CARING FOR NUTRITION PROJECT

Contributing to improved nutrition and health-seeking behaviours in Papua New Guinea

IMPACT BRIEF: 2017-2022

World Vision

About this report

This report is a summary of the end-of-term evaluation of World Vision's Caring For Nutrition project in Papua New Guinea, supported by the Australian Government through the Australian NGO Cooperation Program (ANCP). The evaluation was conducted by independent consultant Raul Schneider/ Schneider Global Health, with further data analysis, review and guidance from World Vision Papua New Guinea (Agnes Tal, Clement Chipokolo) and World Vision Australia (Adeel Ahmed, Kate Moss, Katie Chalk).

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CONTEXT

Maternal and child survival in Papua New Guinea (PNG) remains a significant challenge. PNG has an under-five mortality rate of 57 per 1,000 live births (one in 13 children). The maternal mortality rate of 215 per 100,000 births (580 mothers each year) is eight times higher than the East Asia and Pacific region average.[1] The drivers of these health challenges are complex. PNG struggles with low gross domestic product and government capacity, high unemployment, topographical isolation, and poor social protection and welfare programs. Access to basic services remains limited, creating health and nutrition burdens for children and their mothers. Barriers to good health are also social, driven by unequal gendered power relations and misconceptions around social inclusion, child protection and care-giving. This is largely due to entrenched cultural and traditional beliefs. Child rearing, care-giving, household and garden responsibilities are almost exclusively the role of women. Under-18 pregnancy and marriage, high rates of family violence and chronic undernutrition also increase maternal, newborn, and infant health risks.

1 https://www.unicef.org/png/children-papua-new-guinea

PROJECT OVERVIEW

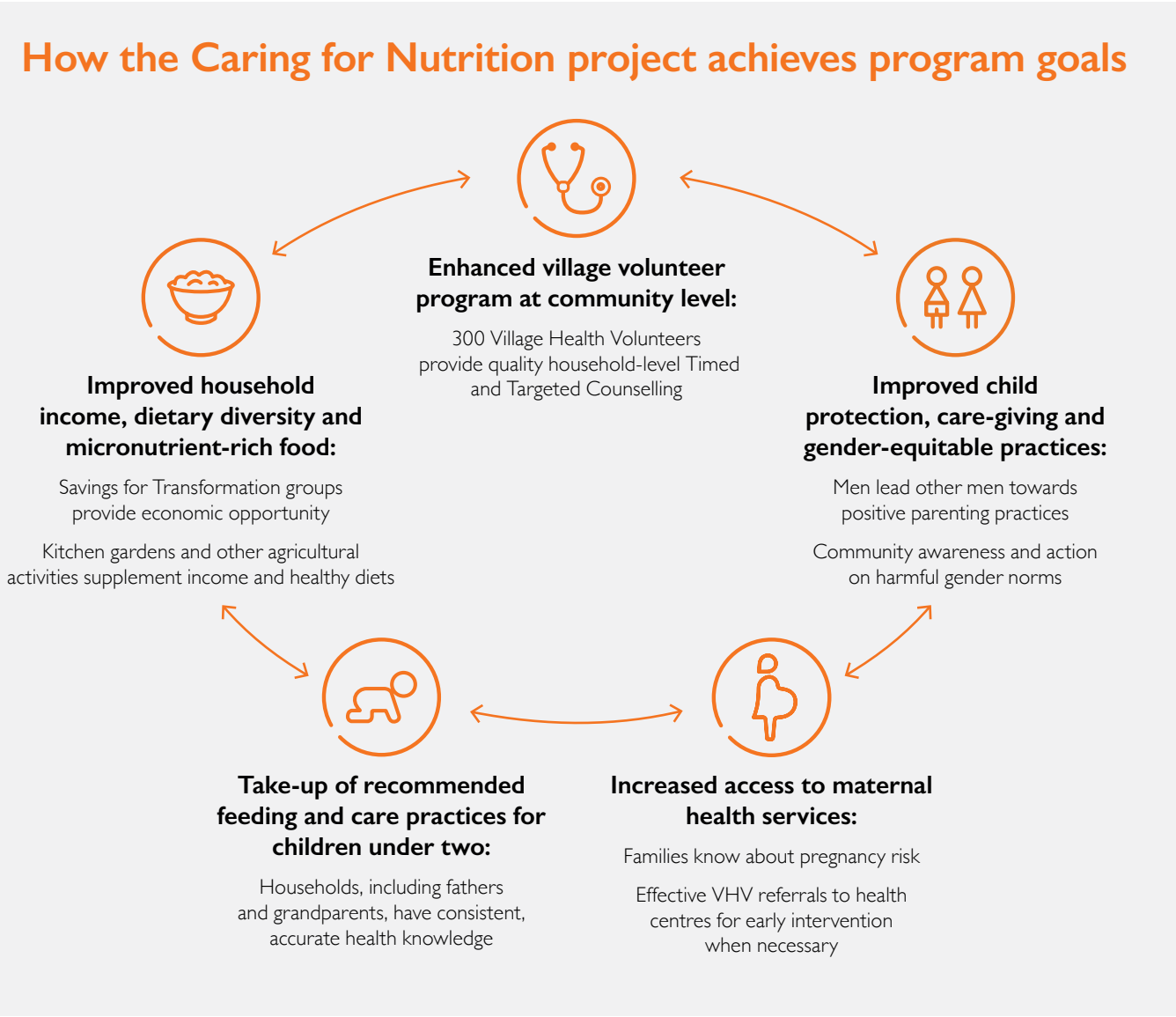
Project goal: To reduce the prevalence of chronic malnutrition in children under the age of five in these locations by 2022.

Since 2017, World Vision's Caring for Nutrition project in PNG has been contributing to the reduction of chronic and acute malnutrition among children under five years, and their mothers, in two very different contexts: disadvantaged urban areas of Port Moresby and rural, isolated communities of Panguna in the Autonomous Region of Bougainville. In these locations, the project implemented an integrated approach to address nutritional deficiencies in pregnant and breastfeeding women and their children under five, with the target of improving nutrition and health outcomes for at least **25,373 people** (with a further 35,000 people indirectly impacted). To achieve this goal, the project worked towards three main outcomes:

- An enhanced and supported village health volunteer (VHV) program at community level
- Improved household incomes leading to dietary diversity and increased consumption of micronutrient-rich food
- Increased caregiver knowledge on the adoption of recommended feeding and care practices and access to health services

The project also embedded multiple cross-cutting issues contributing towards the health and well-being of women and children such as child protection, social inclusion and increased adoption of care-giving and gender-equitable practices among men.

Figure 1: How the Caring for Nutrition project achieves change



Adapting timed and targeted counselling for the PNG context

World Vision's widely used maternal and child health project model, Timed and Targeted Counselling (TTC), was adapted to suit the project sites with isolated rural populations, low numbers of health workers and limited medical resources. To avoid overloading the VHVs, this version of TTC used only three household visits to expectant mothers; the first six months into pregnancy, the second before delivery and the last after the birth of the child. A simpler monitoring system was also developed to suit VHVs with low literacy levels.

In coordination with the National Department of Health (NDoH), the project supported the training of 356 VHVs (201 in Port Moresby, 44 in Panguna and 111 in Buin), including skills related to the contextualised TTC model. With this training, VHVs were able to make household visits, encourage community members to visit outreach clinics, and conduct community awareness sessions on key health topics such as family planning, malaria prevention, antenatal care, immunisation, infant and complementary feeding, exclusive breastfeeding practices, acute respiratory infections, and diarrhoea.

Other models and approaches used:

- **Savings for Transformation:** member-based savings and loans groups emphasising financial literacy, equal access to opportunity (women, people with disability), resilience to economic shocks and re-investment that benefits the community.
- **Healthy Islands Concept:** A Pacific contextualisation of public health planning where communities formulate their collective vision of a 'healthy community' and monitor their progress towards this.
- **MenCare:** Developed by Equimundo and contextualised to the PNG context, MenCare brings men together to talk about their roles and responsibilities, break down harmful attitudes and traditions and learn to lead shifts towards gender equality.
- ***Gutpela Man, Gutpela Femili:*** a curriculum designed specifically for this project through community consultation; topics included gender as a concept, violence, healthy relationships, men and caregiving, and making commitments to change.
- **Celebrating Families; Channels of Hope:** faith-based gender and child protection initiatives engaging everyone in the family to build household harmony and equality.

PROJECT CHANGES

During its five-year duration, the project underwent several changes in response to different factors and situations. These included:

- Two project re-designs – the first in 2018 for a stronger focus on cross-cutting issues (gender, disabilities, child protection), and another after the mid-term review (MTR) in 2020, following recommendations to reduce the number of outcomes and streamline project activities towards realistic targets.
- Suspension of project in Buin. In early 2021, World Vision Papua New Guinea decided to stop project implementation in Buin. Security concerns had increased and telecommunications networks were unreliable, making it difficult to retain staff or provide supplies and services. In June 2021, the project was relocated to Panguna.
- Responding to the COVID-19 pandemic. In 2021, in support of the government's COVID-19 awareness campaigns and distribution of health kits, the project prioritised its resources and activities towards supporting strategies on risk communication and community engagement.

METHODOLOGY

The evaluation used a mixed methods approach to address the evaluation questions, including:

- A household quantitative survey questionnaire targeting 466 households to gather information on mothers/caregivers, pregnant women, children (0-60 months), people living with disabilities and others living in the same households in both project locations. This included anthropometrical measurements of 466 children under 5 years, and use of the Washington Group short set of questions tool. Quantitative data was collected using KoBo Toolbox software on mobile phones.
- Focus group discussions with 15 VHV groups, 15 women's groups, 13 men/fathers' groups, and 13 focus groups with people living with disabilities.
- Key informant interviews (KIIs) with nine provincial and local health workers and three KIIs with national health authorities and partners.

Limitations

- Baseline data did not include information on social inclusion and vulnerable groups.
- Inability of lead evaluator to travel to project sites, due to international travel restrictions.
- Different timing of baseline, MTR and evaluation, limiting comparability of food security findings.
- Some data inconsistencies across different enumerators; WHO flags used to eliminate defective data with reduced sample sizes noted where relevant.
- High turnover of personnel, limiting long-term memories and perspectives of project outcomes.

KEY FINDINGS

Outcome 1: Enhanced and supported VHV program at community level

The project supported the training of 356 VHVs through the NDoH's VHV curriculum, together with training on the TTC model, Healthy Islands Concept, and infant and young child feeding (IYCF), and other topics such as financial literacy, men's role in gender, child protection and backyard gardening. By the end of the project, VHVs were conducting over 900 household visits annually.

As a result of their enhanced community role, VHVs have achieved respect and recognition from community members as well as professional health workers. Largely informal referrals from VHVs on early recognition of danger signs in pregnant women and children led to coordinated services in health facilities which has definitely saved lives. VHV growth monitoring also resulted in the early detection of 74 severely malnourished children who received treatment and went on to a full recovery.

Activities conducted by VHVs were also shown to have increased the knowledge within communities of important health care practices related to early childhood nutrition, increased antenatal care, uptake of family planning, and early care and treatment seeking. Although many community members agreed that the VHVs would benefit from more in-depth training, they were still considered valuable for health advice and facilitating referrals, particularly in the last two years of the project when many of the health facilities and health workers were not operational due to the pandemic.

A lesson for next time on VHV engagement has been the high turnover of volunteers. This is due mainly to a lack of monetary incentives (as they are not part of the formal NDoH payroll system), with other factors including overly high expectations of VHVs by the project staff and community members, multiple trainings that require time away from their daily lives, and a lack of effective monitoring documentation to guide the project focus

Outcome 2: Improved household income leading to dietary diversity and increased consumption of micronutrient-rich food

Savings groups, alongside agricultural trainings to encourage backyard garden development and cooking demonstrations, were intended to improve dietary diversity for children.

Savings groups did not succeed

The project established 56 Savings for Transformation groups, while 231 individual members received financial literacy training. Although the savings groups initially generated interest at community level, the Women's Micro Bank withdrew halfway through the project. No similar bank or financial entity was in place to facilitate bank accounts and loans as planned. COVID restrictions also limited the time spent supporting newly formed savings groups. At the time of the MTR, participants of savings groups were optimistic, saying they would prioritise savings to pay school fees, improve household diets and pay medical bills. But by project end, only 25% of households surveyed reported being part of a savings group, and more than half of the participants saw no difference in their capacity to save. Focus groups revealed COVID-related economic realities in Port Moresby with most households reporting their incomes barely covered basic essential household needs, and 63% of savings group participants reporting their priority was to pay back debts they had accumulated.

"Thanks to the training received I was able to save a little money. When my child had a sudden asthma attack, I was able to use the money to pay for transport to rush him to the hospital and pay the hospital costs."

– WOMEN'S FOCUS GROUP PARTICIPANT

Project highlight: backyard gardening and cooking demonstrations

Backyard garden activities were very successful with 224 households in Port Moresby and 178 in Panguna participating initially and an additional 190 joining later. Vegetables and fruits increased food availability at home with surplus sold at local markets for income. Used as an incentive for VHVs, backyard gardens boosted morale and increased visibility and respect, which in turn increased VHV's active participation to lead project activities in the community. Cooking demonstrations on how to prepare balanced, nutritious meals were a powerful drawcard for increasing understanding and participation in age-appropriate nutrition. Focus groups also noted value in social bonding by bringing people with common interests together. A recipe book is now in production, providing sustainable ideas for adopting healthier diets using homegrown or locally available food.

It is not clear from evaluation data whether these initiatives contributed significantly to increased food diversity and healthier diets for children. Dietary diversity may have been affected by cost of living, with an unfortunate increase in refined carbohydrates in place of rice and root crops, as well as a decrease in meat consumption.

Outcome 3: Caregivers increase their knowledge on the adoption of recommended feeding and care practices and access to health services

The project has achieved statistically significant reductions in the number of children that are stunted and underweight compared to baseline, although the number of children classified as 'wasted' remains high. Early care and treatment seeking practices have been largely credited to VHVs recognising newborn and infant danger signs, as well as the mostly informal referral systems established between them and health workers.

Table 1: Outcome indicators related to chronic malnutrition in Port Moresby

OUTCOME INDICATORS	BASELINE	MID-TERM REVIEW	EVALUATION
% of children under 5 underweight	28.8%	21.4%	23.9%
% of children under 5 stunted	44.5%	49.2%	38.2%
% of children under 5 wasted	12%	16.4%	15.5%

Despite the lockdowns and complications in accessing health services during the pandemic, the number of children over 12 months who have been immunised (measles and third dose of Pentavalent) has also increased, as well as those receiving Vitamin A supplementation and treatment for intestinal parasites. Additionally, the number of children taken by their caregiver for treatment when they had diarrhoea or symptoms of presumed pneumonia also increased. Early nutritional caring practices such as exclusive breastfeeding have improved slightly. Unfortunately, the number of meals per day consumed by children (6-60 months) in Port Moresby decreased compared to baseline. This was attributed to falling incomes and increased food prices, largely due to the pandemic.

Table 2: Outcome indicators showing improved care practices in Port Moresby

OUTCOME INDICATORS	BASELINE	MID-TERM REVIEW	EVALUATION
% of children under 5 who received treatment for diarrhoea	37.6%	50%	54.9%
% of children under 5 taken to health provider with presumed pneumonia	-	53.8%	83.3%
% of children (12-23 months) immunised for measles	78.8%	72.5%	89.5%
% of children (6-59 months) who received Vitamin A supplements in last 6 months	70.3%	81.5%	83.6%
% of children (above 1 year) who received de-worming medicine in last 6 months	39.6%	55.6%	73.1%

Quantitative data gathered to determine access to health services shows an increase in the number of women accessing antenatal services for the first time, as well as more being accompanied by their husbands. Pregnant women are also eating more and the use of contraception has increased – both indications that women (and their husbands) are taking pregnancy and family planning more seriously.

"For some parents, family planning was a new concept and practice – it will take time to understand and apply it at homes. However we now understand how this can be of help to us and our families."

– FATHER AT VITIS COMMUNITY

Table 3: Outcome indicators showing increased use of health services by women in Port Moresby

OUTCOME INDICATORS	BASELINE	MID-TERM REVIEW	EVALUATION
% of women who received an extra meal when pregnant/lactating	56.1%	68.3%	90.2%
% of women who have gone for antenatal care during last pregnancy	85.3%	92.1%	94.1%
% of women going to antenatal care accompanied by their husbands	43.6%	41.5%	59.2%
% of women who received de-worming treatment during pregnancy	20.9%	26.8%	55.9%
% of women using contraception	57.1%	40%	72.4%

Given the important contribution made by health workers, the project cannot take full credit for the improvements observed regarding key maternal and child health indicators. However, community members, health workers and even provincial and national government officials agree that the project's activities and VHVs have contributed significantly to the health and well-being of women and children in the target communities.

The evaluation identified several key contributing factors to ongoing malnutrition, including:

- low consumption of protein and iron-rich foods leading to poor immune system response
- high intake of refined carbohydrates and sugar with low nutrient content
- low intake of fruits and vegetables in urban areas
- children receiving less meals in urban areas due to financial constraints.
- Iron folate consumption also remains very low due to limited availability of tablets.

These are core issues that need to be addressed in future interventions.

CROSS-CUTTING THEMES

Gender

The development of the *Gutpela Man, Gutpela Femili* manual and tools, used for MenCare alongside other gender and child protection initiatives, built consistent male engagement that emphasised the importance of shared roles and responsibilities, including providing a caring home environment for women and children. After COVID-related delays, the project staff did their best to accelerate implementation by conducting 129 awareness sessions focused on equal gender roles in the project's last year, as well as 11 MenCare and positive parenting trainings involving 120 men in Port Moresby and Panguna. In addition to these activities, four child protection workshops and three integrated awareness sessions with other World Vision Papua New Guinea projects took place.

The evaluation found men who participated in the MenCare groups had better engagement with their families, with some accompanying their pregnant wives to antenatal care and showing improved understanding of maternal and child needs and how gender-based violence can affect the mental and physical health of women and their children. Increased awareness has led some men to be able to openly discuss gender-violence issues with other men in their communities. However, gender violence in PNG is rooted in cultural and religious beliefs that have been repeated generation after generation and it is realistically too early to determine true impact or sustainability of largely anecdotal change.

"Since my husband attended the MenCare group sessions, he has started helping me to cook, carry the baby and do house chores while I volunteer for the TB project as a treatment supporter."

– WOMEN'S FOCUS GROUP PARTICIPANT, BUSHWARA

Child Protection

Towards the end of the project, engagement and training of government officers and community members on child protection including referral pathways took place. Project monitoring noted that referrals were now being used for actual or suspected abuse cases. Although significant, this is only the first step in developing a sustainable system, which was beyond the scope of this project. Like gender equality, child protection is a sensitive issue requiring systematic and continued follow-up to ensure existing laws and policies are enforced.

People living with disabilities

The project involved 150 people living with disabilities in project activities. Focus groups show that the majority of community members are supportive and respectful of people living with disabilities, often going out of their way to help families who have children and adults with varying disabilities; the evaluation noted that this was not necessarily related to any particular project activity but to existing community culture. Inclusive health services remain a need. Project staff and VHV engagement directly with people living with disabilities and their families has been greatly appreciated, but long-term solutions need to come from government services. Addressing inclusion and equality for people living with disability requires a multifaceted approach and the collaboration of government and private organisations to provide basic services and support social inclusion.

COVID-19

Without doubt, COVID-19 has set back results for this project. The pandemic was the principal barrier to delivering training and project activities in the project's final two years. Household visits were not possible and many people would not open their doors to VHVs and project staff even when lockdown was not in place. Economic hardship caused by lockdown also affected people's ability to save and may be linked to poor results in improving dietary diversity. The topic of vaccinations also created division in communities. In Arawa, the World Vision office was targeted by anti-vaccine protesters, while the number of women taking their children to be immunised (routine child vaccines) decreased over this period due to fear and misunderstanding often promulgated on social media. Survey data showed children's vaccination in Port Moresby has remained high (over 90%) for both measles and the third dose of Pentavalent, but focus groups with health workers questioned this result, as they discussed difficulties and reduced vaccination demand for infants. Caregivers did not differentiate between the COVID vaccination which received a lot of negative press and the routine vaccinations for children, so many opted to not vaccinate their children at all.

CONCLUSIONS

Evaluation results conclude that a foundation has been laid. This project has been successful in achieving most of its targets and contributing towards all outcomes; however, it is important to note that a large portion of these activities were focused on the provision of training and the establishment of different groups (VHVs, savings groups, MenCare). Training alone does not always lead to sustainable behaviour change and practices, particularly when the systems are still under development and there is no existing support network to accompany the post-project period. Training and the establishment of different groups took time, and the actual support and implementation of activities was relatively short, with further challenges of COVID-19 affecting participation and growth of these groups. In the table below, results are balanced against the likelihood of sustainability, alongside recommendations for future similar programming.

INITIATIVE	RESULTS	LIKELIHOOD OF SUSTAINABILITY	RECOMMENDATIONS
Strengthening the Village Health Volunteer system for maternal and child nutrition	VHVs are clearly linked to outcomes in nutrition, referrals, family planning and men's increased role in family health.	Sustainability depends on commitment by the NDoH to adopt the VHV system in its totality and not partially as it currently stands, including funding for representatives and trainers in each province, a functional and sustainable monitoring and referral system, and formal payroll for community based VHVs. Now that IYCF and antenatal visit results are available to share, it is hoped (but not yet assured) that national and provincial government will continue to fund or directly implement the successful training, refresher courses and community public health awareness behind good results in this regard.	Use evidence from this project to advocate and support the VHV program as an integral part of the NDoH system with an adequate budget and payroll based on merit.
Capacity building of formal health workers; adoption of feeding, care and referral practices	IYCF trainings for health workers filled a gap and resulted in improved health care quality.		Continue to build vital lifesaving bridges between non-formal (VHV) and formal health care: early identification of danger signs, systematic growth monitoring, access to ready-to-use therapeutic foods and referrals to functional nutritional rehabilitation centres established by the NDoH. Future programming should also include food availability and diet choices.
Increased access to health care services for pregnant and lactating women	Community promotion and discussions, including sessions on women's health needs, contributed significantly to uptake of available services.		
Income generation through savings groups	Initially, the savings groups generated interest and the financial literacy trainings were successful. Actual ability to earn and save has decreased in the current COVID-related urban economy of Port Moresby.	Sustainability of savings groups requires more support, either by connecting them to other World Vision Papua New Guinea's livelihood/ income-generating projects or to a partner such as a bank able to facilitate loans and open accounts.	Develop different modalities and saving strategies for urban and rural settings. Ensure partnerships are created with external organisations that can facilitate access to bank accounts, savings and small loans over the long term.
Agricultural techniques and backyard gardens	While not clearly linked to any increased dietary diversity in households, backyard gardens were popular with participants and provided a little extra income for surplus produce.	Some households were already backyard gardening before the project, though on a smaller scale. Based on take-up, the practices are likely to continue and even grow in popularity.	Replicate agricultural training, backyard gardens and cooking demonstrations in all nutrition programming, though modified for urban and rural settings.

MenCare groups and gender interventions	While training was completed, implementation at community level has only taken place over the last two years, severely hindered by the pandemic. Results are promising but small scale / anecdotal.	New groups created need support to organise and bolster learning for long-term behaviour change. As they currently stand, it is unlikely they will be sustainable without this support.	To strengthen results, include children of school age to increase understanding of gender roles and responsibilities, and on men to understand their roles as caregivers and protectors of the whole family. This also involves a more integrated approach between World Vision Papua New Guinea's gender and health programs.
Child protection interventions	Only a few government staff were trained on basic child protection policies late into the project. Generally, there has been low interest in child protection issues demonstrated among community members.	Sustainable child protection actions need to be driven from the top down. *The project has not worked at this level.*	Connect with other efforts to develop solid systems to protect children and action in the persecution of perpetrators. Provide information to women on their rights and existing national gender policies. Encourage closer collaboration and partnerships with the few organisations that provide support for victims of abuse.
Disability awareness and inclusion	Positive attitudes and support for people living with disability was evident but not directly attributable to project efforts. Systemic work on disability in healthcare was not part of project design.	With health-centric results limited, disability in the health system requires another phase and a different approach. In the meantime, project staff and health workers will benefit from more extensive training on disability inclusion and treatment to adequately support those in the community.	Advocate with government for a free transportation and consultation policy for people living with disabilities to be able to access health services and facilitate access to treatment and accessories such as hearing aids, glasses and wheelchairs that can substantially change their quality of life.

A key lesson: designing for different contexts

Due to the change in location for the Bougainville project sites partway through the fourth year, it was not possible to compare results and draw lessons from rural and urban settings. However, from early on in the project, the need for two context-specific designs was identified but not met. Between Bougainville and Port Moresby, work, household and social habits are different, and even between Buin and Panguna, underlying forces are likely to be driving malnutrition prevalence differently. In Panguna, fewer women attend antenatal care because the services are hard to access, which is not the case in Port Moresby. On the other hand in Port Moresby limited space for home gardens, food consumption based on accessibility and price, and high costs of living, among other factors, have contributed to higher malnutrition compared to Bougainville. These findings clearly show that contextualised activities, and more regular and targeted needs assessments, would have maximised impact.

For more information, contact:

Saba Mebrahtu Habte, Impact Evidence Building Advisor, World Vision Australia
saba.mebrahtuhabte@worldvision.com.au

Ellie Wong, Economic Empowerment Manager, World Vision Australia
ellie.wong@worldvision.com.au

World Vision ANCP desk: ancp@worldvision.com.au

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