



# Ensuring Food Security & Stunting Prevention in West Java and Central Kalimantan



Project Period 2021-2022



## ABOUT THE REPORT

Indonesia still faces nutritional problems that severely impact the quality of its human resources. Currently, the country is home to over 6 million stunted children. Many factors contribute to childhood stunting, and these factors are often linked: poor nutrition and a lack of access to diverse foods; poor sanitation and no access to clean drinking water; lack of proper healthcare for children and their mothers; and inadequate psychosocial stimulation and/or parent-infant bonding.

According to Indonesia's National Population and Family Planning Board (BKKBN), as many as 37 percent of young women are anemic. The figure is higher among pregnant women at around 48 percent. In fact, anemia suffered by pregnant women is one of the risk factors that affect the baby's growth and can potentially cause women to give birth to a stunted baby, especially if the mother-to-be is suffering from chronic energy deficiency and malnutrition.

To tackle stunting in Indonesia, the government has targeted stunting reduction to 14% by 2024 (currently the percentage is 24.4%). Meeting these targets is a big challenge for the government, especially in this pandemic. With more than 17,000 islands and 270 million people across these islands, the country requires a multitude of measures and stakeholders.



Last year, YUM recognised the crucial role of supporting community-run *Posyandu* (Integrated Health Services Center) in villages in order to spread knowledge on the risk of stunting among families, especially those currently with pregnant women. *Posyandu* is the primary milestone in monitoring the growth and development of pregnant mothers, babies and toddlers. In 2021, YUM was present in 8 villages in West Java, working with 24 *Posyandu*, and 6 villages in Central Kalimantan, working with 16 *Posyandu*. Together with 125 women volunteer health workers (or *kader* as they are called in Indonesia) in West Java and 41 in Central Kalimantan, we committed to prevent and reduce the number of stunted children in each area.

This report aims to present our findings after the one-year project period of March 2021 to February 2022. In total, close to 1,100 babies, pregnant & breastfeeding mothers and volunteer health workers have benefited directly from the support that was given.

# PROJECT SUMMARY

## WORKING WITH POSYANDU IN THE COMMUNITY

With a target of 36 Posyandu at the beginning of the project, YUM finally successfully partnered with 40, situated in 14 different villages in West Java and Central Kalimantan. All of the Posyandu in West Java are now implementing the five-table system and have an average of 5 *kader*. The five-table system is an indication of the quality of the level of service provided. As for Central Kalimantan, due to restrictions by the local government, all 16 Posyandu were closed during the period of the project. In order to continue supporting the pregnant women, the *kader* committed to going door-to-door to monitor each mother-to-be.



## SUPPORT TO PREGNANT WOMEN

Aiming to support 400 pregnant mothers, YUM ultimately assisted 587 pregnant women in West Java and Central Kalimantan. Each month, around 270 nutritional packages were delivered to these mothers-to-be, in the hopes of providing them with the diverse key nutrients they need to deliver healthy babies. Many of the pregnant women were provided with iron supplement tablets. Thanks to the hemoglobin level checks, we were able to identify the pregnant women who had iron deficiency and who were anemic.



## COLLECTING DATA ON STUNTING

Of the 587 pregnant mothers, 339 babies were born during the project period. Data collected in West Java indicated that 46% of the children were born healthy, 47% at risk and only 7% were stunted. As for Central Kalimantan, 35% of the children were born healthy, 54% were at risk and 12% were stunted. YUM also recorded each child's growth until they turned 6 months old. In both West Java and Central Kalimantan, the results showed that the older the babies grew, the less at risk of stunting they became.



Besides the 339 babies born from the pregnant mothers who were part of the program, data was also collected from 163 babies born during the same period and from mothers outside of the project group. The data found that in West Java, 79% of the babies were stunted at 3 months old.



## TRAINING WOMEN VOLUNTEERS

A total of 166 women *kader* took part in the project. Without any medical or health background, the objective of the project was to increase their knowledge as these women are frontliners in the fight against stunting. Throughout the project, nine topics were covered during the monthly training, and overall 75% of the *kader* felt they had increased their knowledge on each topic.



## SPECIAL MENTION...

We would like to highlight 3 children in West Java and 2 in Central Kalimantan who were born stunted during the project, and due to the fact that their mothers continued to receive food packages and health information, after the third month, these babies' nutritional status became normal.



# PROJECT ACTIVITIES - FOR PREGNANT MOTHERS

## Mid-upper arm circumference assessment

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Mid-upper arm circumference assessment (Pemeriksaan Lingkar Lengan Atas) helps to check the mother's nutritional status as an attempt to minimize the possibility of complications during pregnancy.



## Blood pressure check

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High blood pressure from normal conditions will increase the risk of preeclampsia which endangers the health of the mother and the foetus if left without consultation and any treatments.



## Routine data collection of weight and height

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Excessive weight gain will cause health problems and weight loss for pregnant women will cause pregnancy interference.



## Fundal Height check

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Fundal Height check is required to determine the uterus/womb's development.



## Haemoglobin level check

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Free Haemoglobin level check to determine whether the patient has a risk of anemia.



## Folic Acid distribution

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Folic Acid distribution to prevent anemia.



## Tetanus Toxoid (TT) vaccine

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Tetanus Toxoid (TT) vaccine is given to pregnant women to prevent neonatal tetanus infection in new-borns and foetus in the womb, as well as to prevent the risk of tetanus for mothers.



## Health Information Workshops

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Workshops for pregnant mothers with various health information, delivered by women volunteer health workers.



# PROJECT ACTIVITIES - FOR BABIES AND TODDLERS

## Complementary Nutrition

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YUM provides various types of nutritious food during the Posyandu activity as an example for parents on how to provide proper nutrition to their children.



## Routine data collection of weight and height

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Routine data collection of weight and height of each child in order to assess their nutritional status.



## Health Consultation

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A one-on-one health consultation with medical representatives or midwife to monitor and evaluate each child's health condition and growth development.



## Deworming treatment

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Deworming treatment was given to children aged between 12 until 59 months, twice a year, in March and September.



## Vitamin A distribution

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Vitamin A distribution was given to children aged between 6 until 59 months, twice a year, in February and August.



## Vaccines

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Polio, Diphtheria, Measles, BCG vaccines to prevent Polio, Diphtheria and Tuberculosis are provided by the government-owned Primary Healthcare Centre (Puskesmas).



# PROJECT IMPLEMENTATION

## Distribution of basic food packages to pregnant and breastfeeding mothers from vulnerable families.

Women have distinct nutritional requirements throughout their life – especially before and during pregnancy and while breastfeeding. Before pregnancy, women need nutritious and safe diets to establish sufficient reserves for pregnancy. During pregnancy and breastfeeding, energy and nutrient needs increase to support their body and their baby.

Eating healthily during pregnancy will help your baby to develop and grow. However, during pregnancy, poor diets lacking in key nutrients – like iodine, iron, folate, calcium and zinc – can cause anemia, pre-eclampsia, haemorrhage and death in mothers, while for children, it can lead to stillbirth, low birthweight, wasting, developmental delays and stunting.

In order to ensure that the pregnant women in the program are eating sufficiently, frequently and nutritiously, YUM delivered food packages during the duration of their pregnancy and even, for some, after their baby was born. In West Java, 1,891 food packages (or an average of 189 per month) were successfully delivered to pregnant women every month. In Central Kalimantan, 1,063 food packages (or an average of 118 per month) were delivered.



The program focused on providing assistance to disadvantaged families so at the beginning of the program, the kader were tasked to identify those in need in their communities. A total of 370 pregnant women were identified in West Java and 217 pregnant women in Central Kalimantan. Aiming to support 400 participants, YUM ultimately assisted 587 pregnant women. The average age of the women supported is between 20 and 35 years old. During the running of the program, a total of 211 babies were born in West Java and 128 babies in Central Kalimantan.

Improving diets before or during pregnancy and while breastfeeding is critical to preventing malnutrition in all its forms. Pregnant women also need an increase of protein during each trimester of pregnancy, because protein is the most important nutrient for growth of the baby's tissues and organs, including the brain. Therefore, in order to find out the dietary habits of the participants in our program, YUM assessed them at the beginning and end of the intervention through food frequency questionnaires. The results showed that most of them consume rice as their main food. In terms of protein, we saw at the beginning of intervention that they rarely consumed high amounts of protein; however, after intervention, they increased their consumption of powdered milk, tempe and tofu. It is important to note here that the pregnant women participating in the program come from low income families where the consumption of meat, chicken and fresh fish is very rare.



In terms of fruits and vegetables, based on food frequency questionnaires filled in after the intervention, participants in Central Kalimantan consumed a higher variety of fruits than in West Java. The variety of fruits include apple, guava, pear, orange, grape, dragon fruit, banana, papaya, mango, avocado, and watermelon. For vegetables, they all consume green vegetables quite often but rarely consume vegetables of other colours such as yellow, red, white and purple.



In Central Kalimantan, based on the answers to the food frequency questionnaire, it was agreed between the YUM staff and the pregnant women that 3 types of nutrition supplements would be available to choose from: 1) special milk for pregnancy, 2) fruits or 3) rice, protein and vegetables. Some families have vegetables and fruits in their garden so they prefer to improve their nutrition with milk. Some others preferred more fruits or vegetables.



In view of providing food security to vulnerable families (and future pregnant women), the project in Central Kalimantan also supported almost 450 families to create home gardens with a variety of vegetables growing in them. The program enabled families to purchase seeds and tools to start their home gardens. Each participant received a subsidized Home Garden Package which included chicken manure, raw husks, seeds, agricultural lime and polybags. The package also contained 8 to 10 types of vegetables consisting of beans (long beans, green beans), vegetables (white/yellow squash, cucumber, tomato, chinese okra, small/large chilies, purple/green eggplant) and leaf vegetables (kale, red/green spinach, lettuce, celery, bok choy, mustard greens).



Besides distributing the packages, the YUM staff also actively monitor the growth and the yield of the vegetables. Participants who have the means to use WhatsApp are included in the “food security-home garden” group, while for those who do not have access to a phone, our staff directly visits the participant’s home garden. In these monitoring activities, the staff provides advice and suggestions on improving their yield. For example, the staff will point out if the garden needs additional chicken manure. Moreover, the participants are also asked to actively communicate if there are any problems in the garden or to share photos during harvesting and other matters related to the garden.

## Distribution of iron supplement tablets and implementing a haemoglobin level check for 606 pregnant mothers in 14 villages

Iron supplements are particularly important for pregnant women who have anemia. Since pregnant women are at high risk of suffering from anemia, which can lead to bleeding during childbirth, YUM provided iron supplement tablets to all pregnant women of the program in West Java and Central Kalimantan, after consultation with the midwife. The staff helped to monitor, along with the midwives, how many tablets were taken. The recommended period is 60 days, in compliance with the Ministry of Health.

Beside providing iron supplement tablets, free haemoglobin (Hb) level checks were performed for all pregnant women in their 1st and 3rd trimester. Haemoglobin (Hb) measurement is a standard test among pregnant women used to evaluate physical status and anemia. Each month, an average of 39 pregnant women had their Hb level checked in West Java and an average of 24 pregnant women in Central Kalimantan. In regards to the haemoglobin level of the participants, we found that in West Java, though 69% had normal Hb levels, 24% were found to have iron deficiency (high risk of anemia) and 8% had high Hb levels which can lead to blood coagulation. In Central Kalimantan, thankfully, 88% of the pregnant women had normal Hb levels, 16% were found to have iron deficiency.



**To support the integrated healthcare posts (Posyandu) and volunteer health workers to ensure access to key health service for pregnant mothers and children under 2 years old**

Basic health services at the Posyandu cover at least the five-table system: 1) registration of pregnant mothers, breastfeeding mothers and children 0 to 5 years old, 2) Anthropometric measurements for all participants, 3) Data collection inputted into the Health Card, 4) Health and Nutrition Education for all mothers of small children, pregnant mothers and breastfeeding mothers by a midwife, and 5) Health services, Family planning services and Immunizations, and based on our observations and monitoring of the 24 Posyandu in West Java, all of them are now implementing this system. However, this objective was unable to be reached in Central Kalimantan as all 16 Posyandu were closed during the period of the program.

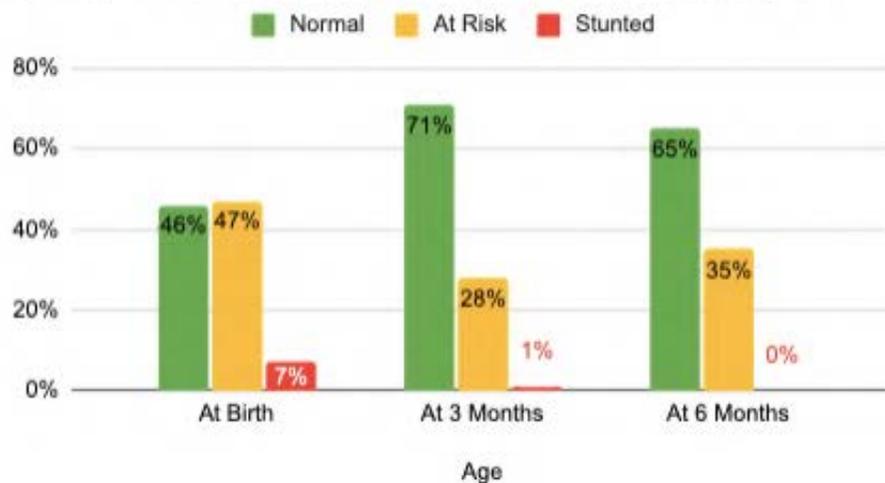




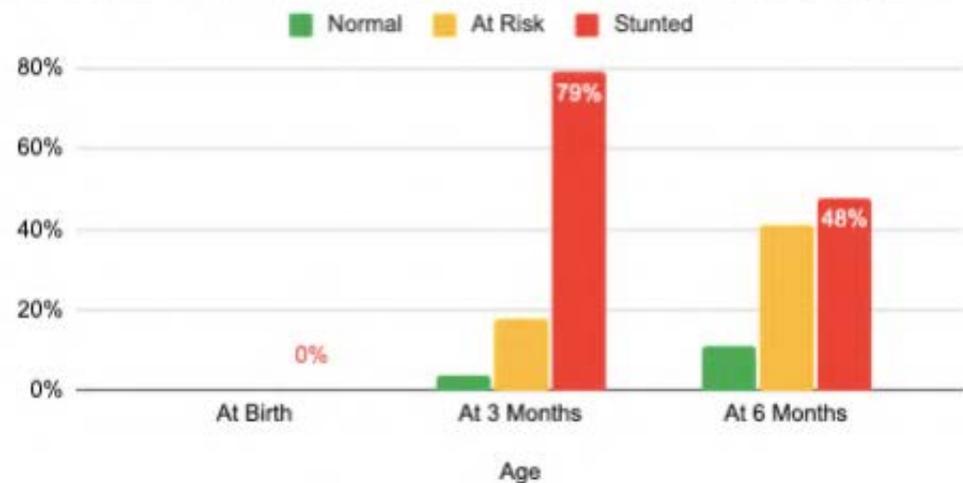
Posyandu has the leading role in providing health and nutrition services to pregnant women and children. Growth monitoring in most of the Posyandu is still based on weight indicators according to age. However, the Posyandu that have been monitored by the project are now also implementing height measurements according to age in order to be able to define a child as being stunted or not. The role of the Posyandu is crucial in the fight against stunting in Indonesia. Within the Posyandu, the kader monitor the development of each child through anthropometric measurements so that growth problems can be detected as early as possible, and stunting can be prevented.

In terms of data collection, the kader are tasked to record the height measurements of all the babies and toddlers in their Posyandu. Due to this, the project recorded not only the anthropometric measurements of the babies of the pregnant mothers participating in the project (Group 1) but also those who did not participate (Group 2). Thanks to the records from the 24 Posyandu in West Java, we found that Group 1 showed a greater percentage of healthy babies (normal status) while Group 2 showed a large number of stunted children.

Group 1 - Babies born to mothers in the program



Group 2 - Babies born to mothers outside the program



As for the pregnant women, the Posyandu collects data regarding their nutritional status as it has an important role in the positive outcome of a pregnancy. The nutritional status can be assessed using different parameters, one of them being the mid-upper arm circumference (MUAC), a simple measurement used to evaluate the nutritional status of an individual and serves as a surrogate of the body mass in pregnant women.

Month	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
<b>Mid-upper Arm Circumference (MUAC) in West Java</b>											
Normal	75%	79%	85%	84%	87%	85%	81%	81%	79%	81%	82%
Malnutrition Risk	25%	21%	15%	16%	13%	15%	19%	19%	21%	19%	18%
Total # of Women	177	197	188	166	137	134	135	134	140	134	122
<b>Mid-upper Arm Circumference (MUAC) in Central Kalimantan</b>											
Normal	0%	0%	81%	90%	97%	95%	94%	92%	96%	98%	98%
Malnutrition Risk	0%	0%	19%	10%	3%	5%	6%	8%	4%	2%	2%
Total # of Women	0	0	26	30	36	40	63	85	55	60	47



The MUAC is one of the most effective ways of determining short term change in the nutritional status of an identified population. Every month, the kader checks the MUAC of all pregnant women who come to the Posyandu. The results for the participating group of pregnant women indicates that both in West Java and Central Kalimantan, most pregnant women are healthy. However, in West Java, an average of 18% of the pregnant women in the group were at risk of malnutrition, while in Central Kalimantan, only an average of 5% were at risk. This data confirms our assumptions that in West Java, the eating habits of the population lead to an inadequate intake of food and nutrients. In pregnant women, this may be caused by the high percentage of early age marriages and lack of nutrition education from their parents and the schools.

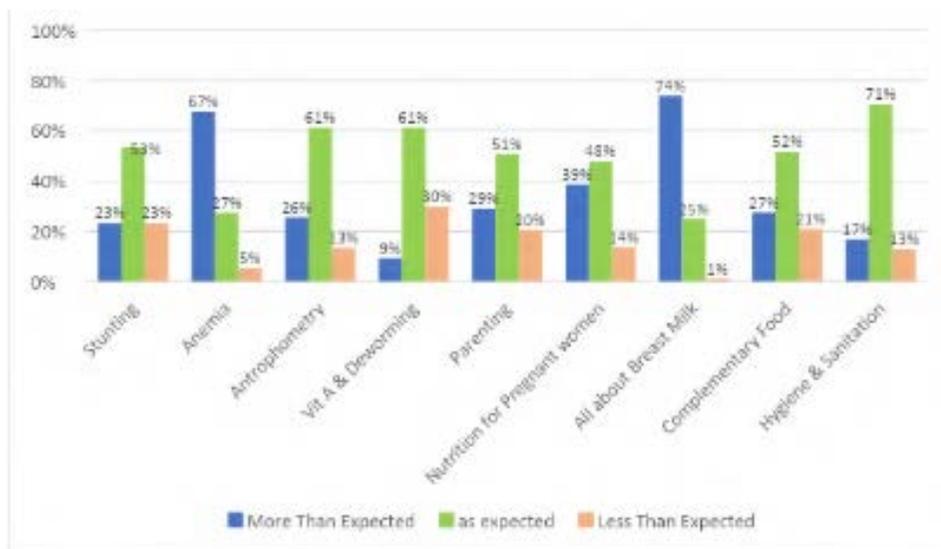
**Increase the knowledge of volunteer health workers by organising training on the importance of stunting prevention, prenatal and postnatal counselling, importance of sanitation hygiene and nutrition as well as child-rearing advice**

In the 300,000 *Posyandu* that serve more than 30 million mothers across Indonesia, the quality of healthcare services provided through this traditional model greatly varies as most of the *kader* lack the training and critical skills needed to recognize or properly attend to the issues contributing to high stunting rates. This is why it was crucial for the project to place a high priority and invest in the training of the 125 *kader* in West Java and 41 in Central Kalimantan. It is interesting to note that the education level of the *kader* in both areas are different so the level of comprehension also varied. In West Java, most of the *kader* graduated from Junior High School, while in Central Kalimantan, most of them graduated from Senior High School.

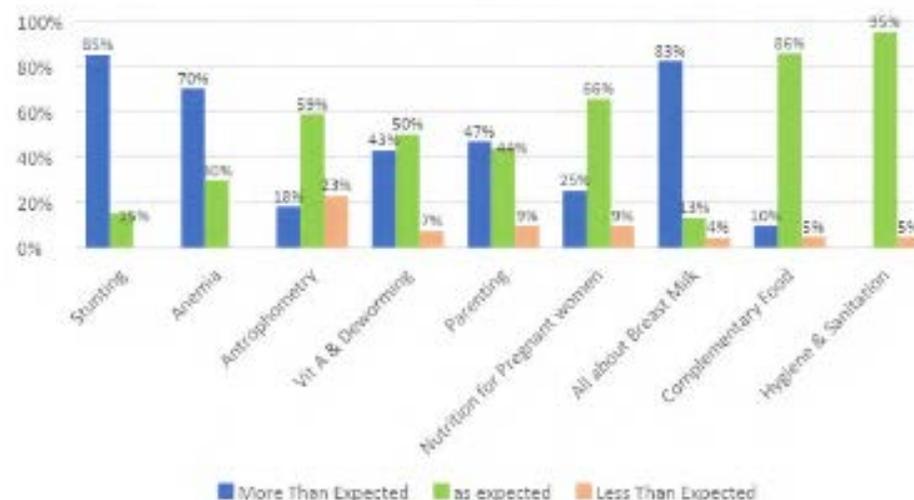
From April 2021 to January 2022 all of our *kader* received training to increase their knowledge and build their capacity. The training does not simply aim to provide them with knowledge on stunting, pre and postnatal care and child development, but we also make sure that they are confident with the knowledge they receive.



A pre and post test was conducted during each training session, resulting in 87% of the kader having either improved their pretest scores higher than expected or as expected. The topics on the importance of breastmilk and how to prevent anemia received high scores, in both West Java and Central Kalimantan, as these topics were already frequently discussed before the beginning of the project. Besides that, the kader in Central Kalimantan had consistent high scores on the topic of Hygiene & Sanitation because they were actively involved in YUM's Clean Water & Sanitation project from 2018 to 2021.



**Training results in West Java**



**Training results in Central Kalimantan**

The topics of the training varied every month, as well as the number of attendees. Due to a second wave of high Covid-19 cases in July 2021, it was not possible for the training to take place. On average, around 70% of the *kader* in West Java came to the training, and 60% of the *kader* in Central Kalimantan.



The *kader* were very excited to join in the training program because they received valuable information that they could use during the *Posyandu* activities when they received questions from the mothers. The training was also an opportunity for them to feel more empowered and useful in their role.

**Create communication campaigns, in collaboration with volunteer health workers, on stunting, sanitation and hygiene in order to increase local awareness**

To increase local awareness around stunting, our main aim was for the kader to deliver the information they had received in the training to all the mothers and pregnant women in their Posyandu. What we learned, especially in West Java, was that most of the kader felt unprepared to deliver a presentation in front of an audience. To help with this, YUM provided them with flipcharts, created by the 1,000 Days Fund. These flipcharts greatly assisted the kader during their presentations about stunting. Besides these flipcharts, posters and banners were created and installed during each monthly Posyandu gathering. In Central Kalimantan, as all 16 Posyandu were closed during the duration of the project, each kader went door-to-door to deliver the information on stunting prevention at the same time as they delivered the food packages to the pregnant women.

Through the Priscilla Hall Memorial Foundation, YUM received 400 smart charts and 165 smart blankets, also created by the 1,000 Days Fund. In West Java, 100 smart blankets were distributed to mothers with newborn babies, while 65 smart blankets were sent to Central Kalimantan to be distributed among the kader to assist them in their visits to families with newborn babies, while explaining about the importance of stunting prevention.



The 400 smart charts, a stunting prevention tool that brings information into the home, were distributed to families with children between the ages of 12 to 24 months old. The smart chart is a tool for height measurement which also provides information about vitamin A, deworming, exclusive breastfeeding, a nutritious diet and the importance of hygiene and sanitation among other tools to prevent stunting. The project worked side-by-side with the kader in both West Java and Central Kalimantan to ensure that each smart chart was installed properly in the houses, and an explanation around stunting prevention was given during the installation.



In November 2021 and January 2022, YUM collaborated with Kalbe Farma, a pharmaceutical company, to hold free ultrasound for 200 pregnant women in West Java and 200 in Central Kalimantan. Kalbe Farma provided the medical team as well as the equipment for the ultrasound. During the activity, videos on stunting prevention were shown and appointed kader were asked to present various themes around stunting, pre and postnatal care and child development.

Another collaboration that involved awareness on stunting was with Indorelawan, an online local volunteer hub that connects NGOs with volunteers. Indorelawan created the #NoStuntingGeneration event that gathers volunteers all around Indonesia to learn about stunting and ways for these volunteers to educate their surrounding communities. Through this event, YUM's Health Coordinator, Eneng Ernawati (Erna), was able to reach 451 people, mostly female students located in 29 different provinces of Indonesia. Erna was tasked to present the importance of Posyandu and more specifically of the kader in the fight against stunting. During the presentation, Erna also described YUM's holistic work in stunting prevention as well as case studies from the field. The volunteers who participated in this event were then assigned to connect with the Posyandu in their area and organise stunting education. Thanks to this activity, close to 200 Posyandu were surveyed by the volunteers and more than 1,000 people were given education on stunting prevention.



**Dampak Generasi Bebas Stunting**  
**545 orang yang di edukasi**  
**stunting & sanitasi**



It is important to note that in the beginning of the project, YUM presented its activities to the Primary Healthcare Centre (Puskesmas) in both West Java and Central Kalimantan, asking permission from both organisations to collect data from each Posyandu. As part of the Indonesian government's strategy to reduce the number of stunted children, each of these government agencies are tasked with carrying out and supporting activities of public awareness around stunting. In January 2022, the kader working with YUM in Central Kalimantan approached their Puskesmas and requested that they be able to use the training content, communication tools and community-led approach created by YUM instead of the one provided by the government. Their reason was that YUM's materials were much easier to understand. As for West Java, both the Sub-District Government have made public presentations in which most of the stunting prevention activities and awareness program in 2021 in the area have been conducted exclusively by YUM. These statements unfortunately prove that, though the central government has a great desire to reduce the number of stunting cases, the provincial government and their agencies either do not have the capacity or the aspiration to execute the central government's directives.



# MEASURING QUANTITATIVE IMPACT

*Project Indicators*



INDICATORS	TARGET	ACTUALS	BALANCE
POSYANDU	36	40	+4
PREGNANT WOMEN	400	587	+187
BABIES	339	502	+163
VOLUNTEER HEALTH WORKERS	130	166	+36
SMART CHARTS	300	400	+100
SMART BLANKETS	100	165	+65
CAMPAIGN <i>Families</i>	600	1200	+600

# MEASURING QUALITATIVE IMPACT

## Stories and Testimonials



I am a housewife whose daily activities consist of taking care of the family and selling clothes online. I have 3 children and am now pregnant with my 4th child.

I was told about the Stunting program in August (at that time I was 4 months pregnant) by the kader (volunteer health worker) in my village. I immediately signed up for the program. When I listened to the information that the kader conveyed, I was happy and interested because I believe this program is very good and very helpful for pregnant women. Moreover, every month there is assistance with nutritional packages such as milk, fruits, eggs, green beans and others. Most importantly, I received knowledge about stunting, which I only found out after participating in the program from YUM.

In the past, when I was pregnant with my previous children, I rarely went to the health facilities to check my baby's condition but now I know how important it is to do a routine check every month. Also, after knowing how important our hemoglobin level is during pregnancy, now I regularly take iron deficiency tablets because I had difficulty giving birth before. I want to make sure that nothing will happen to my baby.

I hope that this program will continue because it is very helpful, especially for people who cannot afford nutritious food.



**Ibu Y, 33 years old, pregnant mother from Central Kalimantan**

“ I have been a kader for a long time but this is the first time I have been directly involved with such an activity. Usually when there is a special training or activity, the kader who participate are selected in advance, but with YUM, anyone who is interested and willing can be involved.

The activities of YUM are also different from those carried out by private and public agencies that collaborate with kader because usually after the materials are provided, it stops there. However, with YUM, based on all the activities I have participated in, there has always been continued support - if there is something that is not understood, we can easily ask the YUM staff.

During this stunting activity, I was very happy because I could share my knowledge and experience with other people. I have also gotten to know many people so now I have many friends.

I do hope this Stunting program continues and is offered not only in Bukit Batu but also in other areas because this program is very helpful especially for those who don't know anything about stunting.

**Ibu H, 33 years old, kader from Central Kalimantan**



“ I have been a kader for almost 10 years. I want to be part of improving my community's health, especially for mothers and children. Since I only completed secondary school, I do not have enough knowledge about public health that I can share. That's why I find the training from YUM very beneficial. From all of the training I received, I found the topic of parenting to be the most difficult. I never knew that there are several different ways to raise a child according to his or her personality .

**Ibu N, 50 years old, kader from West Java**





“ I joined the stunting program when I was already 7 months pregnant and continued receiving support up to 3 months after delivery. Every month I received nutritional packages, attended health workshops delivered by volunteer health workers, received iron tablets (during pregnancy) and got a free haemoglobin level check. When I delivered my baby, I felt very sad and ashamed because my son was born stunted. However, I applied the knowledge and skills that I received in the health workshops at YUM, such as exclusively breastfeeding my baby, eating varied and healthy food and also keeping personal hygiene and sanitation. Finally, when he was 2 months old, his nutritional status became normal and he is now growing up to be a healthy baby. Previously, I rarely came to *Posyandu* and didn't know what stunting was. After joining the program, I'm very grateful that I got valuable knowledge and skills!

**Ibu L, 34 years old, pregnant mother from West Java**



“ I cannot express in words how grateful my husband and I are for the support that we have received since the beginning of my pregnancy. Both my baby and I are healthy and well. The kader, midwife and the YUM staff at the *Posyandu* have shared a lot of useful information about the mother and the baby's health pre and post delivery, especially about stunting and its prevention. The smart blanket has been a great gift for me and my baby. I can use that as a guideline for my child's development and a reminder on how to prevent stunting from happening.

**Ibu F, 28 years old, pregnant mother from West Java**





**Our heartfelt  
gratitude for all  
the donors who  
supported this  
project.**

**Thank you!**

