Applying contribution analysis theory to answer an important question: was the nine-year primary health care program in Western Province, Papua New Guinea, effective?

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Western Province, PNG

- Largest province in PNG: 97,300 sq km
- Population of 281,074
- Limited road access outside district centres; mountainous & flood plains
- Economic drivers: mining, market trade & subsistence farming
- Government & church services provide health care across 7 levels
- 205 health facilities
Program Design

Program goal: Strengthen primary health care and health services in the North Fly District and Middle and South Fly CMCA Trust Regions

### Program Components

1. **Support to Partnerships and Coordination**
   Provide support to the Provincial Health Office, District Health Office and Church Health Services to improve service delivery, partnerships and coordination

2. **Support to Fundamental Enablers of Health Care**
   Ensure the fundamental building blocks for health care are available to all health facilities supported by the Program

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 with Stakeholders**
- **KRA 3. Strengthen Health Systems and Governance: 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 Preparedness for Disease Outbreaks and Emerging Population Health Issues**
'If then' statements on the left will come about because:

**At international level:** there is evidence that the private sector can work effectively with the public sector to improve the delivery of health services in rural and remote regions. Mining companies can play a key role in extending health and social services to marginalised populations if they operate within the international and host government’s regulatory frameworks and policies.

**At national level:** The GoPNG National Health Plan (NHP) 2011-2020 outlines the objectives to implement a back to basics approach to improve primary health services for the rural majority and disadvantaged. The Program logic reflects the systems approach of the GoPNG NHP and aligns its objectives with key result areas.

**At provincial level:** Before Program inception Western Province was one of the worst performing provinces in terms of health status. Provincial Government seized the opportunity to collaborate with OTML, a large copper gold mining company, and other service providers, to maximise benefits from investments in community development to improve coordination and delivery of health services.

**At district level:** Services are often focused in North Fly’s Kiunga or South Fly’s Daru. There is an identified need to fairly distribute and connect services across the three districts in Western Province through more efficient and coordinated resource allocation.

**At facility level:** Front line staff face drug shortages and deteriorating infrastructure, and are often under-skilled, under-resourced and under-valued.

**At community level:** there is evidence that as communities develop their understanding of good health, they take ownership in maintaining it. Barriers need to be broken down relating to cultural beliefs, access and low service utilisation.

The combination of these three outcomes should contribute to improved utilisation, quality of and access to PHC services.

**THEN**
- We will help our partners operate with a coordinated and efficient approach
- We will help partners to strengthen their capacity to deliver primary health care services
- We will help communities to take ownership of and improve their own health

**IF**
- As long as these incentives prevail, then the desired outcome of a strengthened PHC system and service delivery is acceptable to achieve within the life of the Program
2. End-line evaluation objectives

The end-line evaluation sought to investigate whether the Program met its goal to contribute towards strengthened primary health care and health services in the North Fly District and Middle and South Fly CMCA Trust Regions in line with the objectives of the National Health Plan.

Broadly, the end-line evaluation aims to answer the following questions:

1. Has the program contributed to improvements in primary health care outcomes including access, utilisation and quality of health services?
2. What contribution has the program made towards the long-term impact of improved health outcomes in Western Province?
3. What were the overall challenges and successes of the program, and its effectiveness?
3. Contribution analysis theory

1. Set out the **attribution problems** or **questions** to be addressed by the evaluation
2. Review and refine **ToC** which demonstrates the logical link between pre-conditions, activities and outcomes
3. Review existing **evidence** to describe whether the logical links have held true, determine the **level of confidence** required to answer the evaluation questions, and explore the type of **contribution** expected
4. Assess alternative **explanations** and use primary data collection **methods**
5. Assemble the **contribution story**, seek **additional evidence** if required to strengthen the contribution story and reassess **strengths and weaknesses**

*Mayne J. Contribution analysis: an approach to exploring cause and effect. 2000*
3. Data collection

- Program Data
  - National Health Information System

- Health Facility Assessments
- Health Worker Interviews
- Village Health Volunteer Interviews
- Focus Group Discussions
- Surveys with Community Members
- Key Informant Interviews
4. Results

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- "If then" statements on the left will come about because:
  - **At international level**: there is evidence that the private sector can work effectively with the public sector to improve the delivery of health services in rural and remote regions. Mining companies can play a key role in extending health and social services to marginalised populations if they operate within the international and host government’s regulatory frameworks and policies.
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  - **At district level**: Services are often focused in North Fly’s Klonga or South Fly’s Daru. There is an identified need to fairly distribute and connect services across the three districts in Western Province through more efficient and coordinated resource allocation.
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  - **At community level**: there is evidence that as communities develop their understanding of good health, they take ownership in maintaining it. Barriers need to be broken down relating to cultural beliefs, access and low service utilisation.
**Key program results: CMSFHP**

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outpatients seen during clinical attachments and outreach clinics</td>
<td>55,000+</td>
</tr>
<tr>
<td>Clinical attachments conducted</td>
<td>90+</td>
</tr>
<tr>
<td>Outreach clinics conducted (in remote villages in the 5 CMCA regions)</td>
<td>953</td>
</tr>
<tr>
<td>Antenatal care patients seen</td>
<td>2,500+</td>
</tr>
<tr>
<td>On-the-job training sessions conducted with health workers</td>
<td>844</td>
</tr>
<tr>
<td>Condoms distributed</td>
<td>1,700+</td>
</tr>
<tr>
<td>Community members trained as village health volunteers</td>
<td>98</td>
</tr>
<tr>
<td>Contraceptive implants administered in middle and South Fly districts since introduced by the program in 2015</td>
<td>1,600+</td>
</tr>
<tr>
<td>Staff houses built</td>
<td>12</td>
</tr>
<tr>
<td>Vaccinations and Vitamin A supplements administered to children under 5</td>
<td>65,600+</td>
</tr>
<tr>
<td>Children under 5 years old assessed for nutritional status</td>
<td>32,500+</td>
</tr>
<tr>
<td>District health management meetings facilitated</td>
<td>28</td>
</tr>
<tr>
<td>Meetings conducted with women's committee groups and support provided</td>
<td>6</td>
</tr>
<tr>
<td>“Some good changes happened. We received a lot of help from that program, with medication and others which we did not have before. So we had a lot of help from this program so we are happy with this.”</td>
<td></td>
</tr>
</tbody>
</table>

"Some good changes happened. We received a lot of help from that program, with medication and others which we did not have before. So we had a lot of help from this program so we are happy with this.”

Community member, Middle Fly
### Key program results: NFHSDP

<table>
<thead>
<tr>
<th>Outpatients seen at Tabubil Urban Clinic and during Clinical Attachments and Outreach Clinics</th>
<th>151,000+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antenatal Care Patients Seen</td>
<td>4,800+</td>
</tr>
<tr>
<td>Condoms Distributed</td>
<td>192,200+</td>
</tr>
<tr>
<td>Contraceptive Implants Administered in North Fly Districts since Introduced by the Program in 2015</td>
<td>1,670+</td>
</tr>
<tr>
<td>Vaccinations and Vitamin A Supplements Administered to Children Under 5</td>
<td>54,200+</td>
</tr>
<tr>
<td>Children Under 5 Years Old Assessed for Nutritional Status</td>
<td>138,000+</td>
</tr>
<tr>
<td>On-the-job Training Sessions Conducted with Health Workers</td>
<td>1,989</td>
</tr>
<tr>
<td>Community Members Trained as Village Health Volunteers</td>
<td>26</td>
</tr>
<tr>
<td>Staff Houses Built</td>
<td>10</td>
</tr>
<tr>
<td>Attendances at Community Awareness Sessions on Key Health Topics</td>
<td>141,500+</td>
</tr>
<tr>
<td>Villages Supported in Reaching Healthy Village Status in 2018</td>
<td>2</td>
</tr>
<tr>
<td>Schools Supported in Implementing the Health Promoting Schools Concept in 2018</td>
<td>2</td>
</tr>
<tr>
<td>Health Radios Installed</td>
<td>22</td>
</tr>
<tr>
<td>Vaccine Fridges Installed</td>
<td>19</td>
</tr>
<tr>
<td>Vaccine Ice Pack Freezers Installed</td>
<td>8</td>
</tr>
<tr>
<td>Water Tanks Installed</td>
<td>29</td>
</tr>
<tr>
<td>Dinghies and Outboard Motors Provided to Facilities</td>
<td>3</td>
</tr>
<tr>
<td>District Health Management Meetings Facilitated</td>
<td>28</td>
</tr>
<tr>
<td>Meetings Conducted with Women's Committee Groups and Support Provided</td>
<td>8</td>
</tr>
</tbody>
</table>

**Community Member, North Fly**

"[The program] provides good services...reached the unreachable areas and it gave door step services to the people from the village or those from the remote villages. They are happy that [the program] is around."
Installation & maintenance of radios at health facilities NF

Baseline 2009

Endline 2018
Procurement, distribution & maintenance of vaccine fridges and freezers in MSF

We will help our partners operate with a coordinated & efficient approach

- Shared resources and alignment of service delivery
- Trusting relationships
- Communication
- Data for decision-making
- Concern that district and provincial government would not live up to their responsibility to maintain the positive contribution following program closure

“We are able to communicate with each other; the program had put the stakeholders together. Sharing the information has been critical.” Program partner
We will help partners to strengthen their capacity to deliver PHC services

- 78% of health workers interviewed stated that changes in their health facility in the last five years had improved the way services were delivered to the community, as well as the health of the community.

- Of those who sought treatment at their nearest facility, 92% received the services they visited for. Of the 8% who visited the facility but didn’t receive the required treatment, the most common reason was due to a lack of medical supplies (41%).

- When asked about the level of care community members received at their nearest facility, the majority (36%) reported care was ‘very good’, followed by ‘good’ (33%), ‘excellent’ (16%), ‘poor’ (8%), and ‘fair’ (7%).

- Barriers persist: medical supply availability, poor supervision, cost for services and lack of staff available.
We will help communities to take ownership of and improve their own health

- Community health & SDOH

- Communities aware of services available to them through outreach and at HF: immunisations, malnutrition assessments, antenatal care, awareness sessions

- Most commonly mentioned health promotion topics provided by the program: TB, personal hygiene, malaria, immunisation

- More investment and structure needed around VHV Program and Healthy Village Concept
5. What affected the contribution story?

Positive influences

- Program team: experience and relationships
- Consultation and alignment with government objectives and local needs, forming a strong collaboration
- Embedded program within existing health system
- Early transition planning and transparency: phasing down, out and over of activities
5. What affected the contribution story?

**Negative influences:**

- Extreme weather conditions including flooding and dry weather events
- Political elections, nationwide shortages of health resources, and some contention over catchment boundaries
- Use of data to track progress against National Health Plan
- Location of the program office and perceived ‘North Fly centric’ distribution of services
- Logistical constraints and cost implications
Lessons learnt

- Development model
- Program design
- Operational aspects
- Monitoring and evaluation

‘[The program] came in and placed in all these things... The responsibility is now in our hands as the care providers here on the ground. Whatever things that they have set up, it is set up for the community as a whole and for everyone. So the responsibility falls back to us to take good care of them...’ Health Worker, Middle Fly
Thank you!

If interested, please see our publication on lessons in M&E in low resource settings:

**PERSONAL VIEW**

*Lessons for health program monitoring and evaluation in a low resource setting*

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