



Exploring Maternal, Infant, and Young Child Nutrition & Early Childhood Development Practices in Indonesia

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Glossary and Abbreviations

ANC	Antenatal care
Bappenas	<i>Kementerian Perencanaan Pembangunan Nasional</i> / Ministry of Development Planning
Bidan	Midwife
BKB	Bina Keluarga Balita / Toddlers' Families Development Programme
BKKBN	<i>Badan Kependudukan dan Keluarga Berencana Nasional</i> / National Population and Family Planning Board
BMS	Breastmilk substitutes
BPJS	<i>Badan Penyelenggara Jaminan Sosial</i> / Social Security Organizing Body
Bupati	Head of Regency / Mayor
Kader	Community health worker
Dusun	Sub-village
ECD	Early Childhood Development
FDS	Family Development Sessions
Gol	Government of Indonesia
HCD	Human Centered Design
IDEO	a global design company leading on Human Centered Design
IDR	Indonesian rupiah
JICA	Japan International Cooperation Agency
JKN	<i>Jaminan Kesehatan Nasional</i> / National Health Insurance
Kadus	Head of sub-village
Kelor	Moringa oleifera
Kerdil	Dwarfism
KIA	<i>Buku Kesehatan Ibu dan Anak</i> / Maternal and child health book
KIS	<i>Kartu Indonesia Sehat</i> / Indonesia Health Card
KK	<i>Kartu Keluarga</i> / Family Card
KKS	<i>Kartu Keluarga Sejahtera</i> / Prosperous Family Card
KTP	<i>Kartu Tanda Penduduk</i> / Identity Card
Mantri	Male nurse or healer
MSG	Monosodium glutamate
MR	Measles-Rubella Vaccination
OD	Open defecation
Ojek	Motorbike taxi
PAUD	<i>Pendidikan Anak Usia Dini</i> / Early education centre (pre-school)
PKH	<i>Program Keluarga Harapan</i> / Hopeful Family programme
PKK	<i>Pemberdayaan dan Kesejahteraan Keluarga</i> / Empowering and Family Welfare Programme
Polindes	<i>Pondok Bersalin Desa</i> / Village maternity post
Posyandu	<i>Pos Pelayanan Terpadu</i> / Integrated health services e.g. clinic sessions for mothers young children and the elderly
PSG	<i>Pemantauan Status Gizi</i> / Surveillance of Nutritional Status
Puskesmas	<i>Pusat Kesehatan masyarakat</i> / People's health centre
Pustu	<i>Puskesmas pembantu</i> / Sub-health centre supporting the puskesmas
Raskin	<i>Beras untuk Orang Miskin</i> / Rice for the Poor
Rastra	New version of Raskin
RCA	Reality Check Approach
RISKESDAS	<i>Riset Kesehatan Dasar</i> / Basic Health Research conducted by Ministry of Health
SDIDTK	<i>Stimulasi Deteksi dan Intervensi Dini Tumbuh Kembang</i> / Examination, Stimulation, Detection and Intervention for Growth and Development Abnormalities and Deficiencies
SGM	a brand of baby formula and fortified powder milk for pregnant women
SUN	a brand of packaged baby porridge and biscuits
SUSENAS	Indonesian National Socioeconomic Survey
TBA	Traditional Birth Attendant
TNP2K	<i>Tim Nasional Percepatan Penanggulangan Kemiskinan</i> / National Team for the Acceleration of Poverty Reduction
TK	<i>Taman Kanak-kanak</i> , kindergarten
UNICEF	United Nations Children's Fund

INTRODUCTION

In 2017, the Government of Indonesia launched the multisectoral National Stunting Reduction Movement to address stunting during children's first 1,000 days. Alive & Thrive (A&T) completed an extensive desk review of maternal infant and young child nutrition (MIYCN) and nutrition-sensitive practices in Indonesia, which informed the creation of a national Social and Behavior Change Communication (SBCC) strategy.

Developed together with other partners, including UNICEF Indonesia, Interfaith Medical Assistance (IMA) World Health, Millennium Challenge Account Indonesia, and The World Bank, and led by the Ministry of Health and with the Ministry of Communication and Informatics, the strategy, known as the National Campaign and Behavior Change Communication Pillar, has now become an integral part of the government's efforts to reduce

stunting (see box for details). Earlier efforts to overcome challenges to improving priority MIYCN behaviors at household and village levels allowed A&T to identify effective approaches, which influenced the development and implementation of the national strategy.

With funding from the Tanoto Foundation, A&T and Empatika PT implemented an innovative formative assessment on the complementary feeding period (6-23 months), maternal nutrition, and early child development (ECD) practices. It aimed to deepen our collective understanding of local behaviors and practices and inform the co-creation of SBCC solutions with communities. This report shares the assessment's findings and makes recommendations for how they might be valuable contributions to the ongoing national SBCC strategy implementation.

Four strategies to raise awareness and change behavior to reduce stunting

1. A national campaign supports implementers with guidelines, tools, coordination mechanisms, and budgetary resources. Designed with core messages broadly targeting the public, the campaign utilizes varied channels such as traditional and digital media; public activities; educational and religious institutions; civil society and professional organizations; and the private sector.
2. Interpersonal communication for behavioral change takes place and is measured both at the household level and on a larger scale. Village-level integrated health service posts (called *posyandu*), parenting classes, classes for pregnant women, family learning centers, home visits, pre-marriage counselling, and reproductive counselling for teenagers spread key messages in accordance with the needs of target groups. To encourage public interpersonal behavior change, the evidence-based strategy incorporates social-cultural contexts of target groups and implementation tools, such as counselling guidebooks, coordination mechanisms, and financial resources.
3. Advocacy builds support and commitment to create a supportive environment for stunting reduction. Government decision-makers are reached through systematic outreach within government and non-government institutions, utilizing personal audiences, consultation forums, workshops, and media.
4. The capacity of SBCC implementers is developed through trainings and knowledge provision. Print and electronic media, information and educational materials are provided to implementers to improve the efficacy and efficiency of SBCC campaigns. Trainings are given to implementers in both government and civil society institutions, such as kaders of village-level Integrated Health Posts (Posyandu), Human Development Kaders (KPM), and representatives of religious organizations.

Maternal Infant and Young Child Nutrition Practices in Indonesia

National level data on MIYCN behaviors and practices in Indonesia are widely known and available (see Table 1). Factors driving these MIYCN behaviors are highly variable across communities and within households; determinants include food environment and a wide variety of cultural and family dynamics. Furthermore, these indicators, even when available at sub-national levels, do not capture all the critical aspects of feeding practices, particularly during the 6-23 month period. For example, they do not indicate the quantity of food being consumed, how food is provided to children, and other influences on feeding choices.

To that end, significant research has been conducted in different areas of Indonesia. It has shown that mothers lack confidence in their own ability to produce the right quality and quantity of breastmilk in the first six months. This leads to early introduction of complementary foods, which is common. The variety of foods provided to children after six months is often limited to two food groups, grains (typically rice) and vegetables. Likewise, the frequency of feeding is inadequate; many children eat only two or fewer times per day. During pregnancy women reduce their intake of animal protein, and practice other pregnancy-related food taboos as well as reduce overall consumption (Alive & Thrive Desk Review, 2018). While this information adds to what is known about the prenatal period, and what and how children are fed after birth, the reasons behind these choices are only partially understood.

TABLE 1. Select MIYCN indicators in Indonesia

Breastfeeding indicators

Early initiation of breastfeeding	49.3%
Exclusive breastfeeding 0-5 months	51.5%
Continued breastfeeding at 1 year old	77.0%
Continued breastfeeding at 2 years old	55.0%
Children ever breastfed	95.8%
Prelacteal feeding	60.0%
Bottle feeding (0-23 months)	37.0%

Complementary feeding indicators

Introduction of solid, semi-solid or soft foods (all children, 6-8 months)	91.0%
Minimum meal frequency (all children, 6-23 months)	66.1%
Minimum dietary diversity	58.2%
Consumption of iron-rich or iron-fortified foods	68.0%
Consumption of vitamin A rich foods	82.7%
Vitamin A supplementation in past 6 months (6-59 months)	83.5%

Maternal indicators

Post-natal care for mothers within 2 days of delivery	31.0%
≥90 iron pills taken during pregnancy	33%
Antenatal care coverage - at least four times	87.5%

All data is from the 2017 IDHS report preliminary key indicator report, 2013 RISKESDAS or 2012 IDHS

ABOUT THE ASSESSMENT

Objective and Methodology

This assessment set out to address gaps in our understanding of beliefs, practices, and norms related to MIYCN and early child development (ECD) in different contexts. It included a process of developing and testing community-generated solutions to selected inadequate feeding practices among children 6-23 months, and the perceived low quality of MIYCN service delivery.

This assessment, based on the principles of human-centered design, used some of the best formative research techniques available. It consisted of two phases implemented in six diverse communities: immersion and prototyping/testing (see box). In the immersion phase, teams of four researchers lived with families in the selected study locations for four nights and five days, aiming to understand critical nutrition practices. Prior to immersion, a detailed list of “areas of conversation” and “pre-constructed scenarios” were developed to guide researchers in their conversations with current literature and expert advice. Using these guides, investigators observed and interacted with families, directly engaging in food preparation and care of babies and infants. Researchers observed families in their daily lives and interactions with neighbors as well as service providers in health, education, and village government, and recorded twenty-four-hour food diaries for children under two years old. Interactive activities with family members included exercises in food ranking, seasonality, and creating income and expenditure diagrams. Care was taken to ensure that participating families understood that the investigators would be living with them as a member of the household, and that no special arrangements should be made. Ethical approval was granted by the Atma Jaya University.

Immersion

Living in people’s own homes and sharing in their everyday lives to understand existing attitudes and behaviors, and experience first-hand the context and conditions which help, and hinder behavior change.

Prototyping

An open-ended, iterative design process that emphasizes local solutions and local resource mobilization, built on a deep understanding of the context, needs and desire of the people involved in the intervention design.

Findings from the immersion were analyzed and insights from the analysis informed the focus for the prototyping/testing phase in each community site. Investigators returned to their same communities and held a series of local ideation and prototyping design workshops. Workshop participants included pregnant women, mothers with children under two, fathers, grandmothers, other caregivers, midwives, kaders, traditional birth attendants and village leaders. In an initial workshop, investigators shared the findings and supported communities to choose their priority MIYCN challenges. In a follow-up workshop, investigators led an idea creation process, supporting community members to design prototype solutions to the identified MIYCN challenges. Investigators left communities to test out the interventions, while providing remote mentoring and support as needed.

After a period of about six weeks, investigators returned and held follow-up workshops to discuss the prototyping, sharing what was feasible and locally acceptable to address the community-identified MIYCN and ECD challenges.



Map 1. Study locations in eastern, central, and western Indonesia

Assessment Locations and Participants

The criteria for the six study locations were agreed in consultation with national stakeholders. Selected locations had high rates of stunting and reflected a diversity of cultural contexts. Two districts each were chosen in the eastern, central, and western parts of the country using a map of the 100 priority districts for stunting reduction. Table 2 shows the chosen study locations. Villages within each district were selected to include inland, coastal, and riverine geographies, varying sizes, and different religious and cultural characteristics. Detailed descriptions and images from the villages are included in Annex 1.

Over 800 children and adults participated in the four-day immersion phase. Seventeen of the participating 24 households had children in the focal age range (under the age of two). Although pregnant women were also a priority, at the time of the research, no pregnant women were available to participate.

Seven of the investigators performed the research in a household with neighboring families who had

TABLE 2. Study locations

	Province	District
Eastern Indonesia	South Kalimantan	Hulu Sangai Utara
	West Sulawesi	Majene
Central Indonesia	NTT	Alor
	Maluku	Seram
Western Indonesia	West Sumatra	Pasaman
	West Java	Garut

children in the focal age range. While the investigators spent most of their time with their host families, they had the opportunity to spend time with neighbors, health service providers (including midwives and health kaders), teachers (especially in early child development centers [PAUD] teachers), local market vendors, and other community members. The participation of families and individuals was voluntary. Their right to participate or not and their right to confidentiality were fully explained.

THE IMMERSION PHASE



The immersion focused on feeding practices of children 0-23 months and related early child development practices (feeding styles and stimulation practices) as well as, to a lesser extent, on maternal nutrition practices. It also explored providers', mothers', and caregivers' perceptions of the quality of services and practices influencing MIYCN at health facilities. In addition, given the government's campaign on stunting reduction, the investigators observed and discussed some of the perceptions and beliefs of community members about stunting. They also witnessed some of the programs and activities that have resulted from these efforts. A summary of the findings from the immersion follows.

Perceptions of stunting and government actions to address stunting

Many initiatives based on the government's focus on stunting reduction started in 2018. Senior provincial-level officials have challenged district- and local-level health providers and communities to tackle the problem as a high priority. Village governments in almost all of the assessment locations have used and/or allocated village funds (*dana desa*) to tackle stunting. Focus and attention to the issue has grown and was evident in the immersion communities. There have been both positive and unintended results.

- Communities are creating awareness campaigns, using village funds for malnutrition prevention, developing feeding programs, and other interventions.
- In some instances, a culture of blame is developing; high-level officials are blaming district-level health providers who are blaming local-level staff and kaders who are blaming parents for not listening to their advice on how to feed children. Fathers may even blame mothers.
- Labeling a community or a child as stunted is also leading to shame and creating stigma.

Community leaders, health workers, and community members are confused on the definition of stunting and what it means for child development. Stunting is being confused with genetic disorders or dwarfism; one reason is the use of the word *kerdil* (dwarf) in communication products about the campaign. At the same time, the basis for estimating the burden of stunting in communities is being questioned.

- The link between stunting and cognitive development as communicated by the campaign is being challenged based on anecdotal individual experiences. Community members point to individuals (or children) of short stature and remark about their high capacity/ability.
- Also, individuals point out that height measurements are rarely taken in the communities. While *Buku KIA* (Maternal and Child Health Booklet/ MCH Booklet) include standard growth monitoring charts, the investigators rarely found growth data in the books. New directives to measure height were issued in early 2019, however, in some *posyandus*, the health kaders had no idea how to use the equipment for measurement. This leads the community members to question the data that are being shared on the numbers of stunted children.

Findings from the Immersion

EXCLUSIVE BREASTFEEDING

Early initiation of food

While breastfeeding is a norm, breastfeeding exclusively for six months and continuing to breastfeed for two years is not. Infant behavior guides mothers and others in how the child is fed. A crying baby is perceived to mean the baby needs more than breastmilk. A baby showing interest by grabbing for food and crying when others are eating is interpreted as another signal to introduce food. Perhaps most important for behavior change is understanding that mothers are proud when their babies take food early; they believe it shows how strong, smart, and developed the baby is. Mothers and others are delighted when babies try new food, drink coffee or tea, or take a banana.

Influencers

Grandmothers, aunties, and other caregivers have their own beliefs and practices. They are often the first to introduce rice water, palm sugar, honey, or bananas, saying, “it is just a few spoons.” This suggests that they know that it is not the recommended practice, yet they still do it. Mothers and midwives find it difficult to stop relatives from this practice.

Health/nutrition services can also influence behavior. Weight gain, necessary for growth, is emphasized at the *posyandu*, however, mothers perceive that food is necessary for weight gain rather than a change in breastfeeding practices. This is exacerbated by the fact that feeding programs at the health posts distribute foods to mothers with babies under six months old. Since health staff distribute these foods, mothers conclude that they can be given to babies.

COMPLEMENTARY FEEDING 6-23 MONTHS

Introducing food as a complement to breastfeeding

The concept of complementary feeding—food is meant to be introduced at six months as a supplemental source of nourishment, and breastfeeding is meant to continue as the primary source of nourishment for the baby—is not understood. As soon as a baby shows interest in food, mothers consider breastfeeding to be secondary. Mothers do not understand that changes in breastfeeding should be done slowly from 6 to 23 months and that breastfeeding should continue for at least two years. Mothers feel that the food the baby eats is the key source of nutrition and that any breastmilk they continue to give serves the function of mainly providing comfort, and secondarily hydration. Rather than adding the appropriate amounts of food to complement breastfeeding, the recommended practice, mothers feel they should fill their babies with food and only provide breastmilk on the side.

The first food

Contrary to the recommendation that babies should begin eating thick porridges and be introduced to vegetables, meats, and all other types of foods at 6 months, mothers/caregivers choose the first food by its consistency. Younger babies—4-8 months—are primarily given watery porridge. Rice porridge is the most common first food and is often heavily seasoned with salt, monosodium glutamate (MSG), stock or heavily sweetened. Rarely are vegetables or other foods added. Mothers say babies like highly sweetened or salty porridge best, and adding vegetables makes it less palatable. Sugar was often added to new foods to make babies try them. Mothers believe that young children prefer breastmilk substitutes (BMS) or sugary beverages more than breastmilk, and parents cater to these preferences.

Feeding older babies

While investigators discussed feeding in terms of ages associated with changes in recommendations (0-6 months, 6-9 months, 9-12 months, and 12-24 months), mothers gauged feeding practices by when breastfeeding only is enough, and then pre and post teeth. Once babies have teeth, they are expected to eat the same as adults. The appearance of front teeth (usually around 8 months) seems to indicate to mothers that babies can have thicker porridge and mashed foods. The introduction of any substantial food (vegetables, fish, meat) is delayed until the baby is thought to be able to “chew.” By about 12 months, children eat more or less the same food as the rest of the family, with some adaptations, so that children’s diets more closely align with family norms. In some study locations, food for young children is washed off to remove excess chili, and sometimes a conscious decision is made to use less MSG.

Types of foods for young children

People are familiar with the five food groups, as taught in school, but the emphasis remains on rice as the main food. Anything else is viewed as adding flavor and is eaten in small quantities. Animal-source foods are not common in complementary foods provided to babies, even when they are affordable and available (e.g., eggs and fish). Caregivers often avoid fish for complementary foods due to concerns about the baby/child choking on bones. Although some families keep chickens (especially in W Sumatra Hills and W Java Hills) or ducks (in W Kalimantan Riverine), they are generally not eaten and regarded instead as assets that can be easily sold for cash. Eggs are hardly ever consumed, even in families who keep many chickens. Maluku Coastal was found to be an exception in the research village where eggs were often observed in kitchens, mostly purchased at a kiosk.

The most common vegetable eaten in families across all study locations is *kelor* (*moringa*). This vegetable grows wild and is easy to collect. Other green leaves such as spinach, morning glory, and pumpkin leaves are also prepared regularly across most study locations. Pumpkin, long beans, and carrots were found to be used more rarely, and generally they were bought from vendors. Even when local fruit is available, it is often disparaged as “boring” by adults and children alike. It is rarely eaten, and much is simply left to rot. Fruits such as pineapples and mangoes are not grown in the study locations and are often considered too expensive, and a rare treat.

Amount of food

Mothers do not track how much a baby consumes in a day because they eat off other’s plates. Most children do not have dedicated plates, and this practice can last well past the first year of life. Generally, they do not pay much attention to how many times the child eats, or the amount consumed each day. Small children are fed when they demand to eat, and since mothers feed babies/young children when they cry, a routine of specific mealtimes is not the norm. When mothers use packaged food sachets to feed babies, they indicate it is easier to keep track of the amount the babies eat, which was described as an advantage.

Snack and convenience foods

Snacking is a big component of child diets starting from a young age. Crackers, biscuits, and cakes are offered to babies, often in the first six months. Snacks are provided to avoid tantrums and scenes when children are demanding them. The perception is that young children see their older siblings or parents snacking and want the same. Children ask for pocket money to buy snacks from kiosks as soon as they utter their first words. Parents indicated that they like to “treat” their children since they didn’t have these snacks growing up. They also feel that children do not eat enough food throughout the day because they are bored with it and see snacks as a way to address this concern.

Convenience is another factor affecting food choices. Mothers know that it is good to add vegetables and fish to porridge but feel it is too time-consuming. Young mothers feel more secure about what they are feeding their baby by using packaged foods, as the ingredients are “designed for babies’ needs,” (clearly identified on packets) and clear instructions on quantities that are provided.



The family meal environment

Family meal times are becoming less common, and food is available throughout the day to be eaten when hungry. Adults across the locations where meals are no longer taken together commented that meal times and home cooking used to be something that the family looked forward to. Most families cooked once or twice per day and stored the cooked food in the kitchen.

Feeding “picky” or sick children

In situations where children have poor appetites or refuse certain foods, parents prefer not to create a fuss or trigger tantrums; they accept that the child will eventually feel hungry and eat something. It is common for a mother to feel there is nothing she can do about the lack of appetite in a baby or young child, and that it will pass. Parents expect their children’s appetites to be affected by illness and accept this without taking special measures to feed sick children differently. As crying is associated with hunger (as noted above), babies who do not cry (and who may be ill or weak) are often left without any attention or feeding for long periods.

How children are fed

Nurturing care practices—parental interaction with and stimulation of infants and young children-- are crucial to healthy growth and development. None of the *posyandu* sessions observed during the immersion included any ECD-focused services, such as responsive feeding or provision of advice on stimulation or nurturing care. The norm is for mothers (or other women) to look after children, and fathers have little interactions with their young children until they learn to walk. When they are walking, they are primarily expected to interact with other children. Mealtimes can be rushed; emphasizing making eating a pleasant activity for the child is not the norm. When children refuse foods, parents rarely make an extra effort to convince children to try or finish foods. Parents also do not minimize distraction while feeding babies and children. Older infants and young children are sometimes put in front of TVs or smartphones and left to eat by themselves. Mothers often put food in children’s mouths while they were playing or otherwise distracted.

MATERNAL NUTRITION

Diet during pregnancy

Women rarely change their diet while pregnant. Although some women claim to eat more rice during the last couple of months of pregnancy, there is little awareness of a need for extra food, nor a focus on nutrient-rich foods. In some instances, there were preferences for unhealthy snack foods and sweetened condensed milk, as they can readily be found in the local kiosks and match local tastes. Some women felt that drinking coconut milk was as good. Health staff provide and promote fortified biscuits for pregnant women. Miscarriages were nearly always perceived to be connected to what the women had eaten, and this translated to an avoidance of certain taboo foods (e.g. pineapples, durian, octopus), which differed across locations.

Consumption of iron tablets

All the *posyandu* distribute iron tablets to pregnant women who attend, and most women knew they were meant to take at least 90 pills. However, many said they took far fewer than this, or did not take them at all. There is widespread confusion on what iron folic acid tablets are intended for. Some thought they were for blood pressure, which meant that some thought they did not need them if their blood pressure was normal. Women tell midwives about how many iron tablets they take and are often not truthful about. They know they are supposed to take them, but they do not like them--they taste “bitter” or “nasty,” although the new tablets are notably better. Midwives indicated that women were not always taking iron tablets, and they expressed concern that they would be blamed by higher authorities if anything went wrong with a pregnancy. Mothers

said that the midwives increasingly use threats to try to compel women to follow their instructions, telling them, “your baby will die”, and “I will not take care of you if something goes wrong”.

PERCEPTIONS OF MIYCN SERVICE DELIVERY

Caregivers perceptions of service providers

Midwives, traditional birth attendants (TBAs), and community health workers are viewed as valuable key support personnel for health and nutrition in the communities. This varies by the capacity of the staff as perceived by the community. Some are thought to work very well together and provide valuable support to families, while others were less involved and not as valuable. The box summarizes some of the examples that were shared about exceptional midwives compared to those who were seen to be less effective.

Outside of the *posyandu*, no kaders or midwives were reported to make home visits to support mothers in feeding their babies; the only advice available appeared to be limited to standard messages provided at the *posyandu*. Despite selecting villages where the human development worker (HDW) pilot had begun, there were no active HDWs present at any of the immersion sites.

Monthly *posyandu*

The monthly *posyandu* sessions are universally the primary mechanism of support for nutrition. This includes growth monitoring and promotion of babies and young children, and support for pregnant women. Food was often distributed during sessions typically to all who attended. No demonstrations of food preparation were provided for complementary food. The food was often too much for one person and was taken home and distributed among family members. Special biscuits and “pregnancy milk” were sometimes distributed specifically to underweight pregnant women. Many women reported that they gave biscuits away to others. Primary interactions at the *posyandu* were for weight checks, immunizations, and recording information. Iron folic acid tablets are distributed to pregnant women at the *posyandu*. Typically, midwives advise women to rest during pregnancy and did not provide any nutritional or other advice. Community health volunteers and midwives alike complained that they never have time to talk with and give advice to mothers. The need for a follow-up visit was sometimes mentioned, but there was not any follow-through on these visits by midwives or clients.

What makes a good midwife?

- ✓ **Have an excellent personal approach**
 - E.g., Make an effort to remember names of babies and look mothers in the eye
 - E.g., Convey that you caring more about people than data
 - E.g., One was praised for putting people above the criteria from the Health Department and evoked so much respect that people were afraid if they didn’t follow the health advice the midwife could be blamed
- ✓ **Build a strong team of kaders**
 - E.g., Add males to the team to be able to reach fathers and help with maintenance of health post and gardens
- ✓ **Train kaders to assist well**
 - E.g., Use visual resources specifically as needs arise and explain advice clearly one-on-one
- ✓ **Introduce helpful initiatives**
 - E.g., One grew plants that help breastmilk production and cultivated fruits to encourage mothers and children to eat



THE PROTOTYPING AND TESTING PHASE

The findings from each individual immersion site were shared back with the participants and other members of the community in workshops conducted by the investigators. The workshops generated more discussion on practices and services and led to ideas from the community on what they could do to improve practices and/or services. Each community identified a specific challenge they wanted to address. They set a goal, developed an approach/intervention, and tested and evaluated the results of their efforts to address the challenge they identified. A summary of the six community challenges and solutions follows in Table 3. Detailed summaries of the individual prototyping experience in each of the six communities are included in Annex 2.

Overview of Prototypes

TABLE 3. Overview of Prototypes and Findings

	Goal	Prototype	Outcome
1	Incorporate veggies and fish into diets of young children	Recipe book linked to home visits by kaders to discuss feeding practices	Positive results <ul style="list-style-type: none"> Mothers offered new foods and meals to young children Kaders started making weekly home visits to all participating mothers
2	Attract mothers to the health post	User-centered redesign of new health post (<i>posyandu</i>) experience and testing of personal counseling sessions	Mixed results <ul style="list-style-type: none"> Community members were happy with the proposed changes to the <i>posyandu</i> space and activities The midwife and other local leadership of the health post were not on board with the changes
3	Bring back healthy cooking and enjoyable family meals	Neighborhood cooking clubs to introduce new foods to children	Mixed results <ul style="list-style-type: none"> One club was affected by absences and didn't fully get going The second club had success with mothers finding new joy in cooking, support from one another in dealing with picky eaters, and a shift in the mother's mindset about their children's consumption of snack foods
4	Engage the kader to support MIYCN	Community Garden supported by kaders and linked to kader home visits	Positive results <ul style="list-style-type: none"> Produce from the garden provided kaders with an opportunity to visit homes and explain nutrition to mothers
5	Replace junk food with healthy snacks	Homemade fruit snacks for sale at kiosks	Poor results <ul style="list-style-type: none"> Children did not prefer the healthy snacks and continued buying the packaged snacks Two kiosks gave up immediately
6	Promote healthy practices and measure progress	Key milestones chart and daily feeding communication materials	Positive results <ul style="list-style-type: none"> Charts were well-received The Head of Village agreed to print and distribute the materials

Findings from Prototyping and Testing

SOUTH KALIMANTAN: Incorporating veggies and fish into diets

In South Kalimantan, the workshops illuminated the fact that young children's diets lacked diversity. Vegetables and fruits were rarely consumed in the village due to limited access and cost, as well as cultural norms. The local interpretation of complementary feeding was to give children rice and little else. And, while South Kalimantan is a fishing village, amounts of fish eaten were small. Families were concerned about small fish bones being a hazard for infants and young children. Mothers also perceived their infants as “picky eaters” and experienced problems introducing different foods.



Prototype 1: Recipe book

The challenge

How might we get children 12-23 months to eat vegetables, fruit, and fish in a fun and interactive way?

The goal

To make eating vegetables and fish a daily norm, and to reduce unhealthy snack consumption. The focus on fish was to introduce safe eating of fish (without bones).

Local solution

In order to change the local feeding practices for young children, the community decided to create a book of recipes. They developed a recipe book of their own recipes and provided one to each participant. Mothers agreed they would try the recipes with their infants and record what happened in a diary. The diary was a way to record how their infants reacted to different foods. They also agreed to spend no more than IDR 2000/day on food for their infants. Kaders said they would make home-visits to find out how the mothers were doing—not to evaluate but to support them. The kaders established a WhatsApp group to keep in contact.

The results

The results from testing the recipe books were positive. They not only supported mothers in offering new foods and meals, but also inspired kaders to make weekly home visits to all participating mothers. Mothers have tried all the recipes in the book and expanded to include new recipes. Mothers reported that they changed their practices, cooking vegetables at least 5 times per week (weekends are days when they like to eat “ready cooked food”). They found that children enjoyed the variety of vegetables but noted that it was easier to introduce new tastes to younger children. They also found that they needed to add more sugar when they made jelly from fresh fruits. Even after 3 months, mothers still say they are buying vegetables for their infants and cooking at least five times per week.

For kaders, the recipe book and diaries provided them the opportunity to make home visits with a purpose—to discuss with mothers what they had recorded in the diaries and learn how children had reacted to new foods and new recipes. Kaders found that mothers were very committed to trying the new foods and recipes in the book and keeping notes. They experienced some problems when children were sick and refused food. Mothers liked the kader home visits and looking at the records together. Kaders also began to prepare and give fruit at the *posyandu* sessions. This activity is now funded by village funds (*dana desa*).

WEST SULAWESI COASTAL: Attracting mothers to the health post

In West Sulawesi, a coastal community, they chose to address the low attendance at the *posyandu*. They acknowledged that in the community many believed in traditional healing, talisman, and traditional wisdom. They also were not inclined to walk far, which affected attendance. Mothers felt awkward or embarrassed to ask questions at the *posyandu* sessions. They did not find the *posyandu* experience helpful, and they did not find it to be a place of support and encouragement. It also did not offer any feeding programs to generate demand (as was the case in other communities). A new *posyandu* was being planned (the land had been purchased and a building was to be built), which presented an opportunity to design the space together differently.



Prototype 2: User-centered redesign of the health post experience

The challenge

How might we design and develop a user-centered *posyandu* that would allow for better counselling on infant and young child feeding?

The goal

To work with the kader and midwives to design a *posyandu* that would be welcoming to mothers—somewhere that they would want to come.

Local solution

The prototype in West Sulawesi was a new single, feasible model for the *posyandu* drawn from the ideas and needs expressed by the village and visits to the local site. It included the capacity to do counselling with mothers. It listed the necessary resources for each element of the *posyandu*. They shared the model widely discussing the five activities they wanted to see with kaders, village heads, midwives, and head of puskesmas. They also tested some of their ideas for counseling using an existing service room in another *posyandu* as well as ways to follow-up with mothers on a weekly basis.

The results

They had mixed results from their trial. Everyone was excited and positive about the design except the midwife. She insisted that a table was necessary for the consultation part of *posyandu* practice and that any discussion or advice should be provided to all mothers together (not one-on-one and private as designed). The Head of the Puskesmas liked the prototype and valued the idea that community was planning their own community space and encouraged the sharing of this process more widely. However, he also did not understand the idea of the consultation space providing support and encouragement, a space where mothers could talk ‘heart to heart sharing’, seeing this space as a diagnostic space only.

Despite the lack of support by the midwife during a *posyandu* session, when she left, the kaders ran a counselling session as they wanted to, at a *posyandu*. Renovation of a *posyandu* is planned and the kaders are already seeing this renovation in terms of some of the ideas created for the new *posyandu*. Results for this prototype, and whether it is successful in creating demand for the *posyandu*, will not be known until 2020 when the new space is designed and up and running.

NTT COASTAL: Bringing back healthy cooking and enjoyable family meals

The NTT coastal community focused on changing the family meal environment. They realized that abundant and diverse food resources were available but were undervalued and underutilized. They noted that they did not make home-cooked meals, and that children were filling up on snacks. Mothers were tending to cook the same every day and the meals were geared toward adult tastes. They acknowledged that families used to eat better in the past, that mealtimes used to be enjoyable, that children ate well, but that this was no longer happening.



Prototype 3: Neighborhood cooking clubs

The challenge

How might we bring back healthy and enjoyable meals inspired by our childhood experience?

The goal

To learn to cook as their mothers had done by establishing neighborhood cooking clubs.

Local solution

They created two cooking clubs as the solution to this challenge. They cooked together for two hours and tried new foods together. Mothers gathered and discussed what menu they wanted to cook the following day and what available ingredients they already had at home. They experimented with cooking different things specially for their infants. The children ate all sorts of things they had never tried before.

They introduced children to ice popsicles made with real fruit and mung beans rather than the ones from the kiosk. They agreed to meet each week and continue experimenting.

The results

Results from this trial were mixed; one cooking club started well but then had several events that got in the way (birth for one member, a neighbor's funeral) so that they did not meet for 6 weeks. The second cooking club continued throughout the 8-week period.

The benefits that mothers expressed included: realization that they regretted allowing their infants and children to consume so much snack food previously. The clubs helped them to enjoy cooking. It also helped them to know that they were not alone dealing with picky eaters. They felt that sharing tips with each other to encourage eating was helpful. They made a participatory video of their cooking club experience to share with others. There have been many requests in the village to establish new cooking clubs.

An active Head of Puskesmas, frustrated that "parents don't listen, and nothing changes" from awareness raising and educational activities on nutrition felt inspired by engaging in this process and began to think of other approaches (e.g. the snack feeding sessions for kaders, feeding sessions at the *posyandu*, which included songs and early stimulation) to influencing practices. The Village Head would like to support the clubs financially (providing food for cooking). How this would be done without losing the community-based and driven approach requires some thought. Mothers were clear that they wanted the cooking clubs to be informal.

RURAL MALUKU: Engaging the kader to support MIYCN

Unlike other villages, Rural Maluku has relatively good practices; they supplement rice with taro, cassava, sweet potato and sago. They eat fish daily and eat more vegetables than other villages. These are norms established over many generations. All houses have a variety of fruit trees and fruit consumption is widespread. Infants and children are given water to drink rather than the sweetened drinks common in other places. Unhealthy snacking is not a habit; kiosks sell fruits. Residents of Rural Maluku regretted that the positive initiatives of a previous midwife—providing one-on-one trusted and valued personal advice to mothers, operating a kitchen garden at the *posyandu*, and supporting and motivating kaders—were no longer happening in her absence.



Prototype 4: Garden for mothers and babies

The challenge

How might we keep up our good work inspired by Bidan Endah (the previous midwife)?

The goal

Motivate the kader, help them to develop a “can do” approach, and build confidence that they could run a program designed to improve nutrition for mothers and babies.

Local solution

Their prototype was a rehabilitated herb/vegetable garden and a special “family garden” and a “mothers and babies” garden. They made designs/drawings of what they wanted and why. Kaders worked on the garden – preparing and planting new seeds and rescuing plants that had been neglected. They harvested dark green leaves and cooked these for pregnant mothers at the *posyandu*. They also made home visits, which they had not done before, and took produce from the garden with them. Kaders designed the information boards they intended to place at the garden. They named it the “healthy garden.”

The results

This effort was successful. The kaders said having the produce from the *posyandu* garden provided a good reason to visit homes and an opportunity to explain nutrition to mothers in the privacy of the home. The garden is visible as it is on the main village road and working on it generated much interest from the community. The Village Head said he is pleased that the kaders have taken on this initiative, and since he is now paying them from dana desa money, he wanted a way to track their performance. This activity serves that purpose. Their village already use social media; once finalized video footage of the rehabilitation and use of the garden will be uploaded to Facebook. The garden also serves as a reason for the kaders to meet every Saturday. They work together and plan and discuss nutrition interventions.

WEST SUMATRA: Replacing junk food with healthy snacks

The West Sumatra community has extraordinarily high levels of snacking because there are many kiosks and they have cash. Children pester for packaged snacks from a very young age. Children receive pocket money for snacks “*as soon as they can speak.*” TV watching in the evenings is the norm and researchers observed the strong influence of food/snack advertising. Eating fruit is not a norm.



Prototype 5: Homemade fruit snacks for sale

The challenge

How might we include fruit into the diets of families, pregnant mothers, and infants under two?

The goal

To encourage mothers to make and buy healthy snacks and finger foods and appreciate the value of fruits for the child’s diet.

Local solution

For this solution, the community took advantage of the fact that three of the kaders own kiosk shops. They agreed to experiment making snacks with fruits and selling them at their kiosks. Investigators worked with them in their own kitchens to develop a range of fruit-based snacks, e.g. fruits satay, fruits jelly and fruit popsicles. Kaders promoted these items as snacks in their kiosks. They also agreed that *posyandu* sessions would only provide fruits and they would try to establish a “fruit bank” where those with surplus fruit could bring it to *posyandu* to be chopped and shared.

The results

The results from this trial were disappointing. Three kaders who ran kiosks tried to replace demand for packaged snacks with fruit and fruit-based snacks. Children did not buy their fruit snacks and preferred the packaged snacks. Two of the kiosk’s owners gave up almost immediately. The third found that on Saturdays children had extra pocket money and were more inclined to buy fruit jelly. Watermelon was an exception; watermelon sellers reported selling more watermelons. *Posyandu* replaced their traditional feeding program (mung bean porridge) with one that promoted fruits, provided fruit satays. This had a more positive outcome. Providing fruit at the *posyandu* had a strong demonstration effect in large part because it was endorsed by dana desa funding.

WEST JAVA: Promoting healthy practices and measuring progress

In the West Java community, mothers were worried about children's growth, but had relatively little access to information about baby nutrition and development. The midwife rarely visited; it is a very remote village. Mothers with small children felt stigmatized, but many don't understand that being of small stature is an indication of a problem. Mothers tend to see weight gain as the indicator of child development and are aware of and remember the stages of their child's development (from rolling to walking).



Prototype 6: Key milestones chart and daily feeding materials

The challenge

How can we better address our need to know how our children are growing?

The goal

To develop local communication tools to promote healthy practices and other ways to measure progress.

Local solution

This village decided to take on two activities. They made a key milestones chart that indicated different developmental stages: making eye contact, lifting head, rolling over, sitting, crawling, standing with support, standing independently, walking, says single words, says simple phrases, is active (running, kicking ball, climbing on furniture). This was their communication material for tracking a child's development. They also developed some communication material prototypes to encourage daily food consumption according to age--6-9; 9-12 and 12-24 months. They tested these tools out in their community.

The results

The results were informative. They found the development chart easy to understand, and said, "I wish I had had this when my child was younger." Mothers noted this would be a useful way to involve fathers as the charts would be displayed at home. The home charts were well-used and appreciated. They readily shared their babies' achievements and liked to fill in the charts. Feedback on the food posters indicated they were simple and easy to understand. The Head of Village agreed to print and distribute to homes through the *posyandu*. The daily food posters were also posted in key public places, e.g. at the kiosk and *posyandu*. When creating the communication materials, the recommendations were based on what mother were willing to do. They would not eliminate unhealthy snacks across the whole period of 6-24 months. However, they set goals of limiting snack consumption. The communication materials alone in the *posyandu* were not adequate to get the messages across. Unfortunately, village health staff used the charts as a lecturing tool, which was not effective. It is meant to generate discussion.

INFORMING THE GOVERNMENT'S SBCC STRATEGY

Collectively, both the immersion into the communities and the prototyping and testing led to new insights and a greater understanding of MIYCN practices and services and how they might be addressed in a variety of contexts. The learning from this bottom-up approach can help to inform behavior change communication for some of the 12 priority behaviors in the government's SBCC strategy for stunting reduction (see box).

Specifically, this assessment helps to unpack and promote further understanding of how to provide infants with quality complementary food from 6-24 months. In addition, the prototypes and testing provide some insights into other behaviors related to the *posyandu*/growth monitoring and promotion services.

12 priority household behaviors from Indonesia's national SBCC strategy

1. Pregnant women consume minimum of 90 IFA tablets.
2. Pregnant women attend 4 ANC visits.
3. Pregnant women increase their nutritional intake.
4. Pregnant women attend 4 pregnancy classes.
5. Women initiate ASI within one hour of delivery.
6. Women exclusively ASI from 0-6 months.
7. Women continue to give ASI from 6-24 months.
8. Infant is given nutritional complementary foods from 6-24 months.
9. Infant is taken for growth monitoring and promotion.
10. Infant/baduta receives complete course of vaccinations.
11. Members of 1000 day households use healthy latrines.
12. Female adolescents consume IFA tablets.

The World Health Organization's recommendations on breastfeeding are well established. Likewise, recommendations on what, how, how much, and how frequently to feed a child from the age of six to 24 months have been in place for more than 15 years (WHO, 2001). This assessment focused primarily on the period 6-24 months since this is when growth starts to falter, and effectively promoting and supporting social and behavioral changes to meet complementary feeding recommendations is an on-going challenge.

Feeding practices 6-24 months

Providing nutritional complementary food from 6-24 months depends on many behaviors related to what, how, and how much a child is fed. This goes well beyond the mother's influence and includes the food environment and cultural and family dynamics. While these determinants of appropriate complementary feeding are highly variable across communities and within individual households/individuals, this assessment found commonalities in behaviors as well as in community eagerness to try to find ways to improve feeding practices. Comparing recommended practices to current practice, the assessment yielded the following insights for creating effective SBCC to promote and support better practices.

1. Address the mistaken belief that breastmilk is not a food; emphasize that breastfeeding is a critical source of nourishment/food particularly from the age of 6-9 months.

Current beliefs and practices

- As soon as a baby shows interest in food, mothers consider breastfeeding to be secondary.
- Rather than adding the appropriate amounts of food to complement breastfeeding, the recommended practice, mothers feel they should fill their babies with food and only provide breastmilk on the side.
- Mothers are proud when their baby takes food early. They said that it shows how strong, smart, and developed the baby is; all positive attributes. Mothers and others are delighted when babies try out a new food, drinks coffee or tea, or takes a banana.
- Mothers do not understand that changes in breastfeeding should be done slowly from 6 to 23 months and that breastfeeding should continue for at least two years. Mothers feel that the food the baby eats is the key source of nutrition and that any breastmilk they continue to give serves the function of mainly providing comfort, and secondarily hydration.

Guidance for SBCC

- Create a deliberate strategy that focuses on the need for continued, quality breastfeeding.
- Link positive attributes expressed by caregivers—strong, smart and developed child—to continued breastfeeding and complementary feeding. Identify meaningful signs of development that resonate with caregivers.
- Learn more about why breastfeeding diminishes rapidly and is not deemed important to further enhance SBCC.

2. Counter the perception that babies need teeth to receive thick porridges, and promote and support introduction of babies to vegetables, meats, and all other types of foods at six months.

Current beliefs and practices

- Mothers/caregivers choose the first food by its consistency. Younger babies—4-8 months—are primarily given watery porridge.
- Mothers gauge readiness for different foods by the presence or absence of teeth. Once babies have teeth, they are expected to eat the same as adults. The appearance of front teeth (usually around 8 months) seems to indicate to mothers that babies can have thicker porridge and mashed foods.

Guidance for SBCC

- Develop strategies for changing the norm around the consistency of first food provided to children by acknowledging mother's resistance to giving thicker porridge and drawing on her mechanisms for deciding when a child is ready.
- Find ways that resonate with mothers observing when and how babies are developing as a sign for readiness for complementary food and steer away from the focus on the eruption of teeth.
- Based on the prototype example above, mothers and families are aware of changes and interested in tracking them. Explore how these developmental milestones can be leveraged in communications materials linked to the consistency of the first food.

3. Promote and support the practice of adding appropriate, available, and safe animal-source foods into complementary foods provided to babies.

Current beliefs and practices

- Even when animal source foods are affordable and available (e.g., eggs and fish) they are not added to complementary foods.
- Mothers/caregivers are fearful of small bones in fish which is why they do not give to babies and young children.
- Many families do not regularly buy and consume meat. Rice is the most important element of diets. In some areas, fish is also seen as critically important.

Guidance for SBCC

- Acknowledge the fear of feeding fish to babies because of small bones in promoting and supporting fish consumption where eating fish is a norm.
- Explore strategies to provide fish to children without bones, e.g., fish powder has been developed in other countries to add fish to babies' food.
- Learn more about how to address the challenge of the lack of animal source foods in child's diets. None of the prototypes took on this challenge.

4. Develop and promote ways to track the amount of food babies consume at different ages and link to growth and development of babies to ensure consumption of appropriate quantities of foods.

Current beliefs and practices

- Mothers do not track how much a baby consumes in a day.
- This is not a norm in part because children eat off other's plates making knowing how much they eat difficult. Most children do not have dedicated plates, and this practice can last well past the first year of life.
- Little attention is paid to how many times the child eats, or the amount consumed each day. Eating is on demand and not structured around a set pattern of meals.
- Young mothers often shared that they felt more secure about doing the right thing by using packaged foods, as the ingredients are "designed for babies' needs," (clearly identified on packets) and clear instructions on quantities that are provided.
- When mothers use packaged food sachets to feed babies, they indicated it's easier to keep track of the amount the babies eat, which was described as an advantage.

Guidance for SBCC

- Develop creative solutions for how mothers/caregivers can keep track of how much a child is eating daily. More work is needed in this area.
- Experiment with approaches from other countries—e.g., special feeding bowls for children.
- Address the strong reluctance to letting children eat on their own based on fear that the child will playing with and waste food. Acknowledge and develop strategies to change these norms while trying out new strategies to ensuring consumption of adequate quantities of food.
- Build SBCC strategies off demand that exists from mothers to know how much their child is eating. It was observed that some mothers see packaged food as an advantage to knowing how much a child eats.

5. Be direct about avoiding unhealthy snacking for improving feeding of babies and young children.

Current beliefs and practices

- Snacking is a big component of child diets starting from a young age. Crackers, biscuits, and cakes are offered to babies, often in the first six months. Snacks are provided to avoid tantrums and scenes when children are demanding them.
- Parents believe that snack foods make diets less boring; that children are not eating enough food throughout the day because they are bored with their options. Parents offer snacks to address this concern.

Guidance for SBCC

- Develop new ways to increase understanding of the ways that unhealthy snacking among young children affects their diet and growth drawing on caregivers' current awareness.
- One community prototype tried to offer healthy snacks in kiosks with little success. Left to decide for themselves, children continue to select the less healthy option. Develop multi-faceted solutions to the snacking challenge—i.e., continue to advocate for changes in private food industry practices; focus on promoting and supporting parenting skills related to feeding practices; and offer and support specific ideas for what caregivers can do daily.
- Tackle the family/home eating environment in SBCC. The snacking culture in most of these communities is linked to the ways that families eat (see below), convenience, taste, and convenience.

6. Promote change in the family mealtime environment to support improved complementary feeding and child growth.

Current beliefs and practices

- Mealtimes can be rushed; emphasizing making eating a pleasant activity for the child is not the norm.
- When children refuse foods, parents rarely make an extra effort to convince children to try or finish foods.
- Parents also do not minimize distraction while feeding babies and children. Older infants and young children are sometimes

Guidance for SBCC

- Recognize that while mothers are primarily responsible for IYCF, parenting involves more than the mother—it includes the father and beyond to other family members engaged with young children. While none of the communities chose to address directly the challenges with parenting, and how it influenced feeding, one community developed a child development tracking tool and found that this tool served to help mothers engage fathers in monitoring the child's growth.
- Develop SBCC that effectively targets and reaches other members of the family involved in caring for children. Learn more about these other audiences.

put in front of TVs or smartphones and left to eat by themselves.

- Mothers often put food in children's mouths while they were playing or otherwise distracted.
- The norm is that mothers (or other women) look after children, and fathers have little interactions with their young children. Babies until they learn to walk. When walking they are primarily expected to interact with other children.

- Explore how to promote and support "good" parenting within the context of improved growth and development.
- Develop and promote approaches such as bringing families together and changing the way they cook--the goal of the cooking clubs.
- Strengthen and support the relationship between kaders and caregivers through SBCC as part of the solution to changing norms for family eating. For example, the community garden and the recipe book and diaries linked to the home visits helped to improve the child's feeding environment.

Information and support for feeding

1. Word-of-mouth is preferred way to receive information about babies and nutrition.

Current beliefs and practices

- While mothers socialize, they do not discuss challenges they face in feeding children for fear of judgment from others. The need for more peer support and experience-sharing among mothers emerged as a desire in several locations.
- Older women in the community commonly give mothers advice about babies and nutrition, which they generally trust. As is true in many other contexts, older women are an important target audience for SBCC. This assessment did not explore specifically the beliefs and opportunities for influencing behaviors of this group. Results suggest that the older women are aware that their practices of feeding are not recommended (e.g., providing food early), therefore informational messages will be insufficient to change these practices. New strategies should be explored.

Opportunities

Create mechanisms for mothers to have peer support for feeding children focused on changing behaviors. The cooking club prototype offered an informal social experience that was framed in terms of child nutrition, providing the chance for mothers to share struggles and tips for supporting their children to eat healthfully. Mothers reflected that they enjoyed the prototyping workshops that allowed them the chance to share their experiences feeding children with each other, which they rarely do. Many were relieved to find that other mothers had the same concerns and difficulties. Peer support interventions may be an effective mechanism for supporting SBCC for infant and young child feeding. Mothers prefer these to be informal and supported by kaders rather than midwives as they feel more comfortable opening up and sharing with them.

2. Communication materials and delivery of nutrition demonstrations can be improved.

Current beliefs and practices

- Most communications materials shared messages about healthy foods. People often knew what foods were healthy, in general—fish, vegetables, fruits, rice, etc.—and this information was not new to them. Some thought that many of the foods presented were either not available locally or too costly. This made them feel that "eating healthy" was impossible.
- Likewise, demonstration sessions that used foods that they do not have available were also not helpful.
- People ignore materials with many words even when they can read easily.

Opportunities

- **Develop and adapt messages and communications materials that resonate with the local context.** The community trial that created their own recipe books did this by promoting foods that were readily available.
- **Consider smaller or incremental improvements to behavior, rather than unrealistic leaps.** In another trial, posters were developed that did not promote ideal practices, but rather that set goals for better practices that they felt they could achieve. Materials with realistic recommendations were better received. Children will consume snack food, therefore communities felt it was better to help parents understand how to limit or initiate snacking later and promote and support this practice, rather than telling them that their children should not have snacks at all.
- **Make materials accessible and easy to understand.** The community ensured that materials did not have many words; included one simple message on one topic; and used images that reflected how they fed children (e.g., from spoons rather than plates).

3. Mass media, social media, and other electronic communications can be complementary sources to interpersonal communication on young child feeding in some contexts, but not all.

Current beliefs and practices

- People did not necessarily receive significant amounts of information from TV advertising, although many were influenced by ads as well as images that they saw of food eaten in Jakarta. The idea that packaged foods were more ‘scientific’ (based on packaging) appealed to some communities, even those with otherwise healthy eating habits. Social media and electronic communication provided another avenue through which some community members could access and share information.

Opportunities

- **Utilize social media where available to incentivize and support interventions and practices.** People generally do not use social media as a source of information. More commonly it was a way for communities to share their achievements. During the trials, communities turned to social media to broaden the reach of their experiences and share their successes. The recipe book pilot led to the creation of a “WhatsApp” group among the kaders to stay in touch. The cooking club and garden interventions used social media to motivate community members and share achievements. This opportunity is not universally available as some communities lack access, and depend on interpersonal information sharing.

4. Interpersonal (one-on-one) communication remains an essential element for behavior change.

Current beliefs and practices

- The practice of attending the *posyandu* for growth monitoring and promotion and other services is well established. It offers a built-in community-based system that can easily be strengthened and used to support social and behavior change.
- Participation at the *posyandu* and the quality of the services provided varied depending on staff, the facility, the involvement and commitment of local heads of villages and others.
- The approach to interpersonal communication was fairly consistent across the communities. One-on-one interactions between mothers/caregivers and midwives or kaders were limited. Instead, information on nutrition and how to care for babies was shared in large groups in the *posyandu* or with the kaders outside the *posyandu*. Large group sessions deterred moms from asking questions for fear of being reprimanded or embarrassed. Weights were taken in the *posyandu* by kaders, but the growth promotion part of GMP was often missing—no advice was given to address children whose weight outcome was low. This is despite the stipulation that a counselling table is part of the process. It was only operational in one location with a particularly strong and diligent set of kaders.
- Many communication materials and delivery of information were observed during the assessment. Investigators also discussed the experience of mothers and health/nutrition staff in communicating about nutrition. Mothers did not always understand the information being shared or what they should do in response to it. Kaders reflected that simply posting or sharing materials without explanation was not enough, and that mothers needed support and encouragement to understand and use them.

Opportunities

- **Build off of the demand in the community for more one-on-one support in feeding and care of infants and young children.** Mothers and community members want more interactions with kaders and others who can provide support for their feeding challenges. Solutions to achieve more one-on-one interaction between health/nutrition staff were tested in the design of the new *posyandu* and incorporation of home visits by kaders in other prototypes. The design of the “sharing room” in the new *posyandu* was meant to encourage conversation and questions between the mother/caregiver and the health/nutrition worker and to mitigate feelings of judgment or evaluation. There was wide support for this approach except from midwife, who said information should be shared in groups. Kaders and mothers were enthusiastic about the home visits that they made to support child feeding improvements based on the recipe book and garden interventions.
- **Pair interpersonal communication with new tools to stimulate interest and concern for growth.** The developmental charts created in one of the prototypes called for mothers to be active participants in tracking how their child was developing. It focused their attention on the child and provided them with a way to both demonstrate how well they know their babies and also celebrate growth milestones. Giving mothers this physical tool could complement other interpersonal communication encouraging practices that promote growth and development. It also allowed fathers and other caregivers to become more engaged in the baby’s growth. This type of chart, kept at home, serves as a

- Mothers commonly requested more opportunities for one-on-one communication where they could feel comfortable to ask questions and have a two-way conversation.

reminder for mothers and families, and can also be part of a discussion with a kader or midwife.

CONCLUSION

The Indonesian government has made a huge commitment to alleviating stunting in the country. Evidence of this commitment is apparent in the large movement underway that is reaching all levels of society. The SBCC strategy designed to support the movement and promote social and behavior change is clear and multi-faceted. The opportunity is there to make large, significant gains in reducing stunting in the country. Being able to effectively and sustainably change household behaviors underpins this movement and will greatly affect its level of success. To do this requires raising awareness and promoting effective and sustainable behavior change through SBCC and to link to and include SBCC in services that support healthy behaviors and an enabling environment for healthy practices.

Effective SBCC requires an in-depth understanding of current behaviors—not just what families and communities do, but why. Understanding available MIYCN services—how they are perceived, the demand for them, and their quality is also essential to providing effective SBCC that supports these services. The innovative human-centered design approach used in this assessment, both the immersion into the communities and the process of developing and testing community-generated solutions to selected inadequate feeding practices among children 6-23 months, and the perceived low quality of MIYCN service delivery led to insights not possible through traditional formative research. It contributed to our understanding of the community perspective on MIYCN and early child development (ECD) practices and the services designed to support MIYCN. It expanded our awareness of why people choose certain practices and the potential facilitators and constraints to change. Through this process, not only were behaviors and norms better understood, but solutions were generated for what might work to start addressing unhealthy practices and the quality of services. At the same time, the assessment identified areas where further understanding and a search for solutions are needed. Some of the key ones among these include: the low value of breastmilk; the abundance of unhealthy snacks, and the new norms of family meals and mealtimes. Nonetheless, families and communities, including community-based nutrition service providers and local government officials are eager and willing to get to work now and we know enough to begin to strengthen and expand SBCC to support the stunting reduction movement in Indonesia.