PEOPLE-DRIVEN DESIGN
Innovating for stunting reduction in Indonesia

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**Photo Credit:**
- Empatika
- Alex Furno
INTRODUCTION

In Indonesia, just under one-third (30.8%) of children under five were stunted in 2018, impacting millions of children.¹ This is a significant improvement from 37% in 2013,² but this national average masks higher, and in some cases, growing rates of stunting in some cities and districts.³ Stunting (low height-for-age) is the result of poor nutrition and health in early childhood and in-utero. Children suffering from stunting may never reach their full height, and their brains may never develop to their full cognitive potential. They are more susceptible to illness and at school age are at higher risk for poor performance and dropping out.

In 2017, the Government of Indonesia committed $14.6 billion to address this problem, launching the National Stunting Reduction Movement. The National Strategy to Accelerate Stunting Reduction 2018-2022, known as Stranas Stunting, followed soon after. Many international partners support the implementation of the government’s strategy. In 2018-2019, Alive & Thrive (A&T) carried out a desk review on maternal, infant, and young child nutrition (MIYCN) practices that impact child growth. Subsequently, A&T, UNICEF Indonesia, World Health, Millennium Challenge Account Indonesia, the World Bank, and government partners collaborated on a Roadmap to develop a social and behavior change communication (SBCC) strategy to contribute to Stranas Stunting.

The desk review was a starting point for understanding infant and young child nutrition (IYCN) and early child development (ECD) practices. However, more needed to be learned before effective SBCC strategies could be developed. With funding from Tanoto, A&T and Empatika applied the social and behavior change (SBC) process outlined in the Roadmap (see right) to develop and undertake an innovative IYCN and ECD situational assessment in 2019-2020. Using an on-the-ground “people-driven design” approach, this non-traditional assessment aimed to reveal a deeper understanding of the behaviors and services impacting child growth and the communication needed to prevent stunting.

This series shares the details of the findings from this assessment. It generated insights not possible through traditional formative research, including a new, in-depth understanding of some of the current complementary feeding (6-23 months) and related ECD practices—not just what families and communities are doing, but why. It also provided fresh information on how current services and communication related to the stunting reduction campaign are being received, and where they warrant improvement.

Equally important, the series shares the details of the implementation of the assessment process. District- and city-level interventions under Stranas Stunting need to be defined and prioritized according to the local context. District and city leaders are being incentivized to understand the local drivers of stunting and to adjust their budgets and workplans to design and implement their own stunting prevention activities, including those that promote and support behavior change. The district- and city-level efforts are also expected to create an enabling environment for villages to play a role in the overall movement. Citizen engagement and community empowerment are recognized as critical to the strategy’s effectiveness. This series demonstrates how and why the people-driven design process works for SBC. It further offers a way to apply the approach in ongoing local efforts to improve planning, design, implementation, and ultimately effectiveness in achieving SBC.

**ABOUT THE SERIES**

This series is for national and sub-national level stakeholders, including provincial, district, city, and village government leaders, and local organizational partners involved in SBC as part of Stranas Stunting.

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**WHAT WE FOUND**

The major findings on IYCN and ECD practices and insights and suggestions for improved SBC strategies and communication.

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**WHAT WE DID**

The assessment process detailing where it took place, the individual steps in the process, how they were carried out, and associated results of each step.

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**HOW TO BUILD ON IT**

Additional information on the people-driven design approach and how it might be applied by district and local government stakeholders.

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Community members at one of the assessment sites explore the practices and services that contribute to IYCN and ECD challenges in their community. Each community identified a specific challenge they wanted to address. They set a goal, developed an idea/intervention, and tested and evaluated the results of their efforts to address the challenge they identified.

**PHOTO CREDIT | EMPATIKA**
WHAT WE DID

Indonesia has seen some improvement in nutrition over the decades, and now efforts are underway to hasten the pace of progress. What needs to be done differently to accelerate social and behavioral changes to improve nutrition outcomes for mothers and children? One answer is to ensure that people are at the center of the processes that uncover the drivers of current practices and to design programs, interventions, and activities to help change them where needed. The Stranas Stunting strategy acknowledges and endorses empowering communities in efforts to reduce childhood stunting. Recently, the Government of Indonesia made a large Village Fund allocation, providing resources at the local level to take actions to address the problem.

A people-driven design approach is based on the idea that engaging people directly in the change process enhances their motivation and gives them the confidence to change their own behavior. It also encourages people around them to do the same. Most important is that the proposed changes are feasible, appropriate, and meaningful, as well as supported locally. In 2019, we implemented a people-driven design process across six locations in Indonesia.

A facilitator from Empatika talks with a mother in her home while helping with household chores. Immersion often involves informal chatting while taking part in a family’s day-to-day activities.

PHOTO CREDIT | EMPATIKA

PHOTO CREDIT | ALEX FURNO
PEOPLE-DRIVEN DESIGN PROCESS

Our process entailed four steps, which include:

**Step 1 | IMMERSION**
Developing an in-depth understanding of daily life through immersion in a village.

**Step 2 | INSPIRATION**
Exploring what was learned in step one through a process of inspiration to identify focus behaviors and generate ideas and strategies to improve them.

**Step 3 | DESIGN**
Co-creating solutions in the village through a people-driven design process to address priority challenges identified during step two.

**Step 4 | TRIALING**
Testing potential solutions generated in step three through a trialing process in the village to assess their usefulness and feasibility to effect positive change.

Examples of new foods introduced to children during the trialing step. Mothers gave themselves the challenge to come up with new, colorful foods, introducing some to their children for the very first time.
LOCATIONS

The research sites were selected in consultation with the Government of Indonesia and focused on rural communities including both coastal and hilly locations in East, Central, and West Indonesia. They were all among the 100 priority districts with the highest stunting rates.

WEST JAVA
Site: Village of about 700 households
Location: In a river valley surrounded by hills
Livelihoods: Agriculture, including maize, paddy, and some betel nut and chilli as cash crops. Remittances from relatives who migrate to other parts of Indonesia or Malaysia for seasonal informal labor.
Food: Affordable fish, vegetables and fruit year-round, many grown locally.

SOUTH KALIMANTAN
Site: Village of about 300 households
Location: In the middle of a swamp, accessible by road three months of the year and by boat the rest of the year.
Livelihoods: Subsistence farming and river fishing
Food: Severe seasonal food availability issues as land is only cultivable in certain months and vegetable vendors cannot access the village.

WEST SULAWESI
Site: Village of about 200 households
Location: Located in the middle of six sub-villages stretched along a 11km asphalt coastal road.
Livelihoods: Remittances from family members working in Kalimantan as agricultural daily waged labor.
Food: Fish and vegetables sold by vendors are available year-round in the village, but both are consumed irregularly due to families’ unstable cash income.

EAST NUSA TENGGARA
Site: Village of about 350 households
Location: On the coast of a small island, approximately one-hour car journey from the sub-district.
Livelihoods: Fishing and some grow moringa, cassava, or papaya to sell and consume.
Food: Fish is available year-round, along with some vegetables grown locally. Vegetable vendors do not visit the village.

WEST SUMATRA
Site: Village of about 4,000 households
Location: In a river valley surrounded by hills.
Livelihoods: Agriculture, including maize, paddy, and some betel nut and chilli as cash crops. Remittances from relatives who migrate to other parts of Indonesia or Malaysia for seasonal informal labor.
Food: Affordable fish, vegetables and fruit year-round, many grown locally.

MALUKU
Site: Village of about 250 households
Location: Rural setting with unusual layout, following a grid that has been maintained since colonial times.
Livelihoods: Cash crops of cloves and coconuts.
Food: Affordable fish available year-round, along with a wide variety of vegetables. All houses have a variety of fruit trees and fruit consumption is common.
STEP 1: Immersion

HOW WE DID IT

Teams of two trained facilitators per village, from Empatika, lived with families in their own homes in the six study locations. They shared in day-to-day life and engaged in informal conversations with different members of the household, their neighbors, and others in the village. The immersion into the village allowed the facilitators to gain insights into people’s lives, attitudes, and behaviors. Their experiences, conversations, and observations specifically focused on learning about IYCN and ECD through the following interactions:

- Helping to care and prepare food for children
- Accompanying the family to the market to buy food and harvesting food
- Joining family routines—sleeping, working, eating, washing, and enjoying leisure activities
- Participating in mother-child-oriented events, for example the monthly posyandu sessions, special programs aimed at stunting reduction, and pre-school-based feeding programs
- Chatting informally with the family, neighbors, and service providers, such as health cadres, kiosk owners, loan providers, village government officials, and religious leaders
- Engaging in interactive exercises, such as food preference rankings; income and expenditure analyses; daily routine analyses; and seasonality analyses

During this experience, the facilitators built empathy for families, allowing them to recognize families’ motivations for keeping children healthy and growing, as well as the resources they had, or lacked, to be able to do so. Alongside families, they helped to identify what was driving different behaviors as well as the opportunities for behavior change to better support child growth and development.

What is immersion?

Immersion is a formative research method based in ethnography that includes living in people’s homes and sharing in their everyday lives to understand existing attitudes and behaviors, and experience firsthand the context and conditions which help and hinder behavior change.
BUILDING EMPATHY CREATES INSIGHTS

Across the villages, teams observed most caregivers giving babies rice porridge as the first food. It is already well known that throughout Indonesia rice porridge is often introduced before the recommended six months of exclusive breastfeeding. The new learning was how and when caregivers introduced porridge while continuing to breastfeed. Facilitators observed that caregivers gave porridge to infants before they breastfed. Caregivers explained that rice porridge was the main food and breastmilk quenched thirst, rather than being the prime source of nourishment for the infant. This is an important insight for framing messages in communication materials on continuing breastfeeding from 6-23 months. Communication needs to foster an understanding of breastmilk as a major source of nourishment for the first two years—up to or more than half of the nutrition needs of an infant during the first year. With the current practice, infant growth was compromised as families prioritized thin rice porridge over breastmilk.

AT THE POSYANDU

By accompanying mothers and caregivers to the posyandu sessions, facilitators found that they were often hot, crowded, and noisy. Drinking water was rarely available. Snack vendors were outside selling unhealthy foods. The sessions focused on weighing infants and recording weights for the district office. Cadres spent little time answering mothers’ questions or providing personalized advice. In some cases, food was distributed as part of the stunting prevention efforts financed by village governments. Foods often included heavily sweetened mung bean porridge, sweet biscuits, or even fried snacks. I needed a small cut to be dressed by the bidan, which gave me a chance to spend over two hours chatting while meeting cadres and the local imam. Meeting up with children on the way back, they took me to the river and delighted in my ineptitude trying to catch fish. I joined them to collect wild mushrooms and they showed me the water storage tank, river water pipelines, and the smaller rivers where people defecate. I spent one morning at the hot and busy posyandu watching the interactions between the cadres, bidan, and mothers, and chatting with mothers as they waited for their babies to be weighed.

The only meal of the day eaten as a family was supper. We sat on the floor and shared simple but very spicy food. The evenings were a good time to engage the family in making diagrams and other activities to learn more about food and nutrition. We explored their food preferences by ranking self-drawn pictures, as well as charting seasonal availability of food, seasonal cash flow, and family income. One evening I shared some images of the government’s nutrition posters on my phone and asked the family what they thought. Before Magrib each evening, there was always a chance to chat with neighboring mothers. Often the house was full of people in the evenings providing opportunities to share and openly discuss my experiences. Watching TV together with the family in the evenings, we discussed food and snack advertising and lifestyle aspirations.
Step 2: Inspiration

HOW WE DID IT

After the immersion, the facilitators left the villages and met as teams to share and discuss the findings. They started to analyze what they had seen and experienced, discussing the factors that seemed to be contributing to the assessment’s focal nutrition and ECD practices. They then began to identify possible entry points to address key behaviors.

A multi-day intensive workshop with the facilitators, technical experts including nutritionists, designers, and communication professionals followed. During the workshop the facilitators shared their experiences, observations, photos, and videos from each community through small working group processes. Technical advisors learned about the context of each village—its accessibility or remoteness; the foods available; apparent norms or preferences related to care of children; and parenting practices—and asked many questions.

Facilitators shared commonly eaten foods from each village and the groups explored the food diaries together and discussed how caregivers interacted with children during feeding. Food diaries included quantities of different foods consumed and the way foods were seasoned and sweetened to encourage child feeding. Discussions of the communication materials (posters, training flip charts, information leaflets, and different versions of the baby record books) focused on people’s reactions to the materials—what they understood from the messages, what they thought was relevant to them, and what they actually took away.

This intensive analysis of the information highlighted conundrums in each location. For example, why were people’s diets so limited when nutritious food grew plentifully nearby? Why did mothers give newborns breastmilk substitutes when they knew that breastmilk was healthier for infants? These apparent contradictions were explored—linking the deep understanding of the context with expert technical knowledge of current and past interventions and best practices. From there, the group started to prioritize behavioral challenges and identify entry points for addressing them in each location. Through an inspiration process that entailed using cards, drawings, modeling and other interactive materials, the group developed as many ideas as possible that might help the villages to design their own approaches and solutions to address specific IYCN and ECD challenges.

What are conundrums?

Conundrums are confusing or difficult problems or questions. In this case, they were often contradictory practices in which behaviors or practices didn’t align with the existing knowledge or beliefs that were shared or demonstrated.
STEP 3: Design

HOW WE DID IT

Following the inspiration step, facilitators returned to their villages for an additional four days to share the insights with the communities. They held in-depth discussions with community members, in large and small groups, and had informal chats providing a chance for everyone—including mothers, family members, and neighbors—to reflect on what was learned through the immersion and inspiration. The photos, videos, and drawings from the immersion aided the discussions and made it easier for community members to react, discuss, and gain a deeper understanding of the findings that emerged.

These conversations provided the foundation for the community to work jointly with the facilitators to identify a specific design challenge corresponding to a prioritized issue in the community. The issue was phrased as a ‘how might we’ statement. For example, How might we help mothers track their babies’ development? How might we make mothers’ and babies’ diets more diverse? This was intentional, signifying that although the community agreed on an area of focus, the path to addressing it would be open-ended and experimental.

Next, the facilitators led an interactive brainstorming session with the group to identify as many ideas as possible to address the issue. The group and the facilitators explored the new ideas generated during the inspiration phase with technical experts. In many cases, the ideas developed outside of the village did not resonate with the community members. The discussion focused on why that was the case and how to improve upon them or on the development of new ideas.

Through this co-creation process each community ultimately agreed on specific ideas to develop for each ‘how might we’ challenge. Some entailed developing a physical design, for example a poster or a building design. In these cases, communities created models of the products and solicited feedback from the group and others in the community. For activities—for instance cooking clubs, gardening, or preparing new foods—community members went through the steps to try out these ideas to learn how they worked and could be improved.

At the end of the facilitators’ visit, the community members in the group shared their ideas or models with village midwives, health cadres, and officials through informal meetings and discussions. This helped to build community members’ confidence in the response to the challenge and excitement for their ideas, while at the same time garnering the support needed, in some cases, to carry out a trial. They developed an action plan with the next steps.
STEP 4: Trialing

HOW WE DID IT

The action plans guided the trialing of their ideas. They conferred with other community members to see if they were interested in the potential solutions. They identified adaptations needed and finally assessed their effectiveness in changing intended behaviors. Over an eight-week period, facilitators checked in periodically by phone with the village, helped troubleshoot challenges that had arisen, and provided a sounding board for the additional adaptations of the designs.

Community members shared that they found the follow-up calls motivating and appreciated being able to share their achievements.

We returned to the communities one more time after the trialing period, to jointly discuss and reflect on the processes and outcomes of the trials. Through interactive workshops and discussions, community members discussed what went well, what did not work, and what support they might need going forward in helping others to adopt one of the solutions.

Below is a summary of the challenge questions and different solutions that were tested in each location.

**East Nusa Tenggara**

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

**Response:** Interactive recipe book for mothers to use to introduce new foods to babies and record notes of babies’ responses. Use the notes in the recipe books for a discussion with cadres during home visits.

**Challenge:** How might we include fruit in the diets of families, pregnant women, and children under the age of two?

**Response:** Healthy homemade snacks for sale at kiosks and use at posyandu. Fruit-based snacks—fruit satay, fruit jelly, and fruit popsicles—made, promoted, and sold at cadre-owned kiosk shops. Posyandu sessions provided only fruits.

**Challenge:** How might we better address the need to understand how our children are growing?

**Response:** Developmental milestone chart to track child progress and promotional posters for recommended foods. Included making eye contact, lifting head, rolling over, sitting, crawling, standing with support, standing independently, walking, saying single words, saying simple phrases, and being active.

**West Java**

**Challenge:** How might we keep up the good work inspired by the previous midwife?

**Response:** A “healthy garden” linked to work of cadres. Cadres worked on preparing the land, rescuing plants, and planting new seeds. Designed information boards for promotion of vegetables. Used produce during home visits and at posyandu.

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

**Response:** Private counseling space added into a design for a new posyandu. Design also included play space for children and an adjacent space for a garden. Consultation with village health staff and officials to promote the idea.

**Challenge:** How might we bring back healthy and enjoyable meals inspired by childhood experiences?

**Response:** Novel cooking clubs to try to introduce new foods to children, especially infants. Met once a week to continue experimenting. Introduced ice popsicles made with real fruit and mung beans, replacing kiosk foods commonly sold to young children.

**South Kalimantan**

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

**Response:** Interactive recipe book for mothers to use to introduce new foods to babies and record notes of babies’ responses. Use the notes in the recipe books for a discussion with cadres during home visits.

**West Sulawesi**

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

**Response:** Private counseling space added into a design for a new posyandu. Design also included play space for children and an adjacent space for a garden. Consultation with village health staff and officials to promote the idea.

**East Nusa Tenggara**

**Challenge:** How might we bring back healthy and enjoyable meals inspired by childhood experiences?

**Response:** Novel cooking clubs to try to introduce new foods to children, especially infants. Met once a week to continue experimenting. Introduced ice popsicles made with real fruit and mung beans, replacing kiosk foods commonly sold to young children.

**Response:** A “healthy garden” linked to work of cadres. Cadres worked on preparing the land, rescuing plants, and planting new seeds. Designed information boards for promotion of vegetables. Used produce during home visits and at posyandu.

**Maluku**

**Challenge:** How might we keep up the good work inspired by the previous midwife?

**Response:** A “healthy garden” linked to work of cadres. Cadres worked on preparing the land, rescuing plants, and planting new seeds. Designed information boards for promotion of vegetables. Used produce during home visits and at posyandu.
TRIALING IN ACTION

Developing recipe books to help introduce new foods to babies

During the design step in one location, mothers experimented with introducing new fruits and vegetables to their children, which built their confidence to keep experimenting. They also experimented by adding flaked fish to their children’s diet, when previously they were worried about the choking hazard of fishbones. Their action plan for the trialing period included creating new recipes and adding them to the recipe book they had developed together during the design phase. Each mother had her own copy of the recipe book and noted on the empty page against each recipe what their baby’s reaction was to the food. These notes became an important focus for engagement with cadres who visited their homes weekly. Rather than feeling judged, as they had previously felt during home visits, mothers enthusiastically shared what new foods their babies had taken and their reactions. Cadres gave encouragement especially when some mothers faced setbacks. For example, the hot weather resulted in them buying their babies ice popsicles and many had fallen ill as a result and did not want to eat anything but familiar comfort foods. Others found that their teething babies became fussy about food but also found that giving their babies vegetables to chew eased the discomfort of teething. As the weeks went by, mothers routinely provided vegetables at least five days per week, when previously they were giving them no vegetables, and often mixed in flaked fish. The cadres kept in touch with Empatika through WhatsApp and noted how important it had been that the mothers had devised the recipes themselves and were keeping their own notes on their own babies’ reactions to the new foods instead of depending on the cadres to tell them what to do. The recipes were shared more widely among their social media contacts.

Designing a new counseling area for the posyandu

Mothers and health cadres designed a new posyandu with private counseling space and decided to trial the design by taking the pictures and models they had made and sharing them with a wider group of mothers, cadres in other areas, the puskesmas staff (especially the head) and their own village government. The idea was to seek feedback on their design and to build support for their ideas. The designs were universally lauded, in particular the ideas for a dedicated play space for children, an adjacent plot where vegetables would be grown, and the counseling room where mothers could enjoy one-on-one advice in a comfortable space. The mothers and health cadres managed a series of about five such consultations and overcame frustrations of having to reschedule these many times because of the unavailability of the puskesmas head or village officials. They realized that although the designs were liked, they could not be actualized until the construction of the new posyandu was resourced, and this was not planned until the following year. With our encouragement, they decided to trial the counseling space in an existing posyandu and put into practice their ideas for making it a private and comfortable space. The feedback from mothers using this experimental space was that they liked it very much and felt more confident to ask questions and feel valued. It was agreed that this was the evidence they needed to ensure that the new posyandu would include a counseling space.
### Key Results from Trialing

#### West Sumatra: Healthy Homemade Snacks
- Children did not buy fruit snacks; continued to buy packaged snacks.
- Two of the kiosk’s owners gave up almost immediately.
- Posyandu provided fruit satay with dana desa funds.

#### West Java: Developmental Milestone Chart
- Engaged fathers in the progress of their babies and infants.
- Parents felt empowered to track their babies’ growth and development on their own.
- Head of Village printed and distributed posters.
- Promotion to reduce unhealthy snacks was unsuccessful.

#### South Kalimantan: Interactive Recipe Book
- Weekly home visits by cadres were enjoyable and useful. Problems such as difficulties when a child was sick or refused food could be discussed.
- Mothers committed to giving new foods to babies; fish was an exception.

#### West Sulawesi: Counseling Space at the Posyandu
- Head of Puskesmas approved of the model and encouraged wider process-sharing.
- Motivation and support from mothers, village government, and cadres stimulated local-led changes in other areas.
- Rigid views of service-client relations somewhat constrained uptake of the idea.

#### East Nusa Tenggara: Novel Cooking Clubs
- Only one of two clubs continued throughout the eight-week trial period.
- Mothers appreciated chance to discuss and share tips on challenges with picky eaters.
- Cadres tried to replicate the idea, but became formal and unpopular with mothers.
- Village Head offered financial support for the clubs.

#### Maluku “Healthy Garden”
- Motivated the cadre group, giving them a sense of purpose, focus, teamwork; they felt more valued.
- Generated great interest by the community; highly visible.
- Village Head began to pay cadres for the initiative out of dana desa money.

### Conclusion
This innovative assessment process shows how immersion can uncover rich insights and create inspirations into specific behavioral challenges and how they might be addressed. It focused on generating a deeper understanding of infant and young child feeding, parenting practices, and the services aimed at promoting and supporting child growth. It shows how the community was active in designing and implementing behavior change ideas rather than being left out of the process. People were not only part of the solution but were energized to make it happen through this process. They owned the problem and the solution and invested in their own change. The next section presents the detailed findings and learning generated through this people-driven design assessment.
IYCN and ECD insights from the assessment

Assessments of IYCN and ECD practices in Indonesia—and the services available to support them—are not uncommon. Ours began with a review of this literature, which showed, for example, that mothers lack confidence in their ability to produce the right quality and quantity of breastmilk in the first six months. This is one reason they introduce complementary foods early, a common practice. We also learned that the variety of foods provided to children after six months was often limited to two food groups—grains (typically rice) and perhaps vegetables—and that many children eat only two or fewer meals per day. We learned about the widespread consumption of unhealthy processed foods by young children. While important, this understanding was insufficient for creating effective SBC strategies to improve practices.

Our assessment sought to address this issue by examining the reasons underlying the beliefs and practices, and the obstacles that prevent changes in behavior, even when people want to change. Furthermore, we sought to learn more about where people got information and how they became aware of the stunting reduction effort.

Our people-driven design approach also allowed for the development of solutions to support better practices and services.

1. Alive & Thrive Desk Review, 2018
2. ARCHnutrition, 2018
**Key Findings**

**FROM FORMATIVE ASSESSMENT ON IYCN & ECD PRACTICES**

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**Facilitators experienced many facets of life in the villages, gaining insights into the myriad nutrition-specific and nutrition-sensitive drivers of stunting. The assessment aimed to learn about IYCN and ECD practices. It also, to a certain extent, focused on learning about the services and interventions related to those nutrition-specific practices. Furthermore, the assessment prioritized filling gaps in the understanding of feeding practices of children aged 6-23 months.**

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**CONTINUED BREASTFEEDING AFTER 6 MONTHS**

**Recommended practice**

Continue frequent, on-demand breastfeeding until 2 years of age or beyond as breastmilk is a key source of energy and nutrients even after foods are introduced at six months. Complementary food is not a replacement for breastmilk.

**FINDINGS**

**Knowledge and practices**

Many mothers and caregivers introduced solid/semi-solid food early and felt proud when their baby took food at a young age, before six months. Mothers were often unaware of the recommendation to breastfeed for at least two years.

**Insights into current practices**

- Caregivers said that when their baby showed an interest in food it meant he/she was strong, smart, and developed—positive attributes.
- Mothers and others were delighted when babies tried out a new food, drank coffee or tea, or took a banana.
- As soon as a baby showed interest in food, mothers considered breastfeeding to be secondary. Rather than adding the appropriate amounts of food to complement breastfeeding, mothers felt they should fill their babies with food and only provide breastmilk on the side.
- Mothers did not consider breastmilk as a food, or a source of nutrients, and any breastmilk they continued to give served the function of mainly providing comfort, and secondarily hydration.

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**ACTIONS**

**Reorient communication messages to...**

- Address the mistaken belief that breastmilk is not a food.
- Emphasize that breastfeeding remains a key source of energy and nutrients for young children, particularly for babies 6-9 months.
- Link positive attributes expressed by caregivers—strong, smart, and developed—to continued breastfeeding after 6 months.

**Support strategies to...**

- Improve the quality of support caregivers receive to maintain breastfeeding while introducing complementary food at six months.

**Fill gaps in learning on...**

- Why breastfeeding diminishes rapidly and is not deemed important.
- How best to encourage mother’s motivations and demand for continued breastfeeding as a key source of nutrition.

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**PHOTO CREDIT | ALEX FURNO**

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**Photo Credit | Alex Furno**
Introducing Food at 6 Months

Recommended practice
Introduce semi-solid foods at 6 months of age as an infant’s need for energy and nutrients starts to exceed what is provided by breastmilk. At this age infants are developmentally ready for other foods. Gradually increase food consistency and variety as the infant gets older.

FINDINGS

Knowledge and practices
Many mothers and caregivers introduced foods to babies earlier than recommended. Younger babies—4-8 months—were primarily given watery porridge. Rice porridge was the most common first food and was often heavily seasoned with salt, monosodium glutamate (MSG), or stock, or heavily sweetened. Rarely were vegetables or other foods added. Sugar was often added to new foods to make babies try them. The introduction of any substantial food (vegetables, fish, meat) was delayed until the baby is thought to be able to “chew.” Mothers and families were aware of developmental and growth-related changes, but not of the connection between developmental milestones and readiness to introduce first foods.

Insights into current practices
• Mothers said babies liked highly sweetened or salty porridge best, and adding vegetables makes it less palatable.
• Mothers believed that young children preferred breastmilk substitutes (BMS) or sugary beverages more than breastmilk, and parents catered to these preferences.
• Mothers defined three phases of feeding: when breastfeeding only is enough, pre-teeth and post-teeth. The appearance of front teeth (usually around 8 months) seemed to indicate to mothers that babies were ready for thicker porridge and mashed foods. Once babies have teeth, they were expected to eat the same foods as adults.
• Mothers did not consider breastmilk to be a food or a source of nutrients, and any breastmilk they continued to give served the function of mainly providing comfort, and secondarily hydration.

ACTIONS

Reorient communication
to...
• Focus on timing and to counter the perception that babies need teeth to start eating foods.
• Promote introducing babies to vegetables, meats, and all other types of foods at six months.
• Build on the awareness and interest in tracking developmental milestones linking them to when to introduce first foods and different types of foods as the child grows.

Support strategies that...
• Draw on mothers’ existing mechanisms for deciding when a child is ready for certain foods and help to steer away from the focus on the eruption of teeth.
• Improve caregiver support for how and when to add available and safe animal-source foods into complementary foods, even for young babies.
• Advise against the use of ultra-processed foods high in salt and sugar to minimize risk of developing taste preferences for unhealthy foods.

Fill gaps in learning on...
• Barriers—resistance, availability, or other reasons for limited use of animal source foods for this age-group.
• Effective ways to limit the high use of unhealthy foods for this age-group.

Although the recommended age to begin solid food is 6 months, many babies in Indonesia are introduced to foods as early as 4 months. Watery rice porridge is the most common first food.

GIACOMO PIROZZI | ALIVE & THRIVE
Feeding Older Babies 9-24 Months

Quality and Diverse Foods

**Recommended practice**

Feed a variety of foods to ensure that nutrient needs are met. Meat, poultry, fish, or eggs and Vitamin A-rich fruits and vegetables should be eaten daily, or as often as possible.

**FINDINGS**

**Knowledge and practices**

People were familiar with the five food groups, as taught in school. Rice was understood to be the main food while other foods were viewed as adding flavor and eaten in small quantities. Animal-source foods were not commonly included in complementary foods provided to babies. Eggs were hardly ever consumed, even in families who kept many chickens. (Maluku was an exception: eggs were often observed in kitchens, mostly purchased at a kiosk.) The most common vegetable eaten across all locations was kelor (moringa) that grows wild and was easy to collect. Other green leaves such as spinach, morning glory, and pumpkin leaves were also commonly prepared. Fruit was rarely eaten, and much spoiled in the fields. Mothers knew that it is good to add vegetables and fish to porridge and other foods but do not do so.

**Insights into current practices**

- Availability was not always the reason that animal source foods were not provided; in some villages they were affordable and available (e.g., eggs and fish).
- Caregivers often avoided fish for complementary foods because they were concerned that young children would choke on the bones.
- Some families kept chickens or ducks, but they were regarded as assets that could easily be sold for cash and generally not eaten.
- Even when local fruit was available, it was often disparaged as “boring” by adults and children alike.
- Fruits such as pineapples and mangoes were not grown in the assessment locations and were often considered too expensive and a rare treat.
- Mothers valued foods that could be prepared easily, feeling that adding vegetables and fish to porridge was too time-consuming.

**ACTIONS**

**Reorient communication messages to...**

- Acknowledge the fear of feeding fish to babies because of small bones in promoting and supporting fish consumption where eating fish is a norm.
- Focus on promoting specific foods (bearing in mind availability and other factors) rather than general messages about dietary diversity as knowledge is already high for what should be done.

**Support or explore strategies that...**

- Provide fish to children without bones, e.g., fish powder has been developed in other countries to add fish to babies’ food.
- Focus on specific practices rather than knowledge since knowledge of recommended practices was already high.
- Draw on the idea of using tools (such as an interactive recipe book) to support mothers in implementing new practices developed through people-driven design. It can serve to facilitate communication and support between cadres and caregivers.

**Fill gaps in learning on...**

- The reasons families are reluctant to eat eggs or chickens and why they are reluctant to feed these foods to children.
- Why caregivers choose certain foods over others, and the extent that this is related to availability.
- Other norms specific to the local context, especially more about caregivers’ time and desire for convenience.

**SPOTLIGHT**

An interactive tool to encourage dietary diversity for babies and young children

A group from a village in South Kalimantan took on the challenge of trying to incorporate vegetables, fruits, and fish into the foods they fed their babies and young children. The group designed a book with their own recipes intentionally created to include different kinds of foods and a place for caregivers to record how a child responded to a new food. They selected mothers to participate and carried out a short trial during which mothers tried the recipes and recorded their experiences. During the trial, cadres made home visits to the mothers to discuss and share successes and help with challenges in introducing new foods. Mothers found that making the notes helped to keep them engaged and motivated to keep trying the practice. They also valued the home visits, and overall, children enjoyed the variety of foods. Mothers noted that it was easier to introduce new tastes to younger children. Adding vegetables and fruits was well accepted, but adding fish remained an issue because mothers continued to worry about their children choking on small bones. Trying any new foods was also difficult when children were sick and refused food.
Appropriate Amount and Frequency of Food

**Recommended practice**

Start at 6 months of age with small amounts of food and increase the quantity as the child gets older. Increase the number of times that the child is fed: two to three meals per day for infants 6-8 months of age and three to four meals per day for infants 9-23 months of age, with one to two additional snacks as needed.

**FINDINGS**

**Knowledge and practices**

Mothers did not track how much a baby consumed in a day. It was the norm for children to eat from others’ plates, making tracking difficult. Most children did not have their own plates until well past the first year of life. Little attention was paid to how many times the child ate, or the amount consumed each day. Small children were fed when they demanded to eat, and since mothers fed babies/young children when they cried, a routine of specific mealtimes was not the norm. By about 12 months, children ate almost the same food as the rest of the family, with some adaptations. In some locations, food for young children was washed off to remove excess chili, and sometimes a conscious decision was made to use less MSG.

**Insights into current practices**

- Caregivers were reluctant to let children eat on their own because they feared that the child would play with the food and waste it or that they would get messy.
- Young mothers were more secure using packaged baby food, as they thought the ingredients were “designed for babies’ needs” (clearly identified on the labels) and provided them with instructions on quantities. Mothers felt they were “doing the right thing.”
- Mothers saw using packaged food sachets as an advantage because it made it easier to keep track of the amount the babies ate.

**ACTIONS**

**Reorient communication messages to...**

- Reframe playing with food as a positive activity and link to developmental milestones and expectations.
- Acknowledge the fear that the child will play with and waste food and counter the strong reluctance to let children eat on their own.
- Take advantage of the caregivers’ desire to be able to track the amount of food the child is consuming.

**Support or explore strategies that...**

- Promote ways, which may already exist, to track the amount of food babies consume at different ages linked to their growth and development.
- Help mothers/caregivers keep track of how much children are eating daily, perhaps experimenting with approaches—e.g., special feeding bowls for young children.

**Fill gaps in learning on...**

- How big a role the quantity of food consumed by young children plays in poor growth—compared to feeding during illness or the type of foods consumed, etc.
- The transition from porridge or other foods considered “baby foods,” to eating the “family food.”
Avoid Unhealthy Foods

**Recommended practice**
Avoid giving drinks and ultra-processed foods with low nutrient value, such as tea, coffee, sugary drinks such as soda and juice, fried foods, sweets, and packaged foods. Limit so that they do not displace more nutrient-rich foods.

**FINDINGS**

**Knowledge and practices**
Kiosks and snack vendors were prevalent, especially in places where socializing occurred, or children gathered. Snacks came in affordable and attractive packets that were considered treats, in contrast to what were otherwise considered “boring” foods. Snacking was a big component of child diets starting from a young age. Crackers, biscuits, cakes, and other ultra-processed foods were offered to babies, often in the first six months. Children asked for pocket money to buy snacks from kiosks “as soon as they uttered their first words.” Caregivers and others knew that unhealthy foods were not the best foods for young children. Left to decide for themselves, children continued to select the less healthy option.

Family mealtimes were becoming less common, and food was available throughout the day to be eaten when hungry. Most families cooked once or twice per day and stored the cooked food in the kitchen. People were “bored with their food” and preferred packaged foods or cooked foods that seemed more novel.

**Insights into current practices**
- Picky eating was noted as a common issue and often snacks were provided to avoid tantrums when children were demanding them.
- The perception was that young children see their older siblings or parents snacking and want the same.
- Parents indicated that they liked to “treat” their children since they did not have these snacks growing up.
- Parents believed that snack foods made diets less “boring” and that children were not eating enough food throughout the day because they were bored with their options.
- Adults across the communities where meals were no longer eaten together commented that mealtimes and home cooking used to be something that the family looked forward to. Now it was often repeated that home-cooked food was “boring.”

**ACTIONS**

**Reorient communication messages to...**
- Be direct about avoiding unhealthy snacking for improving feeding of babies and young children.
- Reframe them in ways that leverage caregivers’ awareness that unhealthy snacks are undesirable for young children.

**Support or explore strategies that...**
- Tackle the family eating environment to address the norms of snacking. Identify ways to address the family mealtime environment, and the desire for convenience, taste, and novelty.
- Develop multi-faceted solutions to unhealthy food consumption—addressing issues that make unhealthy foods easily accessible to young children while promoting healthy snack replacements and supporting parenting skills to address feeding challenges.
- Experiment with innovative, local supply side issues that contribute to unhealthy snack consumption.

**Fill gaps in learning on...**
- What it means that meals are boring: the reasons why and what might be done about it.
- Constraints to changing the supply side that contributes to the availability of unhealthy food aimed at young children.

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**SPOTLIGHT**

**Novel cooking clubs generated interest but were challenging to implement**

Residents of the East Nusa Tenggara coastal community decided to focus on how to do more cooking at home and to use a wider variety of foods. They realized that diverse foods were available but were being underused. Home-cooked meals were not a routine practice, and when they did cook at home, they tended to make the same thing every day. The cooking club was designed to change that. They focused on making new foods available for children, especially infants. In the initial experiment with the idea, mothers enjoyed cooking together and children liked the food. Fathers were pleased, too. As a trial, two clubs formed and planned to meet once a week for eight weeks. Making this happen was more difficult than they anticipated. One of the clubs struggled with attendance while the other was popular. The successful club generated a lot of interest, including from the Head of Puskesmas, who participated in the design group. They made a participatory video of their cooking club experience to share with others and there were requests in the village to establish new cooking clubs.
Children play on smartphones during a household meal. Across the assessment sites, meals for young children were often rushed or interrupted by play.

PHOTO CREDIT | EMPATIKA

Feeding Young Children in a Responsive Manner

**Recommended practice**
Practice responsive feeding which includes feeding infants directly, being sensitive to their hunger and satiety cues, minimizing distractions, encouraging them to eat but not forcing them, talking to the children, and maintaining eye contact.

**FINDINGS**

**Knowledge and practices**
Mothers commonly felt that there was nothing they could do about the lack of appetite in a baby or young child, and that it would pass. They did not take special measures to feed sick children differently. As crying was associated with hunger, babies who did not cry (possibly due to illness) could be left without any attention or feeding for long periods. When children refused foods, parents rarely made an extra effort to convince children to try or finish foods.

Parents did not minimize distractions while feeding babies and children. Older infants and young children were 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. Mealtimes could be rushed or nonexistent.

**Insights into current practices**
- When children had poor appetites or refused certain foods, parents preferred not to create a fuss; they accepted that the child would eventually feel hungry and eat something.
- People are readily embarrassed if they think others might criticize them. Tantrums indicate that you are a poor parent, a label that parents would rather avoid at all costs.
- During illness, parents expected their children's appetites to be affected and were not aware of the need for special treatment during and following an illness.
- Parents seemed unaware that making eating a pleasant experience and responsive feeding practices were important for early child development.

**ACTIONS**

**Reorient communication messages to...**
- Address knowledge gaps related to feeding during and after illness as it relates to child growth.
- Emphasize the importance of the way in which young children are fed to raise awareness about its link to child growth and development.
- Promote the need to limit distractions during young child feeding.

**Support or explore strategies that...**
- Offer ways to limit distractions when feeding young children to ensure proper food intake.
- Provide opportunities for learning more about responsive parenting and stimulation to support young children’s development.

**Fill gaps in learning on...**
- Why parents defer food choices to a child’s presumed preferences at such a young age.
- Constraints to reorienting the feeding environment for young children and ways to address them.
Early Childhood Development

In March 2020, WHO released Improving early childhood development: WHO guideline, providing direction for strengthening policies and programs to better address ECD including four recommendations—responsive caregiving; promote early learning; integrate caregiving and nutrition; and support maternal mental health. The assessment focused on integrating caregiving and nutrition.

Integrating Caregiving and Nutrition

Recommended practice
Support for responsive care and early learning should be included as part of interventions for optimal nutrition of infants and young children.

FINDINGS

Services and practices
Mostly mothers (or other women) looked after children. Fathers had few interactions with their young children until they learned to walk. Once they were walking, children were primarily expected to interact with other children. Support for early childhood development at the community level was entirely through PAUDs (Pendidikan anak usia dini [pre-school]). Village funds were used to build PAUDs, pay PAUD teachers, provide uniforms to children, and, in some cases, provide furniture and play equipment. All locations had PAUDs, but they mostly catered to children older than two years. No support mechanisms or systems were in place to improve parental interaction or promote play with infants and young children. Even in the private PAUDs there were no systems in place to involve parents or caregivers, or to educate them on good nutrition practices or early childhood stimulation.

Insights about services and practices

• Parents perceived that the main purpose of PAUDs was to prepare children for school. They were reluctant to send younger children, even if they were welcomed.

• Play was not valued by parents to help support early learning, and there was a preference for conventional educational activities.

• Mothers tended to see weight gain as an indicator of child development and were aware of and remembered the stages of their child's development (including rolling, vocalizing, and walking, among others).

• Mothers and other caregivers expressed an interest in tracking developmental and growth-related changes, and some communities felt they had relatively little access to information to do so.

ACTIONS

Reorient communication messages to...
• Raise knowledge and awareness throughout the community about the need for ECD and how to integrate caregiving and nutrition.

• Effectively target and reach other members of the family involved in caring for children with specific practices to help improve ECD once more is understood about how to shift societal norms on caregiving.

Support or explore strategies that...
• Promote and support positive parenting and other nurturing care practices within the context of improved growth and development.

• Consider the use of developmental milestones as markers in messaging, design of communication materials for complementary feeding, and how they might be leveraged to involve fathers more in parenting.

• Focus on how early learning and stimulation can be promoted through current models of service delivery.

Fill gaps in learning on...
• How the PAUD might become a resource for parents of children under two years.

• What strategies might work to ensure that fathers and other family members interact in ways that support development in young children.

Local tool tracks child growth and development

In West Java, the community developed a local solution to better track and understand their children’s growth and development as well as their changing food needs. They created a key milestones chart that indicated different developmental stages (i.e.: lifting head, rolling, sitting, crawling, standing with support and independently, walking, running, talking) and a poster with recommended daily food consumption according to different ages. The materials were useful, and caregivers could easily understand them. Mothers noted this would be helpful for involving fathers as the charts would be displayed at home. The Head of Village agreed to print and distribute charts to homes and post them in key public places, such as the kiosk and posyandu. They felt it was a useful communication material and mothers most liked that it was developed by themselves and for themselves.
Services and communication channels to promote and support child growth and development

Indonesia led the way in the 1970s with its approach to delivering nutrition-specific interventions through its Family Nutrition Improvement program (UPGK). In the late 1980s, the Posyandu community health posts aimed at improving the health of women and children, grew out of that program. They initially focused on nutrition, growth monitoring and promotion, and immunization, and subsequently began to apply a multisectoral approach to combat malnutrition. Services and communications for child growth and development are based on this community-driven approach.

The Posyandu

Until fairly recently (five years ago), many original posyandus were dusty and hardly in use, but still functioning. In the last few years, they have been reactivated but they need improvements to be effective. Village governments have been prioritizing the posyandu using dana desa (village funds) to rehabilitate them and to re-energize and pay for the cadres’ work.

FINDINGS

Services and practices

The monthly posyandu sessions were the primary mechanism of support for nutrition in all the communities. The practices of attending the posyandu for child growth monitoring and promotion were the norm. Food was often distributed during the sessions and typically given to all in attendance rather than based on need. Food was given out without a demonstration or explanation of how it could be prepared as complementary food for young children. In some cases, special biscuits and “pregnancy milk” were distributed specifically to underweight pregnant women. Iron folic acid tablets were also distributed to pregnant women.

Primary interactions with caregivers were often restricted to child weight checks, immunizations, and recording information in Baby Books. Height measurements were rarely taken. Follow-up visits were sometimes suggested, but the participation of midwives or caregivers was rare. No advice was given to address children whose weight was low. A major challenge evidently brought on by the introduction of the stunting initiative in 2018 was the need to frequently fill out records for accountability. This work takes considerable time from cadres and pukesmas staff, leaving less time for mothers.

Facilitators observed health cadres with varying levels of capacity. Advice given on IYCN appeared to be one-way talks from cadres, were not very interesting or engaging. They noted that the food provided was often too much for one person; subsequently, it was taken home and shared among family members. Many women reported that they gave biscuits away to others or simply did not consume them. Health cadres and midwives both complained that they never had time to talk with and give advice to mothers.

The need for follow-up visits was sometimes mentioned, but there was no follow-through on these visits by midwives or clients.

Insights about services and practices

- Caregivers reported that the posyandu sessions, which were one-way talks from cadres, were not very interesting or engaging.
- They noted that the food provided was often too much for one person; subsequently, it was taken home and shared among family members.
- Many women reported that they gave biscuits away to others or simply did not consume them.
- Health cadres and midwives both complained that they never had time to talk with and give advice to mothers.
- The need for follow-up visits was sometimes mentioned, but there was no follow-through on these visits by midwives or clients.

Insights about health cadres’ practices

- Health cadres could not explain how to use the equipment for measuring height.
- Large group didactic sessions at posyandu deterred mothers from asking questions for fear of being reprimanded or embarrassed.
- Mothers did not always understand the information being shared or what they should do in response to it.
- Mothers commonly requested more opportunities for one-on-one responsive conversations with cadres where they could feel comfortable asking questions.
- Caregivers suggested it would be better to focus on what they deemed achievable changes in practices rather than the recommended practices. For example, since children will continue to consume packaged food, they preferred help in understanding how to limit snacking or initiate it when a child is older, rather than eliminating snacks entirely.
- In some cases, community members felt that cadres work very well together; in others this was not the case and little involvement of cadres was reported.

Cadres and midwives had limited one-on-one interactions with mothers/caregivers at the posyandu or in the village. While a counseling table, a place designated for mothers to have questions answered, is required, tables were not operating in most posyandus.

SBC strategies

- Improve counseling services at posyandus and invest in opportunities for more one-on-one support and interactions with cadres beyond monthly posyandu sessions.
- Ensure community participation in improving quality of care in line with the WHO-endorsed concept of family-centered care—based on a mutually beneficial partnership among parents, families, and health-care providers. It highlights the principles of dignity, respect, information sharing, participation, and collaboration.
- Consider feedback loop mechanisms to facilitate community-driven improvements in quality of service delivery per the expressed desire for more engagement in their health posts and services; community scorecards or other mechanisms could be useful to support engagement and enhance accountability.

ACTIONS

Support or explore strategies that...

- Embed opportunities for tailoring and localizing feeding and nutrition programs at posyandus so that they are designed to be more engaging and meet the expressed needs of community members.
- Highlight high-performing posyandus and local village leaders for innovative programs and service delivery through horizontal sharing and other initiatives for recognition.
- Ensure community participation in improving quality of care in line with the WHO-endorsed concept of family-centered care—based on a mutually beneficial partnership among parents, families, and health-care providers. It highlights the principles of dignity, respect, information sharing, participation, and collaboration.
- Consider feedback loop mechanisms to facilitate community-driven improvements in quality of service delivery per the expressed desire for more engagement in their health posts and services; community scorecards or other mechanisms could be useful to support engagement and enhance accountability.

Fill gaps in learning on...

- Barriers and facilitators for influencing how interactions occur between caregivers, health workers, and cadres.
- Needs for capacity building among cadres and other health staff to support effective SBC strategies.

- Ensure community participation in improving quality of care in line with the WHO-endorsed concept of family-centered care—based on a mutually beneficial partnership among parents, families, and health-care providers. It highlights the principles of dignity, respect, information sharing, participation, and collaboration.
- Consider feedback loop mechanisms to facilitate community-driven improvements in quality of service delivery per the expressed desire for more engagement in their health posts and services; community scorecards or other mechanisms could be useful to support engagement and enhance accountability.

- Barriers and facilitators for influencing how interactions occur between caregivers, health workers, and cadres.
- Needs for capacity building among cadres and other health staff to support effective SBC strategies.
Building cadre confidence in reaching out to and interacting with mothers
The design workshop in Maluku aimed to create opportunities for cadres to engage with mothers. The design group decided to create a community demonstration garden and use the produce as a way for cadres to initiate home visits. They hoped that this would create an opportunity for cadres to chat with mothers, provide support, cook together, and feed babies together. The produce was also intended for use at the posyandu. The results of implementing this idea were positive. The community showed interest in the garden. It was highly visible on the main road. The cadre group felt motivated. They felt a new sense of purpose and focus, and more valued by the community. The garden gave them a reason to meet together every Saturday to work and plan nutrition interventions. The Village Head was pleased that the cadres had taken this initiative and since they were paid from the dana desa it gave him a way to track their performance.

Knowledge and practices
Caregivers and others viewed midwives, traditional birth attendants, and community health workers as valuable support personnel for health and nutrition in their communities. While mothers socialize, they did not often discuss challenges they faced in feeding children for fear of judgment from others. Older women in the community commonly gave mothers advice about babies and nutrition. Mothers generally trusted this advice. Older women were aware that some of their traditional feeding practices were no longer recommended (e.g., providing food earlier than six months), but informational messages alone have not changed these practices.

Facilitators observed many didactic communication materials during the assessment. Many materials had reached the villages related to the stunting campaign and the government response (see sidebar). Most communication materials shared messages about healthy foods that many considered old, familiar information. Community members preferred materials that had what they considered realistic recommendations.

People did not necessarily receive significant amounts of information from TV advertising. Social media and electronic communication provided another avenue through which some community members accessed and shared information, although this was primarily for social or recreational purposes. Health information was not commonly shared on these platforms. It may not be considered a trusted source because of misinformation shared on the platforms.

Insights on channels
- Cadres were aware and shared that simply posting or sharing materials without explanation was not enough for mothers, and that the mothers needed more support and encouragement.
- The need for more organized peer support and experience-sharing among mothers emerged as a desire in several locations. For example, caregivers enjoyed workshops during the assessment that allowed them the chance to share their experiences about feeding children.
- Mothers preferred peer support to be informal and supported by cadres or peers rather than midwives as they felt more comfortable with them.

Insights on materials
- Mothers indicated they did not always understand the information in the materials.
- Some caregivers expressed that the foods presented in the communication materials were either unavailable locally or too costly.
- Seeing messages that did not resonate with their context made them feel that “eating healthy” was “impossible.”
- People ignored materials with many words, even when they could read easily.
- Commercial marketing methods promoting packaged foods were considered more “scientific” (based on packaging) and appealed to some communities.

For communication materials:
- Choose words typically known in the community and easy to understand; avoid words like “stunting” and “1,000 days,” opting instead for words and images that focus on specific behaviors.
- Do not use a lot of words or include many messages in the same material; use images to show how to implement a practice.
- Develop/adapt and pretest messages in the community to ensure they are understood and relatable.
- Consider smaller or incremental improvements to behavior, rather than promoting the recommended practice if it is immediately unachievable. For example, promote how to limit or initiate introducing less-than-desirable snack choices later rather than trying to eliminate these foods entirely.
CONCLUSION

Effective SBC requires an in-depth understanding of current behaviors—not just what families and communities do, but why. Understanding available IYCN and ECD services—how they are perceived, the demand for them, and their quality—is also essential to providing effective SBC that supports these services. The findings and insights from this assessment expanded our knowledge and awareness of why people (in different contexts) choose certain practices and the potential helping and hindering factors for change. It demonstrated what can be gained by using a people-driven design approach—creating and implementing solutions owned by the community to address their behavioral challenges.

In its entirety, it offers insights and potential actions for IYCN and ECD that are applicable beyond these communities engaged in the process. Part 3 of this series provides further guidance on how the elements of a people-driven design approach can be used to plan, develop, or improve SBC efforts for stunting reduction at district and community levels.
Engaging people directly in their own behavior change leads to enhanced motivation and confidence to adopt and integrate new behaviors—and to encourage those around them to do the same. This engagement is the essence of people-driven design. Engaging with communities in the process ensures that the strategies for encouraging change are appropriate, meaningful, feasible, and locally owned. Leaders can apply and benefit from using the principles and practices of people-driven design even where strategies are already in place or interventions are on-going. This section explores the people-driven design approach in more detail. It describes what is needed from leaders and others to engage effectively in the approach and suggests ways it can be adapted and incorporated at different stages of the SBC process.
People-driven design requires a certain frame of mind. Leaders and partners must understand and accept that to use this approach they may need to adjust their current way of thinking about SBC. The Government of Indonesia has shown its political and financial commitment to achieving SBC to reduce stunting. The government recognizes that citizen engagement and community empowerment at the village level are necessary for successful SBC. With funds from the Village Law (enacted in 2014 to provide resources at local levels), village leaders have the financial resources at their disposal for stunting-related programs and activities. As part of Stranas Stunting they are expected to foster participatory village deliberation and decision-making in the use of those resources. Part of that process calls for leaders to understand the local drivers of stunting as well as to monitor changes in rates of stunting and the availability and use of services to prevent it as programs are implemented.

Policymakers, technical experts, and other external actors must be convinced that residents of a community are experts in their own right—experts in the sense that they know a lot about their communities. Further, residents have something many experts lack: influence to change behavior based on long-standing relationships. External actors must accept that broader participation in the design process for nutrition SBC interventions is vital. Key stakeholders often will need to move from one mindset to another to successfully apply people-driven design. The following page shows the characteristics of the mindset needed to embrace a people-driven design approach.
RECOGNIZE THAT COMMUNITIES ARE THE EXPERTS OF THEIR REALITY

Technical experts and partners likely have access to and know the recommended practices for ensuring growth and development of children based on current science. They may also be aware of evidence-based interventions that have shown to be effective in improving nutrition practices elsewhere. However, for partners to effectively translate that knowledge and experience to address similar challenges requires that they fully understand the context first. Solutions that work in one community may not work in another. Immersion or other similar methods used in the people-driven design approach provide the means to begin to understand the community context.

PROVIDING INFORMATION OR RAISING AWARENESS ALONE DOES NOT CHANGE BEHAVIOR

A variety of other factors, not a lack of knowledge, inhibit desired behaviors. In the case of IYCN and ECD, caregivers often know what they should do. Knowledge and awareness of recommended practices are not the major inhibitors to behavior change, and never the only inhibitor. Only the community can shed light on drivers of different behaviors. Nutrition behaviors are inherently multi-sectoral, calling for a broader understanding of the context and often requiring multi-sectoral approaches. Only by accepting the people’s expertise of their own reality through humility (and thereby empathy) is it possible to create feasible and effective solutions for change.

ALLOW COMMUNITIES TO LEAD THE PROCESS TOWARD SOLUTIONS

Partners and experts should facilitate a design process rather than leading it. They must continue to be the learners and listeners with people in their own environments. Expert guidance and information are necessary to help guide solutions towards those that will have impact on child growth. But experts should not control what that solution might look like or how far it might go toward achieving recommended practices. They should facilitate a process of co-design with people rather than designing for people. Furthermore, learning happens during the development and design of potential solutions. That process can be as important as the SBC products or materials that are produced. If products and materials are not developed with the community, they are unlikely to resonate with or be understood by the community.

ACKNOWLEDGE THE NEED FOR ITERATION, TRIALING, AND EXPERIMENTATION

Scientific knowledge and learning from other contexts are important to acknowledge and build on, however partners should not rely on pre-determined or fixed interventions or materials, or one-size-fits-all approaches. Rather, design should occur through tailoring or selecting interventions based on experimentation and iteration that draw on as many ideas as possible, based on local realities. Considering out-of-the-box thinking requires building flexibility into the design, not expecting to reach recommended practices immediately, and using what is learned from monitoring and evaluation differently—to improve and change as the efforts progress.

BELIEVE IN A DESIGN BASED ON TWO-WAY CONVERSATIONS

Bringing the context of the community and people’s reality into a design calls for on-going dialogue and exchange. This should occur among community members themselves, as well as between the community and technical and other partners. Tackling challenging nutrition behaviors will likely not proceed quickly or automatically from current to recommended practices. Usually, it occurs by taking steps and making changes to work toward a recommended practice. Expert advice does not change behaviors. Thinking that communities are reliant on this advice for change is a misconception. Effective design requires recognizing people’s agency and capacity to solve problems.
Despite its advantages, it may not always be feasible to have a people-driven process that is entirely community-led. However, it is essential to have some degree of community engagement to improve the chances of an intervention’s success. Below is a look at how the people-driven design approach can be applied throughout the SBC process.

**People-driven design**

**Throughout the SBC Process**

Despite its advantages, it may not always be feasible to have a people-driven process that is entirely community-led. However, it is essential to have some degree of community engagement to improve the chances of an intervention’s success. Below is a look at how the people-driven design approach can be applied throughout the SBC process.

**Understand the situation**

The starting point to develop a strategy or program involving SBC is to continually understand the context for that change at every stage of the SBC process. Many resources and approaches provide guidance on how to conduct situational analyses or formative research across a myriad of topics, including MIYCN. Strategies that allow for the deepest understanding by creating opportunities for empathy will be the most useful. The people-driven design approach that we applied offers a way for district-level leaders to better grasp the drivers of stunting and to empower communities to not just participate in, but to lead the process of SBC.

The people-driven design experience shows how imperative it is to use formative methods and approaches to know why people do what they do. Collecting data on what people do, and simply asking people why they do things, is insufficient. Approaches that allow the community to lead the discussion, and for you to listen and learn, will be the most useful. Others that include observing, testing, or engaging in open conversation will enable a deeper understanding. See the next page for more information on effective formative approaches.

Also, do not assume that local officials or partners, even those who live in the community, can be the voice for different people or specific groups. Local officials or partners are often better educated, wealthier, and/or more socially connected than a typical community member. Even when local partners live in the community, they do not necessarily share the same values, experience, or perspective as others. Only through deeply understanding the context of those most affected by the problem and allowing their voices to be heard will you have true community engagement.

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THE CONTINUUM OF FORMATIVE ASSESSMENT APPROACHES

Formative assessments are essential to better understand behavior and allow program implementers to design focused strategies and programs to promote and support healthy growth and development. Resources abound on different types, methods, and tools to use in formative assessments. As is usually the case, our formative research, shared in Parts 1 and 2, built on what was already known about MIYCN, and aimed to fill in gaps and deepen our understanding. Formative assessments also typically focus on a specific set of behaviors. This people-driven design assessment demonstrates that assessments or formative work that is conducted closest to the context of those targeted for the behavior change provides deeper insights and understanding of the reality.

PEOPLE-DRIVEN DESIGN

The people-driven design approach (and others like it) are assessments implemented closest to the community. Immersion allowed for an on-going and in-depth experience of the community’s reality. Varied tools allowed us to understand the context, and can be integrated into other types of formative assessments to provide implementers similar insights. Our participatory methods included observation and photography, community meetings, resource mapping, scenarios to stimulate conversations, and full-day diaries with photos of food plates and feeding practices. Other methods that allowed people to share freely included preference rankings, seasonality diagrams and household expenditure diagrams. Video ethnography, especially when done by residents themselves, is another useful way to understand people’s reality.

BEHAVIORAL TRIALS

Behavioral trials sit midway between experiencing life in the community and asking questions about it, allowing people to try a new practice in their own environment. Trials of Improved Practices (TIPs), a methodology developed specifically for trials of IYCN in low- and middle-income countries, is well known. The technique consists of a series of visits to the household that bring an interviewer and a community member together to share current practices, discuss improvements, and reach an agreement on possible solutions. These ideas undergo a trial period, and the experience is discussed during a final visit. One drawback is that new behaviors are negotiated by the expert rather than being co-created.

INTERVIEWS AND OTHER EXPERT-LED METHODS

Standard, top-down techniques used in formative research include focus group discussions and interviews of caregivers, key informants, and others. While focus group discussions can be valuable learning opportunities if they are well-designed, they are not intended to gather information on specific practices. For child growth and development, focus groups can be good methods for discussing notions of child raising, beliefs about the properties of foods, what usually happens in the community, and ideas about what might or might not be acceptable to change and why. But focus groups require significant expertise and experience to design and implement effectively. Interviews based on pre-set questionnaires are widely used. The major drawback is that interviews are based on self-reported information, which results in biased responses. To generate more data on lived experiences, the assessment can include observation tools and dietary recall methods. Other techniques, drawn from commercial marketing, can help to elicit more unbiased responses; for example, asking people to finish stories or to describe what they see in photographs. We used these methods during the immersion as well.

FOCUS AND DESIGN

Stranas Stunting outlines the broad categories of nutrition-specific and nutrition-sensitive interventions for reducing stunting in each region. Within these categories, districts and villages must provide the focus and design specific strategies and programs based on their realities and contexts. The design step is perhaps the most challenging. Yet, taking information, findings, and learning from formative or situational assessment activities and linking them to the design is critical. Many tools and frameworks are available to assist in carrying out the organization and understanding of information collected through a formative phase of inquiry.1,2,3,4

Failing to interpret and translate the learning from situational assessments into strategies for change is a common challenge. This may explain why public health and nutrition experts tend to fall back on pre-determined interventions and strategies based on their own knowledge and evidence base.

Our people-driven design approach, documented in parts 1 and 2, illustrates the ways in which all the information, findings, and insights that emerged during the first step can be organized, discussed, and used to inform potential solutions. Facilitators from the assessment used open-ended processes to begin to organize the information. Technical experts (nutrition and others) played an important role in the process, identifying gaps between current and recommended practices and analyzing potential opportunities for change. Focus behaviors and strategies to address them were selected with partners, and subsequently brought to the community for discussion.

Organizing findings and defining interventions and channels for communication

The most difficult process is taking the information (in whatever form it was collected) and making sense of it. For that reason, it is often either not done, or not done well, and the value of what was learned can be lost. Participatory tools for the design process include brainstorming approaches, such as listing the helping and hindering factors related to a specific practice.

CREATE AND TEST

Using information and insights taken from the community and designing program approaches and activities directly with them is ideal. Involving many partners alongside community members themselves can help to bring focus to key issues while co-creating solutions and activities. Working in groups of diverse stakeholders raises visibility and garners more creative ideas. Through co-design there is also more buy-in to the change process, which often means participants show more willingness and motivation to change behaviors. When it is possible, it also can serve to empower and build capacity of local leaders to understand what is needed for effective change. Even ideas that fail along the way can provide strong insights for policies or programs, as shown in the box below.

Communication materials that support stunting reduction interventions or programs also benefit from co-creating and testing. A common issue in programs is rigid implementation plans that have no room for iteration. As a result, you see a resistance to community feedback, to changing concepts, and to the iteration process that is required to bring many ideas to fruition. The enabling environment needs to be amenable to the necessary iterations to allow the design to occur with people so that solutions make sense for them. Communication materials will require creativity and technical communication expertise. Creating alongside the communities, and/or with a deep understanding of their context allows for localization. We saw and discussed various stunting-reduction materials in the community with people. When community members saw unavailable foods on a poster, for example, they did not feel the information was actionable or feasible.

Even ideas that fail can provide valuable insights

A major challenge throughout Indonesia is the high consumption of low-quality foods. One village chose to address this issue by making and selling healthy snacks in local kiosks. However, children did not buy the fruit snacks because they were not sweet enough; they chose packaged snacks instead. The community felt that they had failed since two of the kiosk owners gave up trying to sell the foods almost immediately. While the intervention did not work as planned, it generated discussion and ideas for ways that the community could begin to address the choices made in feeding young children. The posyandu began to offer a fruit satay. It inspired a “fruit bank” where cadres collected fruits from trees to supplement the funds available for foods at the posyandu. Having fruit at the posyandu had a “demonstration effect.” Mothers learned that children develop preferences for tastes—salty and sweet—very early and that they can influence community for discussion.
Promoting further audience testing and localization to ensure communication tools are relevant for all contexts

A poster promoting dietary diversity created nationally or even at the province level might include certain foods that are only available in some areas and not in others. It also might not address the concerns that people in that area have around specific IYCN and ECD practices. During the immersion we saw posters that showed “healthy” food combinations, but in some instances, they featured foods that are not available or affordable locally. Mothers and midwives said they liked the bright colors of the posters but also said, “How can we afford apple, mango, and avocado, especially when not in season?” Others explained, “We know these foods are healthy but can’t afford them.” In some cases, people did not recognize the food shown on the posters, for example red spinach, cheese, milk, and nuts. They said that these foods were relevant to people living in the urban areas. Since the foods pictured on the poster were out of reach, people felt that the posters, pamphlets, and the advice were “designed for city people.”

Further audience testing with additional segments of the population could support adaptations to communication materials to ensure acceptability and address these concerns. Embedding opportunities for additional localization of communication tools could help to ensure that the tools best reflect the local context.

IMPLEMENT AND MONITOR

Creating opportunities for continued community involvement at the implementation and monitoring stage of this national effort remains important. Informed by monitoring processes, learning continues during implementation. Because local level co-design is not possible in every community, interventions and activities can adapt and expand into areas with similar challenges. Stunting reduction strategies or activities require opportunities for testing, adaptation, and adjustment to different contexts during rollout; this flexibility can be built into the implementation, allowing for localization of activities and materials all the way down to the village level.

While localization opportunities are important for people to own the activities and the results, the energy and excitement created can also lead to natural diffusion of the successful solutions from one village or community to another (and even up to the district level or beyond). Solutions need to allow for localization, but local solutions may, in fact, be shared beyond their original context when relevant and feasible, providing inspiration for other communities to adapt similar ideas. For example, other communities showed great interest in the suggested changes to the posyandu developed during our trial, as explained in the box below.

Flexibility is also needed for monitoring and reporting on activities. The requirements for reporting on the use of village funds, for example, would need to have flexibility built in so that village governments could report on locally innovative approaches for stunting reduction. Success should be measured and celebrated in terms of what is desired and meaningful to the community. These may not be standard indicators or recommended practices but instead process markers or incremental steps toward recommended practices.

Horizontal sharing

When scaling, horizontal sharing is preferable, allowing communities, local service providers or local leaders to benefit from what others in similar positions are doing, rather than imposing processes or specific designs from above. This occurred naturally in our assessment with the user-centered posyandu. Community members shared the concept among themselves and with their service providers. Other ideas may be more location specific, and in those cases the policy environment needs instead to endorse the principles of people-driven design and encourage locally adapted processes. While waiting for the new posyandu to be built in the village that developed the idea, the cadres in a sub-village were motivated to do things differently at their posyandu. Their building was very small and they planned to raise the possibility of expanding it with the village office for the next dana desa budget.
QUESTIONS TO CONSIDER THROUGHOUT THE SBC PROCESS

- Are there opportunities embedded for co-creation—for people to drive the design of their own solutions?
- How can you learn from failed solutions to improve activities going forward? Can you incorporate testing and reviews of materials to ensure the appropriateness of concepts and localization of messages?
- Have you incorporated regular check-ins with the community, considering the need to revisit formative assessments as necessary? Context sometimes changes quickly and requires adaptations.
- What measurements and indicators have you considered to know progress is happening? These may not be standard indicators or recommended practices but instead process markers or incremental steps toward recommended practices.
- What can you do to ensure routine course corrections—to iterate and adapt as often as needed to ensure improvements in behaviors? Can the iterations, those loops in the process, happen more regularly and faster to help you fail forward?

USE DATA FOR STRATEGIC ADJUSTMENT

Not only should communities be involved in the design of solutions, but they also need to have a voice in the measures of change. Metrics for change should resonate with the community and reflect the achievements that they wish to see happen that are meaningful to them. Measuring what matters to the community and what they can see for themselves is the best way to inspire continued commitment to change. Monitoring systems should be established that allow for making course corrections and adaptations based on how nutrition and ECD behaviors are changing and improving. Achieving change that results in implementation of recommended practices immediately is unlikely; the goal is to be able to measure the incremental steps along the way.
CONCLUSION

People-driven design can foster effective SBC strategies to address intractable issues, including those related to high rates of stunting in children. The approach deepens the understanding of why people choose certain IYCN and ECD practices and the factors that inhibit changes in behaviors. What was learned about IYCN and ECD practices in the six communities is likely relevant to what drives behaviors in other areas of Indonesia as well.

The elements of the people-driven design approach have value at all stages of the SBC process. When people ‘own’ the change process and help develop solutions, they are much more likely to adopt new behaviors and establish new social norms to support wider behavior change. This leads to increases in the acceptability of approaches to stimulate change as well as the sustainability of activities and improved practices to support stunting reduction. The approach ensures that the community is more meaningfully engaged, and members can act as their own agents of change.

The current policy and program environment in Indonesia offers hope for making significant gains in the effort to improve child growth and development. The availability of both financial and human resources at the community level, including new human development workers, adds to this unprecedented opportunity. The experience shared through these materials provides the foundation for some of the critical skills needed by these frontline workers, and the processes that they could learn to facilitate, in order to generate the community engagement needed to support effective change.
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