td></td>
</tr>
</tbody>
</table>

## Pneumonia case fatality rate

<table>
<thead>
<tr>
<th></th>
<th>National</th>
<th>North Fly</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>2.6%</td>
<td>2.6%</td>
<td>No detectable change in the proportion of pneumonia case fatality rate.</td>
</tr>
<tr>
<td>2014</td>
<td>2.8%</td>
<td>4%</td>
<td></td>
</tr>
</tbody>
</table>
Kiunga Hospital
Case Study

Kiunga Hospital is the district hospital for North Fly and has been in operation since 1985. It is a government facility offering a range of inpatient and outpatient services, with a bed capacity of 75. The hospital is designated as a level four health facility as classified under the NHSS for PNG (2011-2020), however it does not have the resources available to operate at that level. In 2012, the NFHS DP was engaged to support the management of Kiunga Hospital, in collaboration with the District Administrator and the District Heath Manager and their teams, to oversee the operations of the hospital.

The hospital conducts its operations within the allocated financial resources from the national government, which are channelled through the Provincial and District Administrations to the hospital on a quarterly basis. The hospital receives additional funding under the Tabubil-Kiunga Health Agreement, which was signed by the Fly River Provincial Government and OTML in 2011, to support operational activities and quality improvements at Kiunga and Tabubil Hospitals.

Staffing
NFHS DP engaged Mr. Graeme Hill as the Hospital Administrator in 2012 to assist with the management and development of the provision of health services from the hospital. Funding from the Health Agreement has also assisted in strengthening staffing services, by providing the hospital with a general practitioner, surgeon, emergency management physician and an anaesthetic technician. This has given a substantial boost to the service delivery of the hospital, as it is the first time in Kiunga Hospital's history that there have been three permanent doctors employed concurrently.

Training and professional development is essential to ensure that primary health and clinical services staff are equipped with the latest information on health related issues and provide services based on current practices. NFHS DP and OTML have supported training courses and professional development activities for Kiunga Hospital's medical and administrative staff.

Hospital staff have also taken the initiative to offer training opportunities for community members outside of the hospital. The Kiunga Hospital Radiology Department conducted a Basic Radiography Training in 2014 to train students to gain knowledge in radiography and operating x-ray machines. The students were in Grade 12 and were selected from schools across Western Province with the aim to
Key Training

5 laboratory staff undertook the Medical Laboratory Assistant (MLA) course, supported by the NFHSDP Scholarships initiative.

2 medical officers trained in diagnosing extra pulmonary TB.

The radiographer travelled to Castlemaine, Australia, to take part in a two-week program with the Bendigo Radiology Group.

First Response Australia facilitated a Cardiopulmonary Resuscitation (CPR) training for 53 nursing and medical staff and 34 administrative and support staff.

promote radiography as a career pathway. The training was the first of its kind in PNG, and has been adopted nationally to be introduced across PNG in 2016.

Health Service Delivery

Kiunga Hospital provides a wide range of necessary health services to Kiunga and the surrounding communities, as well as acting as a crucial referral facility for health centres and aid posts in extended areas. The consistently high volume of patients seen in all departments of the hospital over the years reflects the important role it plays in the health of populations in Kiunga and communities beyond. The general outpatient department is one of the busiest areas in the hospital with an average of 33,296 patients seen per year between 2010 and 2014 (see Figure 2.15).

The Maternity Ward also has high patient numbers, with an average of 77 obstetrics and gynaecological admissions per month. The number of deliveries conducted at the hospital has seen a significant increase since 2010: over 870 deliveries were supervised by health workers in 2014, indicating the hospital provides a trusted service to mothers in Kiunga and the surrounding communities (see Figure 2.16).

The hospital has two operating rooms where both major and minor surgical procedures are conducted. Types of procedures include lacerations, breaks, appendicitis and hernias. There was a total of 1,325 surgical procedures conducted over 2013 and 2014. Paramedical support is also provided through a medical laboratory on site, radiology, and rehabilitation services.

In addition to this compliment of services, health workers also provide specialist clinics including well-patient maternal and child health clinics, TB testing and treatment, and family planning clinics.

Kiunga Hospital has achieved substantial improvements in areas of management, staffing and infrastructure with the support from OTML and the NFHSDP. However, there is still considerable progress needed to reach a standard that meets minimal accreditation for district hospitals in PNG. Continued management and direction from North Fly District and Fly River Provincial Government is essential to maintain adequate service delivery. The additional funding from the Tabubil-Kiunga Health Agreement will further support progress in Kiunga Hospital meeting the district hospital standard to provide better health services for the people of North Fly District.
Infrastructure Works

Funding from the Tabubil-Kiunga Health Agreement has contributed to significant infrastructure developments at the hospital. NFHSDP also provides logistical support to the dispensary by facilitating quarterly visits to the Area Medical Stores to procure essential medical supplies. Key infrastructure projects undertaken are as follows:

- Construction of an incinerator
- Surgical Ward constructed
- New TB Ward constructed
- Old TB Ward refurbished
- Extension to morgue
- Extension to General Ward
- New dispensary, staff toilets and patient toilets
- Maintenance to nurses quarters
- Renovating 3 doctor’s houses

Partnerships with Kiunga Hospital

In 2014, nine medical and dental students from Griffith University, Australia, completed their elective rotations at Kiunga Hospital. Students were provided the opportunity to experience rural medicine and gain clinical practice first hand through working at the hospital as well as participate in outreach patrols to surrounding and rural areas of Kiunga. This partnership will continue in 2016 with 24 students arranged to spend six weeks working at the hospital.

The Rotary Club of Castlemaine, Australia, has also been a generous donor to Kiunga Hospital. They provided four tradesmen who travelled to Kiunga in 2014 to assist local staff in maintenance work around the hospital, and there are arrangements being made for tradesmen to undertake further infrastructure work at the hospital in 2016. The Rotary Club has also donated three shipping containers worth of hospital equipment. The Kiunga Branch of the Bank of South Pacific (BSP) has also provided financial assistance to the hospital by funding infrastructure alterations to the General Ward. A new suction machine for use in the maternity ward was also presented, which was co-funded by the Fly River Provincial Government and BSP.

Kiunga Hospital, being the district hospital for North Fly, is a key facility for improving the quality of services in the district. As a facility that many health centres refer to, Kiunga Hospital must maintain a high level of services. The hospital is also located in the growing town of Kiunga which has an increasing population due to increased exploration activity.
CMCA Middle & South Fly Health Program

CHAPTER 3
CMSFHP is a community health program funded through the CMCA portion of the Western Province Peoples’ Dividend Trust Fund, managed by OTDF and is implemented by Abt JTA. The program operates through a partnership with the existing health service providers and the implementer; namely Middle Fly District Health Services, South Fly District Health Services, CHS, ECPNG, Western Province Provincial Health Services and Abt JTA. The partnership drives the Program direction through quarterly partnership meetings where priorities are set and activity plans agreed upon. The Program Annual Activity Plan is integrated with the partners’ plans and is aligned to the National Health Plan 2011-2020.

There are three components to the Program which aim to achieve the National Health Plan goal of strengthening primary health care for all and improving service delivery. Component one is support to the province and districts to improve service delivery and partnerships and coordination; component two is support for the fundamental enablers of health care; and component three is support tailored to community needs (19). The components align with the eight key results areas (KRAs) of the National Health Plan (20).
The intensity of implementation of each of the components was designed and expected to vary during the five years of the Program (Figure 3.2). Recognising that there would be limited capacity at health facilities at the commencement of the Program, an early focus on the fundamental enablers of health care was vital. Once the health facilities were well-equipped, had regular drug supplies, and trained staff, it was planned that the focus would shift to community based activities that would increase demand for health services. Support for the districts and the province was designed to decline over time as capacity increased.

The Program catchment area consists of the five CMCA Trust Regions along the Fly River in Middle Fly and South Fly Districts in Western Province of PNG:

- Middle Fly CMCA Trust Region
- Suki Fly Gogo CMCA Trust Region
- Dudi CMCA Trust Region
- Kiwaba CMCA Trust Region
- Manawete CMCA Trust Region

There are approximately 84 villages and 22 open health facilities in the Program area, two of which have re-opened in 2015. The population is approximately 50,000 according to the 2011 census, although OTDF also carried out a census and estimated the population to be approximately 75,000 in 2011 (21). The OTDF census is completed in order to identify residents for compensation payment and is therefore likely to be higher than the actual population.

The Program team consists of approximately 25 personnel based in an office in Kiunga. There is a Primary Health Care team consisting of health extension officers and nursing officers and led by a Primary Health Care Technical Adviser. In addition to the clinical staff, there is a Specialist Workforce Trainer, Infrastructure Officer, Logistics Officer, Health Information Officer and management, finance and administration staff.

A baseline evaluation was conducted at the commencement of the Program, the findings of which were used to identify service needs. The Program is now at the half-way mark of the five year schedule. A comprehensive midline evaluation was conducted to review progress to date and inform the implementation in the remaining years of the Program. The objectives of the evaluation were to:

- Review progress to date on program activities, outputs and outcomes, including progress towards achieving the National targets as detailed in the National Health Plan Monitoring and Evaluation Framework;
- For CMSFHP, assess the effectiveness of the partnership model and coordination mechanisms; and
- Identify lessons learned and recommendations for improving overall program performance to achieve outcomes by 2018 and beyond.

**Methodology**

Specific evaluation questions were designed with input from the Program partners at the Quarterly Stakeholder meeting in Quarter 1, 2015. From these questions, and with the overall objectives in mind, the evaluation methods were developed.
**Program Goal:** Strengthen primary health care for all and improve service delivery

**Program Components**

1. **Component 1: Support to Province and Districts**
   - Provide support to the Provincial Health Office, District Health Offices and Church Health Services to improve service delivery, partnerships and coordination.

2. **Component 2: Support fundamental enablers for health care**
   - Ensure the fundamental building blocks for health care are available to all health facilities supported by the CMCA Middle and South Fly Health Program.

3. **Component 3: Support tailored to community needs**
   - Support to be implemented on a needs basis to communities.

**National Health Plan Key Result Areas**

- **KRA 1 Improve Service Delivery**
- **KRA 2 Strengthen Partnerships and Coordination**
- **KRA 3 Strengthening Health Systems: Health workforce, Information, Infrastructure, Drugs and Supplies, Leadership and Governance**
- **KRA 4 Improve Child Survival**
- **KRA 5 Improve Maternal Health**
- **KRA 6 Reduce the Burden of Communicable Diseases**
- **KRA 7 Promote Healthy Lifestyles**
- **KRA 8 Improve our Preparedness for Disease Outbreaks and Emerging Population Health Issues**

Figure 3.1: CMSFHP components and alignment with the KRAs of the National Health Plan

Figure 3.2: Indicative level of support by component over time for the CMSFHP
<table>
<thead>
<tr>
<th>Program Component</th>
<th>Area</th>
<th>Question</th>
<th>Methodology and target participants</th>
</tr>
</thead>
</table>
| 1                 | Partnerships and coordination (specifically in regards to the Stakeholder Coordination Group) | 1. How well are activities coordinated?  
2. How are issues raised and addressed? | Independent Review – semi-structured interviews with stakeholders by independent evaluator |
|                   | Workforce | 3. How do staff cope with low staff numbers at health facilities? | Document barriers and enablers to providing quality health services through semi-structured interviews with health workers at a sample of health facilities.  
Focus group discussions  
- Community members |
| 2                 | VHV Program | 4. What are the changes in behaviour of health workers including approach to patients, service delivery, motivation and attendance at work? | Focus group discussions including story telling  
- Community members |
|                   | Community engagement | 5. What are VHV’s doing in the communities?  
6. How well are the VHV’s integrated into the health system?  
7. Do the VHV’s continue to provide services?  
8. How much time do VHV’s spend doing VHV work?  
9. How are VHV’s supported by the community? | Review of program VHV documentation  
Semi-structured interviews:  
- Program VHV coordinators  
- VHV’s  
- VHV trainers  
- Supervising health workers  
Focus group discussions:  
Community members |
|                   | Health system performance | 10. Is there appreciation of the program by the communities?  
11. Is there a lack of information on the program in the communities? | Focus group discussions  
- Community members  
- Review program documents distributed to communities |
|                   | Sustainability | 12. Have the indicators improved? | Analysis of Program data and NHIS data for health facilities in Program catchment. |
|                   |               | 13. At the end of the five year program, will the outcomes be sustainable? | Independent Review – semi-structured interviews with stakeholders by independent evaluator |

Table 3.1: CMSFHP midline evaluation questions developed in consultation with Partners, and methodologies.
Analysis of Key Indicators

The performance in indicators was measured by comparing key indicators before (2010-2012) and after (2013-2015) commencement of the Program. The health facilities in the Program area report activity data through the NHIS. The NDoH provides automated reports on key indicators at the health centre and health sub-centre level, which contains the data from aid posts within the supervising health centres and health sub-centre counts. These indicators reflect the health status and health services provided. An analysis was undertaken for the health centres and health sub-centres in the Program area for the indicators in the Program monitoring and evaluation framework:

- Adequacy of medical supplies (% months supplies not available)
- Outpatient visits per person per year
- Outreach clinics per 1,000 children less than five years of age
- Proportion of pregnant women who attended 1st antenatal care visit
- Proportion of pregnant women who attended 4th antenatal care visit
- Proportion of pregnant women who had a supervised delivery
- Family planning use – couple years protection
- Measles vaccination coverage at 12 months of age (%)
- Pentavalent vaccination coverage at 12 months of age (%)
- Malaria incidence per 1,000 population
- Diarrhoea incidence per 1,000 population

The Program directly supports eight facilities reported for the indicators in the Program monitoring and evaluation framework:

- Membok Health Centre
- Bosset Health Sub-Centre
- Obo Health Sub-Centre
- Suki Health Sub-Centre
- Wasua Health Sub-Centre
- Tapila Health Centre
- Obo Health Sub-Centre
- Suki Health Sub-Centre

The Program supportive Program staff to undertake clinical attachments at health facilities. When the Program team conducts outreach clinics in the communities, the team collects data as per the NHIS protocol and provides one copy of the data to the supervising health facility and one copy to the Program Health Information Office for input into the Program monitoring and evaluation database. Data from the Program database were extracted for the period of July 2013-December 2014. The percent attribution was calculated for the following indicators, representing the targeted activities of the outreach clinics:

- Outreach clinics per 1,000 children less than five years of age
- Family planning use – CYP per 1,000 women of reproductive age
- Measles vaccination coverage at 12 months of age (%)
- Pentavalent vaccination coverage at 12 months of age (%)
- Proportion of pregnant women who attended 1st antenatal care visit
- Proportion of pregnant women who attended 4th antenatal care visit

Health Facility Assessments

The NHSS role delineation matrix outlines the staffing levels, services, equipment, and management and supervision for each of the seven levels of health facilities in PNG (5). A Health Facility Assessment Tool was developed to record the current staffing levels, services, equipment, and management and supervision at a sample of ten of the 22 health facilities in the Program area. Health facilities were selected to ensure representation of:

- Health facility run by different partners (District Health Services, ECPNG, CHS);
- Health facility of different levels (Aid Posts, Health Sub-Centres and Health Centres); and
- CMCA Trust Region.

The Health Facility Assessment Tool was administered through an interview with the Officer-in-Charge and inspection of the facility. The data from the midline evaluation was compared to data available for the same facilities from the baseline evaluation at the commencement of the Program (6).

Key Informant Interviews with Health Workers

At the selected health facilities, all available health workers were invited to participate in a semi-structured interview. The interview topics
included changes since the Program commenced, interaction with the VHVs, and barriers and enablers to providing quality health services.

**Key Informant Interviews for the VHV Program**

VHVs, VHV Trainers and a CMSFHP VHV Coordinator were invited to participate in a semi structured interview. The interview topics included activities undertaken since receiving VHV training, interaction with the supervising health facilities, and barriers and enablers to undertaking VHV work.

**Key Informant Interviews with Program Partners**

The interviews with Program partners were undertaken by an independent consultant and a report written. The report is referenced in this report.

**Focus Group Discussions with Communities**

Focus group discussions allow for documentation of perceptions where participants can build on others' comments and identify issues of most relevance or significance to the group (22). Focus group discussions were carried out for one group of 10 adult males and one group of 10 adult females, where possible, in each of the selected villages. All participants were 18 years or older and were selected to cover a range of age groups. The following topics were covered in the focus group discussions:

- Awareness of the Program;
- Changes in the health services since the Program commenced;
- The experience of the VHV Program; and
- Priorities in the next two years for the Program.

At the start of the focus group discussion, the 10 Seeds method was used for rapid estimation of the community's awareness of the Program (23). The group members were provided with ten large buttons to allocate to boxes labelled with three different levels of awareness of the program (not aware, somewhat aware, and fully aware). The participants were asked to individually place the button in the box that reflected their awareness of the program.

**Sample Villages for VHV interviews and Focus Group Discussions**

A sample of villages was selected for participation in the evaluation. Villages were selected to ensure representation of:

- At least one village from each of the five CMCA Trust Regions; and
- Varying degrees of access to health facilities, from location of the facility within the village to requiring boat transport to travel to the facility.

The number of villages that the Midline Evaluation Team aimed to visit was 10. While there are no guidelines for sample number for qualitative studies, it was thought that this number of villages would be sufficient in reaching saturation of data, that is, there are no new themes that emerge from the focus group discussion or interview. At each village, an attempt was made to conduct a focus group discussion with males and females and interview any VHVs or VHV trainers available. Any VHV and VHV trainers at these villages were invited for interviews.

**Qualitative Data Analysis**

The key informant interviews and focus group discussions were carried out either in English or Tok Pisin. The audio was recorded on a digital recorder and translated into English, where required, and transcribed. The transcriptions were imported into NVivo, a qualitative data management and analysis software. Inductive thematic analysis was used where common patterns and themes across sites, as well as differences, were identified using the constant comparison technique (24).

**Limitations**

We have used data from the NHIS in this evaluation. As noted in Chapter 2, there are issues with the accuracy of the data. Data for 2014 and 2015 were reviewed and checked by the Program Health Information Officer and the Provincial Health Information Officer. Data for earlier years have not been reviewed or checked.

In this evaluation, extensive qualitative data collected through focus group discussions and semi-structured interviews were collected. The qualitative data represents the evaluation participants' perspectives and experience. This means that the perspectives documented in this report may not be the only perspectives from communities and health workers.

**Ethical Considerations**

All key informants and focus group discussion participants provided written informed consent. All transcripts of interviews and focus group discussions were de-identified. The midline evaluation was approved by the PNG Medical Research Advisory Committee (MRAC No. 15.08).
<table>
<thead>
<tr>
<th>Perspective sought</th>
<th>Method</th>
<th>Topics covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program partners, Program staff, Ok Tedi Development Foundation</td>
<td>Key informant interviews</td>
<td>Partnership and coordination of the program, sustainability.</td>
</tr>
<tr>
<td>Community</td>
<td>Focus group discussions 10 Seeds</td>
<td>Awareness of the Program</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Changes in the health services since the Program commenced</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The experience of the VHV Program</td>
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<tr>
<td></td>
<td></td>
<td>Priorities in the next two years for the Program</td>
</tr>
<tr>
<td>VHVs/VHV Trainers</td>
<td>Key informant interviews</td>
<td>Activities undertaken since receiving VHV training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Barriers and enablers to undertaking VHV work</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Interaction with supervising health facility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Support required to continue activities</td>
</tr>
<tr>
<td>Health facilities</td>
<td>Assessment of health facilities to the NHSS (interview with Officer-in-Charge and inspection of facility)</td>
<td>Services provided, staffing, infrastructure, medical supplies and equipment.</td>
</tr>
<tr>
<td>Health Workers</td>
<td>Key informant interviews</td>
<td>Barriers and enablers to providing quality health services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Changes since Program implementation</td>
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<tr>
<td></td>
<td></td>
<td>Changes in motivation for work</td>
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<td></td>
<td>Changes in practices at work</td>
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<td></td>
<td></td>
<td>Interaction with VHVs</td>
</tr>
<tr>
<td>Health facility performance</td>
<td>Analysis of NHIS data</td>
<td>Key indicators for health and health services</td>
</tr>
<tr>
<td>Program contribution to health facility performance</td>
<td>Analysis of NHIS and Program data</td>
<td>Key indicators for health and health services</td>
</tr>
</tbody>
</table>
Results

This section describes how the program is governed and the findings from the independent evaluator on Program sustainability and partnerships and coordination.

The Program design related to governance included a link to the Western Province Health Steering Committee. This committee had ceased meeting by the time the Program commenced in 2013. In the absence of this committee, the Stakeholder Coordination Committee was established, consisting of representatives from the following organisations:
- Fly River Provincial Government
- Provincial Health Office
- Catholic Health Services
- Evangelical Church of Papua New Guinea
- South Fly District Health Services
- Middle Fly District Health Services
- North Fly District Health Services
- Ok Tedi Development Foundation

Representatives from World Vision, Rumginae Community Health Worker Training School, Tabubil Hospital and Kiunga Hospital are invited as observers to the Stakeholder Coordination Committee Meetings.

The Program Partners were consulted during the development of the design for the Program. With the exception of the first quarter of the Program, the Stakeholder Committee has met approximately every quarter. A Program Charter was developed in 2014 to outline the philosophy and principles of the partnership, the governance of the program, and the role of each partner in the program.

In addition to the Stakeholder Coordination Committee, there is a Health Management Committee which consists of representatives from the Program and OTDF. The Health Management Committee meets monthly to discuss operational issues and opportunities for collaboration with OTDF’s activities in other programs.
Representatives from the Program partner organisations interviewed for the Midline Evaluation were largely positive about the Program’s progress and achievements. However, church and government partners pointed to some coordination and communication inadequacies on the part of the Program, despite apparent efforts to respond to concerns by Program staff. However, it also became clear as the interviews progressed that there seem to be some inadequacies within partner organisations in terms of their own internal sharing of information generated by the Program.

There was a wide range of views about how the Program’s achievements and approaches could be sustained after the program finishes in 2018. Some of the comments dealt with the way in which the Program has and continues to upgrade health facilities and equipment, including transport, vaccine refrigerators, radios, solar water systems, and infrastructure; all of which were seen as important contributors to sustaining the Program’s outcomes. However, maintenance was crucial. Other comments recognised the need for capable and sufficient staffing resources and the role of partnerships. In summary, the key themes which emerged during the various interviews were: maintenance, alternative funding options, cooperation and partnership, human resources, and transition planning.

The recommendations from the independent evaluator for sustainability and partnerships and coordination were:

- Review arrangements for patrol and attachment coordination and statistical collection.
- There is a need for more detailed program information to be shared at the quarterly stakeholder meetings or an agreement between partners on the most efficient way of disseminating it.
- The integration of the NFHSDP and the CMSFHP may overcome some current information inadequacies.
- Program partners to collaboratively develop a transition plan.
- Training and funding of ongoing maintenance to be a priority for all partners and notably for the government in ensuring that funding is not only budgeted, but made available.
- Consider the funding of in-line health worker positions at key rural health facilities.

Fundamental Enablers of Health Care

This section describes the progress towards improving the fundamental enablers of health care: transport, medical supplies, medical equipment, workforce training and infrastructure. Data for this section comes from the Program Monitoring and Evaluation System, NHIS, Health facility assessments that were conducted at 10 health facilities and 22 health worker interviews (Table 3.3).

**Transport**

Transport in the Program area is largely through boat travel along the Fly River and its tributaries. A dinghy with an OBM at a facility can be used for a variety of purposes that will improve access to health services,
such as:

- Enables health workers to travel to villages in the health facility catchment area to conduct outreach clinics; and
- Enables transport of patients from villages to the health facility or for transport of patients from the health facility to a higher-level referral health facility.

At the commencement of the Program, while it was reported that some health facilities had a dinghy with OBM, further investigation revealed all the existing dinghies and OBMs were non-functional or needed replacing. At midline, 64% of health facilities had a dinghy and OBM (14/22). It should be noted that the dinghy and OBM at Samari Aid Post was provided by the government with the agreement that the dinghy and OBM purchased through the Program for Samari would instead go to Maipani Aid Post. In addition to the facilities below, a dinghy and OBM was provided to Daru Urban Clinic, recognising that although the facility is outside of the Program area, it services villages in the lower Dudi CMCA Trust Region. The improved availability of transport is assisting with referrals:

“Before we did not have a dinghy and a motor so when I saw serious patients we ran around for fuel and then look for engine and canoe to take the patient down to [Health Centre]. But now we have this thing [dinghy and motor] we are able to refer patients quickly down to [Health Centre].” (Health Worker)

The difficultly of travelling in the Program area was a commonly cited barrier for accessing and providing quality health services by health workers, communities, and VHVs. Generally, the villages without access to transport requested to be provided with a dinghy and OBM; and for those with access to a dinghy and OBM, requested fuel. Although a village may have access to a dinghy and OBM, families are expected to pay for the cost of fuel when they need to travel to the nearest health facility. Health workers also noted the lack of fuel as a barrier to providing services, particularly for referrals and outreach clinics, even with the availability of dinghy and OBM. In several focus group discussions, discussants told stories of the Program team transferring patients to higher level facilities.

In terms of emergency referrals, there was a perception in a couple of focus group discussions that they are no longer provided due to the presence of the Program when the funding for emergency referrals is provided outside the Program:

“Before the program started we got our health from OTDF. So when JTA came in OTDF left us. In the past when there was an emergency we were transported in the plane to Kiunga or by the dinghy but since JTA came in this has stopped.” (Women’s Focus Group Discussion)

This also coincides with the South Fly court case that has frozen all available development funds for South Fly Trusts.

Medical Supplies

The Program has supported health facilities to efficiently manage their medical supplies and regularly submit medical supplies orders to the Area Medical Stores. The Program Logistics Officer conducts quarterly visits to the Area Medical Stores to ensure the orders are packed for shipment to the facilities and also works with health workers to rearrange their dispensaries to effectively manage stock. Medical supplies availability was one of the most commonly cited improvements since Program commencement by health workers and the communities.

“We are happy that our [health centre] has been changed because of this [CMCA Middle and South Fly Health Program], they came and they changed that health centre, now we are getting new medicines.” (Women’s Focus Group Discussion)

The key supplies short indicator provided from the NHIS is based on nil stock for more than one week out of a set of 42 supplies. The proportion of months there are supply shortages varies by facility from year to year with no discernible trend (Table 3.4).

Medical Equipment

Health workers require appropriate medical equipment in order to provide health services in line with the NHSS. At the commencement of the Program, many facilities lacked basic medical equipment. Essential medical equipment kits were provided to all health facilities in 2014, with the exception of Samari Aid Post which re-opened in mid-2015. The health facility assessments indicate that the proportion of facilities assessed with key equipment items increased from baseline to midline (Table 3.5). However, at the time of the evaluation, less than 100% of facilities had the essential equipment items despite being provided by the Program, suggesting that some items have broken or have been lost prior to the assessment.
Table 3.4: Key supplies short (%) by health facility support by CMSFHP

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bosset</td>
<td>20.0</td>
<td>28.0</td>
<td>2.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Membok</td>
<td>11.1</td>
<td>5.5</td>
<td>5.2</td>
<td>3.6</td>
<td>7.9</td>
<td>1.4</td>
</tr>
<tr>
<td>Obo/ Kavinanga</td>
<td>2.7</td>
<td>4.5</td>
<td>17.0</td>
<td>25.0</td>
<td>7.2</td>
<td>62.7</td>
</tr>
<tr>
<td>Suki (Gigwa)</td>
<td>0.2</td>
<td>27.7</td>
<td>8.5</td>
<td>72.5</td>
<td>0.0</td>
<td>5.0</td>
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<td>Tapila</td>
<td>0.0</td>
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<td>5.4</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Teapopo</td>
<td>2.5</td>
<td>7.9</td>
<td>0.0</td>
<td>3.5</td>
<td>15.2</td>
<td>15.6</td>
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<tr>
<td>Wasua</td>
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<td>1.0</td>
<td>0.8</td>
<td>12.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

*Data from Samari were not included as the facility was not open from 2012 to 2014*

Table 3.5: Proportion of health facilities with key equipment items at baseline and midline

<table>
<thead>
<tr>
<th>Essential equipment</th>
<th>Baseline (25)</th>
<th>Midline*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Scales</td>
<td>88% (15/17)</td>
<td>100% (9/9)</td>
</tr>
<tr>
<td>Infant (hanging) Scales</td>
<td>71% (12/17)</td>
<td>89% (8/9)</td>
</tr>
<tr>
<td>Steriliser, Presser Cooker</td>
<td>0% (0/17)</td>
<td>67% (6/9)</td>
</tr>
<tr>
<td>Primus Stove</td>
<td>12% (2/17)</td>
<td>89% (8/9)</td>
</tr>
<tr>
<td>Auroscope</td>
<td>41% (7/17)</td>
<td>78% (7/9)</td>
</tr>
<tr>
<td>Foot/Electric Nebuliser</td>
<td>24% (4/17)</td>
<td>56% (5/9)</td>
</tr>
<tr>
<td>Aneroid Sphygmomanometer</td>
<td>59% (10/17)</td>
<td>100% (9/9)</td>
</tr>
<tr>
<td>Bell Stethoscope</td>
<td>65% (11/17)</td>
<td>100% (9/9)</td>
</tr>
<tr>
<td>Clinical oral thermometer</td>
<td>88% (15/17)</td>
<td>100% (9/9)</td>
</tr>
</tbody>
</table>

*Data for Samari removed as the facility reopened at the same time as the Midline Survey*
Cold Chain

The NHSS states that all health centres and health sub-centres should have vaccine refrigerators in order to provide immunisation services while aid posts may have a vaccine refrigerator. Health facilities were provided with vaccine refrigerators and vaccine carriers. At the time of the baseline, 6/20 health facilities (30%) had working vaccine refrigerators (25). At the midline 73% of health facilities (16/22) had working vaccine refrigerators, including 100% of health centres and health sub-centres to meet the NHSS (Figure 3.3). The 2015 Annual Activity Plan included the provision of vaccine refrigerators to the remaining health facilities. However, at the time of the report the low water levels and province-wide fuel shortages had delayed this activity.
Health Radios

Health radios provide a vital communication link between health facilities and their managing organisation. Importantly, health radios can be used in locations without mobile phone coverage and have no operating costs, with the exception of maintenance. Ninety-five per cent of health facilities (21/22) have health radios, with 20 of those radios installed or repaired since Program commencement (Figure 3.4). The exception is Samari Aid Post that was reopened in mid-2015. At the time of this report, all but one radio was functioning, with planned repairs for the radio at Maipani Aid Post that was not working.

"Another great change is that I have a very good radio for my communications, like emergency cases. I can't go close to doctor but by speaking by mouth then i can get a full information from doctor and I would follow the instructions that doctor will give. Like doctor is staying close to me." (Health Worker)

Closed User Group

In addition to the health radios, the Program has established a closed user group (CUG) where a set monthly cost is paid by the Program for each mobile phone number on the group and the users can contact anyone within the group without incurring a cost. Representatives from the health service providers, health workers in facilities and Program staff are all in the group.
Workforce

The Program has supported a number of formal trainings for health workers in the Program catchment area (Table 3.6). The training topics were determined through consultation with Program partners and focused on management and maternal health.

Training was the most common reason given by health workers for improving services at the facilities, and the training that health workers cited the most as resulting in changed practices was the Essential Obstetric Care training, although trainings on new vaccinations and management were also mentioned.

"Before we had certain days to attend to antenatal matters but when I went for the EOC course I was taught to attend to the mother when she comes at any time ... Yeah before that we had Saturday - even family planning that’s what we did. We had certain days but now they come in whichever time we give them their next date of visit they come and then we give them.” (Health Worker)

I think with this management training that we had, it really made us, I think that was the very best school we had, training we had. Because it made, it corrected us on our failure, what we normally we, like the way of approaching patients. (Health Worker)

Several health workers noted the need for more training, as only some from their facility had attended, as well as the need for more in-service training.

Scholarships

The Program provides scholarships for community members from the Program area to train as health workers. There are two scholarships currently funded through the Program: one student is training as a Community Health Worker at the Rumginae Community Health Worker School and another student is training as a Health Extension Officer at Divine World University, a student who was initially funded by OTDF. The Program also continued an additional scholarship for a student undertaking an Environmental Health Officer training course, which was initially funded by OTDF, but this student has since withdrawn from their studies.

Table 3.6: Formal training provided to health workers in the Program area

<table>
<thead>
<tr>
<th>Type of Training</th>
<th>Dates</th>
<th>Number of Participants*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Officer in Charge Training</td>
<td>June 2014</td>
<td>11</td>
</tr>
<tr>
<td>Essential Obstetric Care Training</td>
<td>August 2014, May 2015</td>
<td>31</td>
</tr>
<tr>
<td>Policy and Clinical Implication</td>
<td>October 2014</td>
<td>14</td>
</tr>
<tr>
<td>Basic Management Training for Rural Health Workforce</td>
<td>January 2015, February 2015</td>
<td>13</td>
</tr>
<tr>
<td>Provider Initiated Counselling and Testing</td>
<td>April 2015</td>
<td>10</td>
</tr>
<tr>
<td>Contraceptive Implant Training</td>
<td>August-September 2015</td>
<td>3</td>
</tr>
</tbody>
</table>

*Participants from the Program area only, additional participants from outside the Program area may have attended.
Health Infrastructure

The health infrastructure was generally found to be in poor condition at the commencement of the Program. The Program has focused on maintenance of existing health facilities and construction of new staff houses.

Health Facility Maintenance

Health facility maintenance has been undertaken at eight of the 22 health facilities and solar lighting has been installed at all facilities with the exception of Samari Aid Post which has recently reopened (Figure 3.5). In line with the focus in 2014 on strengthening the health centres and health sub-centres, renovations were carried out at Bosset Health Sub-Centre, Teopopo Health Centre, Tapila Health Centre, Suki Health Sub-Centre and Wasua Health Sub-Centre. In addition Tire’ere Aid Post had renovations. Two previously closed facilities, Samari and Aiambak, were renovated which helped paved the way for these facilities to be reopened.
Houses for Health Workers

During the baseline evaluation for the Program, the lack of staff houses was identified as a major impediment to increasing the number of staff in health facilities and thereby increasing the capacity of these facilities. There were 18 houses for approximately 42 health workers. In 2014, seven health facilities were identified to have a staff house built and in 2015 an additional five houses were to be built. However, a lengthy delay by the sub-contractor for building the houses has resulted in only five houses being completed to date. Nonetheless, once completed, these houses will take the total number of houses to 30 (Figure 3.6).

Workforce

The health workforce at the facilities supported by the Program were largely positive about the Program and articulated clearly the changes in their health facilities since the Program started:

"Yes I have seen some changes [to the health facility]. The [facility] look like a new [facility] where it was a condemned building and we have a lot of, we had a lot of rusted instruments and what was inside was not looking good but since they came and helped, did the maintenance, we are happy about the appearance of the [facility] now." (Health Worker)

Only a few health workers had negative feedback on the Program, largely to do with unfinished renovation or construction of staff houses. The health workers were not informed of when the infrastructure would be completed. A few of the health workers noted that the Program team did not visit frequently enough or did not stay in villages long enough. This perception was echoed in a majority of the focus group discussions.

Health workers were asked what the barriers were and enablers to providing quality health services (Table 3.7).

Supervision of Health Workers

Supervision by health service providers to health workers in the Program area was noted by a majority of health workers as absent. For the minority that had received supervision, many found it unhelpful. The reason health workers were not satisfied with their supervision were:

- Not receiving advice so they can improve;
• Supervisory visits not frequent enough;
• Not being informed of when the supervisory visit would occur;
• Supervisory visit should include looking into the state of the staff housing; and
• No training provided through the supervision.

They’re [supposed] to come and see what we need or what is lacking, and then improve. (Health worker)

Several health workers noted that they wanted good supervision to improve on their performance or to know if they were providing services to standard:

"I really want supervision because to see that whether I’m improving in my job or I’m still at the same level. Or I’m still where I am. If only they come and see my workload or whatever things that they will maybe appreciate me for my job. I will still change my attitude or bring my standard up a bit myself." (Health worker)

Community Support for Health Facilities

When health workers were asked about the support they receive from the community, there was a range of responses from no support to receiving support for a number of activities. Where multiple health workers were interviewed from the one facility, the view of community support was relatively consistent with all staff from the facility noting good or poor support from the community. The type of community support health workers received included provision of food, cleaning the health facility and assisting with transfers of patients by providing fuel.

"When we have work to do here they come around and see our house. If we don’t have food they bring food for us. If we have work to do around the health post they come in and clean around. If there is a patient - they contribute to take that patient; contribute money to buy fuel and take the patient." (Health Worker)

Community Culture and Interaction with Health Service Delivery

Although not specifically asked through the semi-structured interviews with health workers, some cited cultural issues as a barrier to providing quality health services. It was also noted by a health worker in the Suki Fly Gogo Region that there was a barrier to treating men, as they are not as informative as women when providing details of their illness. In one facility in Middle Fly Region, health workers cited the customs where males do not participate in family planning, pregnancy and deliveries as a barrier for delivering quality health services:

"I see that here the customs and traditions are very strong especially when a mother is delivering her baby. I say this because I want to give health service education talks and family planning but the husbands and men don’t come. Even when the mother is giving birth they hardly go and visit her, the men give the burden of pregnancy to the women and forget about them until they give birth." (Health Worker)

Another health worker in Suki Fly Gogo noted that there is a perception among the community that different treatment is provided based on the religious denomination of the community members:

"It’s a problem with our people mostly here saying that this hospital is run by the (…) health services and those from other denominations are known to be, like they are treated as they are different. They sometimes disregard them in getting help or treated here so other church groups or denominations are not happy with this." (Health Worker)
Health Facility Performance

It is expected that by improving the fundamental enablers of health care, the indicators for health and health services will improve. This section describes the trend in key indicators before and after the commencement of the Program.

Service delivery

During the first two years of the Program, when facilities were being upgraded with equipment, the focus of the Program’s Primary Health Care team was on improving community access to health services through conducting regular outreach clinics with local health facility staff. Outreach clinics included the provision of maternal and child health screening and immunisation, clinical consultations and health promotion activities. To facilitate partner engagement, the Program absorbed all associated partner costs including accommodation, rations, incidental allowance and fuel.

This led to a marked improvement in community access to essential primary health care services and an increase in both the number of outreach clinics conducted and outpatients seen. Prior to the commencement of the Program in mid-2013, the rate of outreach clinics dramatically declined, largely due to a decline in clinics at Wasua from an unusually high number of 153 in 2010, to 14 in 2011, which is likely to be an error with the data (Figure 3.7 and Table 3.8). The outreach rate has increased substantially since 2013 and this is likely due to the Program team working with the health service providers to conduct outreach clinics. In 2013 the Program team supported 68 outreach clinics, far greater than the reported total of 51, including in the catchment areas of Samari, Tapila, Teopopo, and Wasua where no clinics were recorded, suggesting an error in the data for the year. In 2014 the Program team was involved in 143 (66%) of outreach clinics conducted.

In 2014 Program partners participated in 81 of 216 days of patrols (38%). Patrols can include providing clinics as well as health promotion. ECPNG participated in the most days (47), followed by CHS (26), Middle Fly District Health Services (4), South Fly District Health Services (2) and North Fly District Health Services (2). In 2015, partners participated in 165 of 289 days of patrols (57%). ECPNG participated in the most days again (99), then South Fly District Health Services (44), CHS (18), North Fly District Health Services (11), and Middle Fly District Health Services (2). In 2015, Program staff moved from outreach patrols to attachments at facilities. As a result, partners’ participation has increased as health workers are joining Program staff when outreach

<table>
<thead>
<tr>
<th>Health facility</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bosset</td>
<td>13</td>
<td>16</td>
<td>4</td>
<td>4</td>
<td>38</td>
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<td>17</td>
<td>12</td>
<td>2</td>
<td>47</td>
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</tr>
<tr>
<td>Obo</td>
<td>27</td>
<td>26</td>
<td>5</td>
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<td>0</td>
<td>0</td>
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<td>30</td>
</tr>
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<td>1</td>
<td>5</td>
<td>38</td>
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<td>19</td>
</tr>
<tr>
<td>Tapila</td>
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<td>4</td>
<td>0</td>
<td>0</td>
<td>22</td>
<td>35</td>
</tr>
<tr>
<td>Teopopo</td>
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<td>2</td>
<td>2</td>
<td>0</td>
<td>19</td>
<td>56</td>
</tr>
<tr>
<td>Wasua</td>
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<td>14</td>
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<td>0</td>
<td>24</td>
<td>5</td>
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<tr>
<td><strong>Total</strong></td>
<td>223</td>
<td>96</td>
<td>28</td>
<td>51</td>
<td>217</td>
<td>225</td>
</tr>
</tbody>
</table>
is conducted from the attachment facilities. Some patrols were conducted with more than one partner participating.

The number of outpatients can be used as an indicator of access and perceived quality of health services. If access is improved where previously there were barriers and the community perceive the quality of services to be reasonable, there should be an increase in outpatients (26). However, outpatients are people who are attending a health facility due to illness and the number may increase if there is greater illness in the community such as an outbreak of a communicable disease. The rate of outpatient visits per person per year has increased from 1.3 in the baseline year of 2012 to 1.5 in 2015 for the facilities supported by the Program, slightly lower than the national target of 1.8 (Figure 3.8). The total outpatients ranged from 52,404 to 59,982 prior to the Program and from 2013-2015 progressively increased from 70,482 to 76,179. Part of the increase would be due to the outpatients seen by the Program-supported outreach clinics, totalling 6,216 in 2014 (9% of total outpatients seen), but more importantly suggests there has been an increase in outpatients at the health facilities. The increase in the outpatients is likely due to an increase in people accessing health services.

Attendance of children at child health checks, either through the health facilities or outreach clinics, has also reached the highest level in five years in 2015. In 2013 the Program-supported clinics saw 519 children aged <1 year (38%) and 759 children aged 1-4 years (36%). In 2014 the Program-supported patrols saw 641 children aged <1 year (22%) and 1,840 children aged 1-4 years (28%). The increase in 2014 is not only due to the outreach clinics supported by the Program team but also an increase in child attendances at health facilities.
Immunisation

The Program has supported improving vaccination through provision of vaccine refrigerators and through providing vaccination services while on patrol. Vaccine services are dependent on availability of vaccines and national stock outs of vaccines is an ongoing issue. Vaccine coverage increased in 2015, with pentavalent vaccine first dose and third dose coverage for children <12 months of age reaching five-year highs of 71% and 30% respectively. Measles vaccination for children less than 12 months was 34%, which is lower than first dose pentavalent coverage likely due to the narrow age group of 9-11 months for administration of this dose (Figure 3.10). However, the number of vaccines administered for the greater than one year age group increased in 2014 and 2015, particularly for measles vaccination in 2014 (Figure 3.11). In 2014 there was a mass measles vaccination campaign in response to an outbreak in several provinces, including Western Province, where people from 6 months to 20 years of age could receive the vaccine. The Program team, through outreach clinics, have contributed to the increases in vaccination in 2014 as well as an increase in the number of vaccines administered at the facilities (Table 3.9).
Reproductive and Maternal Health

The protection provided by each contraceptive method, for example injectable Depo-Provera provides three months protection, and the amount of contraception provided by health facilities, is used to calculate CYP. In PNG this is the indicator that takes into account modern methods of contraception, specifically: sterilisation, injectable Depo-Provera, oral contraceptive pill, and intra-uterine devices (6). The indicator currently does not include condoms or contraceptive implants.

Provision of family planning increased in 2014 to a five year high of 996 CYP then dropped to 916 in 2015. The outreach clinics supported by the Program provided 80 couple years protection (14% of total CYP provided) in 2013 and 113 in 2014 (11%). The Program team have been working on creating community demand for family planning through awareness sessions with 13,666 attendances.

Prior to the commencement of the Program the coverage for first antenatal visits was declining. There was a large increase in 2013 to 48% followed by a reduction to 35% in 2014, then an increase to 43% in 2015. Through outreach clinics supported by the program, 103 (11% of the total visits) and 100 (14%) first antenatal care visits, and 10 (6%) and 8 (3%) fourth antenatal visits were conducted in 2013 and 2014 respectively. The proportion of pregnant women who have had a supervised delivery has declined since the commencement of the Program reaching a five-year low in 2014 of 11% coverage followed by a slight increase to 13% in 2015. There is no apparent reason for this decline but the increase in 2015 is encouraging. The Program team have noted that supervised deliveries are not always recorded at facilities, suggesting that coverage may be higher than reported.

In late 2014 and 2015 two rounds of training for Essential Obstetric Care were supported by the Program. It is expected that both antenatal care visits and supervised deliveries will improve. From the qualitative data collected in September 2015, there is some evidence that antenatal care and supervised deliveries have increased due to not only the training but the renovations of delivery wards at some health facilities.

“They have changed [the ward here]. Not like before... So we have seen the improvements nowadays... All the ladies coming in and delivering in these ward facilities.” (Health Worker)
Figure 3.14: Number of supervised deliveries and supervised deliveries coverage for facilities supported by CMSFHP

"Yes okay, now most our, most of our mothers they are delivering here close by at [Health Facility], before we take them all the way to [referral Health Facility] and then some of the mothers they deliver on the way and it’s not good so now we are very happy that mothers are delivering close by here at [Health Facility]. Because of this [Program] team, and we are thank you and we are very welcome about that." (Health Worker)

Additionally, VHQs, trained through the Program, are assisting in improving antenatal attendance and supervised deliveries through referring expectant mothers to deliver at health facilities:

"Like delivery, we were advised to refer all deliveries to the hospitals and we always do that." (VHV)

However there remain barriers to women accessing maternal care. In some locations, the lack of a delivery ward or adequate transport appears to deter women going to facilities to deliver:

"Most of the mothers from the other villages they don’t come and deliver here. They deliver in the villages... mostly mothers that deliver here are [near the health facility]. So even we advise them to come and deliver here they still have transport problems." (Health Worker)

"So I see there is a health facility here but when mothers want to give birth they can’t go to the facility because there is not labour ward and this forces them to give birth in the village or the bush." (Women’s Focus Group Discussion)

Table 3.10: Number of 1st antenatal care visits by health facility

<table>
<thead>
<tr>
<th>Health facility</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bosset</td>
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<td>103</td>
<td>38</td>
<td>56</td>
</tr>
<tr>
<td>Suki</td>
<td>95</td>
<td>81</td>
<td>113</td>
<td>226</td>
<td>133</td>
<td>239</td>
</tr>
<tr>
<td>Tapila</td>
<td>65</td>
<td>57</td>
<td>71</td>
<td>173</td>
<td>120</td>
<td>102</td>
</tr>
<tr>
<td>Teapopo</td>
<td>67</td>
<td>85</td>
<td>70</td>
<td>114</td>
<td>121</td>
<td>146</td>
</tr>
<tr>
<td>Wasua</td>
<td>129</td>
<td>78</td>
<td>90</td>
<td>252</td>
<td>109</td>
<td>115</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>579</strong></td>
<td><strong>566</strong></td>
<td><strong>589</strong></td>
<td><strong>1093</strong></td>
<td><strong>732</strong></td>
<td><strong>888</strong></td>
</tr>
</tbody>
</table>
Communicable Diseases

The incidence of malaria has substantially decreased since 2012. In South Fly in 2012 and 2015, and Middle Fly in 2013, there were large distributions of long-lasting insecticide treated bed nets by Rotarians Against Malaria which would have contributed to the reduction in incidence. The Program has provided on-the-job training for at least one health worker in 80% (16/20) of open health facilities on the new malaria treatment protocol in 2014 and then an additional two facilities in 2015. Despite the decline in malaria incidence and the bed net distribution, some communities noted in the focus group discussions that they needed additional bed nets to prevent malaria.

Childhood diarrhoea incidence has substantially increased in 2014 followed by a decrease in 2015. The increase may in part be due to better access to facilities and therefore higher detection. Similarly, North Fly District experienced an increase after the commencement of NFHSDP. In 2015 there was a dry weather event that may have increased the risk of diarrhoeal outbreaks due to difficulties in accessing clean water. The Program team proactively addressed this risk through targeted community awareness sessions and provision of water filters that may have mitigated the risk of an increase in diarrhoeal illness. The rate of 156 per 1,000 children less than 5 years of age is still below the 2014 target of 220.

Community Perspective

This section describes the community perspective of the Program and the activities delivered directly to the communities through the Program, including the VHV Program. Data for this section comes from focus group discussions that were carried out at 11 villages. In Komovai there were not a sufficient number of males available for a focus group discussion. Similarly, in Kaviananga only a male focus group discussion could be conducted due to insufficient numbers of females at the time the team was visiting. Additionally seven VHVs and five VHV trainers were interviewed (Table 3.11).

Community Awareness of the Program

The 10 Seeds method identified that 29% of the people who participated in the focus group discussions were aware of the Program, 41% percent were somewhat aware, and 30% were not aware (Table 3.12). While 70% of people had at least some knowledge of the Program, it is clear that awareness of the Program can be improved. More men than women were aware of the Program, which was evident through the focus group discussions. Men
in the focus group discussions clearly articulated the history of the Program and how it came about whereas this was not mentioned in the focus group discussions with women.

Several focus group discussants cited positive changes as a result of the Program. Specifically, the Program provided immunisation and family planning services, treating sick people and transferring patients to higher levels of care. The groups also noted improvements in medical supplies and infrastructure. A majority of the focus group discussions had participants who felt positive about the Program:

"I am very proud of this CMCA health program come, previous years through this government services, we are, most of the mothers and children they didn't have any good access of health programs. But when the CMCA program came in it made a very big change. Difference. You will see most of our children are changing now from their health and mothers most of the mothers are realising now and they are going through family planning." (Women's Focus Group Discussion)

"What have I seen within this program, the health program for the Middle and South Fly is a good initiative to the community. Visiting the communities where they are and providing medical services at the door steps. "(Men's Focus Group Discussion)

Negative feedback on the Program by the communities was largely centred around the limited time or services provided to communities through the outreach clinics conducted by the Program team or lack of information on when the Program team will conduct the outreach clinics:

"They come and they do a good job by giving us medicine but the only concern is they don't stay here long enough. They come, stay for one day and then they leave for [location name] where they are always based."(Men’s Focus Group Discussion)

Another criticism of the Program by the communities was the focus on child health and lack of services for adults. In two separate focus group discussions, a participant noted that one of the Program team members had a poor attitude.

"["He/She"] does not talk properly to the people...So that's one no good thing we see in [him/her], [he/she's] really not open hearted we can say, I can say." (Men’s Focus Group Discussion)

Several of the focus group discussions wanted the Program to continue after the end of the five year contract.

Table 3.11: Villages visited in the Midline Evaluation

<table>
<thead>
<tr>
<th>Village</th>
<th>CMCA Trust Region</th>
<th>Health Facility</th>
<th>Focus group discussion</th>
<th>VHV interview</th>
<th>VHV Trainer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sagopari</td>
<td>Kiwaba</td>
<td>Samari AP</td>
<td>1F, 1M</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Suki</td>
<td>Suki Fly Gogo</td>
<td>Suki HSC</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Kautru</td>
<td>Suki Fly Gogo</td>
<td>Suki HSC</td>
<td>1F, 1M</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Nakaku</td>
<td>Suki Fly Gogo</td>
<td>Nakaku AP</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Kiru</td>
<td>Suki Fly Gogo</td>
<td>Suki HSC</td>
<td>1F, 1M</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Lewada</td>
<td>Suki Fly Gogo</td>
<td>Lewada AP</td>
<td>1F, 1M</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Aiambak</td>
<td>Middle Fly</td>
<td>Bosset HSC</td>
<td>1F, 1M</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Komovai</td>
<td>Middle Fly</td>
<td>Obo HSC</td>
<td>1F</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Obo</td>
<td>Middle Fly</td>
<td>Obo HSC</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Kaviananga</td>
<td>Middle Fly</td>
<td>Obo HSC</td>
<td>1M</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Wasua</td>
<td>Manawete</td>
<td>Wasua HC</td>
<td>1F, 1M</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Waliyama</td>
<td>Manawete</td>
<td>Teopopo HSC</td>
<td>1F, 1M</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tapila</td>
<td>Dudi</td>
<td>Tapila HC</td>
<td>1F, 1M</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Severimabu</td>
<td>Dudi</td>
<td>Tapila HC</td>
<td>1F, 1M</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>20</strong></td>
<td><strong>7</strong></td>
<td><strong>5</strong></td>
</tr>
</tbody>
</table>
Table 3.12: Level of awareness of the CMSFHP among focus group discussion participants

<table>
<thead>
<tr>
<th>Box</th>
<th>Male (%)</th>
<th>Female (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am aware of CMCA Middle and South Fly Health Program</td>
<td>21 (24)</td>
<td>34 (34)</td>
<td>55 (29)</td>
</tr>
<tr>
<td>I am somewhat aware of CMCA Middle and South Fly Health Program</td>
<td>46 (52)</td>
<td>31 (31)</td>
<td>77 (41)</td>
</tr>
<tr>
<td>I am not aware of CMCA Middle and South Fly Health Program</td>
<td>21 (24)</td>
<td>36 (36)</td>
<td>57 (30)</td>
</tr>
<tr>
<td>Total</td>
<td>88 (100)</td>
<td>101 (100)</td>
<td>189 (100%)</td>
</tr>
</tbody>
</table>

Community Priorities

Through the focus group discussions, community members were asked to provide their priorities for health in the next two years. The most common requests were:

- A dinghy with OBM to travel to the health facility;
- Some communities with access to a dinghy and OBM cited a need for fuel;
- An extension to the existing health facility; some stated the need for a labour ward, others wanted the facility to be upgraded to provide a higher level of service;
- For communities without a health facility, an Aid Post;
- A staff house, specifically so the health worker can get to the health facility quickly for emergencies;
- Community water supply; and
- Train community members as health workers so that they can return to the community and work.

VHV Program

The Program has been progressively implementing the VHV Program by CMCA Region, completing the village mobilisation and training of VHVs in the Dudi, Suki Fly Gogo, and the upper Middle Fly Regions (Table 3.13).

Several of the VHV Trainers are health workers. For some of these VHV Trainers, the training that they have received has given them a new perspective on health, from curing disease to prevention:

"I enjoy it because I have a medical background. When I look back for so many years I've been working alone in the health centres, but I found out that I did not enjoy just give medicine alone without solving the problem back at home. We teach people how to do things what is best for them in a healthy way. Then there's no sickness. There are people who never come out to the health centres. That's the difference that I have learned. I did not enjoy just giving treatment - tomorrow they're still there. We have to really try to sort problems at that community level. That's very important." (VHV Trainer)

The VHV Trainers interviewed for the Midline Evaluation reported undertaking a range of activities:

- Assist community members who are sick to the health facility;
- Assist community to build toilets, bathrooms, dish racks, rubbish pits;
- Nutritional gardening;
- Awareness on health issues;
- Encourage mothers to attend the health facility for child health checks;
- Assisting women deliver babies in the village; and
- First Aid.

Two of the VHV Trainers were in CMCA Trust Regions that had not yet rolled out the VHV training and therefore had only been involved in awareness. A couple of the VHVs also cited working in a health facility assisting maternal and child health clinics with the health workers, cleaning the health facility and assisting women in labour at the health facility during the night:

"Like delivery, we were advised to refer all deliveries to the hospitals and we always do that. MCH clinic... we participate in helping assisting, weighing and recording and most job is done by the health workers. Then giving health care, we are not allowed to practice medicine, but we give advice only, to look after themselves when they are in need." (VHV Trainer)

The focus group discussions confirmed the work of the VHVs, where communities cited the VHVs assisting with deliveries, first aid, water, sanitation and hygiene activities, awareness, and taking community members to the health facility when needed:

"Yeah they tell the community to keep their houses clean, build good toilets, dig good water wells, dump their rubbish in the rubbish pit and not to throw
Table 3.13: Number of VHV Trainers and VHVs trained by CMCA Trust Region

<table>
<thead>
<tr>
<th>CMCA Region</th>
<th>VHV Trainers</th>
<th>VHVs</th>
<th>Proportion of villages covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dudi</td>
<td>4</td>
<td>32</td>
<td>100% (16/16)</td>
</tr>
<tr>
<td>Middle Fly</td>
<td>3</td>
<td>14</td>
<td>39% (7/18)</td>
</tr>
<tr>
<td>Suki Fly Gogo</td>
<td>2</td>
<td>30</td>
<td>75% (12/16)</td>
</tr>
<tr>
<td>Manawete</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Kiwaba</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>76</td>
<td>42% (35/84)</td>
</tr>
</tbody>
</table>

One focus group discussant noted that if the VHVs do not have supplies for first aid, they cannot carry out their work:

"Like if, if they have, if they send the supply from JTA yes that's the time they will help, help us, like sick person there or any big cut they will come and help. But if they have nothing, or no supply...they will only help the people to take them to the hospital, sub centre there...they are doing something these volunteers." (Women's Focus Group Discussion)

Furthermore, a couple of focus group discussions noted that the VHVs are not active, or cited a need for the VHVs to do more awareness:

"They [VHVs] don't do house to house health talks and only on occasions do awareness. They call the whole community together and give awareness on health issues." (Women's Focus Group Discussion)

For VHVs, the main barrier for carrying out their work was the response from the community. VHVs tended to cite a more positive experience when they felt they were supported by the community. Some VHVs felt that the community did not listen to them or did not want to participate in activities. In one case, the response from the community led the VHV Trainer to cease activities:

"There are some people who are - they are against seeing the program. They don't really look at us as the - look at me as a trained person. They said some words which made me feel down and upset at times and I stopped on the way. I didn't do a lot of awareness and I didn't carry out a lot of VHV programs because of these - such words, talks which came up in the community." (VHV Trainer)

Two of the VHV Trainers felt that the community response to the VHVs could be improved through more awareness on the VHV Program and health issues, through having support from other people or groups such as the Program VHV Coordinators, or involving more people from the community in the VHV work.

The VHVs and VHV Trainers had variable contact with their supervising health facility. In some cases, the VHV worked independently of the health facility and in other cases the health worker and VHV worked together, with the health worker providing supervision and supplies.

A couple of the VHV Trainers came up with innovative ways to sustain the VHV program, including establishing a VHV Management Committee to improve community support and developing small scale businesses to support the provisions required for the VHV program.

A majority of the VHVs and VHV Trainers requested additional training in order to maintain their work. The health workers and focus group discussants also noted that VHVs required more training. However, neither the VHVs, health workers nor focus group discussants said what type of training was required. Another common need cited was transport. For VHVs the need was for transporting patients to health facilities. The VHV Trainers cited the need to go and supervise their VHVs in the communities. For Trainers located near health facilities, even though they had access to a dinghy and outboard motor, they noted that access to fuel was a problem. While the VHV position is not a paid position, some health workers, communities and VHVs themselves thought there could be financial compensation in recognition of their work.
Health Promotion

Health Promotion aims to empower people to live healthier lives through education and promoting behaviour change. In the context of this program, the aim of health promotion is for people to adopt behaviours that prevent illness and to seek early treatment for better health outcomes.

The Program has two dedicated Health Promotion Officers and all the clinical staff contribute to community awareness activities while in the villages. The Program also supports activities for special days such as World AIDS Day and World TB Day. The key topics for awareness during the Program to date were tuberculosis, family planning and HIV and other STIs (Table 3.14). In addition to the Program team conducting health promotion activities, the VHV Trainers and VHVs also conduct awareness on key health issues such as hygiene, family planning, and safe deliveries.

During several of the focus group discussions, the need for more awareness was stated:

"Yes we need more awareness on several diseases like Tuberculosis and typhoid and all that, people must be aware of these certain diseases. Because Tuberculosis is a killer now, so it's a threat to us so we need more pamphlets or chats so that we can display them in the village. So whoever, visiting person comes he can read for himself. Not enough chats...for certain diseases.... Adding on to that, there must be awareness done on taking certain food like too much sugar and salt we normally have problems in our villages.” (Men's Focus Group Discussion)

Table 3.14: People reached through health promotion by topic, July 2013 - June 2015

<table>
<thead>
<tr>
<th>Topic</th>
<th>Females</th>
<th>Males</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholera</td>
<td>464</td>
<td>306</td>
<td>770</td>
</tr>
<tr>
<td>CMSFHP</td>
<td>435</td>
<td>474</td>
<td>909</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>410</td>
<td>166</td>
<td>576</td>
</tr>
<tr>
<td>Family Planning</td>
<td>8396</td>
<td>5270</td>
<td>13666</td>
</tr>
<tr>
<td>Gender Based Violence</td>
<td>177</td>
<td>220</td>
<td>397</td>
</tr>
<tr>
<td>Healthy Islands Concept</td>
<td>2407</td>
<td>1971</td>
<td>4378</td>
</tr>
<tr>
<td>HIV &amp; STIs</td>
<td>6574</td>
<td>5714</td>
<td>12288</td>
</tr>
<tr>
<td>Immunisation</td>
<td>4697</td>
<td>2916</td>
<td>7613</td>
</tr>
<tr>
<td>Lifestyle Diseases</td>
<td>678</td>
<td>466</td>
<td>1144</td>
</tr>
<tr>
<td>Malaria</td>
<td>669</td>
<td>519</td>
<td>1188</td>
</tr>
<tr>
<td>Maternal Health</td>
<td>1259</td>
<td>971</td>
<td>2230</td>
</tr>
<tr>
<td>Neglected Tropical Diseases</td>
<td>233</td>
<td>327</td>
<td>560</td>
</tr>
<tr>
<td>Nutrition</td>
<td>2099</td>
<td>1264</td>
<td>3363</td>
</tr>
<tr>
<td>Personal Hygiene</td>
<td>1679</td>
<td>1531</td>
<td>3210</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>183</td>
<td>212</td>
<td>395</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>10756</td>
<td>8293</td>
<td>19049</td>
</tr>
</tbody>
</table>

1The number represented the number of people present at a health promotion session. Multiple sessions on the one topic may have been delivered in the one village and therefore people may have been counted twice.
Summary of performance for facilities supported by CMSFHP

A summary of the indicators from the health facilities supported by the Program in the baseline year (2012) and latest available year (2014) for national level data is in Table 3.15. There have been improvements in six of the eight indicators for the facilities supported by CMSFHP compared to five of the eight indicators at the national level. An additional indicator, supervised deliveries, saw no change at the national level. The facilities in the Program area met one target for malaria incidence, whereas at the national level two targets were met for malaria incidence and supervised deliveries.

A summary of the evaluation findings, against the evaluation questions, is detailed in Table 3.16.

Table 3.15: Summary of progress towards achieving the National Health Plan 2020 targets

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria incidence per 1000 population</td>
<td>190</td>
<td>126</td>
<td>28</td>
<td>171</td>
<td>108</td>
</tr>
<tr>
<td>Diarrhoea cases per 100 children &lt;5yrs</td>
<td>230</td>
<td>139</td>
<td>184</td>
<td>244</td>
<td>291</td>
</tr>
<tr>
<td>Outreach clinics per 1000 children &lt;5yrs</td>
<td>46</td>
<td>4</td>
<td>27</td>
<td>33</td>
<td>39</td>
</tr>
<tr>
<td>Measles vaccination coverage</td>
<td>66%</td>
<td>35%</td>
<td>38%</td>
<td>52%</td>
<td>58%</td>
</tr>
<tr>
<td>Pentavalent vaccination coverage</td>
<td>NA</td>
<td>7%</td>
<td>17%</td>
<td>47%</td>
<td>56%</td>
</tr>
<tr>
<td>Proportion of births that are supervised</td>
<td>42%</td>
<td>17%</td>
<td>11%</td>
<td>44%</td>
<td>44%</td>
</tr>
<tr>
<td>Antenatal 1st visit coverage (%)</td>
<td>75%</td>
<td>35%</td>
<td>44%</td>
<td>69%</td>
<td>67%</td>
</tr>
<tr>
<td>Outpatient visits per person</td>
<td>1.7</td>
<td>1.3</td>
<td>1.5</td>
<td>1.0</td>
<td>1.2</td>
</tr>
</tbody>
</table>

- Green: Target met and improvement between 2012 and 2014
- Yellow: Target met but decline between 2012 and 2014 OR target not met but improvement between 2012 and 2014
- Red: Target not met AND decline between 2012 and 2014
WE CAN STOP
TB IN PNG
<table>
<thead>
<tr>
<th>Program Component</th>
<th>Area</th>
<th>Question</th>
<th>Outcome from evaluation</th>
</tr>
</thead>
</table>
| 1                 | Partnerships and coordination     | 1. How well are activities coordinated?  
2. How are issues raised and addressed? | Program partners were generally positive about the Program progress and achievements. Inadequacies in coordination and communication were cited particularly in the planning of patrols and the sharing of program information. Abt JTA was aware of some of these inadequacies and at the time of the evaluation was implementing actions to rectify the inadequacies, such as improving information sharing through provision of monthly and quarterly reports. |
| 2                 | Workforce                         | 3. How do staff cope with low staff numbers at health facilities?  
(this was broadened to barriers and enablers for health workers providing quality health services) | Largely the issues affecting health workers providing quality services were the lack of basic items such as medical supplies, equipment and transport. Community support and good supervision are also required for health workers to work effectively.  
Enablers: Medical supplies available, transport (OBM and dinghy) available, adequate equipment, supervision, community support and training  
Barriers: Medical supplies shortages, lack of fuel, lack of equipment, lack of supervision, lack of community support, working alone (at Aid Posts), issues with staff housing, lack of space in health facility to provide services, and cultural barriers that prevent people accessing services. |
| 3                 | Village Health Volunteer Program   | 5. What are VHV’s doing in the communities?  
6. How well are the VHV’s integrated into the health system  
7. Do the VHV’s continue to provide services  
8. How much time do VHV’s spend doing VHV work?  
9. How are VHV’s supported by the community? | VHVs that were interviewed were still active in the community doing a range of activities: assist sick community members to the health facility; assist community to build toilets, bathrooms, dish racks, rubbish pits; nutritional gardening; awareness on health issues, encourage mothers to attend the health facility for child health checks; assisting women deliver babies in the village; and first aid.  
The VHV’s and VHV Trainers had variable contact with their supervising health facility. In some cases, the VHV worked independently of the health facility and in other cases the health worker and VHV worked together, with the health worker providing supervision and supplies. The VHV’s also experienced varying levels of support from the community. Where community support was good, the VHV was provided food and transport when needed or the community complied with carrying out the tasks instructed by the VHV, for example building toilets. Where community support was poor, the VHV said the community did not follow their instruction.  
A majority of the VHV’s and VHV Trainers requested additional training in order to maintain their work and the need for regular supplies from their supervision health facility. A couple of the VHV Trainers came up with innovative ways to sustain the VHV program, including establishing a VHV Management Committee to improve community support and developing small scale businesses to support the provisions required for the VHV program. |
<table>
<thead>
<tr>
<th>Program Component</th>
<th>Area</th>
<th>Question</th>
<th>Outcome from evaluation</th>
</tr>
</thead>
</table>
| Cross-cutting     | Community engagement      | 10. Is there appreciation of the program by the communities?  
                     | 11. Is there a lack of information on the program in the communities?   | The community has largely received the Program positively some noting changes to health facilities, health services and the health of the community since the commencement of the Program. Several of the communities wanted the Program to continue after the five year contract ended.  
                     |                                                                          | The views from some communities on what the Program would achieve, particularly in regards to infrastructure, differed from the original Program design. In the Program design, only some renovation and construction of new infrastructure for health facilities was envisaged. However some communities had expected new facilities to be built. Additionally, some participants from the focus group discussions were not aware of the Program, more so for women. More awareness of the Program is required, particularly in terms of what the Program can achieve with the given budget and timeframe. |
| Cross-cutting     | Health system performance | 12. Have the indicators improved?                                        | There has been improvement in indicators with the exception of supervised deliveries and incidence of diarrhoea. While some of the improvement may have been due to other influences, it is clear, through the attribution analysis, that the Program was responsible for some of this improvement, specifically outpatients, child attendances, outreach clinics, immunisation, family planning and antenatal care. |
| Cross-cutting     | Sustainability            | 13. At the end of the five year program, will the outcomes be sustainable? | The Program includes a combination of health system support and strengthening activities, with more emphasis on support in the Program to date to improve service delivery. The performance of health facilities for many indicators improved beyond the contribution of the Program support outreach. This may provide early evidence of sustainable changes occurring at the health facilities. Future activities need to transition from more strengthening activities in order to create sustainable outcomes. These broad activities, to be included in the Exit Strategy developed with Program partners, include training for maintenance of equipment and infrastructure, in-line positions to boost manpower, and support for Program partners able to access adequate funds on a timely basis from external sources. Program partners believe maintaining the partnership is important for sustainability and greater ownership by government health services is critical. |
Integration of Programs

CHAPTER 4

In 2014, after more than one year of concurrent implementation of CMSFHP and NFHSDP, OTML and OTDF made the decision to align the two programs under the management of OTDF. Up until then NFHSDP had been managed by and contracted to OTML, and CMSFHP managed by and contracted to OTDF. The handover of NFHSDP’s contractual management from OTML to OTDF occurred in February 2015. This change paved the way for greater integration of the programs operationally. The program funding remains separate, with NFHSDP funded by OTML directly and CMSFHP funded through the CMCA portion of the Western Province Peoples’ Dividend Trust Fund.

Both programs are designed to strengthen existing health service delivery, and therefore implement similar activities across the spectrum of the health system. While each program has a separate geographical catchment, both programs share health service partners as key stakeholders, and operate from a shared administrative base in Kiunga. The programs are contracted to run until 2018: to June for CMSFHP and to December for NFHSDP.

For these reasons, integrating the programs creates efficiencies through minimising overhead costs and promoting maximised service delivery. In developing the budget for Phase two of NFHSDP, progressive savings were identified and the overall budget reduced in anticipation of the integration. The integration is incremental, with the aim of complete integration by December 2016.

The integration of the programs is progressing well in line with the approved Integration Plan endorsed by the Steering Committee in Quarter 1 2015. The first change to occur as part of the integration was to move relevant staff to sit together in the office in Kiunga. This occurred in January 2015. A revised organisational structure for onsite positions was endorsed by the Contract Management Group and
Table 4.1: Changes in Program staff positions with the integration of NFHSDP and CMSFHP

<table>
<thead>
<tr>
<th>Position</th>
<th>Before integration</th>
<th>After integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance</td>
<td>One position for each program</td>
<td>One position focuses on accounting for both programs; the other looks after procurement and purchasing for both programs</td>
</tr>
<tr>
<td>Administration</td>
<td>One position for each program</td>
<td>One position supports both programs and administers the Scholarships component of both programs</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>One position for NFHSDP, two positions for CMSFHP</td>
<td>One position has been upgraded to Infrastructure Manager; all three positions work across both programs</td>
</tr>
<tr>
<td>Logistics and Medical Supplies</td>
<td>One position for each program</td>
<td>One position focuses on medical supplies and equipment for both programs; the other looks after logistics and maintaining cold chain and health radio networks for both programs</td>
</tr>
<tr>
<td>Health Information</td>
<td>One position for each program</td>
<td>One position supports both programs. Position now based in Port Moresby</td>
</tr>
<tr>
<td>Education and Training</td>
<td>One position for each program</td>
<td>One position looks after training for both programs. The Scholarships component has been integrated with general administration support</td>
</tr>
<tr>
<td>Program Management</td>
<td>One position for each program</td>
<td>One position is Program Manager with overall responsibility for both programs; the other is Operations Manager with operational responsibility for both programs</td>
</tr>
</tbody>
</table>

implemented in Quarter 2 2015. The revised structure included the appointment of an Operations Manager in July to oversee operational aspects of Program implementation, enabling the Program Manager to focus on stakeholder and community engagement.

Through the integration process, positions and roles are being streamlined, and greater efficiencies can already be seen (Table 4.1). Primary health care is approached differently in the two programs: NFHSDP has health/disease specific activities and officers, while CMSFHP takes a holistic approach with all officers implementing activities across all health issues. There are several considerations in integrating this component of the programs, including partner organisation and team capabilities. The first point of integration will be the VHV program, as the program teams are already working together on training VHVs. Health promotion and clinical services will be integrated gradually, with a completion date of December 2016. The Primary Health Care Technical Adviser will assume the supervision and management of NFHSDP Area Wide Services staff in 2016, as the primary health care teams and approaches are amalgamated.

A single program Annual Activity Plan is in development for 2016, which includes activities for both programs. Consultation with health service partners has commenced and the Plan will be finalised once the Western Province Annual Implementation Plan is endorsed by the Provincial Administrator.

The integration of NFHSDP and CMSFHP is gradual but progressing well. It is important to note that both programs are well established and have the capacity to absorb this change. The integration will provide efficiencies in program operations, without compromising the quality of service delivery.
Conclusion

CHAPTER 5

Component 1: Partnerships and coordination

The partnership approach remains an integral part of the Programs and will do so for the integrated Program moving forwards. The partnership developed through NFHSDP created a foundation to build on for CMSFHP and likely contributed to the ability of the CMSFHP to mobilise rapidly. One of the findings from the independent evaluation of the Program partnership was the issues with communication both between and within partner organisations. Already the Program team has initiated monthly emails to all Program partners to share Program monthly and quarterly reports as well as any other reports of interest. As Program partners do not always have email access, hard copies of these reports are provided at the quarterly meetings. Moving forward, the satisfaction of Program partners with the level of coordination and communication will need to be monitored.

Access to timely and sufficient funding has been noted by the Provincial Health Services as an issue in implementing their annual activity plans. There are multiple sources of funding that will be available to Program partners both now and beyond 2018 such as Health Service Improvement Program, District Service Improvement Program, District Development Authority, Tax Credit Scheme, and private organisations. The Programs can provide support to Partners to access this funding.

Component 2: Fundamental Enablers of Healthcare

Workforce

An adequate number and appropriate mix of staff was identified as an issue in the CMSFHP baseline evaluation, where some facilities had low staff numbers and there were only a limited number of nursing officers and only one health extension officer in the facilities (25). Staff housing was a factor in attracting more staff to these remote facilities and was a priority for CMSFHP with a total of 12 staff houses either built or due to be completed soon. One activity in the original Program design for CMSFHP to boost the health workforce was temporary funding for In-line positions within partner organisations while the position is included in
the staff establishment. Citing concerns over lengthy government processes, the Program partners have not taken up this offer to date. Aiambak Aid Post was closed at the time of Program commencement and was renovated and a staff house built. While Provincial and Middle Fly District Health Services are committed to providing a health worker for the facility, this has not yet occurred. In-line positions or support to partners to identify and overcome issues with recruitment could be opportunities to increase the health workforce and therefore the capacity of health facilities to provide quality services.

Supervision by health managers to the health workers in the facilities supported by the Program was noted as inadequate and is a possible avenue for improving performance and motivation for health workers. The Program will consider supporting health service managers to improve supervision.

Infrastrucure, equipment and transport

The rehabilitation of existing infrastructure or new construction, either health facilities or staff houses, is both costly and time consuming. However infrastructure is still a priority for improvement both from the perspective of the community and Program partners. Given the Program has only a limited budget and three years remaining, these needs cannot all be met through the Program. Alternate sources of funding need to be sought such as funding available through the Health Sector Improvement Program and the District Development Authority. The Program can focus some funding on improvements at key health facilities.

For infrastructure, equipment and transport, support will move from provision of training for existing health service providers to management and maintenance.

Medical supplies

Medical supplies availability has improved, particularly in 2014. However, the current approach of the Program Logistics Officer travelling with partner staff to the Port Moresby Area Medical Store is not sustainable. There are plans to build District Medical Stores which may reduce the need to travel to Port Moresby and may provide better access to medical supplies. The Programs could consider supporting the development of these District Medical Stores.

Outreach clinics

In terms of outreach clinics, the experience of NFHSWP has been that higher support to partners was required in the beginning of the Program and has
since tapered with outreach clinics coordinated and funded by partners and the Program providing support in the form of additional health workers. The Programs have also, as of late 2015, increased Program staff working on clinical attachments at health facilities supported by the Programs. During these attachments the Program staff provide on-the-job training, conduct clinical work and assist the facility staff to plan and carry out outreach clinics for villages in the catchment area. While outreach clinics supported by the Programs will continue in the future, more clinical attachments will be undertaken to improve the capacity of health facilities to provide services.

**Health Information**

Accurate and timely health information is required for evidence-based decision making. Through the analyses of the data from the NHIS for Western Province in this report, there are clearly improvements to be made in terms of data quality even though completeness has been relatively high. Furthermore, Program partners do not always have access to NHIS data for review, highlighting an opportunity to improve the use of data by decision makers. Further support and training for the Provincial and District Health Information Officers, as well as training for Officers-in-Charge of health facilities and health administrators would assist in improving data quality and use.

**Kiunga Hospital**

Kiunga Hospital remains pivotal to the improvement of health services and outcomes, not only in North Fly but also for Middle Fly communities along the Fly River who can access Kiunga. As a level 4 facility, the hospital needs to be able to provide quality high level services as part of a functional referral system.

**Component 3: Support to Communities**

It appears there are positive outcomes when there is community support for health workers and VHVs and there is a sense of community ownership for health. The Programs have supported empowering communities through the Healthy Village, Health Promoting Schools and VHV Program initiatives. Further implementation of the Programs will strengthen these community-based initiatives and support beyond the life of the Programs is critical. Currently there is no Provincial or District Health counterpart for the Healthy Village, Health Promoting Schools and VHV Programs supported by NFHSDP and CMSFHP. The Programs could advocate for such a position to be created and transition the community-based initiatives over to the government.

Additionally, at the community level, more awareness of the program is required, particularly for women, so that the community has an understanding of what the program can do and cannot do, particularly in regards to infrastructure.
Given there will be no additional funding available through OTML or OTDF for extending the Programs beyond 2018, CMSFHP, originally a five year Program that commenced in July 2013, may be extended within the existing budget by six months to the end of 2018 to coincide with the NFHSDP end date. This chapter describes the proposed approach for the remaining years of the program to ensure the achievements to date are maintained and the health service providers will be able to continue to provide quality health services beyond 2018.

It will be imperative for both the Program team and Program partners to recognise that the province will not have access to the same level of support provided through the Programs and will need a period of transition in the remaining years of the Program to ensure achievements are maintained. Ultimately, the following outcomes are required to enable sustainable achievements:

- A governance framework is in place to enable integrated health service delivery across the province;
- Health service providers know where and how to access funds and have access to timely and adequate funding;
- Health facility infrastructure and equipment are maintained by health service providers through a planned and funded maintenance program;
• Health service providers have a plan and access to funds for an ongoing training program to ensure health workers undergo regular training to maintain and update skills;
• Outreach clinics are planned and conducted from health facilities regularly, with health workers able to access funds for per diems, fuel and other necessary items for the clinics;
• Health service providers are able to ensure adequate medical supplies are available at health facilities;
• Health service providers have access to timely and accurate health information for monitoring performance and decision making; and
• Communities and health partners understand and appreciate that the Programs finish in 2018.

However it should be noted there are currently a number of gaps in achieving these outcomes. The desired outcomes, gaps, approach and expected contribution from the Program partners is detailed in Table 6.1. A transition plan will be developed with Program partners. At the stakeholder coordination meetings in November 2015 and February 2016, partners supported the Program to identify gaps and priorities and endorsed the concept of an exit strategy. The Program will work with partners throughout 2016 to develop a transition plan containing agreed actions for system strengthening from now until the end of the Program. While the details of the strategy are still being finalised in consultation with partners, there will be a number of key principles reflected:
• Support access to other funding sources to reduce the dependence on Program funding. Other sources could include Health Service Improvement Program, District Service Improvement Program, District Development Authority, Tax Credit Scheme, and private organisations.
• Support the province and districts to effectively plan and effectively utilise limited resources.
• Support the development of health facilities in priority geographic locations. The locations will reflect nominated provincial and OTDF growth centres where significant development and other projects are expected.
• Support provision and maintenance of equipment to national standards, including asset management and maintenance.
• Support workforce strengthening through the provision of funding for in-line positions at priority locations, in order to reopen and maintain health services at these locations.

• Strengthen health information management, through NHIS training, facilitating more communication and feedback between all levels of health information management.
• Support development of district medical stores, to reduce reliance on visits to Area Medical Stores.
• Identify potential impediments to achieving sustainable health services and mitigation measures.

It should also be noted that there are several contextual unknowns that may impact the transition. Firstly, it is expected that all Provinces in PNG transition to a Provincial Health Authority structure. The PHA brings the public health and curative health services under one authority as well as rural health services and the provincial hospital and there is greater financial control and authority for human resources in health. Secondly, the establishment of District Development Authorities will lead to more funding being available and control at the district level for health service delivery rather than at the provincial level. Thirdly, with the downturn in the economy the budget for health is set to retract from 2015 levels until 2019 (27). It is unclear how these developments will impact the Programs, the transition plan and the future of health service delivery in the province. The Programs will monitor these developments and adjust approaches for sustainability accordingly.
### Table 6.1: Approach to reaching sustainable outcomes by 2018

<table>
<thead>
<tr>
<th>Desired outcome</th>
<th>Current gap</th>
<th>Approach</th>
<th>Partner contribution</th>
</tr>
</thead>
</table>
| Governance framework is in place to enable integrated health service delivery across the province | • There is no provincial level partnership committee for leading, planning and coordinating  
• There is no Provincial Health Steering Committee  
• There is no District Health Management Committee in Middle and South Fly Districts  
• Technical Program Coordinators across the provincial and 3 district positions are not operating effectively (technical and management) | • Support PHO to reactivate the Western Province Health Steering Committee (WPHSC) to enable a collective voice  
• WPHSC used to engage to develop an integrated annual activity plan  
• Programs to advocate and support the development of District Health Management Committees for Middle and South Fly Districts  
• Technical Program Coordinators supported to carry out their duties  
• All training is followed by supervision to ensure outreach and services are operating and to maintain staff morale | • Provincial Administrator to lead and chair a Provincial partnership committee meeting  
• District Health Management Committees to be established in Middle and South Fly Districts and led by the District Administrators  
• Health service providers agree to support Technical Program Coordinators for activity coordination  
• Government and health service providers to ensure adequate resources are available for these governing structures to meet |
| Health service providers know where and how to access funds and have access to timely and adequate funding | • There is a lack of certainty for receiving funds through routine funding sources.  
• There is a lack of information on additional sources of funds for health.  
• Health service providers apply for funds independently rather than with a province or district wide approach | • WPHSC is used as a vehicle to highlight funding challenges to the Provincial Administrator  
• Program to prepare a directory of funding sources to support present and future activities in the province | • Health service providers to work together (through the partnership) to determine best use of funds, to develop proposals or other requirements for accessing funds that benefit whole of province |
| Health service providers maintain health facility infrastructure and equipment through a planned and funded maintenance program | • Infrastructure and equipment are not routinely maintained  
• Provision of equipment and rehabilitation of infrastructure heavily reliant on the Programs | • For each facility, Programs to provide an infrastructure and asset register of Program-supplied equipment and infrastructure  
• For each facility, Programs to provide a preventive maintenance plan and asset management plan  
• Work with partners to identify suitable staff to coordinate maintenance  
• Work with District Technical Program Coordinators to take ownership of ensuring that key equipment is functional  
• Build and expand capacity at Kiunga Hospital and Daru Hospital to support maintenance in health facilities across the province | • Allocate budget and human resources required for implementing the equipment and infrastructure maintenance program |
<table>
<thead>
<tr>
<th>Desired outcome</th>
<th>Current gap</th>
<th>Approach</th>
<th>Partner contribution</th>
</tr>
</thead>
</table>
| Health service providers have a plan and access to funds for an ongoing training program to ensure health workers undergo regular training to maintain and update skills | - Annual Provincial Training Plan is developed although the Programs contribute substantial funds for its implementation.  
- Administration of the Education Program Activity Group, although chaired by Provincial Health, is supported by the Programs.  
- The Scholarships Program is supported by the Programs | - Continue to support the development of an integrated training plan  
- Work with partners to create a provincial training coordinator position  
- Transition administration of the Education Program Activity Group and the Scholarships Program to Program partners | - Health service providers to allocate budget and human resources required for implementing the training plan |
| Outreach clinics are planned and conducted from health facilities resulting in outputs and outcomes in line with provincial and national targets | - Outreach clinics are supported in North Fly and in the CMCA Regions in Middle and South Fly Districts by the Programs | - Programs to support health service providers to plan and budget for outreach clinics  
- Program to support supervisory visits and clinical attachments to build overall capacity of health facilities to deliver services | - Health service providers to ensure staff at health facilities have adequate support for service delivery and conducting routine outreach clinics including access to funds for per diems, fuel and other necessary items for outreach  
- Partners to allocate funding and undertake supervisory visits |
| Health service providers are able to ensure adequate medical supplies are available at health facilities; | - The Programs heavily support the ordering and distribution of medical supplies including ensuring orders are completed, that orders are packed in the Port Moresby Area Medical Stores and assist with distribution to facilities | - Programs to technically support development of District medical stores and increase the capacity of Officers-in-Charge to routinely submit orders  
- Strengthen relationship with HHISP Technical Adviser in Area Medical Store  
- As capacity builds, move away from sending staff to AMS  
- Liaise with Daru transit store to supply South Fly facilities (rather than through Kiunga)  
- Provide a position to supervise the operation of the North Fly District Transit Store | - Districts to prioritise establishment of District Medical Stores.  
- Health service providers to follow-up second monthly orders from health facilities and when required, fund the Provincial Logistics Officer to travel to Port Moresby for following up shipment of orders.  
- NF District Health Manager to allocate a current employee to work at the NF District Transit Store |
| Health service providers have access to timely and accurate health information for monitoring performance and decision making. | - The Programs support health facilities to submit monthly NHIS Reports.  
- Currently, there is limited use of data for review of performance or decision making. | - Programs to support the Provincial Health Information Officer build capacity in creating Quarterly Reviews of health information.  
- Programs to build capacity of health facility staff and health service providers to use data for decision making. | - Health service providers to follow up submission of NHIS monthly reports.  
- Support the District and Provincial Health Information Officers with require equipment where required (e.g. computers, internet access). |
| Communities and health partners understand and appreciate that programs finish in 2018 | - No sense of urgency in transition planning | - Develop a transition plan that describes how the Programs will exit  
- Develop a communication plan to effectively deliver the messages contained within the transition plan. | - Partners understand their obligations and responsibilities within the transition plan  
- Partners assist in communicating the messages within the transition plan to communities |
Annex
CMCA
Middle and South Fly
Health Program

Partnerships and sustainability
Mid-term evaluation - 2015
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1. Executive Summary

A mid-term evaluation of the CMCA Middle and South Fly Health Program was conducted in August and September 2015 to review the program’s achievements and progress and to inform its approach in the second half of its operations.

The review was in two parts – a field research across a selection of villages and health facilities undertaken by researchers from the University of PNG and an examination of partnerships and sustainability. This report details the findings of the examination of partnerships and sustainability.

Partnerships and coordination:
Stakeholders from OTDF, Catholic Church Health Services, ECPNG, as well as District and Provincial government health services were largely positive about the program's progress and achievements. While church and government partners pointed to some coordination and communication inadequacies on the part of the program, it also became clear as the interviews progressed that there are some inadequacies within partner organisations in terms of their own internal sharing of information generated by the program. Abt JTA was already aware of some gaps in coordination and communication and was in the process of addressing these gaps at the time of the review.

Recommendations

- Information flows between partners to be reviewed to ensure key people within partner organisations are included in the dissemination of information.
- Review arrangements for patrol and attachments' coordination and statistical collection.
- There is a need for more detailed program information to be shared at the quarterly stakeholder meetings or an agreement between and within partner organisations on the most efficient way of disseminating it.
- The integration of the North Fly and the CMCA Middle and South Fly programs may overcome some current information inadequacies.

Sustainability:
There was a wide range of views about how the program's achievements and approaches could be sustained after the program finishes in 2018. Some of the comments dealt with the way in which the program has and continues to upgrade health facilities and equipment, from transport through to vaccine fridges, radios and solar water systems, and infrastructure all of which were seen as important contributors to sustaining the program's outcomes. But ongoing maintenance was crucial. Other comments recognised the need for capable and sufficient staffing resources and the role of partnerships. There was also the view that greater ownership by Western Province government of health services was critical for sustainability. In summary, the key themes which emerged during the various interviews were:

1. Maintenance
2. Alternative funding options
3. Cooperation and partnership
4. Manpower
5. Transition planning

Recommendations:

- Partners to collaboratively develop a transition plan for the program
- Training and funding of ongoing maintenance to be a priority for all partners and notably for the government in ensuring that funding is not only budgeted, but made available
- Consider the funding of in-line health officer positions at key rural health facilities.

Concluding comments – beyond the CMCA health program

After just two years, the CMCA Middle and South Fly Health Program is already making a significant advance in improving health services in the CMCA areas. This is despite operating in some of the most inaccessible parts of PNG where the small population is widely dispersed. The program had some early teething issues but that should be expected when mounting a logistically challenging program in a resource-constrained environment where government funding predictability and timeliness is aspirational rather than a reality.

The program has provided a welcome degree of funding and service predictability. It is helping to rebuild a run-down government health service, addressing some of the fundamental gaps constraining service delivery and putting down solid foundations which should take that service well beyond the life of the CMCA program.

The worry persists, however, that the service predictability which the program has achieved looks fragile beyond the life of the program. The big question of sustainability beyond the CMCA program is one which concerns all partners and not just in terms of how to maintain service delivery once the program finishes but also how to shape the program now to underpin its chances of sustainability.

There is no one single answer to that question. Some responses are already within the grasp of the partners to achieve with little or no external assistance. However, reliance on predictable and timely government funding in the future remains wrought with uncertainty while National and Provincial political vision remains myopic. A vital ingredient for a promising future lies in the effectiveness and reach of the program's training program which builds the human resources essential for any future service delivery. Also at the core of an effective health service are the communities themselves. While the benefits of training health staff are evident, educating communities to not only access but also expect better health services is also vital.

2. Introduction

The CMCA Middle and South Fly Health Program is a community health program, which is based on the principles of partnership and cooperation between the health service providers – Provincial and District health services, Catholic Health Services and the Evangelical Church of PNG, and the program’s implementing body, Abt JTA. Funded through the CMCA portion of the Western Province People’s Dividend Trust Fund and managed by the OkTedi Development Foundation (OTDF), this five-year program started in July 2013. As the program’s implementer, Abt JTA plays a critical role in supporting coordination of the partnership and helping to fill critical gaps in the existing services.

The overall goal of the program is to support the Middle and South Fly Districts to achieve the National Health
Plan goal to strengthen primary health care for all and improve service delivery. Its objectives are aligned to those of the National Health Plan 2011-2020 and the Western Province Strategic Health Plan 2012-2016. It has three components:

- Component 1: Support to Province and Districts
- Component 2: Support fundamental enablers for health care
- Component 3: Provide packages of support tailored to community needs

With the program nearing the halfway mark of the five-year schedule, a mid-term evaluation of the program was commissioned and conducted in August and September 2015 to review the program's achievements and progress and to inform the program's approach in its remaining period. In particular, the evaluation objectives were:

1. Review progress to date on program activities, outputs and outcomes, including progress towards achieving the National targets as detailed in the National Health Plan Monitoring and Evaluation Framework;
2. Assess the effectiveness of the partnership model and coordination mechanisms;
3. Identify lessons learned and recommendations for improving overall program performance to achieve outcomes by 2018 and beyond.

The review was in two parts: a) field research across a selection of villages and health facilities undertaken by researchers from the University of PNG; and b) an examination of partnerships and sustainability undertaken by an independent evaluator, Annmáree O'Keeffe, through interviews with the key stakeholders.

This is the report by Annmáree O'Keeffe detailing the findings of part (b): Partnerships and Sustainability.

3. Methodology

A three-step approach was taken in reviewing partnership coordination and relationships, and the program's potential sustainability:

1. Preparatory phase: a desk review of program documents and other relevant material.
2. Interviews: The evaluator undertook in-country interviews from August 31 to September 5 with a range of key stakeholders in Port Moresby, Kiunga and Daru. See Attachment 1 for the schedule of interviews. In accordance with the principles of ethical research, at the start of each interview, interviewees were asked to confirm that they were voluntarily participating in the interview; they were assured that their views would be kept confidential in that their comments, while reflected in the report, would not be attributed to them; and that should they wish to withdraw their comments subsequent to the interview, they were free to do so.
3. Analysis and Report drafting: Analysis of the information collected and further feedback guided the drafting of the report and its recommendations.

4. Partners’ views

This section sets out the perspectives of the program's stakeholders - OTDF, Catholic Church Health Services, ECPNG, as well as officers from Western Province District and Provincial health services – on the program's approach to partnerships and coordination and their views on sustainability.

The interviews drew on the list of evaluation questions developed with program partners at the quarterly program partnership meeting in March 2015. The questions relevant to partnerships and coordination, and sustainability were:

- Partnerships and coordination:
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- How well are activities coordinated?
- How are issues raised and addressed?

• Sustainability:
  - At the end of the five-year program, will the outcomes be sustainable?

(i) Partnerships and coordination

In documenting the response of the partners to the partnerships and coordination questions in line with the guarantee of confidentiality and anonymity of stakeholder views, their comments are summarised below under each category of partner i.e. Church, Government or OTDF.

a) Church

Overall:
The views of the church stakeholders were largely positive about the way in which the program has progressed so far in supporting improved health services along the CMCA corridor.

Partnerships:
It was observed that the partners to the Middle and South Fly program tended to operate more independently than in the North Fly program where a combination of more substantial facilities and the geography facilitated a closer partnership. This difference is highlighted by the fact that there is no regular commercial flight between Middle Fly's main town, Balimo, and other parts of the Province or even PNG, making it difficult for Middle Fly-based District health service officers to attend partnership meetings. Alternative means of support are either too expensive (chartered flights) or lengthy (by dinghy to Daru and then commercial flights to Kiunga). The current drought has also impacted negatively on the program as flights between Daru and Kiunga have been irregular and unpredictable.

The quarterly stakeholder meetings were identified as important ways of sharing information about the program and to hear about challenges and achievements of other partners although one stakeholder thought the meetings should be used to focus more on the detail of the program's activities so stakeholders were kept abreast of what was happening in the field. Another stakeholder saw the decision to integrate the two programs as a positive because it would enable a more unified approach to Provincial health planning.

Coordination:
In terms of coordination and information flows, some church partners wanted more information about proposed patrols. There were two particular issues in this regard.

- Firstly, there seems to be limited information relayed to some church stakeholders about proposed patrols which resulted in the church stakeholder District headquarters not knowing what patrols were being planned for the facilities for which they were responsible. As a result, opportunities were sometimes missed in taking advantage of the patrols to deliver drugs and supplies to church-run facilities.
- Secondly, some patrol reports do not contain the level of information which service providers wanted to allow them to follow up with appropriate treatment and to have details about immunization e.g. ages, vaccines delivered etc.

To overcome these information and coordination inadequacies, it was suggested that program staff should contact the church service providers before and after the patrols and not to limit their communication regarding patrols (before and after) to staff at the church-run facilities visited. It was also suggested that a patrol schedule be shared with stakeholders on a regular basis.

A related concern dealt with limited information and feedback about training conducted at a particular church facility with the stakeholder in disagreement with the approach taken during the training because it risked being at
odds with what the stakeholder's organisation preferred.

Aside from these coordination concerns which Abt JTA was already working to address at the time of the review, there was an overall view that the program had a very good team which was addressing many of the gaps in the health service delivery in the CMCA areas of the Middle and South Fly. It was recognised that the program had to be a coordinated partnership because Abt JTA couldn't fill the gaps and improve service delivery without sufficient input from service delivery partners.

It was acknowledged that the physical nature of the geographic area where the program is operating meant that not everyone could be reached. But despite these physical constraints, improvements were happening. As noted by one stakeholder, “Integration is good. We can plan and see together as one. The cost of health service in Western Province is very expensive. We can't reach out to everyone but with the program, we are seeing improvements”.

b) Government

Overall:
Like the church stakeholders, government (Provincial and District) stakeholders were happy overall with the progress of the program, seeing it as responsible for improvements in health services.

Partnerships:
A key contributor to the program's progress so far was the partnership approach which enabled a better roll out of health services. The program was able to maintain a regular presence in the CMCA corridor through its patrols and attachments unlike in the non-CMCA areas where the government found it difficult to provide patrol services because of the lack of resources.

Some stakeholders felt that the quarterly stakeholder meeting wasn't enough and cited the North Fly example where the PAG (program activity group) meetings1 provided more specific detail. Similarly, it was suggested that Middle and South Fly Districts should consider North Fly's practice of holding a monthly District Health Management Committee chaired by the District's CEO.

Coordination:
Similar to the church stakeholders, the majority of government stakeholders wanted comprehensive figures and statistics to be fed back to the partners after the patrols rather than only registered at the facilities. There was also an emphasis on ensuring that the right statistics were collected and recorded so that there is better visibility of who has received what service.

There was a request for the Abt JTA team to continue offering to take government staff on patrols as this was seen as a very positive way to a) upskill staff through on the job training and b) enable government staff to visit areas not recently visited by government health services because of lack of resources. Government stakeholders acknowledged that because of staffing constraints within the government services, people weren't always available to accompany the program's patrols, but the stakeholders wanted the opportunity to consider the possibility.

There was also the request that the program staff provide Provincial health headquarters with information on who they were training. It was acknowledged that the program expected the trainees to inform Provincial health but there was a strong preference for the program to do this directly with Provincial health. Similarly, there was a request for information on the attachments to the government facilities.

Government stakeholders were very positive about the health work carried out during the patrols. As one government

1 The reviewer understands from the Abt JTA program team that PAG meetings for the integrated North and CMCA programs are being introduced where this is feasible.
stakeholder put it, “The program has added value to what has been lacking on the government side – there’s a lot of improvement, filling gaps which we don’t cover”. The program staff were also seen as consultative and responsive to government enquiries and requests to meet outside the usual scheduled program partnership meetings.

c) OTDF

Overall:
In the absence of the Provincial health steering committee, the program was seen as playing a key role in planning, coordinating and getting services down to the local level.

Partnerships:
The partnership approach was considered critical for delivering services down the river which was a very difficult environment to operate in. The responsiveness of the partners had helped the program very much. Very favourable comparisons were made between the health services now being delivered through the program and the inadequacy of what had been provided prior to the program’s commencement in some parts of the Districts.

It was recognised that there had been some early teething problems at the start for the program as CMCA corridor communities expected immediate results. But the village council planning committees now understood better that it could take a while to see the results and to understand where the program was going. The partnerships were beginning to work and the facilities, which had been run down and in some cases, with no staff, were being rebuilt or repaired and people were being trained.

Coordination:
A key contributor to coordination should be a strengthened Provincial Health Steering Committee which had been stronger in its earlier days but which had dwindled in recent times. Instead, the program was doing what the steering committee should be doing – planning and coordinating implementation. However, the ageing government health workforce was acknowledged as a big problem for Provincial health, and younger people weren’t coming up the ranks. There also tended to be a push back by long-term departmental health advisers who were used to doing their own thing. Nevertheless, the program team seemed to be working well with partners and it was filling the coordination gap.

Conclusions

While stakeholders across the three partners were largely positive about the program’s progress and achievements, discussions with the church and government partners have pointed to some coordination and communication inadequacies. These were being addressed by Abt JTA during the course of the review.

It also became clear as the review progressed that some of the information and coordination inadequacies were within some partner agencies. Notably, those stakeholders who do not attend the quarterly stakeholder meetings were unsure if those who did attend the meetings on behalf of their organisations were receiving more detailed information as papers from the stakeholder meetings were not being distributed internally. It would seem too that the program had made a reasonable assumption that partners would take responsibility for distributing appropriate reports within their own organisations.

There was a strong and widespread acknowledgement of the program’s contribution to the expansion and improvements in health services across the two Districts and appreciation for what the program’s patrols achieved for the communities they visited.
Recommendations

- Information flows between partners to be reviewed to ensure key people within stakeholder organisations are included in the dissemination of information.
- Review the administrative arrangements for patrol and attachments coordination among partners and revise patrol reporting approaches, collection of statistics and dissemination to include the broader range of stakeholders and including stakeholder headquarters.
- While the quarterly stakeholder meetings are welcome and the frequency satisfactory for many stakeholders, there is a need for more detailed program information to be shared at these meetings or an agreement between partners on the most efficient way of disseminating it.
- The integration of the North Fly and the CMCA Middle and South Fly programs and the adoption of the North Fly PAG meeting system may overcome some of the perceived information inadequacies.

(ii) Sustainability

There was a wide range of views about how the program's achievements and approaches could be sustained after the program finishes in 2018. Some of the comments dealt with the way in which the program has and continues to upgrade health facilities and their equipment, from transport through to vaccine fridges, radios and solar water systems, and infrastructure all of which were seen as important contributors to sustaining the program's outcomes. But maintenance was crucial. Other comments recognised the need for capable and sufficient staffing resources and the role of partnerships. There was a strong view that to achieve sustainability and ensure adequate health services after the program had concluded, the government needed to take greater ownership.

In summary, the key themes which emerged during the various interviews were:

a) Maintenance
b) Alternative funding options
c) Cooperation and partnership
d) Manpower
e) Transition planning

In documenting the partners' views on the program's eventual sustainability, their comments have been organised under these five key areas. It should be noted that not all partners had views on each area. In some cases, there may be only two partners represented in the summary of views under a particular theme and then under another, a different two. However, overall, the five areas were the ones which dominated the interview responses. It is for that reason they are highlighted in this report.

a) Maintenance

Churches
It was essential to teach people at the upgraded facilities how to maintain the upgraded facilities and new equipment whether it was fixing the radio batteries, keeping the outboards in good repair or the solar systems working. It was felt that maintenance responsibilities on the part of the receiving partners needed to be made clear and that the program should give instruction on how to go about the maintenance, not just what to do but which trade or repair companies to contact for more complex repairs.

Government
It was important to start planning now on how to maintain the assets which the program had delivered so that
government stakeholders could follow this up. Government stakeholders recognised the need to train people to undertake maintenance. However, although the government currently budgets for equipment replacement and maintenance, in reality, implementation isn't happening because of limited staffing and the lack of funding. The budget allocations tend to be on paper only.

b) Funding

Churches:
There was a concern that the inclusion of funding for infrastructure in the program was diverting the program's attention away from the core objective of improving community health. A question was posed about the possibility of Ok Tedi following the Oil Search practice of using tax credits to fund infrastructure and maintenance rather than channeling health facility infrastructure and equipment funding through the CMCA program. This would enable the program to focus wholly on improving public health practices while the difficult and complex issue of upgrading infrastructure and equipment could be managed by another body with core expertise in this area.

It was suggested that the government should consider supporting the program on a kina to kina basis. This was seen as a way of addressing the shortfall between what the program currently can address within its funding envelope and the still outstanding health needs which cannot be addressed.

One stakeholder questioned the long term viability of the program's practice of paying patrol allowances which were seen as discouraging health service volunteers from participating in patrols when the program allowances were eventually not available.

Government:
Funding predictability and timeliness was essential. An important constraint to sustainability was the impact of Provincial politics which had resulted in blockages and divergence of funding away from the Provincial health services. For example, Provincial government health is largely unable to instigate its own patrols because there is no money for fuel. Without a resolution to the funding issue, sustainability would be jeopardised.

c) Cooperation and partnership

Churches:
An emphasis was put on ensuring that the three longstanding service providers worked together to sustain the outcomes. It was felt that this approach should already be happening, with partners taking more of a lead in coordinating and arranging stakeholder meetings so that when Abt JTA leaves, the pre-existing partners will already be in the leadership roles to continue and sustain the improved coordination approach.

OTDF:
The Province's government was seen as the key element in ensuring adequate coordination of health services across the Districts. It was encouraged to step up to these responsibilities and to connect more with the program particularly through the Provincial Health Steering Committee which was identified as a potentially effective coordinating tool.

Partnership was also seen as the key to sustainability with the concept of partnership holding the ingredients for sustainability at its core. There was optimism that planning and coordinating as partners and building capacity would mean that when the band-aids were taken off i.e. when the CMCA health program stopped, the capacity to sustain would have been developed. This view was encouraged by the reality that existing gaps were being lessened as health workers were upskilled, essential supplies and equipment were being delivered and infrastructure was being rehabilitated. The program had evolved with extensive patrols, involvement with the communities, infrastructure
improvements and training. The Village Health Volunteer program was also seen as contributing to sustaining health improvements as it empowered communities to take greater responsibility for their health.

d) Manpower

**Government:**
Inadequacy of staffing resources was seen as a significant constraint to sustainability by government stakeholders as the extensive delay to implementing the revised Provincial staffing structure meant that government health services had to manage with understaffing while existing staff were ageing as they could not be replaced or even complemented with younger staff. One stakeholder noted: "If we had enough manpower, we would be able to carry out what the project has started. Otherwise we may have a breakdown in delivering services to villages." To overcome this major obstacle to sustainability, a stakeholder asked if the CMCA program or OTDF could look at supporting inline positions in key rural facilities. This would need to continue beyond the life of the current program but it would ensure adequate and appropriately trained staff in at least the significant rural facilities.

The deplorable state of staff housing at a number of health facilities was also seen as a major obstacle to getting staff in place.

**OTDF:**
Identifying appropriately trained people to staff the health facilities is one of the fundamental approaches needed to maintain the health services beyond the program. Provincial government has to step up to the challenge but supporting some inline positions to keep the outcomes going beyond 2018 may be an interim option.

e) Transition planning

**Churches:**
Planning for sustainability was recognised as something that the program needed to start now through the development of a transition plan covering the remaining period of the program. This would help the partners start to focus on what needed to happen from now until 2018, when the program is scheduled to stop.

**Government:**
There was a real desire to be able to sustain the program's outcomes. And to help it do so, it was essential for the program's work plan to maintain its alignment with the government's own health planning so if there was a reduction in the program, the government would be in a position to cushion the short fall because it wouldn't be a diversion from its own program.

Part of the transition is knowing what the program is doing. "If they leave tomorrow, what is there?" Information was critical to supporting the ongoing activities although it was recognised that it would be difficult for government to maintain the same degree of activity as the program had achieved. It was important to put a transition timeline together as well as a transition action plan to determine what and how to keep going and to identify alternative funding.

**OTDF:**
Although the approach taken by the program emphasises partners working together rather than simply letting Abt JTA do it, there was still a gap in the program in that there wasn't a long-term sustainability strategy. It was important to start planning now for the transition so that host establishments could take over when Abt JTA left. While important, money wasn't seen as the key issue – what was crucial was good planning. The next phase of the program needed to focus on management by the existing services providers. It was important to stay focused on
upskilling as well as the program's core objectives.

Conclusions

Planning the transition to the program's eventual cessation or an “exit strategy” was one of the most strongly emphasised areas for the program to focus on during its remaining period. This would require all partners including the program's implementer, Abt JTA, to collaboratively develop the transition plan and to ensure individual partner responsibility for applying the resources – mostly human – to fulfilling the eventual plan. Underpinning the plan would be the principles of partnership and coordination which were seen as the core sustaining elements of the program. Government was encouraged to connect more effectively with the program.

On an ongoing practical level, finding ways and resources to maintain the upgraded facilities and new equipment was identified as a priority. This would require the program team during the remaining period to ensure that facilities were given appropriate maintenance information and training while partners, and notably the government, would need to ensure appropriate funding for maintenance was available.

A major constraint to sustainability were issues related to government staffing resources including the ageing workforce and recruitment stalemate, and delays surrounding the implementation of the new Provincial structure and the state of staff housing.

In terms of financing beyond the life of the program, while there was a view that coordinated planning rather than money was a more important contributor to sustainability, it is evident that the unpredictable Provincial funding of health services will remain a major obstacle to sustainability. This is largely a political problem which requires a political solution and is not one which the program cannot solve. However, the suggestion that the program or even OTDF consider funding key in-line health officer positions at key rural health facilities even beyond the life of the program may help in some way to overcome the difficulties this ongoing Provincial political reality continues to present.

Recommendations

- Partners to collaboratively develop a transition plan to guide the approach and application of partner resources to implementing the plan and its objective of upgraded health service sustainability beyond the program.
- Training and funding of ongoing maintenance to be a priority for all partners and notably for the government in ensuring that funding is not only budgeted, but made available for maintenance of health facilities and their equipment
- Consider the funding of in-line health officer positions at key rural health facilities.

5. Concluding comments – beyond the CMCA health program

After just two years, the CMCA Middle and South Fly Health Program is already making a significant advance in improving health services in the CMCA areas of the Middle and South Fly Districts. This is despite operating in some
of the most inaccessible parts of PNG where the small population is widely dispersed. The physical challenges include restricted access due to the lack of roads and inhospitable terrain across much of the two Districts, the reliance on dinghy transport, and the remoteness of communities that affects both their access to health facilities and the ability of health services to access them. The current operating environment has been made even more challenging by an unseasonal and lengthy drought in 2015.

The program had some early teething issues but that should be expected when mounting a logistically challenging program in a resource-constrained environment where National government funding predictability and timeliness is aspirational rather than a reality. At the time of completing this report, at the end of 2015. Western Province's health services had only received the first quarter's budgeted funding for 2015.

The program has provided a welcome degree of funding and service predictability. It is helping to rebuild a run-down and neglected government health service, addressing some of the fundamental gaps constraining service delivery and putting down solid foundations which should take that service well beyond the life of the CMCA program.

The worry persists, however, that the service predictability which the program has achieved looks fragile beyond the life of the program. The big question of sustainability beyond the CMCA program is one which concerns all partners and not just in terms of how to maintain service delivery once the program finishes but also how to shape the program now to underpin its chances of sustainability.

There is no one single answer to that question. The views on sustainability as set out in the earlier section demonstrate this clearly. To recall, partners identified five areas which they saw as key ingredients for sustainability: a) maintenance; b) alternative funding options; c) cooperation and partnership; d) manpower; and e) transition planning.

Some of these approaches are within the power of the partners to implement with little or even no external assistance. For example, in the area of maintenance, all partners can work towards reinforcing a maintenance-culture within their own organisations so that maintenance of the facilities and equipment is routine.

Cooperation and partnership are also approaches that not only exist now but also are absolutely achievable in the long term. It simply requires an ongoing will beyond the program's life to maintain the partnerships, working cooperatively together in the interest of contributing to an effective ongoing approach to health service delivery.

Transition planning is also within the grasp of existing partners. It too does not require any additional resources. Instead, like cooperation and partnership, it requires a will and willingness to work together to achieve a transition plan that all partners can sign on to and implement.

So that leaves just two areas that do present serious challenges - manpower and finding alternative funding options - if the core ingredients for sustainability are to be forthcoming. Manpower requires not just budgeted funding but funding that is both available and timely. Although the Province has drawn up staffing establishments, these remain a paper exercise. The reality shows that many of the government facilities are drastically understaffed. In some cases, without the support of OTDF and the program, crucial staff would not be there. Adequate funding for manpower remains an intransigent constraint to sustainability.

How to overcome this? Improving government funding predictability and timeliness – both at the National and Provincial level – is essential. However, it is clear that until the politics recognises the necessity of funding predictability and timeliness to ensure effective health services, government and church health staff will continue to have to operate under less than optimal conditions. In the interim, other potential partners – whether private sector or development assistance partners – are possible solutions to a funding gap beyond the CMCA program.
That said, it is vital to recognise that the program itself continues to nurture and develop the most critical resource needed for sustainability and that is capable human resources. This nurturing is achieved through the program’s training activities, the results of which will last long beyond the life of the program itself.

In addition, the program needs to ensure that the service improvements and enhancements that it implements now take account of the future financial reality of the Province. In short, there is no point in creating a Rolls Royce health service when the Province could only ever afford to maintain a Fiat Bambino.

In summary, there are a number of actions which partners can take now to entrench the benefits of the program well in the future. But reliance on predictable and timely government funding in the future remains wrought with uncertainty while National and Provincial political vision remains myopic. A vital ingredient for a promising future lies in the effectiveness and reach of the program’s training program which builds the human resources essential for any future service delivery. Also at the core of an effective health service are the communities themselves. While the benefits of training health staff are evident, educating communities to not only access but also expect better health services is also vital.
## Attachment 1 – List of interviews

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Name and position</th>
<th>Date and place of interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Province Provincial Health Services</td>
<td>Lucy Morris, Deputy Director, Programs</td>
<td>4/9, Daru</td>
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<tr>
<td></td>
<td>Goneang Yokowar, Deputy Director Policy and Administration</td>
<td>3/9, Kiunga</td>
</tr>
<tr>
<td></td>
<td>Sister Narua Koiparu, Provincial Family Health Coordinator</td>
<td>4/9, Daru</td>
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<tr>
<td>District Development Authorities</td>
<td>Robert Alphonse Kaiyan, CEO, North Fly District Development Authority</td>
<td>2/9, Kiunga</td>
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<tr>
<td></td>
<td>Moses Ase, CEO, South Fly District Development Authority</td>
<td>5/9, Daru</td>
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<tr>
<td></td>
<td>Kimsey Waiva, District Health Manager, Middle Fly District</td>
<td>1/9, Kiunga (by telecom to Balimo)</td>
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<td></td>
<td>Sister Wesu Boli, District family health coordinator, South Fly District</td>
<td>5/9, Daru</td>
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<tr>
<td>National Department of Health</td>
<td>Orpah Tugo, A/g CEO, Daru Hospital</td>
<td>5/9, Daru</td>
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<tr>
<td>Evangelical Church of PNG</td>
<td>Suli Gayani, Health Secretary, ECPNG – Balimo/South Fly</td>
<td>31/8, Port Moresby</td>
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<td></td>
<td>Dr Sharon Brandon, Medical Superintendent, ECPNG – Rumginae Hospital</td>
<td>1/9, Rumginae</td>
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<tr>
<td>Catholic Health Services</td>
<td>Cathy Yaki, (Sister Anna was unavailable)</td>
<td>2/9, Kiunga</td>
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<tr>
<td><strong>OkTedi Development Foundation</strong></td>
<td><strong>Ian Middleton</strong>&lt;br&gt;CEO</td>
<td>2/9, Kiunga</td>
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<tr>
<td>Lalatute Avosa, COO</td>
<td>1/9, Kiunga</td>
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<tr>
<td><strong>Alison Tammy</strong>&lt;br&gt;Executive Manager, Program Services</td>
<td>1/9, Kiunga</td>
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<tr>
<td><strong>Belden Dasa</strong>&lt;br&gt;Senior Manager, Program Services &amp; Administration</td>
<td>2/9, Kiunga</td>
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<tr>
<td>Andy Maie&lt;br&gt;Regional Coordinator, South Fly</td>
<td>2/9, Kiunga</td>
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<tr>
<td><strong>Richard Zumoi</strong>&lt;br&gt;OTDF board member and representative of Middle Fly CMCA Trust Fund on CMCA Advisory Committee</td>
<td>27/10, Aiambak (by telephone)</td>
<td></td>
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<tr>
<td><strong>Abt JTA – CMCA program</strong></td>
<td><strong>Geoff Scahill</strong>&lt;br&gt;Program Director</td>
<td>31/8, Port Moresby</td>
</tr>
<tr>
<td>Georgina Dove&lt;br&gt;Technical Director</td>
<td>31/8, Port Moresby</td>
<td></td>
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<tr>
<td>Kelly Kewa&lt;br&gt;Program Manager</td>
<td>Throughout the week</td>
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<tr>
<td><strong>Eleanor Sullivan</strong>&lt;br&gt;Primary Health Care Coordinator</td>
<td>31/8, Port Moresby and 3/9, Kiunga</td>
<td></td>
</tr>
<tr>
<td><strong>Emma Field</strong>&lt;br&gt;M&amp;E Manager</td>
<td>31/8, Port Moresby (by telephone in Brisbane)</td>
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References


