Australian Aid | World Vision

iREACH
(maternal and child health) project

Indonesia

Impact Brief – 2017-2021

About this report

This brief summarises the results from an evaluation of World Vision Indonesia's iREACH (maternal and child health) project. The evaluation was conducted between 17 April to 11 May 2021 by consultant, Lindawati Wibowo, with additional analysis and support from Angeline Gloria, World Vision Indonesia. Reviewed by Katie Chalk and Shirantha Perera, World Vision Australia.

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Context

Gaps and challenges to maternal and child health in Palu City remain alarming. In 2015, 22 of the 132 reported maternal deaths in Central Sulawesi were located in Palu City. The three main causes of child mortality were infectious disease (diarrhea and pneumonia), malnutrition, and low birth weight.

In 2015, cases of pneumonia detected and treated in Palu City were also the highest in the province. In 2016, 52 cases of malnutrition, representing only 2.4% of all children under five, were reported to the Health Office. However, nutrition records reported 34.1% underweight and 17.7% wasting in children under five, suggesting under-reporting. These figures are high in comparison to Indonesia's 2013 national basic health report which stated 19.6% of children were underweight with 12.1% wasting. While national prevalence of babies born with low birth weight was 10.2%, Central Sulawesi had the highest prevalence of 16.9%.

Nutrition is not solely a problem among children. In 2016, Tadulako University studied 64 high-risk pregnancies and found the two most common risks were maternal nutrition (25% of mothers are stunted from childhood, with an increased risk of delivering low weight babies), and anaemia (12.5% of women of child-bearing age are anaemic, related to diet diversity). Palu City's high maternal mortality rate was also due to indirect causes known as the "three delays" (delays in seeking care, delays in accessing care, and delays in receiving adequate care) and the "four too factors" (too young, too old, too many (babies), too close).

Project overview

The Indonesia iREACH project aimed to strengthen the referral capacity of 107 '*posyandu*' (integrated health posts) by using app-based technology (an IT-based growth monitoring system called '*mPosyandu*') in five sub-districts of Palu. The success was to be measured according to a) whether the *posyandu* met government standards and b) whether there was an increase in case referrals to health facilities, particularly related to high-risk pregnancies, malnutrition, pneumonia and diarrhoea.

The project intended to reach over 5,000 people through health promotion, training and support groups, aimed at bringing knowledge and skills to caregivers and communities (including people with disabilities) to support healthy outcomes for women and children in four ways: 1) preventing and reducing the incidence of malnutrition and infection, 2) identifying danger signs of illness, 3) timely access to health care, 4) best practices on preventing disease and infection.

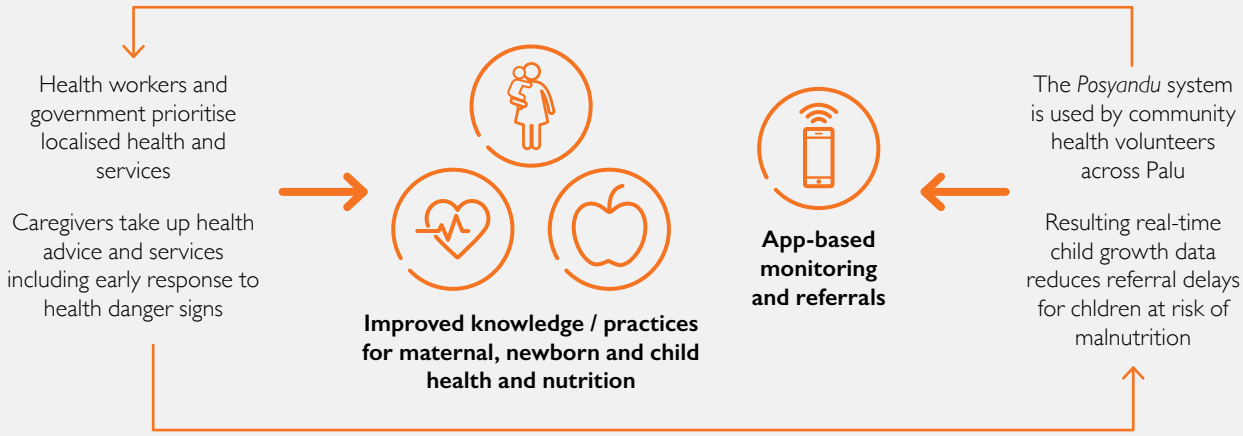
Indonesia iREACH Goal:

Improve the community-based monitoring system and practice of maternal and child health, via an IT system to identify risks and refer cases

Outcome 1: Strengthened community practices and behaviours for maternal and child health and nutrition (MCHN).

Outcome 2: Improved IT-based monitoring and referral system on maternal and child health.

Figure 1: The iREACH project theory of change



Changes and responses

The project experienced two devastating setbacks: firstly the earthquake and subsequent tsunami that hit Central Sulawesi province in September 2018 , then the COVID19 pandemic from March 2020.

Prior to the earthquake, most *posyandu* targeted by the project had already improved operations – meeting government standards and using the *mPosyandu* app. When the earthquake hit, facilities were badly damaged, community health volunteers (CHVs) and health workers (HWs) were displaced (and often traumatised), and government financial support for the *posyandu* (including *mPosyandu*) decreased significantly as resources were diverted to disaster management. With *posyandu*s closed for more than four months, the project shifted focus to health and nutrition, working with puskesmas (government health clinics), on infant and young child feeding (IYCF) training, PD Hearth sessions and water and hygiene promotion, including a WASH campaign that focused on safe drinking water treatment. During this time, the *mPosyandu* app assisted with continuity of data – despite buildings and equipment being lost, growth monitoring records were secure and accessible from the cloud.

As COVID19 emerged in Indonesia, government restrictions led to the closure of *posyandu* for almost 3 months, and again a collapse in monitoring systems and assistance to CHVs and HWs. Once again shifting focus, the project initiated a review and revision of standard operating procedures at *posyandu* and puskesmas to cover prevention issues, as well as distributing PPE, hygiene kits and handwashing stations in the community. This, along with changes in Palu City Health Office (PCHO) personnel, meant PCHO did not extend the IREACH Memorandum of Understanding (MoU) to implement *mPosyandu*. The final year of IREACH reduced the number of participating *posyandu* to 30, and supported these to become 'model *posyandu*' to demonstrate standards and effective local health partnerships in action. The project delivered on this revised goal to establish 30 model *posyandu* in six villages by June 2021.

Indonesia's maternal and child healthcare system: *posyandu* and *puskesmas*	**Core nutrition solution: PD Hearth**
Community health across the collective islands that make up Indonesia is held together through the '*puskesmas*' system, which translates loosely as community health clinic. These clinics, belonging to the Indonesian Ministry of Health, are staffed mainly by professional health workers, and provide clinical and medical services (including ante-natal and paediatric) at sub-district level. More localised grassroots care for mothers and their children is provided by a network of '*posyandu*' (health and nutrition integrated service centres), which are coordinated by the *puskesmas* but staffed mainly by community health workers including volunteers and midwives. The main objective is to help reduce under-five and maternal mortality rates. The *posyandu* provide family planning, basic health care and antenatal advice, as well as monitoring the growth of children under five. Not all children are monitored as some parents are reluctant to take advantage of the *posyandu*'s services.	Positive Deviance/Hearth (PD/H) is an internationally recognised and proven program to rehabilitate and prevent malnutrition in young children. It has three main objectives: • to quickly rehabilitate malnourished children • to build the capacity of families and communities to sustain the rehabilitation • to prevent malnutrition in the future. The program is grounded on the premise that solutions to malnutrition exist within the community. Through a 'Positive Deviant Inquiry' (PDI), community members gain access to local knowledge, strategies, resources, and practices used by families with well-nourished children (at the same level of poverty). Nutrient-dense menus are developed using locally available and affordable foods, and volunteers are trained to teach these menus along with caring and feeding practices. Caregivers and their children attend 12 days of 'training' to practise cooking, feeding, and caring for their children, which is followed up with support at home. Children are weighed before and after the programme and then periodically over the course of one year.

Evaluation methodology

Scope of consultation

Survey sample size:

- 365 caregivers with children under five from the 32 *posyandu* sampled originally
- 186 pregnant women from the same *posyandu*
- An additional 200 pregnant women from other nearby *posyandu*

Additional focus group discussions and key informant interviews with:

- Caregivers
- CHWs
- Pregnant women
- Other health stakeholders including *puskesmas* and government staff

The evaluation in April/May 2021 used a 'plausibility approach' looking at the continuum from project provision, delivery, utilisation **(process evaluation)** to its impacts **(outcome-impact evaluation)**. Information was gathered using mixed methods for complementary or triangulation purposes. The quantitative data was collected through a survey using the same questionnaire as the one used in the baseline survey; whilst qualitative information was gathered through FGDs with various village and *puskesmas* stakeholders, as well as in-depth interviews with some key informants from *puskesmas*, the District Health Office, and the District Planning Agency.

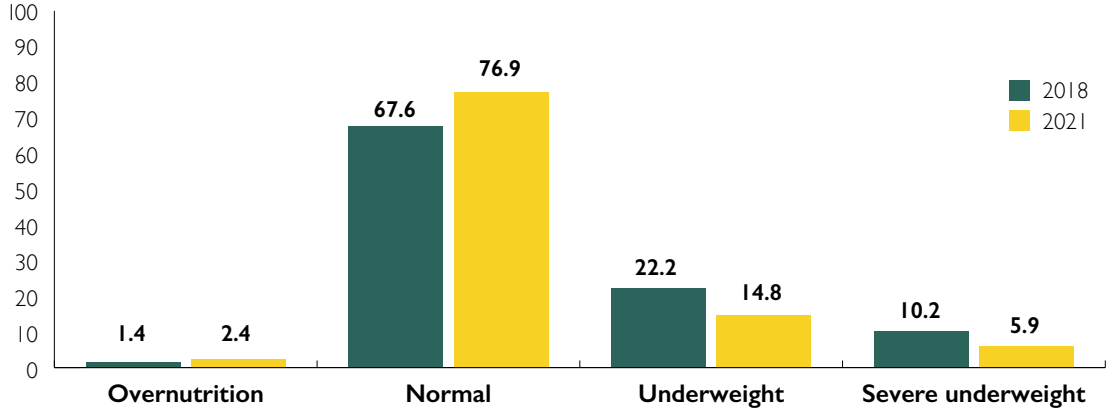
Due to rapid changes in Palu's context due to dual emergencies, some indicators selected at the start of the project were no longer relevant by the end, limiting quantitative conclusions. However, this situation also allowed for 'live' testing of the *mPosyandu* tool, resulting in evidence and strengthened conclusions on its effectiveness and stability as cloud-based data.

Results

- In the project's second year (2018-19) large scale health promotion activities on IYCF and safe drinking water benefited 7,618 persons (2.4 times higher than the predetermined target for this period). This included training 802 caregivers in IYCF.
- In the third year of the project (2019-2020) 63% of the 107 assisted *posyandu* had routinely utilised *mPosyandu* to monitor the growth and health of 3,830 children under five, detecting 1,361 cases of children at risk of being underweight or suffering from severe illnesses, with 44% referred to health facilities.
- In total, 728 HWs and CHVs were trained on *posyandu* management, *mPosyandu*, and community-based integrated management of childhood illness (IMCI). Post-activity monitoring showed 94% of caregivers had an increased knowledge of IYCF; 30% of children enrolled in PD Hearth increased their weight; and 97% of caregivers confirmed their family's drinking water was safe.
- In response to the pandemic, the project distributed 239 PPE kits, 3,787 hygiene kits, 129 handwashing stations to households and public places – increasing the number of total IREACH beneficiaries to 16,381 people since it covered all household members.
- The child health campaigns reached 11,582 people.

Impact: improved nutrition

Using a secondary anthropometric data set from the 32 sampled *Posyandus*, the evaluation detected a significant improvement on the overall nutritional status of children under five compared to baseline (illustrated in the figure below). The project contributed to this result with early risk detections, timely responses (including referral), and effective delivery of Infant and Young Child Feeding (IYCF) information in the nutritional health campaigns, along with the significant reach into populations through the *posyandu* system.



Findings

Outcome 1: Strengthened community practices and behaviours for maternal and child health and nutrition

Outcome 1: indicator results		
	2018 Baseline	**2021 Evaluation**
Proportion of children under two receiving age-appropriate food	**12.2%**	**20%**
Proportion of children under two exclusively breastfed to six months	**23.1%**	**53.7%**
Proportion of caregivers handwashing at the five critical times	**60%**	**26.6%**

IYCF best practices (defined as children under two still being breastfed or receiving appropriate complementary feeding with respect to diversity and frequency) were found to be statistically improved compared to the baseline. This positive outcome was linked through participant feedback to the frequent and repetitive messages to caregivers from various media campaigns, as well as other educational activities delivered by participating *posyandu*.

By contrast, the practice of handwashing at five critical times seemed to decline compared to the baseline, despite widespread campaigns in the assisted areas. A likely explanation for this is the pandemic-related messaging that encouraged handwashing at any time (as opposed to the five critical times) as an effective way to prevent viral transmission. Therefore, the 'handwashing at five critical times' question used in the endline survey was no longer as relevant due to an overall shift to more simplified handwashing messages.

Outcome 2: Improved IT-based monitoring and referral system on maternal and child health.

With the smaller than anticipated number of *posyandu* remaining involved with the project by the end, it was difficult to accurately measure standards and results. However, the FGDs and KIIs showed consistent views that CHWs and midwives became more confident during the project, which in turn improved the take up of *posyandu* services. Around 60% of mothers used the services offered by the project's model *posyandu*, compared to a 42% average in other areas. Some villages reported more regular visits from CHWs, especially to households with malnourished children (usually after being detected in *mPosyandu*) or pregnant women. Coordination between *posyandu* and *puskesmas* was also reported to have improved.

When Fadliani's daughter Auna was detected as moderately underweight, they began to attend PD Hearth sessions to support better nutrition for all her children. Auna gained a healthy 400 grams and Fadliani now helps out at cooking demonstrations for other mothers at the *posyandu*.

Other observations regarding the model *posyandu* included:

- Increased early detection of children failing to gain weight in two consecutive months).
- Increased number of reported and/or referral cases to health facilities due to stakeholders and caregivers being better informed about potential problems and required responses.
- Improved knowledge among targeted groups on the use of *mPosyandu*, CHN related issues, and *posyandu* management.
- Increased involvement of different stakeholders (such as village working groups) in operating *mPosyandu*, evaluating the data, and determining collective action.
- Improved responses by some *puskesmas* health staff on the reported cases.
- Improved utilisation of *mPosyandu* data for adding and/or verifying the data in ePPGBM[1].

It is important to note that these positive outcomes cannot be generalised across all the model *posyandu* as the progress and challenges varied at different posts. The best results were observed when village working groups and *puskesmas* staff were actively involved. Better collaboration between the *posyandu* and *puskesmas* should remain an area of focus, even with the model *posyandu*.

1 Elektronik pencatatan & pelaporan gizi berbasis masyarakat (translation: Electronic recording and reporting of community nutrition indicators).

Sustainability

Health and nutrition outcomes through strengthened *posyandu* can be sustained; however, the continued use of *mPosyandu* as a tool to bring about this change is not guaranteed. Most stakeholders agree on the importance of an IT-based monitoring and referral system on maternal and child health, and *mPosyandu* has shown good results (including in times of crisis). However, it was not possible to simply hand the application over to the local government. These factors included the rapid turnover of government staff (meaning ongoing training and advocacy activities would be necessary), and some confusion between *mPosyandu* and other online health initiatives used by the Department of Health across Indonesia.

Cross-cutting themes

While this project did not aim for social equality outcomes. examples of working effectively for disadvantaged groups were noted, for instance:

Working with women

- In its final year, iREACH connected with Palu's Family Welfare Organization (PKK), one of the biggest women's groups, to improve women's engagement and leadership in *posyandu*. In total 73 members of PKK took part in training on *posyandu* management, and the organisation took on direct *posyandu* supervision in two villages.

Working with children with disability

- In collaboration with Women Empowerment and Child Protection Office (DP3A), the project incorporated concepts of disability and access into training for CHVs and health workers on child rights.
- In this training, participants raised several points about barriers to *posyandu* access faced by children with disability: accessibility, understanding of services and difficulties bringing children to the health post. The project produced promotional materials in local Kaili language including encouragement and pathways for all children to take part in growth monitoring. Internal records identified six children with disability were being routinely monitored in model *posyandus* during the project's final year.
- iREACH also supported *posyandu* renovations to make buildings more accessible for children or mothers with disabilities to attend.

Child Protection: the Child Friendly Posyandu

- When developing the revised approach of model *posyandu*, the project included among them the Child Friendly Posyandu. This connected with the Palu government Child Friendly City initiative. While guidelines existed for Child Friendly Health Centre standards, they had not before been applied to the local *posyandu* spaces. As well as infrastructure and setup, the Child Friendly Posyandu indicators included training for CHVs on disability and child protection. The model successfully influenced Women's Empowerment and Child Protection Ministry (DP3A) to move forward on implementing these standards across the *posyandu* network, contributing to the realisation of Palu as a Child Friendly City.

Psychological support for Posyandu's Cadres and Puskesmas Health Staff

As Palu City slowly recovered from the September 2018 earthquake, health workers and volunteers carried out their responsibilities while facing their own tragedies and traumas. Working with other local organisations and the local polytechnic nursing college, the project team commenced a program to provide psychosocial support for frontline health teams. These one day events, held in March 2019, took into account the need to build relationships within the groups so they could support each other after the day was over. Activities included counselling sessions, contemplation, and group games. At the end of the event, the participants expressed their appreciation to the organizing team for the support, saying it had helped them stay strong.

Working in remote locations and with disadvantaged indigenous groups, the project's grassroots volunteer approach brought health and nutrition services closer to mothers who needed them.

Lessons: social outcomes

Although levels of underweight and severely underweight in children under five remains of concern in Palu City, improved services through *posyandu* appear to be contributing to a reduction over time. The project has built good support structures for further improvements, as well as triggering three valuable social outcomes:

CHV knowledge and response led to broader improvements to health services.

Intensive training from health professionals to community volunteers built necessary knowledge at local level. Importantly it also increased confidence, status and responsiveness of CHVs using new technologies and networks, and in many locations they influenced a shift in accountability of service providers to deliver activities and coordinate tasks accordingly. Other village stakeholders, for instance, health staff, midwives or the women's groups, became more motivated in public health promotion and home visits to malnourished children or pregnant women. Caregivers were more willing to bring their children to model *posyandu*, measured through *posyandu* and *mPosyandu* records. In the final year, against a target of 1,545 participants, the project reported 11,582.

Innovative practices led to strengthened local partnerships.

The project initially invested in motivating health officials through intensive communications and coordination to demonstrate what could be possible under *mPosyandu* and Standard Operating Procedures for *posyandu* staff and volunteers. This proved its value. The team demonstrated flexibility and consistently strong community relationships in the face of multiple setbacks, even though many aspects of the original action plan were taken out along the way. Interruptions to rollout including change of government held back the handover of *mPosyandu*. However, the commitment from health partners to apply SOPs and child-friendly principles has remained strong. Engagement with PKK in the final year unlocked a new network for health intervention, though it was not part of the original design.

Mobile technology was used in many ways, including to announce winners and thank participants in the final year's *posyandu* competition.

Technology brought communities together.

An interesting side benefit of *mPosyandu* was its appeal as a piece of modern technology. It was attractive and fun for people of various backgrounds to come together and learn the app. The team had expected CHVs would face initial challenges in using *mPosyandu*, but often these were overcome through community collaboration. Groups formed to provide their own 'IT support', usually teenagers and youth or Puskesmas staff with an interest in technology. Higher uptake than expected was measured in the project's first year, with 96% of participating *posyandu* already using it when the earthquake struck in September 2018.

Herda, a village health volunteer, shows a family how *mPosyandu* works. The app is simple to use and understand, using thumbs up / thumbs down to indicate whether a child's weight or height for age is outside healthy range.

Working in remote locations and with disadvantaged indigenous groups, the project's grassroots volunteer approach brought health and nutrition services closer to mothers who needed them.

Launching the Come to Posyandu campaign in 2017, with an emphasis on bright, engaging and easily understood materials.

Conclusions

The idea to establish an IT-based monitoring system for ensuring early detection and timely responses for undernutrition or other danger signs in children under five has proven sound. The project can provide evidence of its benefits, including secure data in times of emergencies and a general strengthening of maternal and child health priorities and accountabilities. But to maintain results or scale up the system further requires management to address both technical and non-technical issues.

Recommendations to World Vision Indonesia:

1. Provide tailor-made capacity building and regular communication and planning with local stakeholders at City level, taking into consideration the likelihood of turnover within government institutions.
2. Provide technical troubleshooting support to *mPosyandu*, and resolve issues with data storage in the cloud outside Indonesia.
3. Strengthen the connection between *mPosyandu* and ePPGBM for strengthened use of both systems.
4. Refresh efforts to partner with Tadulako University or other academic institutions to hand over recommendations 1 and 2 above longterm, and to scale up *mPosyandu* in other areas of Palu City.
5. Strengthen and clarify World Vision's approach to inclusive MNCH, building on examples of good practice for disability and inclusion of marginalised groups.

Recommendations to government and other health partners:

1. Raise and resolve issues within the ministerial decrees on government procurement and personal data management, which have limited the ability to scale up current *mPosyandu* data storage.
2. Replicate positive practices in *posyandu* infrastructure, management and human resource / capacity of CHVs.
3. Support locally designed behavioural change communication as an integral part of MNCH; innovations on messaging are important to reach deeper into local communities and their patterns of sharing information.
4. Establish a forum to continue regular discussions and sharing information across *puskesmas* / *posyandu* on behaviour change strategies, innovations, best practices and results.
5. Again, make inclusion of most vulnerable groups (disability, marginalised minorities) a visible principle of MNCH policy for the accelerated stunting prevention program.

We recognise with gratitude DFAT's flexibility during the post-disaster recovery period in supporting the project and considering the required adjustments, including extension of the project until June 2021.

Fadliani and her daughter receive graduation certificate from Pos Gizi

When you commit to humanity amazing things can happen!

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World Vision Australia acknowledges the support of the Australian Government through the Australian NGO Cooperation Program (ANCP).