

Research Brief

1000 Days Fund Impact Analysis: A Mixed-Methods Evaluation

Three independent evaluations converge on a clear finding: the 1000 Days Fund model measurably improves child health outcomes by investing in people and systems that work. A process evaluation by the Behavioural Insights Team, a Contribution Analysis validated by the Research Advisory Board, and an AI-led series of community health worker (CHW) interviews all point in the same direction: when trust is built locally and consistently, change follows.

The mechanism is straightforward: when health workers are equipped with the right tools, mentoring, and local legitimacy, they deliver consistent, credible guidance that families follow. Trust turns information into action. The 1000 Days Fund is also building trust within the Ministry of Health, enabling the model to be efficiently scaled and contributing to system-wide improvements.

The findings move beyond rhetoric. In district after district, well-trained and supported community health workers are not just transferring information; they are reshaping the small, daily decisions that shape child health: when to feed, what to feed, how to respond to illness. The story here is not of heroes or breakthroughs, but of slow, credible progress built on attention, empathy, and reinforcement. Trust, once gained, does something no subsidy or campaign can do: it alters norms.

Across the data, the effect is clear and measurable—reductions in stunting, improved maternal health outcomes, and stronger links between households and the local health system. Of course, no program fixes everything, and the work of sustaining change is never done. But what these evaluations capture is precisely the kind of development that endures: deeply local, quietly radical, and grounded in evidence that people, when well equipped and believed in, will do the rest.

Across Indonesia's most underserved districts, the model demonstrates both scalability and plausibility. Independent reviewers found that the program's design links proximal behavior change—such as feeding and maternal health practices—to downstream outcomes in linear and observable ways. In a sector often constrained by short project cycles or unverified claims of impact, this alignment of evidence, theory, and lived experience stands out.

The findings provide credible proof that when local systems are built around capability, not dependency, measurable change follows.

A Model That Works

The 1000 Days Fund partners with the government to train and equip community health workers (CHW), Indonesia's one million-strong volunteer backbone of the rural health system. The programme goes beyond one-off workshops. More than 61,000 CHWs have now been trained and receive mentoring, supportive supervision, and practical tools like the Smart Chart, a home-based visual guide for families to track growth and apply stunting-prevention practices.

This consistent, trust-centred approach is paying off. According to the evaluations, stunting prevalence fell by 19 percent between 2021 and 2024 in Manggarai Barat and Rote Ndao—outperforming 18 of 22 other districts in East Nusa Tenggara. The steepest declines occurred between 2023 and 2024, as system-strengthening effects accumulate over time.

“Trust is not a by-product—it is the intervention.”

Behavioural Insights Team, 2025

Families in programme areas also showed dramatic improvements in maternal and child-health behaviours:

- Exclusive breastfeeding reached 78 percent (vs 69 percent nationally)
- Iron tablet supplementation adherence 72 percent (vs 43 percent nationally)
- Basic immunisation coverage 73 percent (vs 36 percent nationally)
- Animal-protein intake among 6–23-month-olds 85 percent (vs 78 percent nationally)

These upstream gains underpin downstream impact. Mothers are healthier, babies stronger, and service delivery more resilient—even through the COVID-19 disruptions that paralysed many districts.

Pathway to Scale

With five years of implementation evidence and independent validation, the 1000 Days Fund model is now ready for scale. In partnership with Indonesia's Ministry of Health, the next phase aims to extend the approach across 54,000 community health workers in East Nusa Tenggara to reach 1.4 million women of reproductive age and 700,000 children under five. Scaling this model would cost a fraction of hospital-based interventions, while tackling the root causes of malnutrition at home. Continued donor investment will enable:

- Rigorous data pipelines and external verification mechanisms.
- Strengthened CHW supervision and case-management capacity.

- Expanded learning agenda on maternal nutrition and low-birth-weight prevention.

Building a Body of Evidence

The first study, independent Contribution Analysis, applied a six-step framework to test the plausibility of 1000 Days Fund's contribution to these outcomes. Evidence was triangulated across three data pillars:

1. Programme Monitoring Data – Pre/post-training tests, household surveys, and CHW process data.
2. National and Provincial Surveys – SUSENAS, SSGI/SKI, and NTT Provincial Health Office datasets.
3. Independent Review and External Validation – The Research Advisory Board (RAB) of global and Indonesian experts analysed alternative explanations.

The second and third studies employed qualitative evaluation methods implemented by the Behavioural Insights Team. Data was collected through a series of interviews with caregivers, CHWs, and supervisors to capture lived experiences of system resilience.

Findings from these studies converged:

- The combination of strengthened CHW capability, family engagement, and system support provides a credible explanation for observed stunting declines.
- Districts with sustained 1000 Days Fund engagement saw sharper and more resilient gains than provincial averages.
- Early investments in CHW capability, supervision, and community engagement yielded compounding returns over time.

The evaluations also identified areas for improvement: strengthen data quality assurance, integrate routine supervision into district budgets, and expand low-birth-weight prevention through community case management.

Evidence of Impact

Indicator (2021-2024)	1000 Days Fund Districts	National Average / Comparison
Stunting prevalence	19% reduction (7.5 percentage point)	Other NTT districts have an average of +1.4 percentage point increase
Exclusive breastfeeding (0-6 mo)	78%	69%

Indicator (2021-2024)	1000 Days Fund Districts	National Average / Comparison
Iron tablet adherence (pregnant women)	72%	43%
Immunisation coverage (children <5)	73%	36%
Animal-protein intake (6-23 mo)	85%	78%
CHW knowledge gain (post-training)	32% increase	N/A

From Trust to Behavior Change

The evaluations found that measurable results began with relationships. The Behavioural Insights Team observed that CHWs who built empathy and credibility achieved greater caregiver compliance. Training mattered, but it was *trust* that turned information into sustained behaviour change.

This relational foundation was amplified by structural improvements of regular supervision loops with Puskesmas and district-level mentoring. Together, they created a reinforcing system where households receive personalised guidance, CHWs feel supported, and local health offices have data they can act on.

Level	Results Chain	Assumptions
Impact	Stunting rate reduction	Caregivers and pregnant women access vaccination, treatment, and health monitoring
Intermediate Outcomes	↑ Improved stunting prevention measures	Caregivers and pregnant women are motivated to change their behavior upon getting new information
	↑ Improved knowledge in stunting prevention	Caregivers and pregnant women trust CHWs in giving the new information on stunting prevention measures
	↑ Better pregnancy and child nutrition education	CHWs are confident and giving accurate information to caregivers and pregnant women
Outputs	↑ CHWs are trained	CHWs are available in the targeted area and willing to participate consistently in the 1000 Days Fund capacity building process

Figure: 1000 Days Fund's Pathway to Impact

What Makes It Work

Design Principle	Description
Trust as the driving force	CHWs measure not only visits completed but also caregiver trust
Principled flexibility	Fidelity is defined by adaptation. CHWs tailor counselling frequency and content to each household's needs.
Continuous learning	Peer-to-peer mentoring and refresher coaching sustain quality long after initial training.
System linkages	Integration with Posyandu and Puskesmas supervision closes the feedback loop between households and the formal health system.

Evaluation period : 2021 – 2024
 Geography : Manggarai Barat & Rote Ndao, East Nusa Tenggara (Indonesia)
 Evaluators : Behavioural Insights Team (UK), 1000 Days Fund's Research Advisory Board

Evaluating the Impact of the 1000 Days Fund Model in Manggarai Barat & Rote Ndao: A Contribution Analysis

Executive Summary

Between 2021 and 2024, the 1000 Days Fund set out to answer this core question: Did our model actually move the needle on reducing childhood stunting in Manggarai Barat and Rote Ndao, East Nusa Tenggara (Nusa Tenggara Timur or NTT). We commissioned the services of an independent researcher and embraced a contribution analysis approach, to surface what changed, why, and how we can do better.

Childhood stunting is not a single-response issue. It cannot be solved by one intervention alone, but through the convergence of multiple, reinforcing solutions. From household behaviours and community health systems to local governance and data use.

This evaluation assesses the contribution of the 1000 Days Fund to reducing childhood stunting in Manggarai Barat and Rote Ndao, East Nusa Tenggara. The evaluation draws on triangulated evidence from internal monitoring data, secondary analysis of government surveys, and independent external review by some members of the Research Advisory Board. Together, these sources provide a credible picture of how 1000 Days Fund interventions have influenced maternal and child health outcomes, community health worker (CHW) capacity, and stunting prevalence.

Key Findings

Stunting Reduction: Between 2021 and 2024, both Manggarai Barat and Rote Ndao recorded a 19% reduction in stunting prevalence, outperforming 18 other districts in the province. Progress accelerated between 2023 and 2024, consistent with global evidence that system-strengthening effects accumulate over time.

Maternal and Child Nutrition: Exclusive breastfeeding rates in 1000 Days Fund districts reached 78% (national average: 69%). Iron/folic acid supplementation adherence among mothers was 72% (national average: 43%).

Immunisation Coverage: Basic immunisation rates in 1000 Days Fund-supported areas were 73%, nearly double the national rate of 36%.

Health System Resilience: Despite COVID-19 disruptions, both districts maintained higher-than-average coverage of child growth monitoring and showed smaller declines than other districts.

Community Health Worker Capacity: Training and the use of practical tools such as the Smart Chart significantly improved community health workers' knowledge and counselling skills, leading to measurable improvements in caregiver awareness and adoption of stunting-prevention practices.

What This Means

Headline metrics such as stunting rates remain important, but they are downstream outcomes. The real drivers of change lie in maternal nutrition, low birth weight prevention, breastfeeding, immunisation, and improved service delivery. These factors must be tracked and strengthened as intermediate outcomes. TDF's phased approach anchors progress in these causal pathways and builds the foundation for durable reductions in stunting.

Root Cause & Model

Stunting reduction should follow a clear pathway to impact, as opposed to using it as the single indicator. Progress depends on reinforcing each link along this pathway. From improved frontline care, improved breastfeeding rate, immunization, to maternal nutrition and low-birth-weight prevention. The programme accelerates this pathway by training and supervising community health workers (CHWs), equipping them with growth monitoring tools like Smart Charts, and integrating data and supervision within local health systems. In a country where only 13% of CHWs were trained before deployment, the 1000 Days Fund's model turns CHWs into trusted local change agents who drive measurable improvements in child health.

How We Validated Results

We built our assessment on three pillars:

- Monitoring & evaluation data from direct program implementation.
- District and national survey data (SUSENAS, SSGI/SKI), the bedrock for objective prevalence and behavior indicators.
- External review and scrutiny, specifically by the Research Advisory Board, to root out bias and explore alternative explanations.

Importantly, we did not work in randomised controlled conditions (a limitation), but layered sources to strengthen causal plausibility.

Key Outcomes & Intermediate Metrics

- Stunting Drops: 19% reduction over three years in focus districts (outpacing nearby areas).

- **Behavior Change:** Marked increases in exclusive breastfeeding, immunization, and maternal micronutrient supplementation—validated across datasets. Importantly, caregivers with Smart Charts were more likely to know about and enact these protective health actions.
- **System Resilience:** Even during COVID-19 shocks, coverage for growth monitoring and immunization held up stronger than in peer districts.
- **CHW Capacity:** Post-training scores, process monitoring, and external evals all showed step-change improvements. Notably, 65% of CHWs in Rote and 60% in Manggarai Barat demonstrated new technical competencies.

Where We Fell Short & What's Next

We recognise that observed plausible relationships do not equal causation, and the absence of randomised control groups limits definitive attribution. Early programme monitoring and evaluation also faced challenges, including sampling inconsistencies, while provincial health office data were sometimes constrained by limited quality assurance, incomplete quantitative analysis, and are limited in their ability to comment on the direct impact in our study areas.

Looking ahead, we are strengthening our data systems by improving pipelines and introducing systematic quality assurance for all contributing indicators. We are also deepening external validation, embedding more rigorous tracking of service delivery, and using continuous feedback to refine both the deployment of the Smart Chart and the supervision systems that support CHWs.

Implications for Scale

Strong evidence points to a replicable, integrated model. CHW empowerment and health system strengthening approaches can deliver an effective stunting reduction strategy. Provincial and national scale-up is justified, paired with a learning agenda that prioritizes intermediate outcomes, not just the stunting prevalence indicator.

Evidence from Manggarai Barat and Rote Ndao shows that an integrated model combining CHW empowerment, behaviour change interventions, and health system support, can deliver measurable improvements in child nutrition and health outcomes. The model merits consideration for provincial and national scale-up, particularly in high-burden districts striving to accelerate stunting reduction.

Future 1000 Days Fund's programs should test the model's boundaries in new districts, further refining with live feedback loops, and relentlessly sharing failures as well as successes. Organizations that are working at this intersection are encouraged to collaborate to overcome stunting in Indonesia.

Contents

Executive Summary	1
1. Background	6
1.1. Evolution of 1000 Days Fund Approach	6
1.2. Unpacking 1000 Days Fund's pathway to impact	8
2. Evaluation Approach	9
2.1. Key Features of the Approach	10
2.2. Application in This Evaluation	10
2.3. Data Sources	11
2.4. Limitations	13
3. Findings	14
3.1. Impact: Stunting Reduction	14
3.2. Training Effectiveness: CHWs' Knowledge and Skills	16
3.3. Contribution to Improved Service Delivery	17
3.4. Contribution to Household Knowledge & Behavior Improvement	19
3.5. Contribution to Stunting Prevention Indicators	21
4. Conclusion	25
References	27
Appendix: Research Advisory Board (RAB) Profiles of Members	28

1. Background

Stunting, or low height for age, is caused by insufficient nutrient intake, poor hygiene and frequent infections, and is associated with terrible disadvantages, including a loss of up to 10 IQ points and impaired cognitive, language and sensory-motor capacities. Stunted children also have weakened immune systems which means they are more susceptible to illnesses like diarrhea, and miss school more often than their non-stunted peers. Indonesia has one of the highest stunting rates in the world¹. In the province of East Nusa Tenggara, approximately 1 in 3 children are stunted. However, the right interventions in the first 1,000 days of life can prevent stunting in children. The mission of the 1000 Days Fund is to build a scalable health system that delivers those interventions directly into people's homes.

Delivering these interventions effectively requires more than just sound policy. It mostly depends on the people implementing them. Community health workers (CHWs), who serve as the first point of contact for rural households, are essential to translating national strategies into real impact at the household level.

With this understanding, our pathway to impact focuses on empowering village-level community health systems. Since the 1980s, the Indonesian government has relied on these systems, run by more than one million CHWs, to conduct routine nutritional counselling and growth monitoring. These activities are crucial in equipping pregnant women and caregivers with the knowledge they need to adopt stunting prevention practices. Without sufficient awareness, uptake of key preventive measures remains low, contributing to outcomes like low birth weight, a primary driver of stunting.

Only 13% of these CHWs receive training prior to deployment, raising concerns about the quality of service delivery.² By equipping CHWs with the necessary training and tools, we transform them from passive volunteers into empowered change agents who can influence sustained stunting prevention practices at the household and community levels.

1.1. Evolution of 1000 Days Fund Approach

Indonesia's network of more than one million CHWs is one of the largest in the world and forms the backbone of frontline health services in rural areas. They are often the first and most frequent point of contact for households, delivering counselling on nutrition, monitoring child growth, and linking families to formal health services. However, because only 13% of CHWs receive structured training before deployment, a

¹ 2024 Indonesian National Nutrition Survey (SSGI)

² Rokx, Claudia; Subandoro, Ali; Gallagher, Paul. 2018. Aiming High: Indonesia's Ambition to Reduce Stunting. © World Bank. <http://hdl.handle.net/10986/30151>

significant gap remains that limits their ability to provide consistent, high-quality support and limits their potential to drive stunting prevention.

1000 Days Fund addresses this gap by equipping CHWs with training, behaviour change tools, and supportive supervision. We use a variety of tools to train these CHWs, with the 'Smart Chart' at the center of our approach between 2019 and 2023. The Smart Chart is an early detection tool supported by bite-sized information on stunting. Installed in homes after counselling visits, the chart helps caregivers understand and adopt practices such as breastfeeding, iron supplementation, and regular growth monitoring. Feedback from families and CHWs has guided continuous improvement, making the tool widely accepted.

Since its inception in 2019, the 1000 Days Fund has adopted the principle of adaptive programming, revising and optimising its approach in response to changing contexts, emerging evidence, and community feedback. In 2020, we introduced additional technical assistance for CHWs and parents to address the “loss of knowledge transfer” that often occurs after one-off capacity-building activities. Emerging evidence from an early evaluation led by Pisani further highlighted that babies born with low birth weight were up to three times more likely to be stunted 2-23 months later³, underscoring the need for more effective strategies to improve the health of young and pregnant women to improve birth outcomes. At the same time, the evaluation revealed that preventive actions were often not taken even where caregivers knew about stunting risks, demonstrating that knowledge alone is insufficient to change outcomes.⁴ These lessons have been pivotal in guiding 1000 Days Fund to refine its model, shifting its focus from simply building knowledge to strengthening behaviours, improving access to services and system-level support.

Over the past five years, the model has evolved in two important ways. In 2023, 1000 Days Fund introduced and piloted community case management (CCM), training CHWs to triage at-risk households for early detection and treatment with the goal of reducing low-birth weight, the number one determinant of stunting in Indonesia. This innovation allows CHWs not only to deliver general counselling but also to identify and prioritise families needing urgent support. 1000 Days Fund has also deepened its application of the 5S for CHWs—they are Salaried, Skilled, Supervised, Supplied, and Secured—with a particular emphasis on Supervision. Strengthening supervision ensures that CHWs are not working in isolation but are fully supported and embedded within local health systems. This shift reflects the recognition that long-term stunting prevention depends on both empowered frontline workers and responsive health structures.

As the model has matured, there needs to be an updated analysis to demonstrate what has changed and why results are now stronger. The 1000 Days Fund has spent the past

³ Pisani, Elizabeth. 2025. *Investigating the contribution of 1000 Days Fund's stunting reduction programme in two districts of Nua Tenggara Timur*. (Even after adjusting for family context.)

⁴ *Ibid.*

five years developing, evaluating, and refining their model, the team is now working with the Ministry of Health to scale the model throughout the province of NTT, home to 1.4 million women of reproductive age, 700,000 children under 5 and 54,000 community health workers.

1.2. Unpacking 1000 Days Fund's Pathway to Impact

Level	Results Chain	Assumptions
Impact	Stunting rate reduction	Caregivers and pregnant women access vaccination, treatment, and health monitoring
Intermediate Outcomes	↑ Improved stunting prevention measures	Caregivers and pregnant women are motivated to change their behavior upon getting new information
	↑ Improved knowledge in stunting prevention	Caregivers and pregnant women trust CHWs in giving the new information on stunting prevention measures
	↑ Better pregnancy and child nutrition education	CHWs are confident and giving accurate information to caregivers and pregnant women
Outputs	↑ CHWs are trained	CHWs are available in the targeted area and willing to participate consistently in the 1000 Days Fund capacity building process

Figure 1. Simplified 1000 Days Fund's Pathway to Impact and Assumptions.

1000 Days Fund's "pathway to impact" emphasises strengthening community health systems as the most effective way to reduce stunting at scale. By improving CHW capacity, caregiver knowledge, and household practices, 1000 Days Fund directly addresses the key drivers of stunting: maternal malnutrition, low birth weight, and poor infant feeding. These intermediate outcomes build the foundation for long-term, population-level reductions in stunting in early childhood.

The pathway to impact begins with CHWs, who are the frontline link between households and the health system. When CHWs are trained, they acquire the knowledge and confidence needed to provide accurate counselling on pregnancy, child nutrition, and stunting prevention. This training is designed to transform CHWs from passive volunteers into active agents of stunting prevention.

With enhanced capacity, CHWs can deliver better pregnancy and child nutrition education. Caregivers and pregnant women receive practical guidance on critical behaviours such as exclusive breastfeeding, appropriate complementary feeding, micronutrient supplementation, and regular growth monitoring. For this step to work, it

is assumed that CHWs are confident and that caregivers trust them as credible messengers.

Through repeated interactions, caregivers and pregnant women develop trust and improved knowledge of stunting prevention. This knowledge is a foundation for behaviour change, but it depends on the assumption that families are both motivated *and able* to act upon new information.

The next expected outcome is that households adopt improved stunting prevention measures. Consistent antenatal care, improved maternal nutrition, exclusive breastfeeding, immunisation, and hygiene practices are the immediate drivers of better maternal and child health. For this outcome to occur, it is assumed that caregivers and pregnant women have access to basic services, including vaccination and health monitoring, so that behaviour change can translate into tangible improvements.

Over time, these preventive measures are expected to contribute to reductions in stunting prevalence. Research shows that addressing the underlying causes of growth faltering, including maternal malnutrition, poor infant feeding, and limited access to health services, creates a pathway from strengthened CHW capacity to healthier pregnancies, healthier children, and ultimately measurable reductions in child stunting.

2. Evaluation Approach

This evaluation assessed the 1000 Days Fund's contribution to reducing stunting in Manggarai Barat and Rote Ndao, East Nusa Tenggara. The methodology was designed to be rigorous yet practical, recognising the challenges of attributing complex health outcomes to a single intervention.

This evaluation applied a **Contribution Analysis** framework to assess the role of the 1000 Days Fund in reducing stunting in Manggarai Barat and Rote Ndao. Contribution Analysis is well suited to complex health and nutrition programmes, where many interacting factors influence outcomes and strict attribution is not feasible.⁵ Instead of asking whether 1000 Days Fund alone caused the observed results, the approach tests whether change was observed and whether the evidence supports a credible and plausible case that 1000 Days Fund interventions contributed to the observed changes.

2.1. Key Features of the Approach

Contribution Analysis focuses on **causal pathways** through articulating pathway to impact, identifying intermediate outcomes such as maternal nutrition, infant feeding, and service delivery that are precursors to stunting reduction. Multiple data sources are

⁵ Marina Apgar and Carlisle Levine, "Contribution Analysis," *BetterEvaluation*, 2020, <https://www.betterevaluation.org/methods-approaches/approaches/contribution-analysis>

used for **triangulation** to strengthen the plausibility of the contribution story, including internal monitoring data, government surveys, and independent external analysis. The analysis explicitly explores **alternative explanations**, recognising that contextual conditions, other programmes, and systemic shocks (such as the COVID-19 pandemic) also influence outcomes. Findings were strengthened through **iterative validation**, particularly by members of the Research Advisory Board. This process ensures that the contribution story is both evidence-based and credible to external experts.

2.2. Application in This Evaluation

Guided by the six iterative steps set out in the Apgar's contribution analysis⁶, we adopted the following process in this analysis:

1. **Definition of the attribution problem**

The evaluation sought to determine whether 1000 Days Fund made a meaningful contribution to reductions in stunting prevalence by improving related stunting prevention behaviours in Manggarai Barat and Rote Ndao.

2. **Development of the pathway to impact**

1000 Days Fund's causal pathways were mapped, focusing on how improved CHW capacity leads to better household knowledge and behaviours, which in turn drive maternal and child health improvements and, ultimately, reductions in stunting.

3. **Collection of existing evidence**

1000 Days Fund's monitoring system data and surveys of households and CHWs were used to review knowledge, behaviour change and service delivery improvements.

4. **Assembly of the contribution story**

Evidence was synthesised to assess whether observed changes aligned with the pathway to impact.

5. **Collection of additional evidence**

Data from SUSENAS, SSGI, the Provincial Health Office were compiled, alongside independent analysis by the Research Advisory Board.

6. **Revision of the contribution story**

The contribution story and its evidence was validated and reviewed by external experts to ensure credibility.

⁶ *Ibid.*

2.3. Data Sources

This evaluation draws on multiple sources of evidence, each with distinct strengths and limitations. Data sources are described in detail throughout the report and summarised in a table on the next page.

Programme Monitoring & Evaluation Data

Since its inception, 1000 Days Fund has collected programme monitoring data to track its activities and outputs. This includes:

- Pre- and post-training assessments of health worker knowledge about stunting.
- Surveys of health workers and households with young children in programme areas to assess knowledge, attitudes, and behaviours related to stunting prevention.

Programme data are valuable for understanding reach and immediate outcomes of 1000 Days Fund interventions. However, they were not designed for research purposes. Sampling was not initially systematic, questionnaires evolved over time, and data are not collected in non-programme areas. While appropriate for a delivery-focused organisation, these features limit the ability to use programme data alone to establish causal attribution.

National and District-Level Survey Data

SUSENAS (National Socio-Economic Survey)

Conducted by the National Bureau of Statistics (BPS) once—and more recently twice—per year for several decades, SUSENAS is among the most rigorously collected and managed household surveys in Indonesia. The sampling frame is designed to be nationally representative, and the survey provides high-quality socio-economic and demographic data. However, SUSENAS does not collect direct measures of child height or weight, limiting its use for assessing nutrition and stunting outcomes.

SSGI (Indonesia Nutrition Status Survey)

Implemented by the Ministry of Health since 2003, Indonesia Nutrition Status Survey (Survey Status Gizi Indonesia or SSGI) uses a household sample frame similar to SUSENAS but focuses specifically on nutrition and health. It is representative at the district level and includes direct measurement of child height and weight for all children under five. These data provide the most reliable basis for monitoring district-level stunting prevalence.

SKI (Indonesia Health Survey)

Indonesia Health Survey (Survey Kesehatan Indonesia or SKI) integrates the Basic Health Research (Riskesdas) and the Nutrition Status Survey (SSGI) to assess health

development achievements and nutrition trends among young children in Indonesia. SKI methodology is similar to SSGI but with expanded scope of other health data.

East Nusa Tenggara's Provincial Health Office Data

The NTT Provincial Health Office data, collected by health workers across districts, provides detailed and locally grounded information on population-level health metrics in East Nusa Tenggara. With a large sample size and reporting that often reaches the village or sub-district level, it offers valuable visibility into health trends and service delivery at the frontlines. However, the quality of these data is inconsistent because there is no formal system of quality assurance. Variations in training, staffing, resources, and the capacity for routine verification reduce reliability and comparability.

Table 1: Data Source Summary

Data Source	Collected by	Coverage & Method	Strengths	Limitations
SUSENAS (National Socio-Economic Survey)	National Bureau of Statistics (BPS)	Nationally representative household survey; once or twice per year	Large sample size (~345,000), long time series, high data quality	Does not include child height/weight; cannot directly measure stunting
SKI (Indonesia Health Survey) & SSGI (National Nutrition Status Survey)	Ministry of Health	District-representative household survey; includes all children under five	Large sample size (~100,000); direct measures of child height & weight; reliable district-level stunting data	Conducted periodically; less frequent than SUSENAS
Provincial Health Office Data	NTT Provincial Health Office	District population data collected by health workers	Large sample size (population); regular and detailed reporting at local level	Data quality inconsistent; no formal quality assurance mechanisms
1000 Days Fund Monitoring Data	1000 Days Fund	Programme records of posters, trainings, trainees; surveys of health workers and households in programme areas	Provides detail on programme reach, training effects, and behavioural change	Not research-focused; evolving tools/questionnaires; no non-programme comparison areas

2.4. Limitations

The absence of control groups means statistical causality cannot be established with absolute certainty. However, the analysis of internal data, government surveys, and

independent external review provides a credible basis for assessing 1000 Days Fund's contribution to reductions in stunting rates and related behaviours.

3. Findings

3.1. Impact: Stunting Reduction

The highest stage of 1000 Days Fund's pathway to impact expects that sustained improvements in maternal nutrition, infant feeding, immunisation, and health-seeking behaviours translate into healthier pregnancies, healthier children, and ultimately reductions in stunting prevalence. Because stunting is a trailing indicator (the impact of interventions during pregnancy are observed when the child is 2 and 5 years old), the expectation is that visible impact at the population level will only emerge after several years of consistent intervention.

Rote Ndao and Manggarai Barat saw **stunting prevalence drop by 19%** from 2021 to 2024

Between 2021 and 2024, Manggarai Barat and Rote Ndao recorded some of the highest reductions in stunting prevalence in the province (Figure 2), with a notable acceleration in progress between 2023 and 2024.⁷ Both districts saw stunting prevalence drop by 7.5 pp (Rote 7.3 pp, Mabar 7.7 pp) from 2021 to 2024, or 19% reduction, outperforming 21 of the 22 other districts in the province⁸. This trend aligns with global literature, which suggests that the effects of health system strengthening are not immediate but accumulate over time as foundational capacities are built.

Table 2. Stunting prevalence change in Manggarai Barat & Rote Ndao compared to other districts in East Nusa Tenggara, 2021-2024

District	Stunting Rate 2021	Stunting Rate 2024	Percentage change, in percentage point (2021-2024)
Rote Ndao	40.1%	32.4%	-7.3
Manggarai Barat	38.5%	31.2%	-7.7
Average stunting rate in other districts in NTT	34.9%	36.3%	+1.4

What makes this progress notable is not only the size of the reduction, but also the **trajectory of change**. The steepest declines occurred between 2023 and 2024 (see Figure 2), after several years of consistent 1000 Days Fund engagement. This pattern is consistent with global literature on stunting reduction, which shows that

⁷ Analysis based on SSGI 2021, 2023 and 2024 data. Note that in 2022, the province of East Nusa Tenggara declined to participate in SSGI.

⁸ One district that is close to 1000 Days Fund's reduction

system-strengthening interventions often take time to yield visible population-level effects.

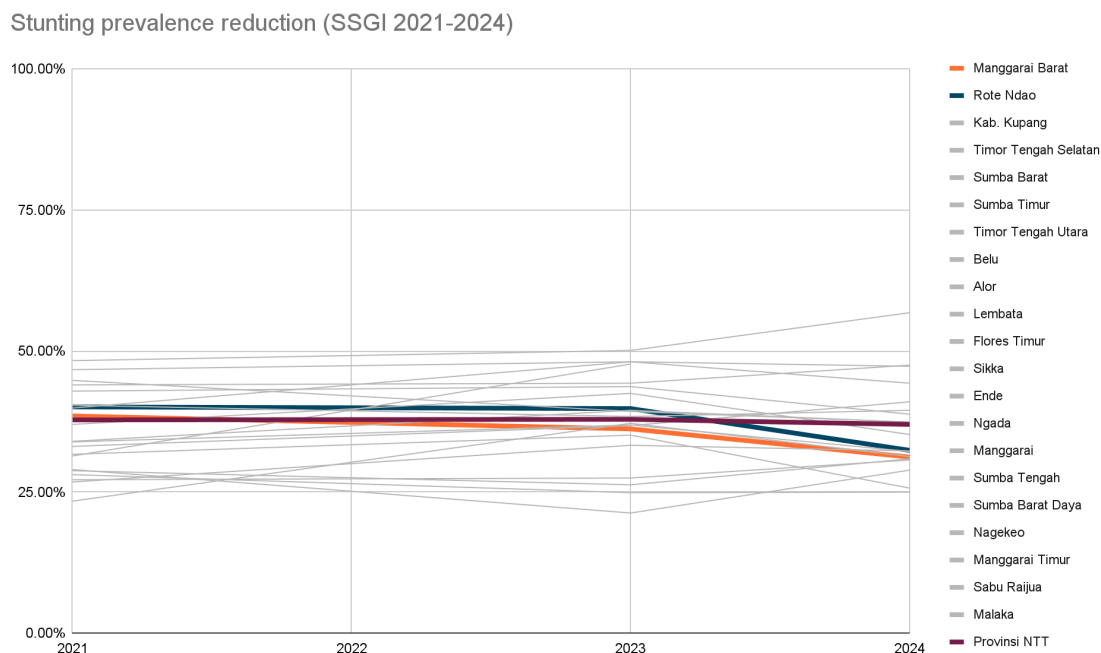


Figure 2. Stunting prevalence change over time in Manggarai Barat & Rote Ndao compared to other districts in East Nusa Tenggara, 2021-2024

The early years lay the groundwork where 1000 Days Fund built CHW capacity, shifting caregiver behaviours, and strengthening service delivery. The cumulative effects emerge in subsequent years as more children experience healthier pregnancies, safer births, and improved nutrition during the critical first 1,000 days.

In East Nusa Tenggara, overall stunting reduction has been uneven, with some districts stagnating or even experiencing reversals. Against this backdrop, the progress in Manggarai Barat and Rote Ndao stands out. Independent analysis by the Research Advisory Board confirmed that the timing and location of improvements closely align with the intensity of 1000 Days Fund's interventions. This strengthens the case that 1000 Days Fund's model has been a meaningful contributor to accelerated change.

Substantial improvements in exclusive breastfeeding and vaccination coverage were also observed, suggesting beneficial shifts in key nutrition-related behaviours. Despite systemic challenges, notably those posed by the COVID-19 pandemic, program areas exhibited greater resilience in the continuity of essential growth monitoring and healthcare services.

Stunting is often seen as a slow-moving indicator, with national and provincial averages shifting only gradually. The fact that Manggarai Barat and Rote Ndao achieved such significant reductions within three years highlights the potential of targeted,

community-based interventions when implemented with consistency and scale. It also validates 1000 Days Fund's strategy of focusing on causal pathways—addressing maternal malnutrition, improving infant feeding practices, and strengthening service delivery—as the building blocks for durable change.

While 1000 Days Fund does not claim sole responsibility, the alignment of internal programme data, government survey results, and independent external analysis supports a strong case for contribution. In districts with sustained 1000 Days Fund presence, reductions in stunting were sharper than provincial averages and among the highest in the province. Triangulation of internal monitoring, externally led analysis, and government survey data underpin a plausible association between 1000 Days Fund interventions and improvements in child growth and community health system performance. Given the trends, the 1000 Days Fund model merits consideration for scale-up in comparable settings striving to reduce the burden of stunting.

The following sections present evidence of how the 1000 Days Fund's approach contributes to the ultimate goal of reducing stunting rates. Guided by the pathway to impact, we draw on multiple lines of evidence to assess effectiveness at different stages: the delivery of CHW training (outputs) and a set of intermediate outcomes: CHWs' provision of stunting education to households (service delivery), improvements in stunting prevention knowledge among caregivers and pregnant women, and the adoption of preventive measures at the household level.

3.2. Training Effectiveness: CHWs' Knowledge and Skills

The first step in the pathway to impact is the training of community health workers (CHWs). The assumption is that CHWs in targeted areas are willing to participate in the capacity-building process and consistently engage with programme activities.

An earlier evaluation by Pisani found that our intervention package contributed to measurable improvements in the quality of healthcare delivery. Post-training assessments showed increased knowledge among community health workers (CHWs) in key areas such as stunting, nutrition, growth monitoring, and counseling. Overall, knowledge was better immediately after a training than before the training; the median gain in knowledge score was 25%, with participants in lactation and nutrition training improving their scores by a median of 33% (see Figure 3). These knowledge gains translated into improved competence: over half of trained CHWs demonstrated proficiency in at least one of the core skills taught. In Rote Ndao, 65.3% of CHWs were competent in growth monitoring, and 12.2% underestimated their own abilities in

self-assessments—suggesting growing confidence. In Manggarai Barat, 59.7% of CHWs were competent in Smart Chart-based counseling.⁹

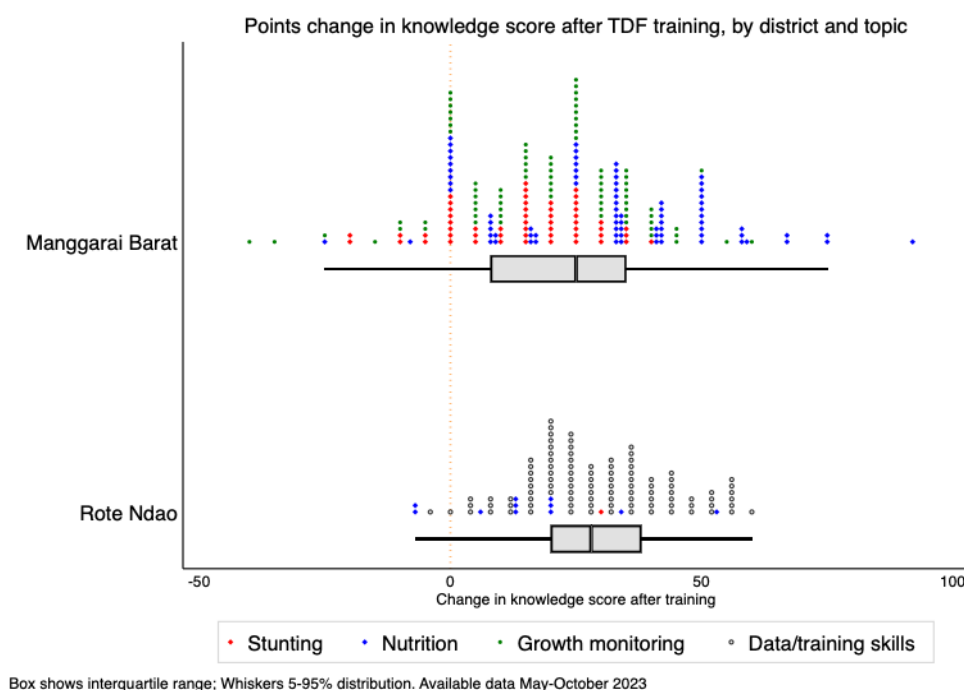


Figure 3. Knowledge score change among CHWs post-1000 Days Fund training

3.3. Contribution to Improved Service Delivery

The 1000 Days Fund has invested in strengthening local health systems, improving service delivery and building the capacity of the health workforce. Strong and responsive health systems are essential for sustaining stunting reduction and scaling up effective practices. Strong and responsive health systems are the backbone of sustained stunting reduction because they ensure that effective interventions reach every mother and child, consistently and at scale. When health systems function well, they provide timely prenatal and postnatal care, monitor growth, facilitate immunizations, and deliver nutrition services—intervening early, reliably, and repeatedly where it matters most.

Responsive health systems also adapt to changing local needs, quickly address emerging challenges like outbreaks or supply shortages, and use data to refine programs for maximum impact. Without this foundation, even the best stunting reduction practices can fail due to fragmented delivery, staff turnover, and lapses in care, eroding progress.

⁹ 1000 Days Fund’s internal data analysis also shows the risks of overconfidence, which is a common occurrence post-training. We have taken this into account by improving our technical assistance and monitoring post-training.

To scale up what works and sustain gains across entire populations, only strong, adaptive health systems can provide the reach, continuity, and resilience required for every child to thrive. While behavior change at the household level is critical, it must be supported by a health system that can consistently deliver quality services over time. This is particularly important in the face of shocks such as pandemics, natural disasters, or resource constraints.

We assessed the coverage of monthly growth monitoring for children under two as one of the stunting-related services. In both Manggarai Barat and Rote Ndao, coverage declined in 2023 compared to 2021. However, this trend was consistent across many districts in East Nusa Tenggara, likely due to the lingering effects of the COVID-19 pandemic, which disrupted routine services nationwide.¹⁰ Notably, Rote Ndao experienced one of the smallest declines in coverage, and Manggarai Barat maintained a slightly higher coverage rate than the provincial average (68% vs. 67%). These findings suggest a degree of resilience in service delivery in areas where our programs have been active.

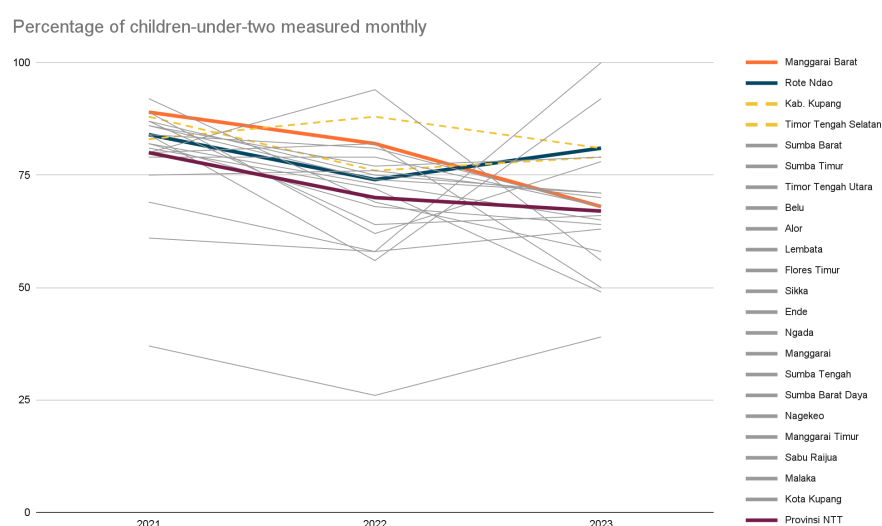


Figure 4. Absolute change of percentage of children-under-two measured monthly, according to the East Nusa Tenggara Provincial Health Profile (2021-2023)

3.4. Contribution to Household Knowledge & Behavior Improvement

Strengthening the health workforce has directly contributed to improved service delivery for pregnant women and children under two. Enhanced counseling capacity has enabled more effective communication of stunting prevention practices at the

¹⁰ Farizi SA, Harmawan BN. Decreasing coverage of co-production based on maternal and child health services (Posyandu) during the COVID-19 pandemic in Indonesia. Cogent Social Sciences 2023. <https://www.tandfonline.com/doi/full/10.1080/23311886.2023.2267743>

household level. Independent analysis¹¹ of our data found that the placement of Smart Charts in homes was associated with greater caregiver knowledge about stunting and its prevention (see Figure 5). This knowledge, in turn, was linked to the adoption of key preventive behaviors.

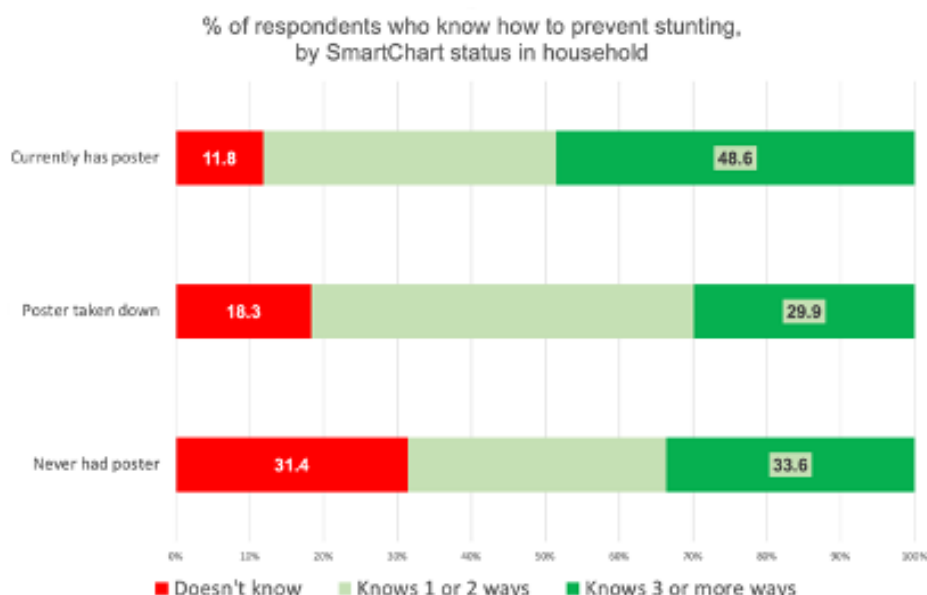


Figure 5. Knowledge of stunting among households, stratified by smart chart status

Figure 6 shows levels of knowledge about specific prevention interventions (the red dots), as well as the adoption of those interventions by people who do and do not know that that action can prevent stunting in their children. Feeding with nutritious food is the prevention method most frequently mentioned by respondents (at just 46%, illustrating the continuing room for improvement). Unprompted knowledge about other prevention methods, including those mentioned on the SmartChart, is rather low.

¹¹ Pisani, E.

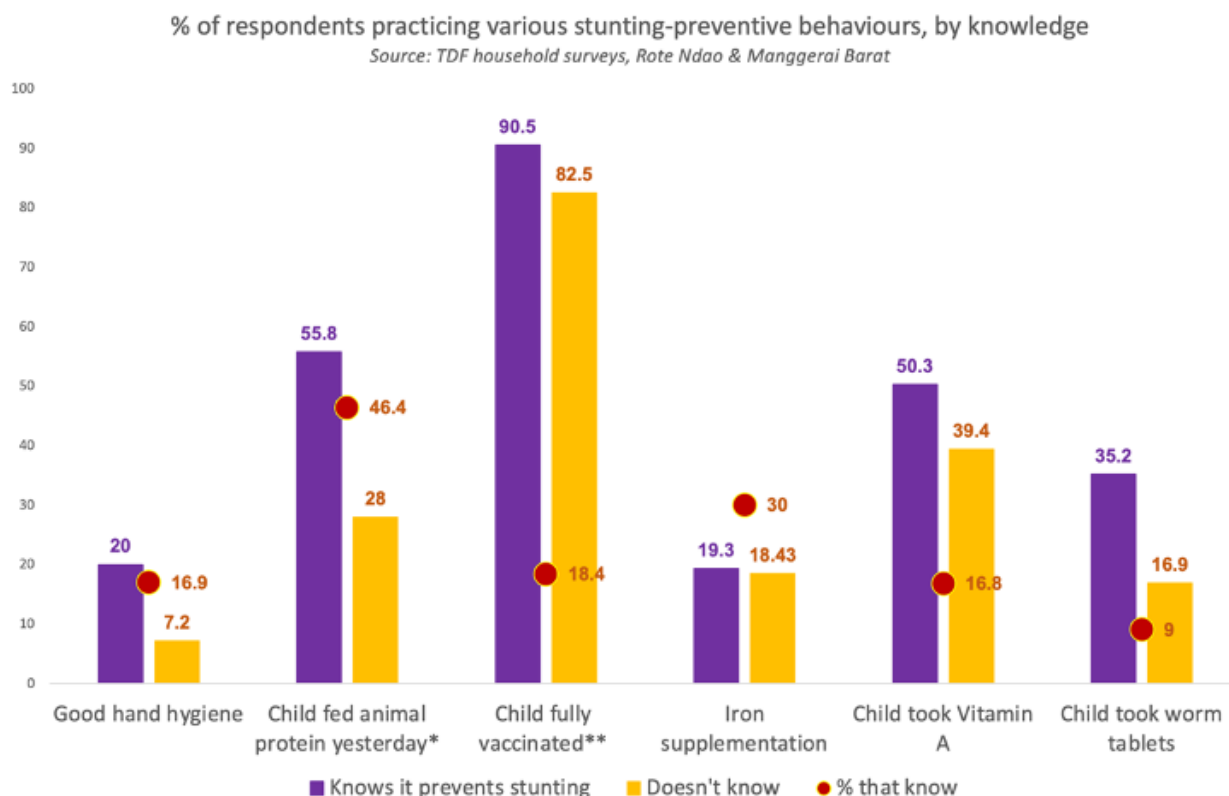
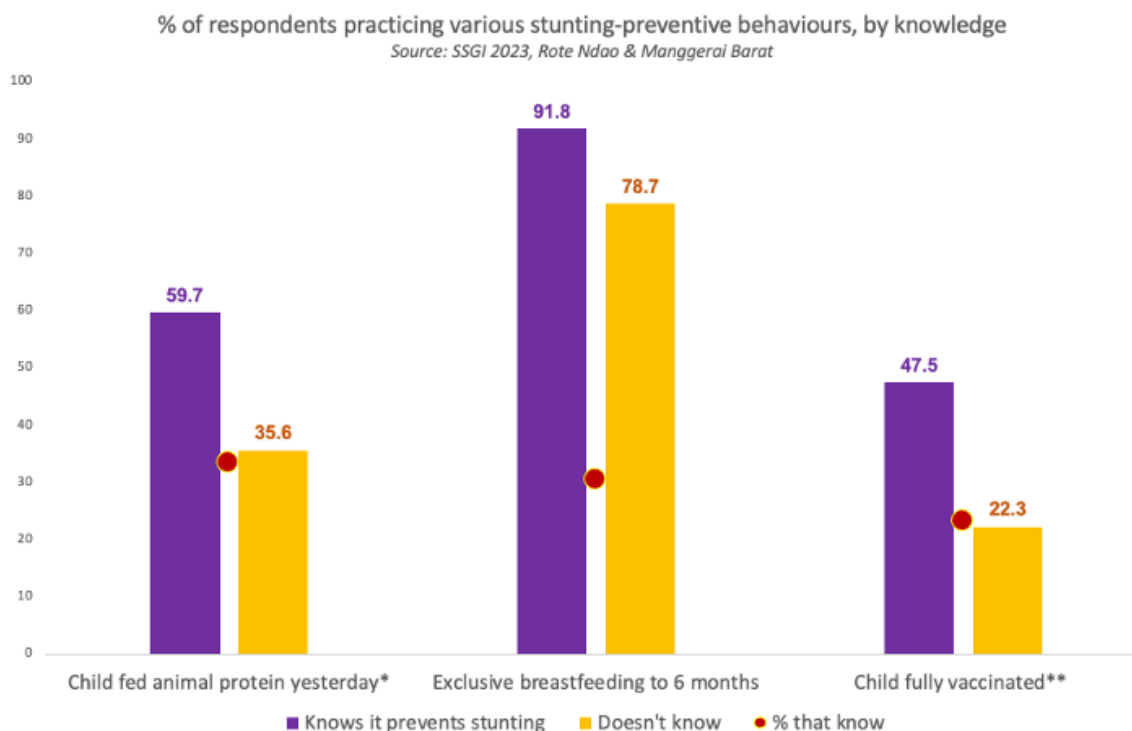


Figure 6. % of respondents who mention specific stunting prevention methods (dots) and % practicing those behaviours, by knowledge; TDF data.

People who knew that a behaviour could prevent stunting were more likely to practice that behaviour; the relationship was statistically significant for all actions other than vaccination (for which rates are already reportedly high) and iron supplementation. Knowing that an action could prevent stunting was associated with a doubling or more of prevention behaviour for hand hygiene, feeding animal protein to children aged six months or more, and worming treatment, while Vitamin A consumption increased by 28%. Encouragingly, SSGI also indicates that increased knowledge is associated with better stunting-prevention behaviour¹² (see Figure 7).

¹² *Ibid.*



(a)

(b)

Figure 7. Percentage of households adopting stunting preventive measures, based on (a) 1000 Days Fund data and (b) SSGI data

The convergence of programme monitoring, household surveys, and external data strengthens the case that TDF interventions contributed to improved knowledge among caregivers. Although other information sources (e.g., media, schools, government campaigns) also play a role, the consistent association between Smart Chart exposure and knowledge gains suggests that TDF was a central driver in enhancing household understanding of stunting prevention. This knowledge creates the conditions for the next step in the pathway, adoption of improved practices.

3.5. Contribution to Stunting Prevention Indicators

One of the clearest signs of progress in Manggarai Barat and Rote Ndao has been the shift in maternal and child health behaviours, which serve as intermediate outcomes on the causal pathway to stunting reduction. These changes, observed between 2021 and 2024, show that 1000 Days Fund-supported interventions are not only improving knowledge but also transforming practices at the household level.

72% of mothers adhered to recommended iron and folic acid supplementation, compared to a national average of 43%.

Improving maternal nutrition before and during pregnancy is essential for preventing low birth weight, one of the strongest predictors of stunting. A cluster-randomised trial proves that prenatal iron and folic acid supplementation reduce maternal anemia, increase birth weight, and lower the incidence of low birth weight, one of the strongest predictors of stunting.¹³

In 1000 Days Fund-supported districts, 72% of mothers adhered to recommended iron and folic acid supplementation, compared to a national average of 43% in 2023.¹⁴ The result suggests that targeted, household-level interventions are closing the gap between national policy and everyday practice, with direct implications for healthier pregnancies and stronger birth outcomes.

According to WHO, exclusive breastfeeding during the first six months significantly reduces the likelihood of stunting¹⁵. 1000 Days Fund-supported areas have recorded 78% exclusive breastfeeding coverage, compared to the national average of 69%¹⁶. SUSENAS data shows that Rote Ndao outperforms Manggarai Barat (see Figure 8). Overall, the rise in exclusive breastfeeding is particularly significant because it reflects both behavioural change and confidence among mothers to adopt practices that may previously have been hindered by cultural norms, misinformation, or lack of family support.

¹³ Christian P, West KP, Khatry SK, Leclercq SC, Pradhan EK, Katz J, Shrestha SR, Sommer A. Effects of maternal micronutrient supplementation on fetal loss and infant mortality: a cluster-randomized trial in Nepal. *Am J Clin Nutr*. 2003 Dec;78(6):1194-202. doi: 10.1093/ajcn/78.6.1194. PMID: 14668283.

¹⁴ It should be noted that this comparison uses 2024 1000 Days Fund program monitoring and compared with national data (SKI 2023). We could not find iron tablet adherence data in the 2024 SSGI national survey.

¹⁵ World Health Organization, “Exclusive Breastfeeding for Six Months Best for Babies Everywhere,” WHO, January 15, 2011, <https://www.who.int/news/item/15-01-2011-exclusive-breastfeeding-for-six-months-best-for-babies-everywhere>.

¹⁶ Badan Kebijakan Pembangunan Kesehatan. (2023). Laporan Hasil Survei Kesehatan Indonesia (SKI) 2023. Kementerian Kesehatan.

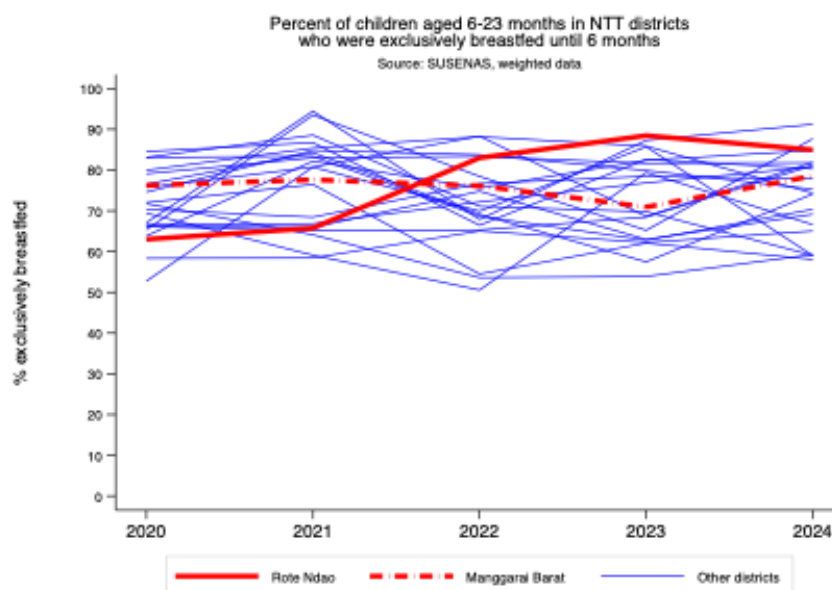


Figure 8. Percent of children aged 6-23 months in NTT district who were exclusively breastfed until 6 months, Susenas 2020-2024.

Immunization is another critical indicator that prevents recurrent infections, which in turn protects growth trajectories. Research in Indonesia demonstrates a statistically significant association between immunisation status and stunting incidence.¹⁷ In 1000 Days Fund-supported districts, 73% of children received basic immunisations, almost double the national average of 36%.¹⁸ A closer look at SUSENAS data shows that the proportion of vaccinated children in programme districts is not substantially higher than in other parts of NTT. However, the percentage change in immunisation rates between 2020 and 2024 indicates that Manggarai Barat and Rote Ndao outperformed at least 18 other districts in the province (see Figure 9).

¹⁷ Purwanti ED, Masitoh S, Ronoatmodjo S. Association Between Basic Immunization Status and Stunting in Toddlers Aged 12-59 Months in Indonesia. *J Prev Med Public Health*. 2025 May;58(3):298-306. doi: 10.3961/jpmph.24.230. Epub 2025 Jan 30. PMID: 39901750; PMCID: PMC12149842.

¹⁸ It should be noted that this comparison uses 2024 1000 Days Fund program monitoring and compared with national data (SKI 2023). We could not find immunization rate data in the 2024 SSGI national survey.

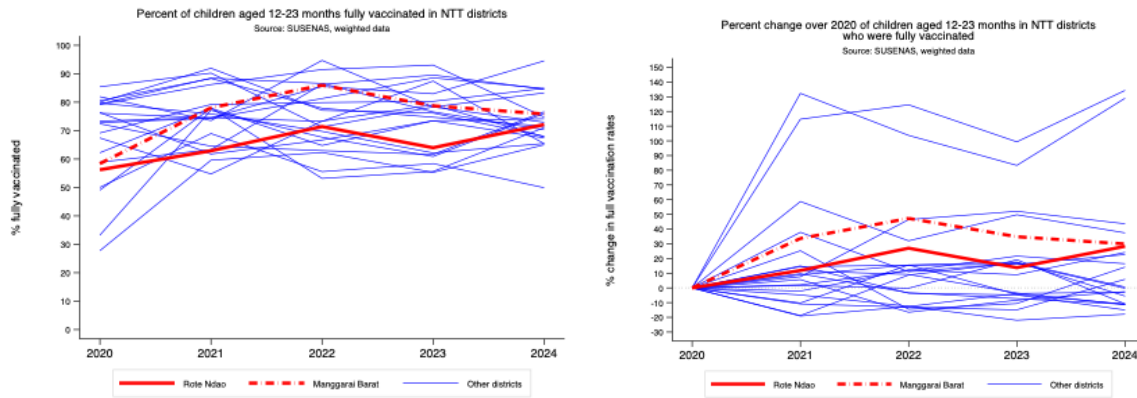


Figure 9. Vaccination rates in implementation districts and all other NTT districts, Susenas 2020-2024. Absolute levels (left) and percent change compared with 2020 (right)

This analysis demonstrates how system strengthening and improved understanding of maternal and child health contribute to stunting prevention indicators. These changes are crucial intermediate outcomes that drive long-term reductions in stunting. At the same time, evidence indicates that 1000 Days Fund-supported districts maintained stronger service delivery than non-programme areas, even during crisis periods, underscoring the importance of pairing household-level behaviour change with resilient health systems.

4. Conclusion

The evaluation of the 1000 Days Fund model in Manggarai Barat and Rote Ndao demonstrates that targeted, community-based interventions can accelerate reductions in stunting when implemented consistently and at scale.

The contribution story is credible. Household-level behaviour change has been reinforced by health system strengthening. Trained and equipped community health workers (CHWs) demonstrated improved competence in counselling, growth monitoring, and behaviour change communication. Service delivery in programme areas proved more resilient to shocks such as the COVID-19 pandemic, with growth monitoring and routine immunisation coverage maintained at higher levels than provincial averages.

Improvements in maternal nutrition, breastfeeding, and immunisation are measurable in the short term and serve as leading indicators of lasting change. Exclusive breastfeeding (78% vs. 69% nationally), iron/folic acid supplementation (72% vs. 43% nationally), immunisation coverage (73% vs. 36% nationally), and animal protein intake (85% vs. 78% nationally) show that caregivers in 1000 Days Fund-supported areas are increasingly adopting practices that protect infant growth during the critical first 1,000 days.

Between 2021 and 2024, both districts recorded some of the steepest declines in stunting prevalence across East Nusa Tenggara. Both districts saw stunting prevalence drop by 7.5 pp (Rote 7.3 pp, Mabar 7.7 pp) from 2021 to 2024, or 19% reduction, outperforming 18 other districts, out of 22 districts in the province. We observe progress accelerating in later years as early investments in CHW capacity, household behaviours, and service delivery compounded. These findings reinforce global evidence that sustainable reductions in stunting require investment in systems and behaviours, not only broader targets.

While the 1000 Days Fund does not claim sole responsibility for observed changes, triangulation of internal monitoring, government surveys, and independent external analysis provides a reasonable case for contribution. In districts with sustained programme presence, reductions in stunting were consistently sharper and more resilient than provincial trends.

At the same time, important limitations remain. The absence of randomised controls limits definitive attribution, early programme monitoring had sampling inconsistencies, and provincial health office data lacked systematic quality assurance. Not all caregivers or CHW are acting on their new knowledge to protect the health of children. These caveats do not weaken the overall contribution story but highlight the importance of continued investment in stronger evaluation and data systems.

The experience of Manggarai Barat and Rote Ndao demonstrates that lasting reductions in stunting are possible when programmes simultaneously empower households, strengthen frontline health workers, and reinforce local health systems. These lessons provide a strong basis for considering the 1000 Days Fund model for scale-up in other high-burden districts across Indonesia.

Recommendations

1000 Days Fund • Strengthen data quality by standardizing CHW and household surveys with clear sampling protocols. • Scale case management by expanding CHW capacity to triage at-risk households, linking early detection with referral systems for low-birth-weight prevention.	Donors • Support more rigorous evaluations such as experimental/quasi experimental research and strengthen MEL capacity. • Finance adaptive pilots in 2–3 new districts with resources earmarked for real-time learning and iteration.
Local Government • Mandate district health offices to incorporate CHW supervision into routine health promotion budgets (APBD) • Establish quarterly data quality review meetings.	National Government • Adopt CHW training curricula that include 1000 Days Fund modules on stunting prevention • Issue guidance to provinces to use Dana Desa (village fund) for household-level prevention tools

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Appendix: Research Advisory Board (RAB) Profiles of Members

CO-CHAIRS

Yanuar Nugroho, PhD

A senior academic with the University of Manchester, UK (2004-now, honorary status from 2015) and former Deputy Chief of Staff (Deputy Minister level) for Analysis and Oversight of Strategic Issues on Social, Cultural and Ecological Affairs at the Executive Office of the President, Republic Indonesia (Jan 2015-Oct 2019). Previously Director and Expert Adviser to the Head of the President's Delivery Unit for Development Monitoring and Oversight (UKP-PPP/UKP4) (2012-2014). Currently Expert Coordinator at the National Secretariat for SDGs Implementation, Ministry of National Development Planning of the Republic of Indonesia.

Fred Carden, PhD

An independent research and evaluation consultant in Ottawa, Canada with over 30 years' experience in evaluating development research. He was Director of Evaluation at the International Development Research Centre (Canada), where he worked from 1993-2013. He now leads an independent consultancy, Using Evidence. He has lived and worked in Indonesia for extended periods since 1989 and has worked in many other countries in Asia, Africa, and Latin America.

MEMBERS

Zulfiqar A. Bhutta FRS, SI, OC, MBBS, FRCPCH, FAAP, PhD

Dr. Zulfiqar A. Bhutta is the Robert Harding Inaugural Chair in Global Child Health at the Hospital for Sick Children, Toronto, co-Director of the SickKids Centre for Global Child Health, and the Founding Director of the Center of Excellence in Women and Child Health & Institute of Global Health & Development at the Aga Khan University, unique joint appointments. He also holds adjunct professorships at several leading universities globally, including the Schools of Public Health at Johns Hopkins (Baltimore), Boston University, George Washington University, as well as the London School of Hygiene & Tropical Medicine. He is a designated Distinguished National Professor of the Government of Pakistan and was the Founding Chair of the National Research Ethics Committee of the Government of Pakistan from 2003 to 2014. Dr. Bhutta was part of the seven-member Independent Expert Review Group (iERG) appointed by the UN Secretary General for monitoring global progress in maternal and child health Millennium Development Goals (MDGs). Dr. Bhutta was educated at the University of Peshawar (MBBS) and obtained his PhD from the Karolinska Institute, Sweden. He is a Fellow of the Royal Society (London) and the National Academy of Medicine (USA). He is a recipient of some of the highest awards in global health including the acclaimed Roux Prize (2021), the Canada Gairdner Global Health Award (2022) and the Henry Friesen Prize (2023). He heads a large research team in Pakistan with a special interest in research synthesis. Dr. Bhutta's research interests include newborn and child survival, maternal and child undernutrition, and micronutrient deficiencies.

Tiara Marthias, PhD

Dr. Tiara Marthias focuses on research and projects on inequality in reproductive health, maternal, neonatal and child health (RMNCH) using health systems perspective. Her research interests include (1) health systems & policy analyses related to geographical inequity in RMNCH services utilization including policy development, evidence-based planning and budgeting, (2) econometric studies to decompose inequalities and inequities in health care utilization, (3) health financing analysis and evaluation of health fund channelling and prioritization and (4) evaluation methods particularly exploring the realist evaluation approach. Tiara also has extensive experience working with Indonesian ministries and sub-national government offices to assist in health program planning and evaluation and collaborating with international health organizations.

Sally Pairman, MNZM, D.Mid, MA, BA, RM, RGON

Sally Pairman is Chief Executive of the International Confederation of Midwives (ICM), a role she commenced in mid-January 2017 after more than 30 years of work in midwifery practice, education, and regulation in her home country of New Zealand. Previous roles include Professor of Midwifery, Director of Learning and Teaching and Head of Midwifery at Otago Polytechnic.

Kharisma Nugroho, PhD

Kharisma Nugroho is an accountant and medical sociologist, passionate about continuous quality improvement and equity-focused research and evaluation. Through his work with Migunani Research Institute Yogyakarta, Kharisma has been an active advocate for cognitive diversity and continuous improvement in development work in Indonesia. In his role as a member of the Technical Expert Advisory Group at Newton Fund and Global Challenges Research Fund (GCRF), UK, Kharisma reviews research protocols and reports funded by GCRF. Specific development sectors of interest include locally-led transformation, knowledge sector, climate smart-public health, and anti-corruption initiatives.

Jordan Downey, MPH

Data scientist and researcher with 8 years of experience in public health research, data science, analytics, and program monitoring and evaluation, with a focus on community health and health equity and formal training in epidemiology and biostatistics. She managed research and evaluation at Last Mile Health, where she worked on Liberia's first national community health data systems and led research on treatment seeking for child illness, program implementation science, and CHW knowledge. A graduate of Johns Hopkins and MIT, her skill set includes statistical analysis, data visualization, product analytics, data system design and management, KPI development, monitoring and evaluation, research study design, and translation of analytical findings into actionable insights.

Gumilang Aryo Sahadewo, PhD

Gumilang Sahadewo is an Associate Professor in the Department of Economics, University of Gadjah Mada. He holds a PhD in economics from the University of Pittsburgh. His research interests are the economics of education, human capital, and the economics of tobacco control. His current projects investigate the livelihood of current and former tobacco farmers in Indonesia, the effect of an information campaign on child marriage, the effect of a home-based growth chart on stunting reduction, and the effect of tobacco consumption on stunting. He has published in the journals of Human Resources, Development Studies, Applied Economics, and Tobacco Control.

Ex-OFFICIO

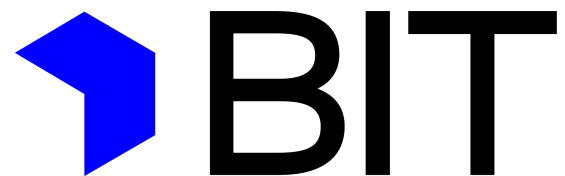
Zack Petersen

Zack Petersen is the Founder and Chief Strategist for the 1000 Days Fund. He has over 12 years of experience in leading teams and overseeing programs in community health and development, delivering strong results in complex environments and low-resource settings. He designed the 1000 Days Fund as a bold approach to invent and test innovative, cost-effective solutions to help end stunting in Indonesia. Zack and his team are relentlessly committed to improving maternal and newborn health outcomes for the poor and marginalized. Prior to founding the 1000 Days Fund, Mr. Petersen worked for the World Bank Group and the Research Triangle Institute. Zack is a graduate of the Fletcher School of Law & Diplomacy and served proudly as a Peace Corps volunteer in Mauritania.

IPE : 1000 Days' Fund Integrated Community Case Management

Final report

Behavioural Insights Team



Contents

Executive Summary	3
Introduction: The ICCM Model and its Evaluation	3
Program Overview: A Community-Based Approach to Stunting Prevention	3
Study Objectives and Scope	3
Methodology: A Mixed-Methods Approach	4
Findings	4
What is going well: How the model has been validated	6
Updating the Behaviour Change Model: From Information to Influence	7
Update 1: Visits Matter, but Relationships Matter More	8
Barriers as contextual lens: Social and logistical barriers.	11
Recommendation: How to measure and monitor trust.	12
Update 2: Fidelity Looks Like Personalisation, Not Blind Comprehensiveness	14
Update 3: Capability is a Continuous Process, Not a Single Formal Training	18
Recommendation: Systematise Peer Learning and Mentorship	19
Conclusion: The Evolved ICCM Model for Scaling	19
Appendix	21
Appendix A: Findings for each research question	21
Appendix B: Summary of Findings by IPE Domain	25
Fidelity – Was the ICCM implemented as intended?	26
5.2. Acceptability – How do implementers and families experience ICCM?	26
5.3. Feasibility – Can the model be implemented at scale?	27
5.4. Process – What mechanisms drive (or block) outcomes?	29

Introduction: The ICCM Model and its Evaluation

Program Overview: A Community-Based Approach to Stunting Prevention

The 1000 Days Fund (TDF) is a non-governmental organization dedicated to empowering village health systems to eradicate stunting in Indonesia, focusing on the critical first 1,000 days of a child's life. The Integrated Community Case Management (ICCM) program represents TDF's latest innovation: a structured, home-visit intervention targeting at-risk pregnant mothers and children under two to drive the adoption of key health and nutrition practices.

The program is delivered by a network of key actors embedded within the existing Indonesian village health system. This system includes the government-run community health centres (*Puskesmas*) and the volunteer-operated village health posts (*Posyandu*). The primary actors are:

- **Community Health Workers (CHWs, or *Kader*):** Local volunteers who conduct the monthly home visits, providing tailored counseling and support.
- **Field Programme Coordinators (FPCs):** TDF-hired facilitators who train, mentor, and monitor the CHWs, ensuring the quality of program delivery.

The program follows a clear, three-phase flow designed to build capacity and deliver targeted support:

1. **Training:** FPCs conduct comprehensive training for CHWs, covering topics such as stunting prevention, growth monitoring, counseling techniques, and case management.
2. **Identification:** High-risk families are identified at monthly *Posyandu* health posts based on specific health criteria, such as low mid-upper arm circumference (MUAC) in pregnant women or faltering growth in children.
3. **Home Visits:** CHWs conduct monthly home visits to provide personalized counseling, monitor health progress, and collect data using digital tools.

Study Objectives and Scope

This **Implementation and Process Evaluation (IPE)** was designed to move beyond simple monitoring to understand the realities of the ICCM model on the ground. The primary objective was to assess the program's implementation and surface actionable insights to consolidate, improve, and strategically scale the intervention. The evaluation was structured around four key dimensions as defined in the evaluation framework :

- **Fidelity:** Was the ICCM program implemented as intended?
- **Acceptability:** How do CHWs and beneficiary families experience the program?

- **Feasibility:** To what extent can the intervention be successfully implemented in this context?
- **Process:** How do the mechanisms of the intervention lead to the desired outcomes?

Methodology: A Mixed-Methods Approach

To provide a holistic view of the program's implementation, the evaluation utilized a mixed-methods IPE design, combining the depth of qualitative inquiry with the breadth of quantitative data. Data was gathered through a suite of tools, including :

- **Semi-structured interviews** with 20 CHWs and 20 beneficiary families.
- **Direct observations** of 20 CHW-led home visits.
- **Descriptive analysis** of routine program monitoring data from 1,142 visits conducted with 491 families.

It is important to note the limitations of this study. This evaluation is not an impact assessment and does not include a control group, meaning it cannot make causal claims about the program's impact on health outcomes. The qualitative sample size is small and intended to provide illustrative depth and generate hypotheses rather than to establish generalizable prevalence rates. Furthermore, some quantitative data, particularly concerning adherence to visit protocols, should be interpreted with caution due to identified data quality limitations.

Findings

The behaviour change pathway originally proposed in our [evaluation framework](#) is broadly validated. The analysis highlights one key refinement: **trust between CHWs and families emerges as the central mechanism mediating outcomes**. This trust cannot be assumed or standardised; it must be built gradually through context-specific approaches that reflect the social and logistical realities of each region, and often the particular needs of each family.

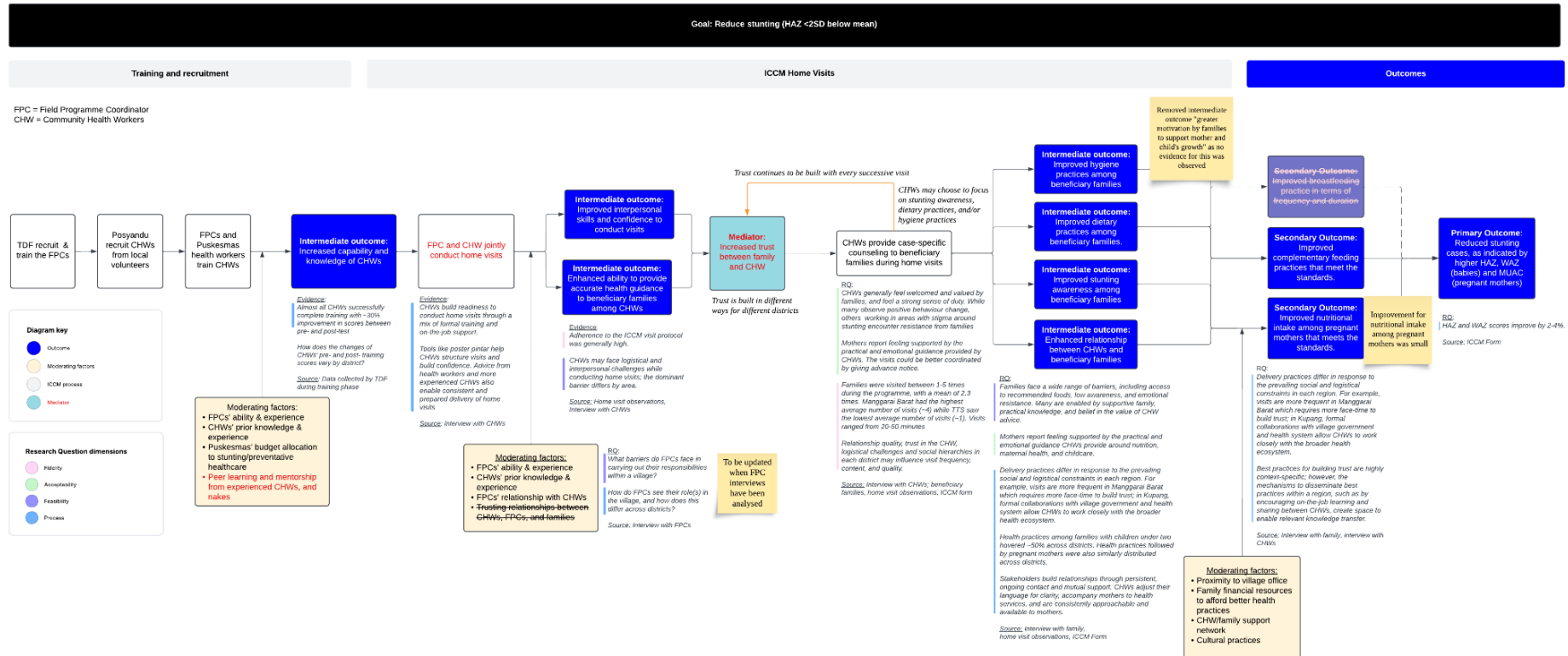


Fig. 1: Updated behaviour change model. See the full-size model [here](#).

The evidence gathered through this evaluation affirms that the ICCM program is built on a strong foundation, successfully improving CHW capabilities and facilitating positive health outcomes through interactions between CHWs and families. The findings offer a deeper understanding of *how* this change occurs, revealing that the key mechanism is not simply the provision of information (or frequency of doing so), but the development of a trusted relationship between the CHW and the family. This insight allows for a valuable evolution of the program's behaviour change model, sharpening its focus on the elements that matter most for driving impact.

Understanding the context: Social and logistical barriers vary by district

Across all districts, two types of barriers consistently shaped how the ICCM programme was received: **social** barriers and **logistical** barriers. These can be seen as two ends of a continuum, with districts leaning more towards one or the other, or facing a mix of both. Recognising this variation is critical for understanding why programme delivery and outcomes differ across regions.

- Social barriers:** These relate to the acceptability of CHWs, cultural norms, and scepticism towards advice. For instance, CHWs often need to navigate sensitive issues such as the stigma surrounding unmarried pregnancy (*hamil tanpa suami*), as well as resistance from higher-status families who feel *minder* (shame) or *gengsi* (pride) about accepting support for stunting. FPCs similarly noted that social hierarchies and stigma often made it difficult to engage families openly.

“Ada orang tua yang bertanya “memangnya anak saya kenapa, dia stunting atau bagaimana, kenapa kalian katakan dia stunting seperti itu?” sedangkan secara tidak langsung mereka belum melihat buku KMS.”

“There are parents who ask, ‘What’s wrong with my child, is he stunted or what, why are you saying he’s stunted like that?’ even though they haven’t actually looked at the KMS (growth monitoring) book directly.”

– KKB-10

“Jadi mereka tuh seperti malu, merasa diri susah gitu. Jadi mereka kayak tidak menerima anaknya dinyatakan seperti itu. Dan dia kemarin tuh sampai sempat ancam saya. Tapi ya tidak saya biarkan. Saya juga balik edukasi tapi dengan kekerasan sedikit.”

“They feel embarrassed because they are in a difficult situation. So, they don’t accept it when their child is said to be in that condition. One of them even threatened me, but I didn’t let it go. I continued to educate them, though a bit firmly.”

– FPC-03

- **Logistical barriers:** These relate to the physical and infrastructural challenges of service delivery. CHWs frequently cited difficult terrain, damaged roads, inadequate transport support, and weak mobile signals as the main obstacles to their work. FPCs also confirmed that poor road access directly affected how they and CHWs carried out home visits and fulfilled their responsibilities.

“Medannya iya. Treknya ya jalannya. Karena rata rata rumah sasaran disini itu di atas. Apalagi udah mulai masuk musim hujan. Itu yang jadi kendalanya.”

“Yes, it’s the terrain. The path, the roads. Because most of the target households here are located uphill. Especially now that the rainy season has started. That’s the obstacle. The main obstacle.”

– LKB-29

“Nah itu berpengaruh sekali sih, Kak. Karena ada akses yang kita tidak bisa masuk dengan segampang-gampang itu.”

“It really has a big impact. There are some areas that aren’t easily accessible.”

– FPC-4

This framing shows that barriers are not uniform across districts but highly context-specific. The two sets of barriers can be framed as a continuum to profile the areas: some districts lean more towards logistical challenges, others towards social, while some face a mix of both.

- **Predominantly logistical barriers (Rote & TTS):** These are some of the most remote districts. Families here generally do not resist CHWs; instead, their main barrier is physical access to services. These remote areas tend to be more welcoming to CHWs, so *authority* and *problem-solving skills* could be sufficient.
- **Predominantly social barriers (Kupang):** As Kupang is the provincial capital, access is less of an issue. Here, the challenge is that social dynamics constrain acceptability. In this context, *institutional credibility*—especially endorsement from midwives, nurses, or other health professionals—lends weight to CHWs’ visits and makes them more acceptable to households.
- **Mixed barriers (Lombok Utara, Manggarai Barat):** These districts face a combination of moderate logistical challenges and social barriers. Trust here tends to develop gradually, through *interpersonal relationships* built over time, and is reinforced by varying degrees of *institutional credibility*.

For example, in Lombok Utara, where barriers are mixed, families with higher education levels tended to be receptive with the visits. Many also expressed simple surprise and gratitude at being visited, suggesting that presence itself went a long way in building

trust. In Kupang, however, where social hierarchies dominate, education and status did not always translate into receptiveness. CHWs reported that some higher-status or better-educated households questioned their authority or resisted advice.

Seeing barriers through this contextual lens helps explain why the same intervention looks different in different places. It underlines the broader lesson carried through the rest of this report: that programme success depends on being adaptable to local conditions rather than applying a single model everywhere.

What is going well: How the model has been validated

This evaluation confirms that the ICCM model is built on solid foundations and is achieving successes in behaviour change.

- **Effective training & knowledge transfer:** The program's training module is effective. TDF's training data shows that CHW knowledge scores for over 1,000 (out of ~1,600) CHWs trained increased by 32% between the pre- and the post-test.

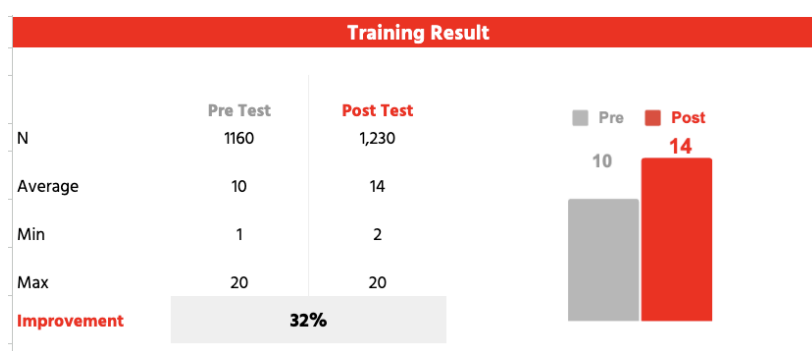


Fig 2: Pre- and post-training scores. Source: 1000 Days Fund

- **High community acceptability:** The program is overwhelmingly well-received by both CHWs and the communities they serve. Interviews reveal that CHWs feel valued and motivated by their role, while families feel genuinely supported by the practical and emotional guidance they receive.

“Kalau menurut saya semua terbuka karena ketika kita pergi dan juga menerima kita dengan baik, termasuk mereka kan tinggal serumah dengan mertuanya. Mertuanya juga sangat mendukung.”

“In my opinion, everyone was accepting because when we left, they welcomed us well, especially since they live with their in-laws. Their in-laws were also very supportive.”

– RKB-01

- **Progress Towards Key Health Outcomes:** TDF has reported progress towards its primary, long-term outcomes. After an average of three visits, pregnant women's MUAC increased by ~2% while children's HAZ increased by ~4%. 23% of children

were no longer classified as stunted, and 30.5% of malnourished mothers were no longer considered malnourished. Whilst impact evaluation is not the focus of this report, we include this for descriptive purposes.

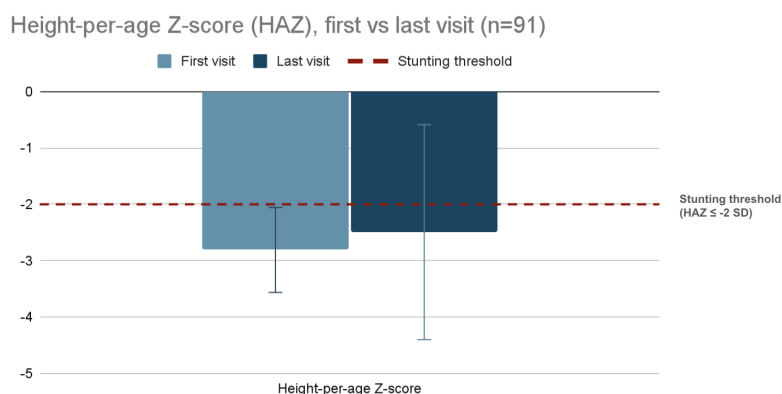


Fig 3: Comparison of HAZ scores between first and most recent visit. Source: 1000 Days Fund

Updating the Behaviour Change Model: From Information to Influence

While the program produces results, its success is driven less by simple information transfer and more by the quality of the CHW/family relationship that enables sustained, complex behaviour change. The program's initial theory of change correctly identified home visits as the primary intervention and enhanced knowledge as a key outcome. This evaluation provides an opportunity to refine this model by illuminating the critical role of relationships.

While the program successfully improves stunting awareness, the translation to behaviour change is uneven (e.g., complementary feeding improved from 25.5% to 35.1% adherence between the first to the last visit; in contrast, improvement on pregnant mothers' adherence to nutritional intake standards was more muted from 53.0% to 59.3%). This suggests that knowledge transfer alone is an insufficient mechanism for change.

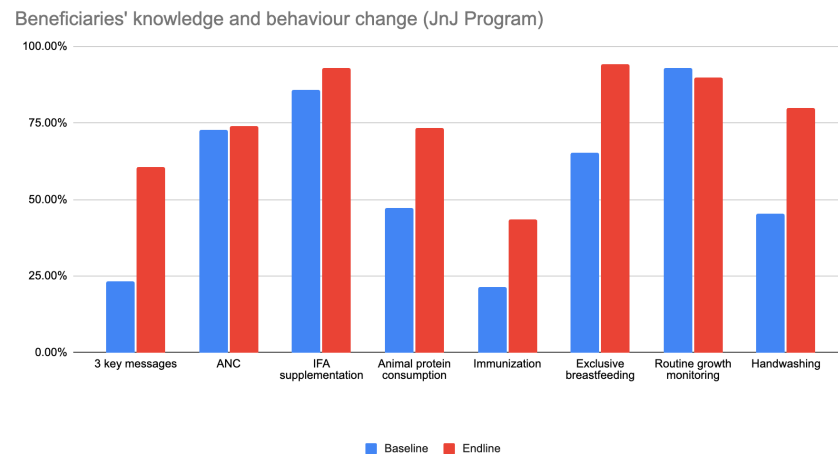


Fig. 4: Beneficiaries' knowledge change on key aspects of stunting prevention. Source: 1000 Days Fund

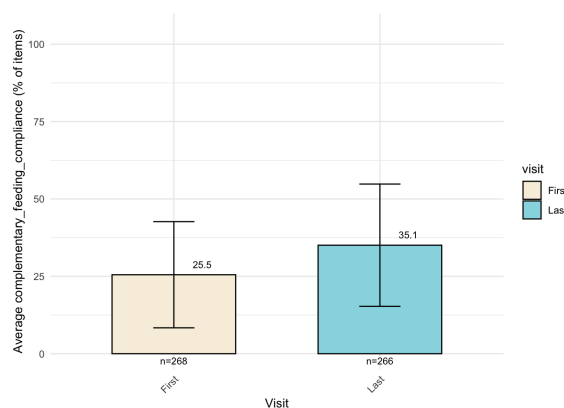


Fig. 5: Comparison of % of families adhering to best-practice complementary feeding for <2 year olds (consumption of cereals, legumes, dairy products, eggs, vitamin A-rich fruits and vegetables, other fruits and vegetables, Piringku guidelines)

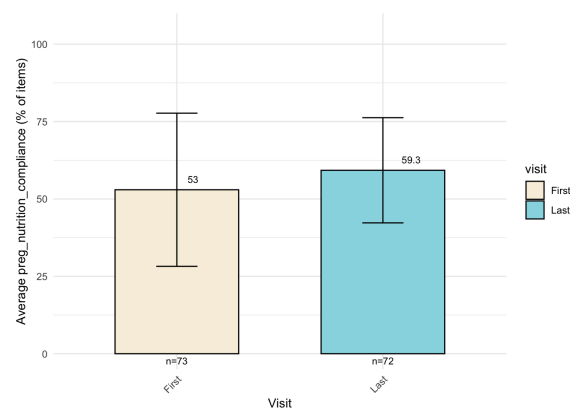


Fig. 6: Comparison of % of pregnant mothers adhering to recommended nutritional practices (having and taking iron-folic acid supplements, following Piringku guidelines)

We observed that even though Manggarai Barat recorded the highest median number of visits per family, its health practice adherence rates were comparable to those in districts with fewer visits. This finding prompted a deeper look beyond simple metrics, revealing that the quality of the CHW-family relationship is the central moderating factor that enables all other outcomes. Trust is an essential precondition that allows knowledge to be received and motivation to take root.

To align the model with this evidence, several key changes are proposed :

1. **Positioning trust as the central mediating mechanism:** Trust between CHWs and families through district specific pathways is now included as a central mediating factor between the home visit activities and the intermediate outcomes. This reflects the finding that without a foundation of trust, advice is less likely to be accepted and acted upon.

2. **Redefining fidelity as personalisation rather than comprehensiveness:** CHWs adhered to the spirit of the ICCM protocol by tailoring counselling methods to family needs, rather than delivering every prescribed message at every visit.
3. **Accounting for ongoing capability-building:** The model now includes an additional moderating factor for ongoing peer support, recognizing that the most effective CHWs benefit from continuous, on-the-job learning and mentorship from their peers long after the initial training is complete.

Update 1: Visits Matter, but Relationships Matter More

Greater programmatic effort, as measured by visit frequency, does not consistently lead to better health outcomes. The case of Manggarai Barat is the clearest illustration of this puzzle. This district recorded the highest median number of visits per family, yet the health practice adherence rate for families with children under two was similar to other districts.

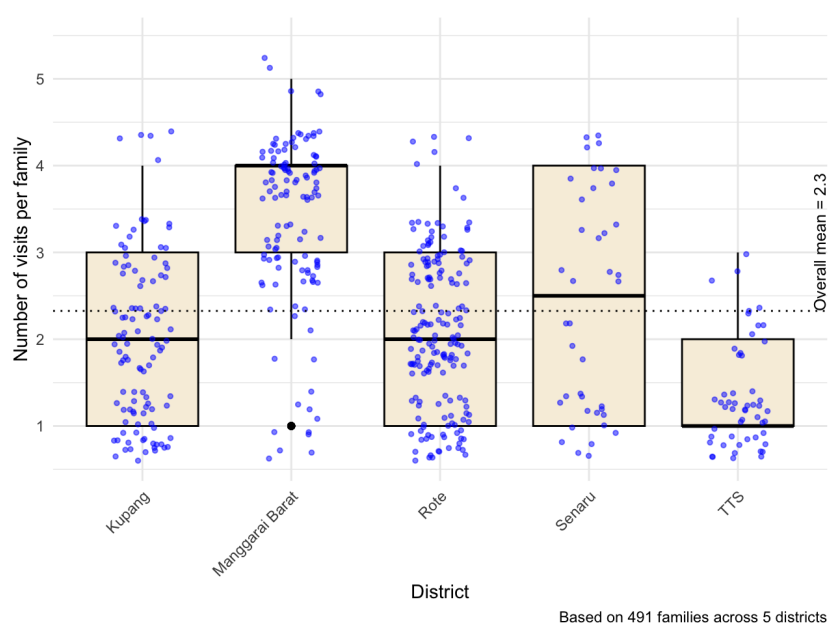


Fig 7: Boxplot of number of visits to each family, by district

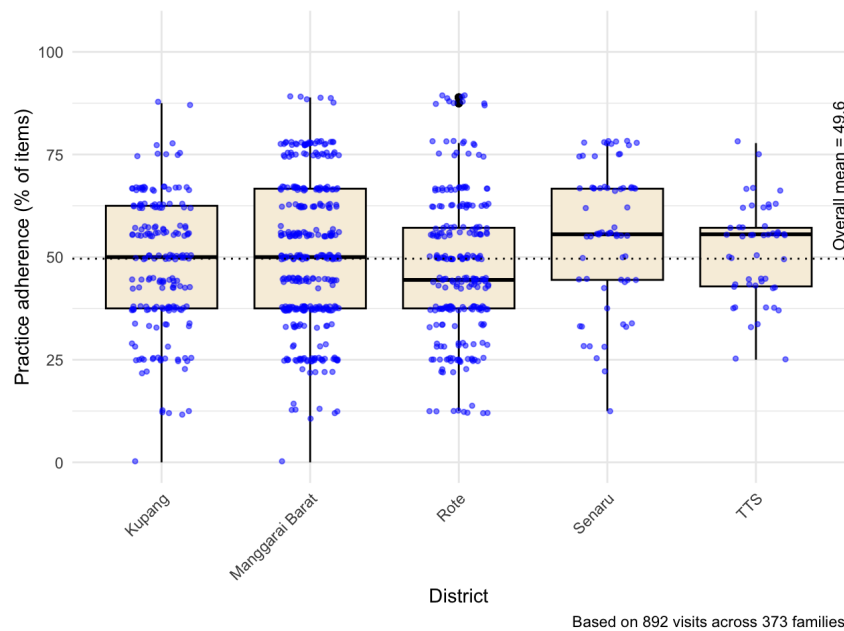


Fig. 8: Boxplot of % of health practices followed by families with children under 2 years old (immunisation, vitamin A supplementation, deworming medicine, breastfeeding and exclusive breastfeeding for children under 6 months old, “Piringku” nutrition guide, handwashing after using the toilet), by district

This disconnect between the quantity of visits and the quality of outcomes forces a critical question: if visit counts and protocol checklists do not fully explain effectiveness, what hidden mechanisms are at play? The answer lies in the nuanced, context-specific ways that CHWs build trust with families.

In the updated behavioural change model, trust sits at the heart of the ICCM programme, yet it can take different forms in practice. From the data we collected, families’ trust in CHWs appears to be present when they accept CHWs’ advice (both during home visits and in broader settings such as at posyandus), value their role, and feel comfortable disclosing health problems – which in turn makes them more likely to act on their advice.

For instance, these two cases illustrate how trust shapes families’ engagement with CHWs. In Lombok, one mother described being happy with a CHW’s visit and how the CHWs thoroughly asked her everything, which prompted her to follow their advice, such as buying medicine. On the other hand, in Kupang, a mother mentioned having to justify the CHW’s visit to a skeptical mother-in-law.

Trust (LIB – 30)	Less Trust (KIH – 14)
"Senang karena jarang ada kader bisa yang berkunjung. Saya kaget sekali." "I was happy because it's rare for a kader to visit. I was very surprised."	
"Ada yang sudah berkunjung dan ditanyakan itu sudah masuk." "(The fact that) there was someone who came and asked, and that counted."	"Kalau ada kunjungan seperti ini, misalnya mama (mertua) bertanya 'tadi ibu mereka datang untuk apa?' lalu saya jelaskan dan mereka pun merespon baik."
"Menanyakan semuanya. berusaha. Misalkan anak-anak ini butuhnya kayak obat ini, dibeliin sih." "They asked about everything. They made an effort. For example, if the child needed medicine, we bought it."	"When there was a visit like this, for example my mother-in-law asked: 'What did they come here for?' Then I explained, and she responded well."

A growing body of international research shows that trust is not an abstract "nice-to-have," but a measurable and decisive driver of whether community health worker (CHW) programmes succeed. A multi-country study in Bangladesh, Haiti, and Kenya found that more frequent CHW interactions were strongly associated with higher trust, suggesting that frequency provides the opportunity for relationships to form.¹⁹ The required frequency, however, may vary between contexts; as our findings in Manggarai Barat illustrate, although visits were the most frequent out of the five districts studied, the team also needed to increase the number of CHWs to deepen relationships with beneficiary families.

What matters is the quality of those interactions. Evidence consistently points to two universal dimensions of trust: **healthcare competence** (families' belief in the CHW's knowledge and skills) and **respectful communication** (empathy, active listening, and confidentiality).²⁰ Different contexts emphasise these dimensions differently: in Kupang, signals of competence and institutional authority are critical, while in Manggarai Barat, trust builds slowly through relational bonds.

¹⁹ Sripad, McClair, Casseus, Hossain, Abuya, Gottert. (2021). Measuring client trust in community health workers: A multi-country validation study. *Journal of Global Health* 11:07009

²⁰ Ibid.

Furthermore, interviews with Field Programme Coordinators (FPCs) reveal inconsistencies in their evaluation of optimal CHW visit frequency, suggesting that the approach to building trust and relationships varies by context, and thus, trust building differs regionally. One FPC from Manggari Barat noted:

“Jangan hanya sampai lima bulan, lima kali pendampingan. Saya rasa juga itu belum pas, Kak. Kalau bulan perkunjungan satu kan dua, kan itu kita saling mengenali, Kak, sebenarnya. Kita dengan kader, kita dengan sasaran.”

“Don’t limit it to just five months or five visits. I don’t think that’s enough. If the visits happen once a month, by the second one we’re only just starting to get to know each other — us with the CHWs, and the CHWs with the beneficiary families.”

– FPC-02

However, another FPC from Lombok expressed a different view as they had already started the rapport-building process before the first visit, during posyandu:

“6 bulan, aku pikir cukup banget Kak, udah setengah tahun. Minimal 4 lah, maksimal 6 udah oke lah. [...] Kalau kenalan nggak lagi, karena kan sasaran masing-masing ya, di Posyandu masing-masing jadi nggak ada kenalan-kenalan.”

“6 months, I think that’s definitely enough, it’s already half a year. A minimum of 4, a maximum of 6 is fine. [...] As for introductions, no longer, because the targets are individual, in their respective Posyandu, so there are no introductions.”

– FPC-05

Trust also has proven causal power. A CHW-led programme with first-time mothers in the United States found that each one-point increase in relationship quality was linked to a 22% higher odds of perfect adherence, even after controlling for other factors.²¹ Other studies show that trust enhances client empowerment and satisfaction, and even buffers against anxiety and low mood, enabling families to sustain new behaviours.²² During COVID-19, pre-existing trust shielded CHWs from hostility and made them more effective messengers than government channels.²³

Global evidence also highlights the conditions that build or break trust. Support from formal health staff strengthens CHWs’ credibility, while visible disrespect from clinics

²¹ Mundorf, C., Shankar, A., Peng, T., Hassan, A., & Lichtveld, M. Y. (2017). Therapeutic relationship and study adherence in a community health worker-led intervention. *Journal of community health*, 42(1), 21-29.

²² Ibid.

²³ Sripad, P., Gottert, A., Abuya, T., Casseus, A., Hossain, S., Agarwal, S., & Warren, C. E. (2022). Confirming—and testing—bonds of trust: A mixed methods study exploring community health workers’ experiences during the COVID-19 pandemic in Bangladesh, Haiti and Kenya. *PLOS global public health*, 2(10), e0000595.

undermines it.²⁴ Long-term continuity of relationships fosters deep bonds, but breaches of confidentiality are especially destructive, leading some families to avoid services altogether.²⁵ Trust is therefore dynamic: it can be built gradually through competence, empathy, and consistency, but it must be actively maintained.

Taken together, these findings reinforce our central conclusion: visits matter less than the trust they generate. Trust is the mechanism through which CHWs' knowledge, authority, and empathy translate into behaviour change, and it must be treated as a core, measurable component of programme design. However, while trust underpins behaviour change across all districts, the way it is built varies significantly, explaining why a one-size-fits-all approach to implementation is insufficient.

From the five districts where data was collected, four key components of how trust is built emerged:

- a) Institutional credibility:** Trust derived from the formal backing and integration of CHWs within the established health system (e.g., Puskesmas staff, midwives, doctors, and village heads).

"Kalau untuk kunjungan rumah itu ibu maksudnya kaya dari nakes. Begitu mereka bisa ikut supaya mereka bisa cek langsung HBnya ibu hamil."

"For home visits, what the mothers mean is when health workers can also come along. That way, they can directly check the haemoglobin of pregnant women."

– KKH-12

- b) Relational trust:** Trust developed over time through sustained, empathetic engagement, often evolving into deep, almost "parent-like" bonds between CHWs and families.

"Mereka menganggap saya seperti orang tua sendiri, sehingga mereka tidak pernah menutupi apa yang mereka rasakan."

"They consider me like their own parent, so they never hide what they feel."

– MKB-18

- c) Demonstrated problem-solving skills:** Trust is earned through demonstrated competence and the ability to solve concrete problems for the family.

²⁴ Grant, M., Wilford, A., Haskins, L., Phakathi, S., Mntambo, N., & Horwood, C. M. (2017). Trust of community health workers influences the acceptance of community-based maternal and child health services. *African Journal of Primary Health Care & Family Medicine*, 9(1), a1281. <https://doi.org/10.4102/phcfm.v9i1.1281>

²⁵ Ibid.

"Mama ngasih tahu ya kayak gini caranya biar anaknya sehat gitu. ...juga senang kalo ada yang ngajari."

"Mama teaches us like this, showing how to keep the child healthy... we're also happy when someone teaches us."

– LIB-31

d) Authority of CHW status: Trust that stems from the respected role of the CHWs within the community, maintained through rigorous training and consistent professionalism

"Senang karena jarang ada kader bisa yang berkunjung. Saya kaget sekali."

"Happy because it's rare for a CHW to visit. I was very surprised."

– LIB-30

Recommendation: How to measure and monitor trust.

Across all contexts, a high-quality CHW-family interaction moves beyond the transactional delivery of information to become a supportive partnership. The qualitative data points to three essential pillars of an effective visit:

Empathy and Emotional Support: Effective CHWs act as empathetic supporters who make families feel encouraged rather than judged. This emotional labour is a core component of the program's value.

Tailored and Practical Guidance: Successful CHWs are adept at diagnosing a family's primary need—whether it is for practical, easy-to-follow instructions, emotional validation, or simply the feeling of being seen by the health system—and adapting their approach accordingly.

Collaborative Problem-Solving: The most effective CHWs work with families to identify and overcome barriers. They acknowledge constraints and explore locally viable solutions together, positioning themselves as partners in the family's health journey.

"Mereka tetap kasih semangat, tidak bikin semangat kita turun... jadi tidak bikin kita tersinggung"

They keep giving encouragement, they don't let our spirits drop... so they don't make us feel offended

– MIB-19

There are two aspects to consider when measuring trust:

1. Identifying which trust component is most important in a new area.
2. Assessing whether trust has been successfully developed over time.

As the ICCM programme expands to new areas, additional components of how trust is built may emerge. **Mapping new districts' context**—whether barriers are primarily social, logistical, or mixed—can help identify which trust-building strategies to prioritise first. For instance, In areas with mixed barriers, complexity should be expected from the outset. Building trust here may involve trial and error to determine which components matter most, and strategies will need to adapt as understanding of the local context deepens.

To assess whether trust is developing, we propose **triangulating perspectives from CHWs, supervisors, and families**. This could include:

Source	Detail	Example
Household surveys or short questions	Families' perceptions of CHWs and openness to share problems.	- "If your child experienced a health problem, how likely would you be to tell your CHW?"
	Short pen-and-paper (1-2 items) administered by FPCs every 2 visits.	- "How comfortable do you feel discussing personal or family health issues with your CHW?"
Observations or FPCs notes	Supervisors/FPCs note attentiveness, questions, and follow-up actions.	Already covered in the current ICCM forms.
CHWs reflections	CHWs' perspective on how welcoming the family is, how often advice is accepted, or disclosures of sensitive issues.	- "How welcoming was the family?" - "Did the family follow your advice?" - "Did the family disclose any sensitive issues?"
	Could be gathered through short debrief interviews (≈10 mins) with FPCs or TDF staff.	

Taken together, these triangulated insights would act as a feedback loop, helping to track not only whether trust exists but also which component of trust is most salient in each area. In turn, this would inform which approach is likely to work best.

Update 2: Fidelity looks like personalisation more than comprehensiveness

Observed adherence to ICCM protocols during home visits appeared high (86.9% on average), but these figures should be interpreted cautiously as there is evidence that (i) some enumerators may not have understood how to use the option “Done by someone other than the CHW” (therefore overreporting actions taken by the CHW directly), and; (ii) one enumerator in Manggarai Barat logged all visits at exactly 20 minutes, suggesting possible data quality issues.

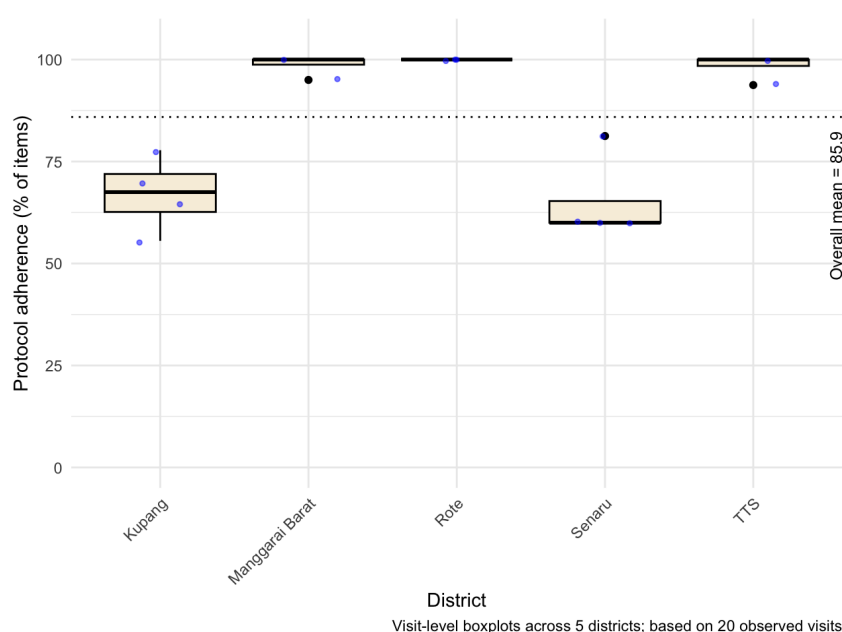


Fig. 9: Boxplot of % adherence to the ICCM visit protocol (defined in [evaluation framework](#)), by district

Looking at practice-level detail, some elements of the protocol were consistently followed across districts, while others were implemented more sporadically. This points to variability not only in overall adherence but also in which components were prioritised.

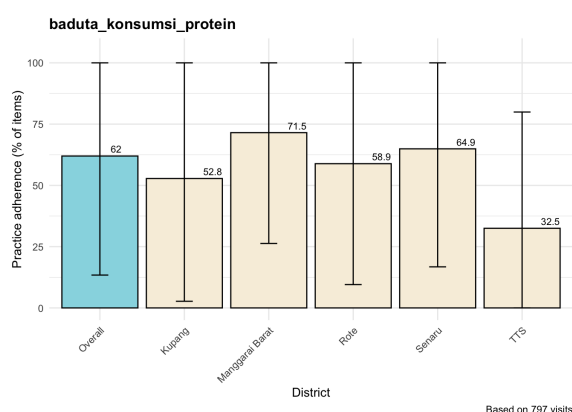


Fig. 10: Protein consumption adherence for children < 2

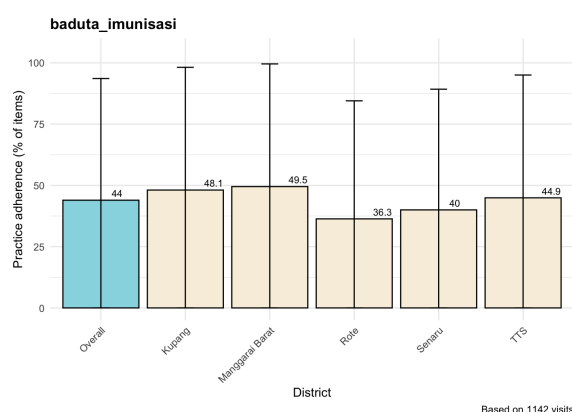


Figure 11: Immunisation adherence for children < 2 years

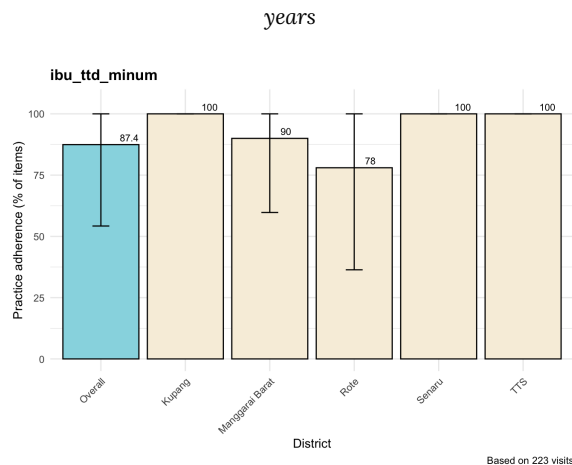


Figure 12: Iron tablets consumption adherence for pregnant mothers

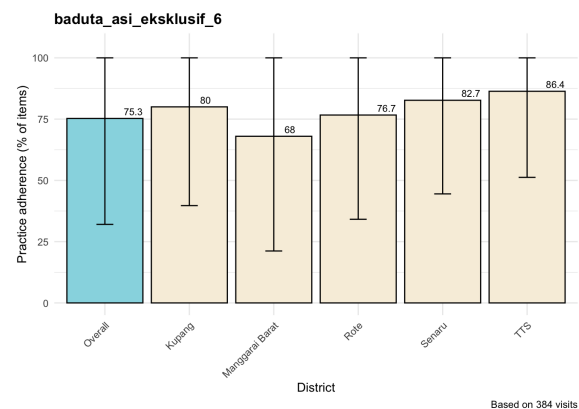


Figure 13: Breastfeeding adherence for pregnant mothers

This variability suggests that CHWs adapt their counselling to the specific needs and conditions of the families they visit, rather than delivering a uniform set of messages. Instead of covering all topics such as hygiene, diet, and stunting detection in every visit, they focus on the issues most relevant to each household. Examples of tailoring include:

- Encouraging parents to become more involved with health services in their village

“Terus anak anak yang dulunya orang tua tidak mau datang ke posyandu, kita berikan arahan sehingga sekarang mereka sudah sudah, sudah sadar dan sudah banyak yang berubah.”

“And the children whose parents previously didn’t want to come to the posyandu — after we gave them guidance, the parents have now become more aware, and many have changed.

– KKH-12

- Reminding mothers with chronic energy deficiency to take iron tablets and maintain their health.

“Kami lihat hasil pemeriksaan dari buku KIA itu seperti apa? Jadi seumpama kalau masih tetap KEK ya kami beritahukan harus jaga kesehatan. Ingat minum obat tablet tambah darah.”

“We look at the results recorded in the KIA book. So, for example, if the mother is still experiencing chronic energy deficiency (KEK), we remind her to take care of her health and to remember to take iron tablets.”

– KKH-12

This kind of tailored approach becomes possible once trust has been established — as

mothers grow more comfortable, they are more open in sharing their challenges, allowing CHWs to target advice more precisely.

“Senangnya karena mereka memberikan kita saran, kalau keluhan kita apa mereka akan memberitahukan harus seperti apa.”

“We feel happy because they give us advice – when we have complaints, they tell us what we should do.”

– KIB-09

If we assume CHWs should cover all prescribed health practices at each visit, the behaviours recorded by ICCM and observation forms might suggest incomplete fidelity. However, the qualitative responses from interviews suggest that CHWs often tailored their counselling as trust developed, focusing on the issues most important to each family rather than following the protocol mechanically.

The other challenge with fidelity was with visit frequency -- although the programme was designed with monthly visits as an ideal, households only received an average of 2.3 visits over a 6-month period.

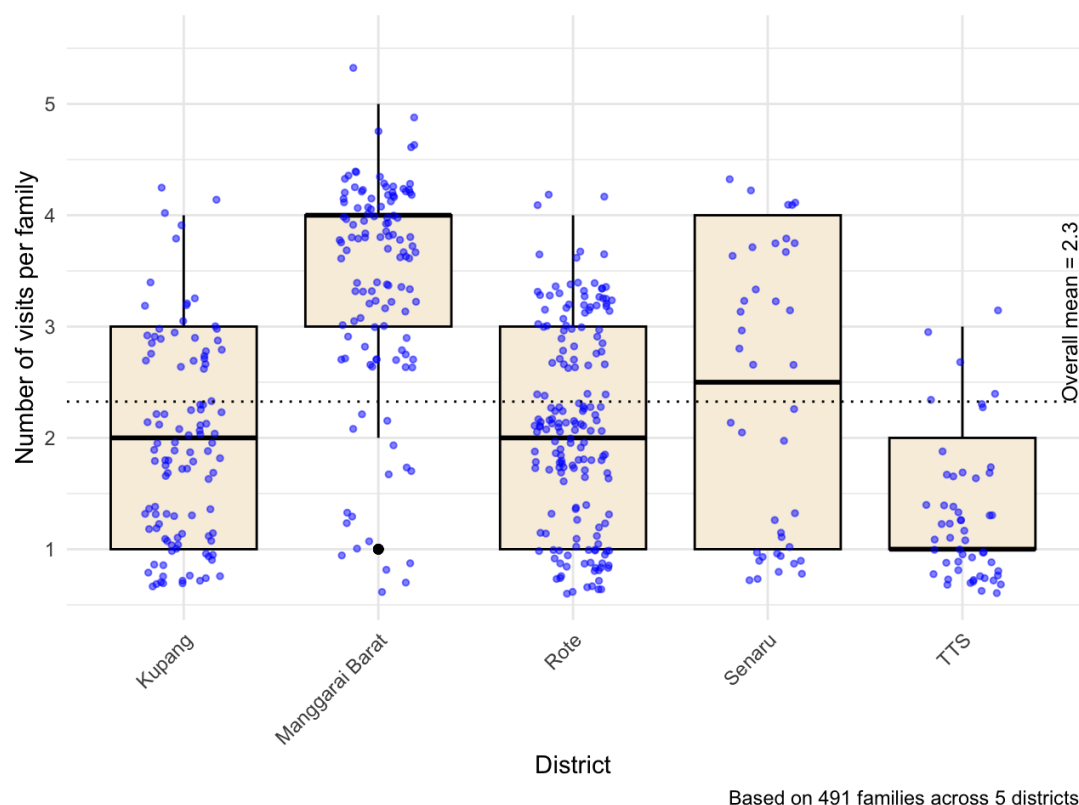


Fig 7: Boxplot of number of visits to each family, by district

On the surface, this might seem like a shortfall. Yet, as discussed earlier, the central paradox of the programme is that greater numbers of visits do not consistently translate

into better health outcomes. It is the trust between CHWs and families that drives change. This raises a pertinent question for future consideration: should visit frequency be treated as a rigid monthly requirement, or as a flexible tool that can be adapted strategically to build trust? Ultimately, it highlights that true programme effectiveness—and thus its fidelity—hinges on the trust built between CHWs and families, which sits at the heart of the programme.

Recommendation: Prioritise guiding principles and formally sanction flexibility

FPCs and CHWs are already tailoring their approach to the situation found on the ground. This is most apparent in visit frequency; the official guidance for one visit a month is not being met in most districts, yet positive outcomes are still achieved because the focus is on building trust.

Therefore, we recommend the programme make a strategic decision to shift the focus from rigid, possibly unachievable details such as a set number of visits, to upholding the programmes core principles. This change would empower practitioners by explicitly sanctioning the flexibility they are already using to adapt effectively to the needs on the ground.

Update 3: Capability is a Continuous Process, Not a Single Formal Training

A large proportion (>70%) of CHWs attended at least some part of training, showing an overall 32% improvement in scores between pre- and post-test. CHWs' capability develops through a blended learning process—formal training builds the foundation, while ongoing informal support ensures that skills are sustained and applied in practice. While the foundational training provided by the 1000 Days Fund is universally valued, the local support structures that reinforce this learning vary across districts.

Across all districts, CHWs credit the TDF training with providing essential knowledge and building their confidence.

"Sebelum pelatihan itu kadang kami kaku... setelah pelatihan ini kami bersyukur karena kami sudah bertambah ilmu,"

"Before the training we were often stiff... after this training we are grateful because we have gained knowledge."

– KKB-10

This formal training is effectively “scaffolded” by tools such as the poster pintar (smart posters), which CHWs cite as crucial aids that help structure their visits and overcome nervousness. In some districts, FPCs also adapt the training by incorporating local

myths or culturally relevant stories into the materials, making the messages more relatable and easier for CHWs to communicate to families.

"Nah, kalau soal mitos-mitos kan kita akan masukkan. Biasanya itu kita FPC setiap wilayah, kayanya di SCL lain juga sih, mereka akan masukkan mitos-mitos yang ada di masyarakat."

"Well, regarding myths, we will include them. Usually, each FPC in every region, and I think in other SCLs as well, will include myths that exist in the community."

– FPC-02

However, while training establishes baseline competence, CHWs' capability still needs to be actively supported after the training. Confidence alone does not yet translate to full independence.

Across the districts, the reliance on FPCs is particularly strong during the first few visits. As CHWs begin to apply what they have learned, they depend heavily on FPCs for direction and reassurance. In Manggarai Barat, one FPC described how CHWs initially needed reminders to conduct their visits, reflecting that task ownership was still developing.

"Mama jangan lupa kunjungan rumah." Jadi kan itu hal yang saya rasa dulu mungkin mereka tidak memiliki kepemilikan, tapi sekarang mereka rasa tuh, oh ini mereka punya dan ini bagiannya mereka. Dan yang seharusnya dilakukannya itu oleh mereka. Kita hanya sebagai mendampingi."

"Mama, don't forget the home visits," I feel that before, they didn't have that sense of ownership, but now they feel that this is theirs and part of what they should do. We are only there to accompany them."

– FPC-02

Beyond helping CHWs gain ownership, FPCs also play a vital role in strengthening community trust. FPCs often help bridge this process by validating CHWs' messages when households are sceptical.

"Kalau misalkan ada kendala yang kayak dia pun sasaran, masih ngeyel, itu kita masuk dengan segi, "Oh, kami dari 1000 Hari. Kami paham sekali soal ini."

"If there's a problem — like when the beneficiary is still being stubborn — we step in by saying, 'Oh, we're from the 1000 Days Fund. We understand this issue very well'"

– FPC-02

Another FPC from Lombok emphasised that such conversations also help families see the visits as supportive rather than evaluative.

"Aku menekankan lebih pada masyarakat memahami bahwa kunjungan rumah ini tujuannya ini, sehingga ibu-ibu ada teman berbagi keluhan kesah, berbagi keresahan bagaimana cara menyusui yang baik, cara kasih makanan baik."

"I tried to emphasise more on helping the community understand that the purpose of these home visits is so that mothers have someone to share their worries with, to talk about their concerns on how to breastfeed properly, and how to feed their children well."

– FPC-05

The first few visits, therefore, serve multiple purposes: they help CHWs strengthen their sense of task ownership, build trust with families, and gradually gain confidence to work more independently. As one FPC from Kupang explained, accompanying the first and second visits is indeed necessary to ease CHWs' nervousness, but genuine confidence only emerges once they are trusted to conduct visits on their own.

"Nah, kenapa ketika 1-2 bulan awal saya mendampingi, tapi di bulan ke-3, itu saya lepas mereka yang kunjungan rumah. Karena saya memberikan kesempatan ruang. Tapi biasanya kalau ada kita juga, mereka itu agak nervous. [...] Nah, kesempatan itu yang dikasih, akhirnya mereka berhasil. Signifikan, Kak, hasilnya."

"So, why is it that in the first 1-2 months I accompany them, but in the 3rd month, I let them do the home visits alone? Because I give them space and opportunity. But usually, if we are there, they get a bit nervous. [...] Well, with that opportunity given, they finally succeeded. The results are significant."

– FPC-04

This reflects how capability development is relational – CHWs learn not only through instruction but also through modelling and gradual transfer of responsibility.

As CHWs gain confidence and begin to operate more independently, peer relationships become another important source of learning and motivation. Specific to Kupang, the interview with CHWs reveal that they exhibit a strong culture of peer learning and mentorship. An experienced CHW from Kupang described her role in sharing knowledge with new recruits.

"Cerita pengalaman dengan artinya kan mereka ada yang baru jadi saya berbagi."

"Sharing experiences, because some of them are new, so I share."

– KKH-12

A less-educated CHW explained her proactive strategy of seeking guidance from the local midwife and studying materials independently before visits.

"Yang kadang saya tidak ketahui saya tanyakan saya melalui chat WA, ketika saya tanyakan nanti mereka sudah mulai membimbing."

"What I sometimes don't know, I ask through WhatsApp chat, and when I ask, they start guiding me."

– KKB-16

This suggests that readiness is not a static state achieved after a single training but an ongoing process of continuous learning supported by a robust local network.

Recommendation: Systematise Peer Learning and Mentorship

Sustaining CHW capability requires more than formal training. It depends on strengthening the everyday systems that support their practice. Initial training is effective for knowledge transfer, but confidence and practical problem-solving skills emerge through continuous learning from other CHWs who are facing similar challenges.

TDF can strengthen these peer support systems by establishing a structured peer mentorship program: Scale the organic model of peer support observed in Kupang, where experienced CHWs formally mentor and guide new recruits. While FPCs already play some of this role by sharing their experiences from across different villages, it is often more powerful and feels more relevant to hear advice directly from someone in the same position.²⁶ FPCs also affirmed that their way to give advice to CHWs is to position themselves as someone who is equal rather than an expert, a dynamic that makes the mentorship feel more approachable.

"Komunikasi yang kita bangun ketika kita in-bonding dulu dengan mereka tidak membatasi diri bahwa kita mitra, tetapi tidak dengan pandang status bahwa saya lebih bagus. Tidak. Tetapi memposisikan diri kepada mereka. [...] akhirnya mereka coba-coba tidak sungkan lagi."

"The communication we build when we first bond with them doesn't limit us to just being partners, without viewing our status as superior. No. Instead, we position ourselves as equals to them. [...] eventually, they try to ask without hesitation."

– FPC-04

Conclusion: The Evolved ICCM Model for Scaling

Based on the four domains of evaluation originally proposed (fidelity, acceptability, feasibility, process), we find that:

²⁶ Wang, Z., Walther, J. B., Pingree, S., & Hawkins, R. P. (2008). Health information, credibility, homophily, and influence via the Internet: Web sites versus discussion groups. *Health communication*, 23(4), 358-368.

Domain	Conclusion
Fidelity	The ICCM model was broadly implemented as intended, although protocol adherence varied by component and district.
Acceptability	The programme was well received overall. CHWs were motivated to perform their role; families appreciated respectful and practical support on nutrition, maternal health, and childcare.
Feasibility	While training and systems for monitoring and peer learning can be scaled, it is difficult to scale specific best practices to build trust between CHWs and families, as these are highly context specific.
Process	Programme outcomes were driven less by information transfer than by relational mechanisms. Adherence to health recommendations varied widely by district, and we suspect this adherence was mediated by the relationship between CHWs and families.

The "base model" for scaling the ICCM program is not a rigid, universally applied protocol but rather a flexible framework. The updated model that TDF should scale is one that prioritizes defining, measuring, and managing the quality of CHW-family interactions.

This evolved model is built on a set of core principles:

- **Cultivating Trust:** Recognizing that a trust-based relationship is the foundation for all behaviour change.
- **Principled Flexibility:** Solving local problems with guidance that is adapted to the specific context and needs of each family.
- **Empowering CHWs:** Supporting CHWs through robust, localized, and continuous learning networks.

This strategic focus on quality, context, and continuous learning is the key to building a more resilient, effective, and ultimately more scalable program. By embracing this evolved model, the 1000 Days Fund can ensure that as the ICCM program grows, it becomes not just larger, but also smarter and more deeply attuned to the diverse realities of the communities it serves, maximizing its potential to eradicate stunting in Indonesia.

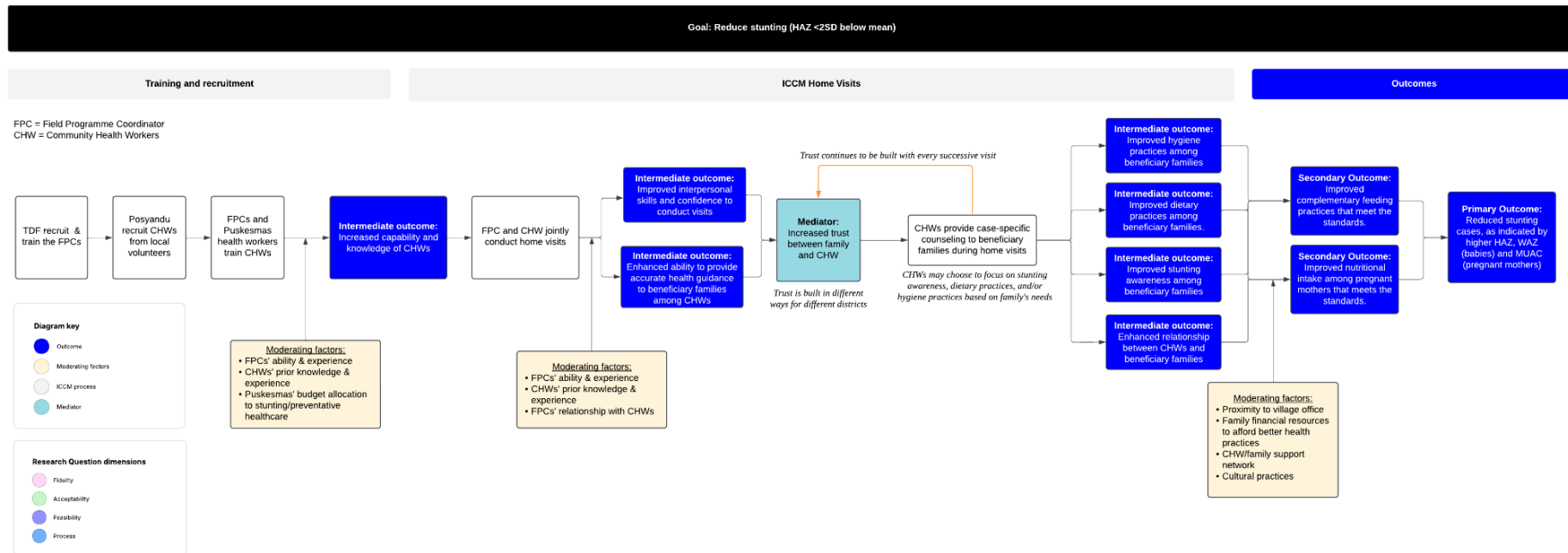
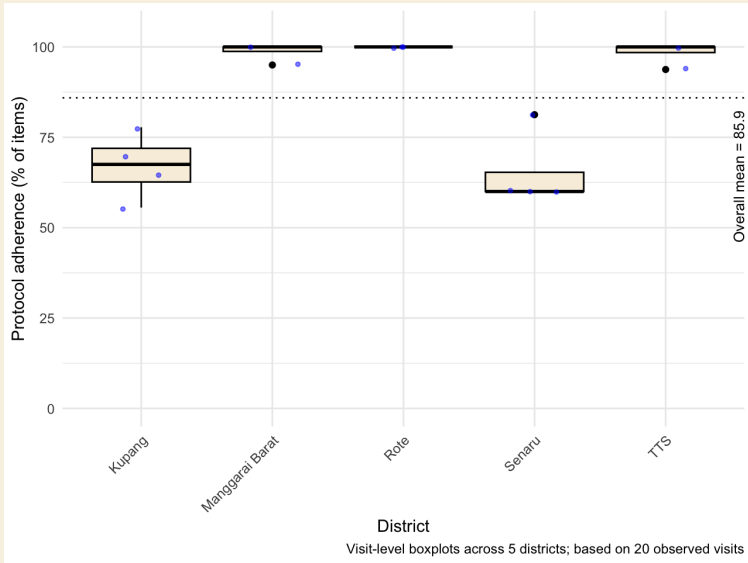
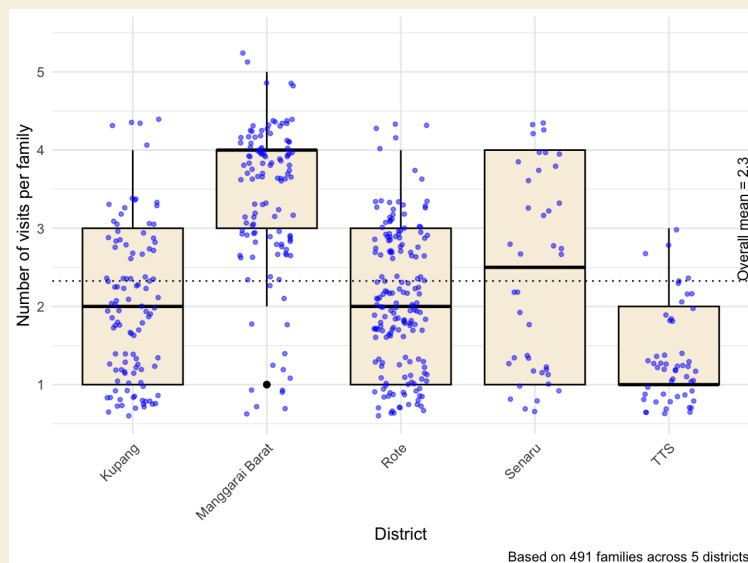


Fig. 14: The updated base model of the ICCM programme. Full-size version found [here](#).

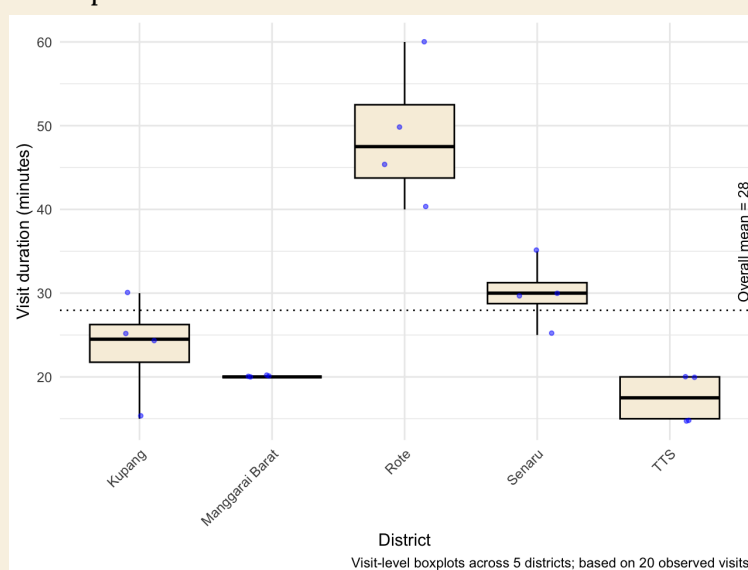
Appendix

Appendix A: Findings for each research question

Research question	Source	Overall results
Fidelity		
To what extent do FPCs and CHWs adhere to the ICCM protocol, including counselling and data collection?	Home visit observations	CHWs achieved an overall average adherence rate of 86.9% to the ICCM visit protocol, based on 20 observed visits. However, these figures should be interpreted cautiously as there is evidence that (i) some enumerators may not have understood how to use the option “Done by someone other than the CHW” (therefore overreporting actions taken by the CHW directly), and; (ii) one enumerator in Manggarai Barat logged all visits at exactly 20 minutes, suggesting possible data quality issues.  Visit-level boxplots across 5 districts; based on 20 observed visits
What is the frequency of home visits for each beneficiary family, and what is the duration of each home visit?	Home visit observations ICCM form data	Across 491 families, the average number of ICCM visits was 2.3, with wide variation across districts. Manggarai Barat showed the highest median visit count (~4), while TTS had the fewest, with most families receiving only one visit.



Visit durations also ranged widely: from 10 minutes to 60 minutes. The overall average duration was 28 minutes, suggesting that while most visits were reasonably thorough, some may have been too brief to deliver the full ICCM protocol.



What factors contribute to variations in the frequency, quality, and content of ICCM home visit delivery across different districts?

Interviews with CHWs
Interviews with beneficiary families
Home visit observations
Interviews with

Logistical challenges such as poor terrain and limited resources prevail in more disadvantaged areas such as Rote; CHWs in more well-resourced areas such as Kupang tend to face more social challenges. Areas in between such as Manggarai Barat tend to see a mix of different barriers. Manggarai Barat in particular also requires more visits to build rapport with the family.

	FPCs ²⁷	Using local language is seen as an essential skill by FPCs during home visits.
Acceptability		
How do CHWs experience the ICCM programme delivery?	Interviews with CHW	CHWs generally feel welcomed and valued by families, gaining intrinsic satisfaction and a strong sense of duty through their role. While many observe positive behaviour changes and engage families with personalised counselling and tools, others encounter resistance, especially where stigma or social norms are present. CHWs remain committed but suggest improvements such as joint visits and more health worker support to strengthen delivery and reduce burden.
How do beneficiary families experience ICCM home visits?	Interviews with beneficiary family	Most mothers report feeling supported by the practical and emotional guidance CHWs provide, especially around nutrition, maternal health, and child care. Families are generally receptive to the visits, noting visible educational tools and appreciating in-home monitoring and referrals to health services. Some suggestions were made to improve coordination (e.g. advance notice), but overall the experience was perceived as helpful and respectful.
Feasibility		
What are the barriers and enablers families experience when trying to implement ICCM advice?	Interviews with beneficiary family	Families face barriers across all COM-B domains, including limited access to recommended foods, time constraints, low awareness, and emotional resistance (e.g. denial, defensiveness, or disgust toward fish or supplements). However, many are enabled by supportive family networks, proximity to health services, and a strong belief in the value of CHW advice for their child's wellbeing. Practical knowledge, government-provided materials, and emotional motivation also play a role in facilitating follow-through.
What barriers do CHWs face in conducting ICCM home visits?	Interviews with CHW	CHWs face a range of delivery barriers, including limited memory, lack of tools or data access, and difficult terrain that increases time and transport burdens. Social norms (e.g. stigma around unmarried pregnancy, distrust from higher-income families) and misconceptions about

²⁷ Conducted and analysed by TDF

		stunting advice also reduce family openness. While CHWs do mention low incentives, they don't mention how this links to visit quality directly. Motivation may be indirectly strained by logistical and interpersonal challenges.
What barriers do FPCs face in carrying out their responsibilities within a village?	Interviews with FPCs ²⁸	FPCs encounter several barriers in their village responsibilities, including difficult access to intervention villages due to terrain, weather, and limited network. Although most CHWs demonstrate strong commitment, some are less committed and FPCs face rescheduling issues as a result. Furthermore, some beneficiaries decline home visits and threaten FPCs.
Process		
How do FPCs see their role(s) in the village, and how does this differ across districts?	Interviews with FPCs ²⁹	FPCs play the following roles in villages: 1. Providing technical assistance to CHWs for home visits (including training, Smart Chart installation, counselling, and building rapport) 2. Advocating for CHWs' needs (incentives, budget for training) to village governments 3. Conducting technical assistance during posyandu 4. Coordinating with relevant stakeholders such as puskesmas, DinKes, and Bappeda for advocacy and coordination
How do delivery practices differ between different regions?	Interviews with CHW Interviews with beneficiary family Home visit observations Interviews with FPCs ³⁰	Delivery practices differ in response to the prevailing social and logistical constraints in each region. For example, visits are more frequent in Manggarai Barat which requires more face-time to build trust; in Kupang, formal collaborations with village government and health system allow CHWs to work closely with the broader health ecosystem. Some FPCs create simplified training materials, like handwritten notes, to better support their CHWs. The approach to building rapport with families also varies by region; in some areas, this is effectively done at posyandu, while in others, the first two home visits are dedicated specifically to establishing trust.

²⁸ Conducted and analysed by TDF

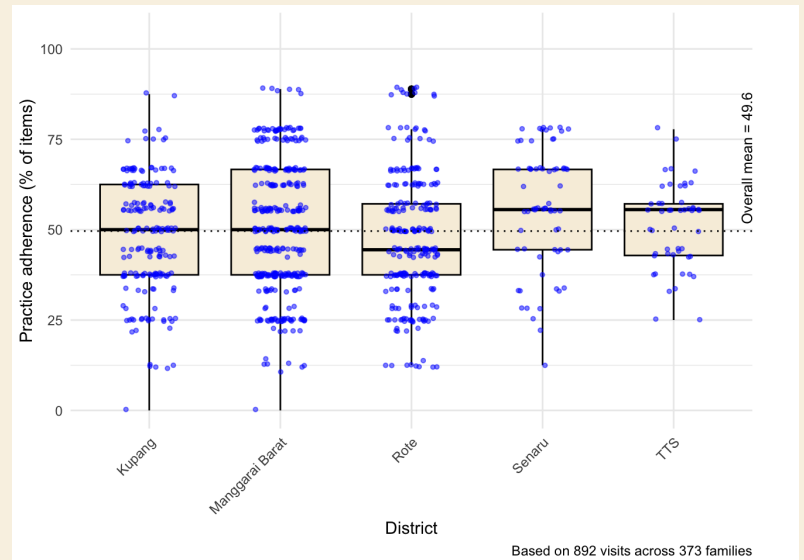
²⁹ Conducted and analysed by TDF

³⁰ Conducted and analysed by TDF

How do health practices among beneficiary families change across different districts?

Data collected by TDF during home visits (ICCM form)

Health practices among families with children under two were similar across districts, with average adherence rates ranging from ~45% in Rote to ~55% in Senaru.



Health practices followed by mothers ranged from 50%-75%, and showed similar distributions across districts.

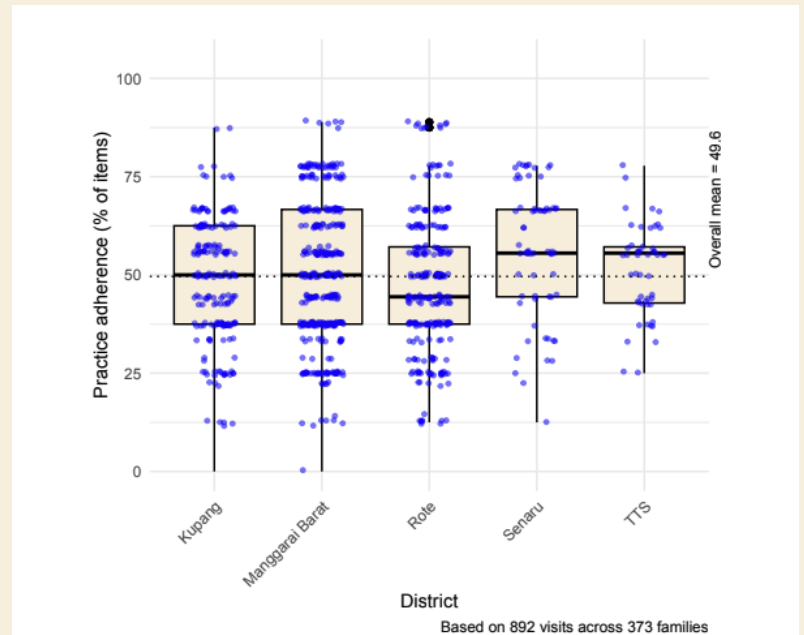
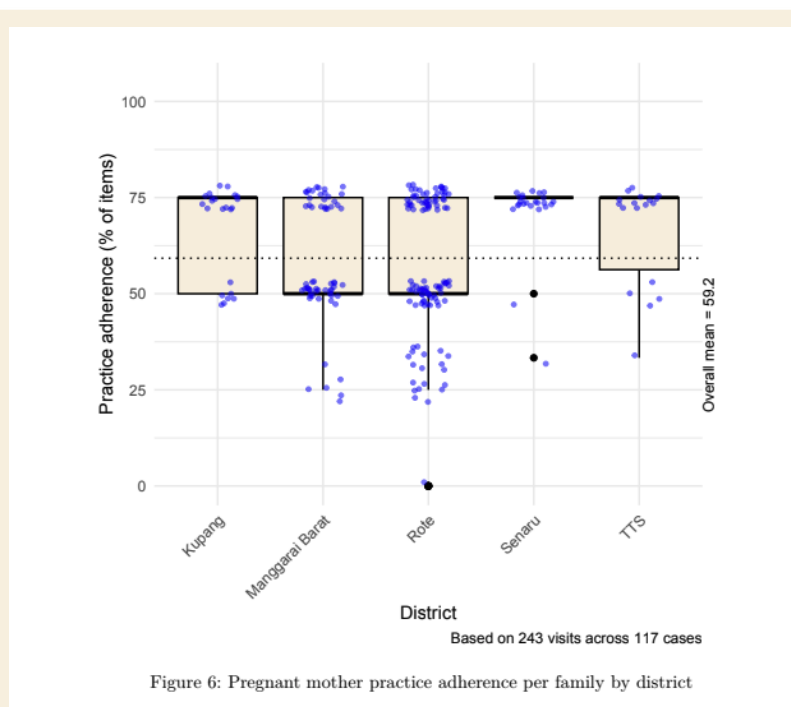


Figure 5: % of health practices followed by families with children under 2 years old



How context-specific are the best practices, and can they be scaled to other regions?

Interviews with CHW
Interviews with beneficiary family
Home visit observations

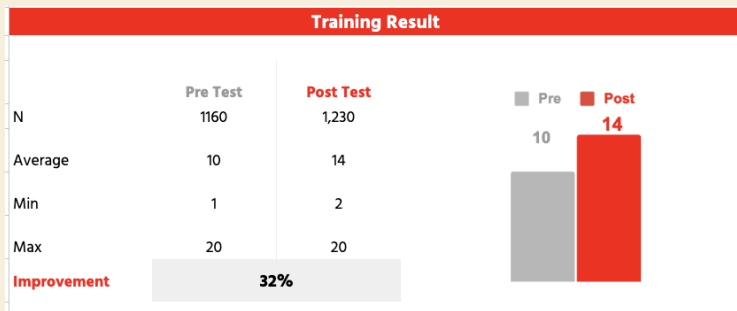
Best practices under the ICCM are highly context-specific. Trust is central to success, but the “pathways of trust” vary across districts—system-based in some, personal or pragmatic in others—so there is no single approach to building it. This means relational dynamics, rather than information transfer alone, determine effectiveness, and what works in one place may not work the same way elsewhere.

That said, the on-the-job training and sharing seen in Kupang show how scalability can work in practice. By creating space for CHWs to experiment, share, and refine context-specific methods, this approach enables the transfer of relevant tips and tricks within districts. FPCs also incorporate relevant myths at each location in the training materials. Scaling, therefore, is less about exporting fixed practices and more about strengthening adaptive learning systems that equip CHWs to build trust in ways that fit their local context.

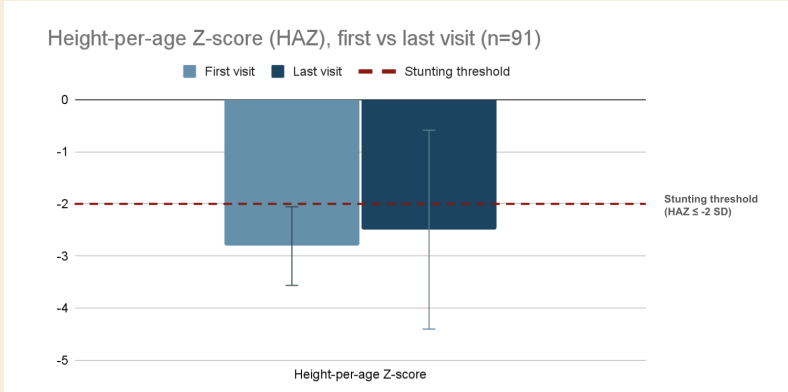
How do stakeholders (FPCs, CHWs, families, Puskesmas staff) build relationships with each other?

Interviews with CHW
Interviews with beneficiary family

Stakeholders build relationships through persistent, ongoing contact and mutual support, with CHWs frequently offering advice informally and drawing on existing community ties.

	Interviews with FPCs Home visit observations	Collaboration across roles is key, with CHWs, Puskesmas staff, village heads, and FPCS coordinating to solve problems and support each other logistically and professionally. In particular, FPCs position themselves as partners of CHWs and help CHWs work on the issues they find in the field. FPCs encourage CHWs in their work and affirm CHWs' capabilities to beneficiaries. Trust and communication are actively nurtured, as CHWs adjust their language for clarity, accompany mothers to health services, and foster approachability by being consistently available.																		
How do CHWs gain skills and readiness to conduct home visits?	Interviews with CHW Interviews with FPCs ³¹	CHWs build readiness through a mix of formal training and on-the-job support, including education from the 1000 Days Fund, health workers, and other institutions. Tools like smart posters help CHWs structure visits and build confidence, especially when discussing sensitive topics. Family approval and peer mentorship, particularly from more experienced CHWs, further enable consistent and prepared delivery of home visits. FPCs also support CHWs' training by: • Developing <i>lembar bali</i> (cheat sheets) to help CHWs during home visits • Ensuring that training meets CHWs' needs by being interactive, incorporating roleplay, and involving all CHWs																		
What proportion of CHWs successfully complete training?	Data collected by TDF during training phase	More CHWs took the post-test (n=1,230) than pre-test (n=1,160), suggesting that completion rates are reasonable. Post-test scores were 32% higher on average than pre-test scores.  <table border="1"> <thead> <tr> <th></th> <th>Pre Test</th> <th>Post Test</th> </tr> </thead> <tbody> <tr> <td>N</td> <td>1160</td> <td>1,230</td> </tr> <tr> <td>Average</td> <td>10</td> <td>14</td> </tr> <tr> <td>Min</td> <td>1</td> <td>2</td> </tr> <tr> <td>Max</td> <td>20</td> <td>20</td> </tr> <tr> <td>Improvement</td> <td colspan="2">32%</td> </tr> </tbody> </table>		Pre Test	Post Test	N	1160	1,230	Average	10	14	Min	1	2	Max	20	20	Improvement	32%	
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³¹ Conducted and analysed by TDF

How do changes in CHWs' knowledge scores change pre- and post- training?	Data collected by TDF during home visits (ICCM form)	CHWs' knowledge scores improved by approximately 32% across districts, as measured by TDF's pre- and post-test scores.
How do the trends of HAZ & WAZ (for babies) and MUAC (for pregnant mothers) change over the course of interventions?	Data collected by TDF during home visits (ICCM form)	HAZ and WAZ scores improve by 2-4% overall. 

Appendix B: Summary of Findings by IPE Domain

5.1. Fidelity – Was the ICCM implemented as intended?

The ICCM home visits programme was broadly implemented as intended, although adherence to best practices varied.

The training improved stunting knowledge for a good proportion of CHWs across all five districts (>70% of CHWs attended the training), and the ICCM protocol appears to be generally followed during home visits. Nonetheless, adherence to best practices is variable across districts, suggesting that some behaviours (e.g., iron-folic acid supplementation, breastfeeding) are easier to encourage than others (e.g., immunisation, protein consumption in some districts).

A key insight for future expansion is the distinction between context-specific practices and universally applicable principles. Many methods used by CHWs and FPCs are highly tailored to local conditions and may not be directly transferable to other areas.

However, the core principles that drove success are highly scalable. These include:

1. Tailoring advice to the unique needs and circumstances of each family
2. Incorporating local myths and beliefs into CHW training
3. Encouraging continuous learning from other CHWs and FPCs beyond the initial training

5.2. Acceptability – How do implementers and families experience ICCM?

The programme is generally well received by both CHWs and families, though the reasons for its success vary by region.

Overall, CHWs describe feeling valued and motivated by their role, gaining intrinsic satisfaction and observing behaviour change during visits. Families echo this positive view, noting that CHWs are supportive and respectful, particularly on issues of nutrition, maternal health, and childcare. They valued educational tools, in-home monitoring, and referrals.

At the same time, qualitative data reveal that the drivers of acceptance vary across districts. In Rote and TTS, CHWs report an unambiguously positive reception, describing families as consistently open and appreciative. Families there emphasise the clarity and practicality of the advice, often noting how straightforward guidance around immunisation or care-seeking felt easy to follow. In Manggarai Barat, by contrast, trust developed more slowly: local partners noted it often took three visits before families opened up. Here, acceptability was rooted in personal bonds, with families describing CHWs as “like their own parents.” This relational model deepened trust but demanded sustained engagement.

Other districts highlight different dynamics. In Lombok Utara, acceptability appeared more procedural and conditional on professionalism: families with higher education levels were more receptive, and CHWs found the training steps adequate for their practice. Families valued the simple fact of being visited at all, describing surprise and gratitude that a CHW came to their home. In Kupang, however, social hierarchies complicated reception. While some families were welcoming, CHWs recounted instances of resistance among higher-status or better-educated households. Feelings of shame about stunting, or pride that discouraged accepting support, sometimes led families to withhold information or reject advice.

Taken together, acceptability is high and driven by trusting relationships across all districts; it is how trust is formed that differs from district to district.

5.3. Feasibility – Can the model be implemented at scale?

The model's potential for scalability is strong, but its feasibility is shaped by context-specific barriers. In better-resourced districts, these challenges are often social, while in lower-resource areas, they are primarily logistical, with other regions facing a mix of both. This variation means that specific operational practices cannot be copied wholesale across regions. However, the program's underlying principles, particularly the importance of building trust not just with mothers but with their entire

family and village ecosystem, are universally applicable. The paragraphs below describe key enablers and barriers to implementation using the COM-B framework.

Capability

Families sometimes lacked the knowledge or confidence to implement advice, while CHWs faced memory gaps and inconsistent tool access. Training and refresher sessions strengthened skills, but further reinforcement is needed. For example, families in Rote and Manggarai Barat reported struggling to introduce new foods when children resisted, highlighting the need for behavioural strategies alongside knowledge of best practices.

Opportunity

Constraints in opportunity cut across both physical and social environments. In Rote and Lombok Utara, the most pressing barrier was logistical: difficult terrain, long distances, and inadequate fuel stipends made visits costly and time-intensive. A CHW in Lombok described climbing treacherous paths during the rainy season, while another in Rote noted that families lived over 2.5 km away on damaged roads. In Kupang, by contrast, the barriers were primarily social. CHWs encountered stigma when engaging unmarried pregnant women and resistance among higher-income families ashamed of stunting or unwilling to accept help. Families themselves highlighted material constraints: in Kupang and TTS, limited household income meant eggs or other nutritious foods could only be bought “if there was money,” while in Rote and Manggarai Barat availability was a bigger issue—fish or fruit were often difficult to obtain.

Motivation

CHWs were highly motivated by their role, but stigma and lack of recognition were described as emotionally draining. In Kupang, for instance, defensiveness and social hierarchies made engagement particularly taxing. Families were often motivated by strong social networks and visible improvements in child health, but resistance to specific practices, such as giving fish or supplements, persisted. Motivation was also shaped by family dynamics: mothers emphasised that behaviour change was only sustainable when husbands or in-laws were supportive.

Enablers and overall picture

Enablers included supportive family networks, proximity to health services, smart posters and other tools that legitimised CHW advice, and ongoing supervision. While low incentives were not directly linked to visit quality, cumulative pressures from terrain, stigma, and resource shortages risk undermining motivation over time. District-level contrasts underline that feasibility is not uniform: in some areas scaling requires solving basic logistical and digital infrastructure gaps, while in others it hinges on reframing sensitive health issues and equipping CHWs to navigate complex social

hierarchies. Overall, scaling is feasible but depends on adequate adaptation to local contexts.

5.4. Process – What mechanisms drive (or block) outcomes?

Programme outcomes are shaped less by information transfer than by relational and contextual mechanisms.

The architecture of trust

The foundation of the ICCM programme's success is trust, but the way trust is built varies significantly across districts. For instance, in Kupang, strong formalised collaboration appears to underpin effectiveness. CHWs described being part of teams with doctors, midwives, and village heads who responded quickly to issues and shared responsibility. This integration into a broader health ecosystem lent CHWs credibility and reinforced their authority in the eyes of families. In Manggarai Barat, trust was instead rested on cultivating deep personal bonds over time, with CHWs often described as “like a parent.” While powerful, this slower relational model helps explain why higher visit counts did not translate into stronger adherence: change depended on bonds that could not be rushed. In Lombok Utara, trust tended to form through a more pragmatic dynamic, built through problem-solving and mobilising networks—from midwives to village government—to overcome family resistance.

Negotiating credibility and authority

CHWs' impact depended not only on persistence but also on how families perceived their legitimacy. In some areas, families questioned their authority due to their limited formal education, or stigma around stunting and unmarried pregnancy meant advice could be seen as intrusive or judgmental. In these cases, effectiveness hinged less on technical accuracy and more on the CHWs' ability to navigate social hierarchies and sensitive conversations.

Pathways to readiness

CHWs built readiness through both formal training and continuous, on-the-job learning. Initial training from the 1000 Days Fund was consistently valued for building knowledge and confidence, reinforced by tools like smart posters. Post-training support, on the other hand, varied by district. Kupang showed strong peer mentorship and proactive learning, while in TTS CHWs benefited from refresher courses not only from TDF but also Puskesmas and the national family planning board, broadening their expertise. These variations suggest that readiness is not static but shaped by the density of local support and training opportunities.

Collaboration across actors

Multi-stakeholder collaboration was a recurring mechanism across districts. CHWs, Puskesmas staff, village government, and FPCs often solved problems collectively, offering logistical and moral support. When the collaboration was effective, CHWs and FPCs reported greater credibility and responsiveness.

Taken together, the relational dimension emerges not just as an enabler but as the central mechanism of the programme. Relationships take longer to build in some districts than others, but they ultimately determine whether advice is trusted, whether practices are adopted, and whether the programme achieves lasting behaviour change.

Executive Summary

The following report explores and explains in detail how frontline community health workers trained under the 1000 Days Fund engage and empower mothers to exclusively breastfeed children for the first 6 months of life.

Based on 117 AI-led interviews with CHWs across multiple districts, the study finds that CHWs play a pivotal role in promoting maternal and child health by providing home-based counseling, fostering trust, and combating misinformation. However, persistent barriers—like cultural myths, limited refresher trainings, inconsistent tool access, and economic pressures—undermine breastfeeding success. The findings emphasize the need for continuous training, stronger community engagement, better material support, and recognition systems to sustain motivation and improve outcomes.

Key Takeaways

- **Trusted local connectors:** CHWs serve as the front line of maternal health, delivering integrated home visits and counseling that combine health monitoring, nutrition guidance, and emotional support for postpartum mothers.
- **Cultural and structural barriers persist:** Traditional beliefs, family pressure, formula marketing, and postpartum stress continue to erode exclusive breastfeeding practices despite awareness gains.
- **Investment in training and recognition matters:** Consistent mentorship, refresher workshops, digital tools, and formal recognition can sustain CHWs' confidence and retention—improving breastfeeding rates and maternal wellbeing.

Drivers of CHW Participation & Engagement

Participants were motivated by broader social connections, modest allowances, skill development and personal commitment to maternal and child health advocacy.

"keinginan untuk berkontribusi pada masyarakat atau organisasi dan menambah wawasan serta jaringan pertemanan (the desire to contribute to society or an organization and expand my knowledge and network of friends.)"

Community gatherings were described as uplifting and supportive environments that enhanced participants' sense of belonging and confidence. They indicated that broader social networks fostered deeper engagement and strengthened communal bonds.

"Yang pertama ramai bisa berkumpul dengan teman-teman ibu-ibu yang datang. (First, it's lively, being able to gather with the other mothers who come.)"

Modest financial allowances were reported to supplement incomes and elevate social standing. Several individuals mentioned these incentives motivated continued

involvement. Selection through local appointment was described as a practical measure to maintain outreach continuity and secure employment.

"Menjadi CHW juga bisa mendapatkan penghasilan atau bisa akan ada insentif yang diberikan dari desa juga bisa menjadi penambah penghasilan keluarga kita (Being a CHW can also provide income or incentives from the village, which can supplement our family income.)"

"dijadikan rel atas permintaan kepala desa dan dinilai mampu. (I was appointed at the request of the village head and deemed capable.)"

Serving as CHWs was indicated to foster practical healthcare experience and expand health knowledge. Participants described strengthening leadership, communication and organisational skills through peer exchanges. Motivation arose from productive use of spare time and growing supportive networks.

"banyak teman juga kita dapatkan dari pekerjaan yang kita laksanakan (We gain a lot of knowledge and make many friends through the work we do.)"

Volunteering was described as deeply fulfilling and often grounded in personal or spiritual motivations. Cadres reported pride in promoting maternal and child health. Disseminating health information and witnessing improvements in child growth were mentioned as rewarding aspects that strengthened trust.

"walaupun insentifnya enggak seberapa, tapi saya bangga dengan pekerjaan saya sebagai CHW (even though the incentives aren't much, but I am proud of my work as a community health worker)"

"Membantu masyarakat mendapatkan pelayanan kesehatan dasar dengan berperan sebagai garda terdepan dalam edukasi, pemantauan kesehatan ibu dan anak serta ibu hamil. (Helping the community access basic health services by acting as the frontline in education, monitoring maternal and child health, and supporting pregnant women.)"

Postpartum Home Visits & Maternal Support Services

Mothers received integrated home-based visits combining health monitoring, breastfeeding assistance, nutritional guidance, hygiene training and family planning discussions to address postpartum needs.

"Kami melakukan kunjungan rumah, memberikan KIE, menjelaskan tentang KB yg mau di gunakan pascasalin.. (We conduct home visits, provide information, explain about postpartum contraception, personal hygiene, baby hygiene, danger signs for postpartum mothers, danger signs for newborns, nutritious food for postpartum mothers.)"

Home visits were reported to include health monitoring for mothers and infants, covering vital signs, breastfeeding support and infection vigilance. Teams described

integrating village health post sessions and SAJI counselling to deliver education, emotional support and follow-up scheduling.

"kita bisa sedikit membantu dengan mengecek suhu tubuh atau tekanan darah dan menyarankan sasaran untuk melakukan pemeriksaan ke tenaga kesehatan terdekat (we can help a bit by checking body temperature or blood pressure and advising them to seek medical attention nearby.)"

Exclusive breastfeeding for six months was described as vital for infant immunity. Participants reported that dietary advice, medication guidance and family involvement supported maternal nutrition, milk production and safe formula use.

"Untuk ibu pasca melahirkan, kami menganjurkan untuk tetap makan makanan yang gizinya seimbang agar air susunya tetap banyak. (For postpartum mothers, we recommend eating a balanced diet to ensure their milk supply remains abundant.)"

"saya juga memberi semangat serta mengingatkan keluarga agar ikut mendukung ibu dalam menyusui (I also encourage and remind the family to support the mother in breastfeeding and maintaining her health.)"

Participants expressed that language-specific counselling, family inclusion and motivational check-ins helped address emotional and practical postpartum needs. Structured education using illustrated materials was described to reinforce newborn care, complementary feeding and stunting prevention.

"Pertama-tama saya menanyakan kabar balita terus memberikan edukasi yang ada di poster pintar (First, I ask about the toddler's condition, then provide education from smart posters and always give three key messages to prevent stunting, then educate mothers with toddlers to prevent stunting so that children become healthier.)"

Challenges & Misconceptions Surrounding Exclusive Breastfeeding

Mothers report a combination of deeply held beliefs, physical discomfort, practical constraints and confidence gaps undermining their ability to maintain exclusive breastfeeding.

"stres, kelelahan, depresi pasca bersalin, dan keyakinan diri yang rendah (stress, fatigue, postpartum depression, and low self-confidence)"

Traditional beliefs passed down by older relatives were reported to foster doubts about exclusive breastfeeding. Participants indicated that fears of contaminated milk, fluctuating quality from diet or environment and harmful colostrum led to early supplementation and apprehension about breast shape changes.

"kolostrum itu merupakan susu kotor. (colostrum is dirty milk.)"

Perceived low milk supply frequently prompted early introduction of formula or honey and generated postnatal anxiety, participants reported. Community ideas linking small breast size to insufficient flow were described as further undermining mothers' confidence.

"Ya kadang-kadang mereka bilang ASI saya kurang mencukupi (Sometimes they say their breast milk is insufficient)"

"Ukuran payudara kecil sehingga menghasilkan sedikit ASI. (Small breast size means producing less milk.)"

Physical discomfort from engorgement, cracked nipples and poor latch technique was reported to hinder milk production and sustainment of exclusive feeding. Emotional factors such as postpartum depression, fatigue and early postpartum illnesses were described as compounding these challenges.

"Ada beragam masalah yang sering dialami oleh ibu menyusui, seperti puting luka dan lecet, ASI seret, serta payudara bengkak (There are various issues often experienced by breastfeeding mothers, such as sore and cracked nipples, low milk supply, and engorged breasts.)"

"jadi takutnya kecapekan, kurang tidur, jadi stres. (fearing exhaustion, lack of sleep, leading to stress.)"

Time pressures and limited support networks were indicated as logistical obstacles for mothers returning to work. Reports indicated public discomfort, lack of technical guidance, and economic pressures as additional barriers to exclusive breastfeeding.

"Keterbatasan waktu karena pekerjaan atau kegiatan lain yang membuat ibu sulit menyusui secara eksklusif (Time constraints due to work or other activities that make it difficult for mothers to exclusively breastfeed.)"

Family & Community Influences on Breastfeeding Practices

Mothers' early feeding choices reflect the influence of cultural beliefs and family and partner pressures, amid inconsistent community support and barriers.

"Kurangnya pendukung lingkungan kerja atau mitos serta informasi yang salah tentang ASI, tekanan sosial dan keluarga, kondisi fisik ibu dan bayi, serta promosi susu formula yang agresif. (Lack of workplace support or myths and misinformation about breastfeeding, social and family pressure, physical conditions of the mother and baby, and aggressive formula milk promotion.)"

Cultural rituals and customary dietary restrictions were described as shaping early feeding choices. Community members reported beliefs that colostrum is harmful and mentioned myths about milk quality, which undermined exclusive breastfeeding despite advice.

"Itu mereka memberi atau mempunyai anggapan bahwa kolostrum itu merupakan susu kotor. (They have the belief that colostrum is dirty milk.)"

Family pressures to introduce water, honey or formula before six months were expressed by participants, with mothers-in-law and older relatives emphasising these practices. Aggressive formula marketing was reported alongside concerns about insufficient milk, leading to expressed breastmilk use.

"ada orang tua, bahkan mertua, yang masih percaya bahwa bayi perlu diberi madu, air putih, atau susu formula sejak dini (Sometimes parents or in-laws still believe that babies need to be given honey, water, or formula milk early on.)"

Partners and extended kin were indicated to provide emotional reassurance and practical help, sharing household tasks and infant care. Respondents described this support as essential in bolstering confidence and reducing stress, enabling continued breastfeeding under pressure.

"Dukungan dari suami dan keluarga dekat, seperti memberikan semangat, membantu pekerjaan rumah tangga, dan menyiapkan makanan bergizi, membuat ibu merasa lebih nyaman, termotivasi, dan terhindar dari stres serta baby blues (Support from the husband and close family, such as providing encouragement, helping with household chores, and preparing nutritious meals, makes the mother feel more comfortable, motivated, and avoids stress and baby blues.)"

Health actors, including midwives and village chiefs, engaged mothers through education and monitoring, reported participants. Work commitments and limited paternal involvement were mentioned as barriers, while neighbours' discouragement and social stigma created additional challenges.

"Selama yg sha kunjung selalu donk dengar apa yg sha sarankan apa lagi selalu ada ibu bidan yg dampingi bu (During my visits, they always listen to what I suggest, especially since there is always a midwife accompanying me.)"

"Ya suami itu kan kalau di kampung makan suaminya pada malu teh ya kalau untuk dukungan istrinya untuk menyusui anaknya. (Yes, husbands in the village are usually shy about supporting their wives in breastfeeding their children.)"

Current Training, Tool Access & CHW Confidence

CHWs report that initial training and collaboration improve knowledge and confidence, but inconsistent tool access and utilisation and lack of refresher sessions hinder skill retention.

"Kami di sini kayaknya pelatihannya sekali setahun, nggak ada pernah sekali kita diadakan latihan. (Training is very important. Here, it seems like training is only held once a year, we never have regular training.)"

Various training sources were reported to boost confidence though gaps in refreshers and specialised tools were noted. Cadres described initial instruction as primary yet raised concerns about skill retention without follow-up sessions. Collaboration with health centre teams and community leaders was indicated to support ongoing learning.

"Alhamdulillah sejak ada seribu hari lebih percaya diri ngomong di depan banyak orang. (Alhamdulillah, since the 1000 Days Fund, I'm more confident speaking in front of many people.)"

"Kami bersinergi dengan bidan desa, dengan tokoh masyarakat sekitar, tokoh pejabat desa, lalu dengan CHW-CHW PKK, dan juga paguyuban perumahan. (We synergize with village midwives, local community leaders, village officials, PKK cadres, and the housing association.)"

Official teaching modules and aids were described as irregularly distributed. Participants reported reliance on WhatsApp, vehicles and improvised visuals during home visits. Despite limited access to Smart Charts and other digital tools, cadres mentioned use of instructional blankets, the Buku KIA manual and digital videos to reinforce exclusive breastfeeding messages.

"Kami belum mendapatkan Smart Charts secara ril (We haven't received Smart Charts in reality.)"

"Itu kami berkunjung ke rumah ibu yang setelah melahirkan dan kami juga memantau lewat WA ya (We visit the homes of mothers after childbirth and also monitor via WhatsApp, asking about their condition.)"

"alat bantu sederhana seperti leaflet atau buku KIA, buku kesehatan ibu dan anak juga sangat bermanfaat (Additionally, simple tools like leaflets or the KIA book, the maternal and child health book, are very useful because they help me show pictures and explanations that mothers and families can understand.)"

Training by the 1000 Days Fund was reported to enhance knowledge, practical skills and productivity. Use of job aids, mobile reports and demonstration modules was described as improving breastfeeding counselling and growth monitoring. Confidence with certain tools varied and cadres expressed ongoing stress related to trust-building and formula concerns.

"Pelatihan dari seribu hari dan alat materi yang diberikan kepada saya sangat membantu saya. (The training from the 1000 Days Fund and the materials provided to me have been very helpful.)"

Recommendations for Future Enhancements to Maternal & Child Health Services

Participants reported that integrated training, resource provision, financial support and community engagement would strengthen counselling, breastfeeding and maternal health services.

"Paling penting untuk meningkatkan dukungan kepada para CHW seperti saya ini yaitu kolaborasi dengan teman sejawat serta dukungan dari tim kesehatan. (The most important thing to increase support for health workers like me is collaboration with colleagues and support from the health team.)"

Participants reported that collaborative training with clear objectives, mentorship and interactive materials was essential for improving counselling and reporting skills. They indicated that modules on child health, nutrition, immunisation and motivational techniques alongside accessible visual and print resources would deepen technical understanding. Portable monitoring devices and digital tools were described as useful for home consultations.

"Pelatihan berkelanjutan untuk meningkatkan keterampilan dan pengetahuan CHW. (Continuous training to enhance the skills and knowledge of cadres.)"

"supaya juga kami tahu kira-kira pakai aplikasi apa untuk mengetahui status gisi anak-anak. (We hope to learn about these applications to improve our work.)"

Participants described multi-channel breastfeeding education programmes combining practical demonstrations, coaching and specialised tools as key to reinforcing exclusive breastfeeding. Regular home visits with consistent scheduling were mentioned to ensure ongoing guidance, while maternal support packages addressing nutrition, transport, stress management and parenting skills were reported to strengthen wellbeing and breastfeeding outcomes.

"menurut saya perlu diadakan kelas menyusui. Jadi sang ibu belajar langsung bagaimana pelekatan yang benar. (So I think a breastfeeding class is needed. So the mother learns directly how to attach properly.)"

"pemerintah itu harus lebih peduli sama masyarakat-masyarakat kecil, masyarakat-masyarakat yang menengah (The government should pay more attention to lower and middle-class communities that need special attention.)"

Respondents mentioned that increased allowances and welfare support were vital to bolster motivation and commitment among volunteer workers. Structured

recognition through formal awards and public acknowledgement was reported to enhance legitimacy and community standing. They indicated that stronger communication channels and formal government endorsement would raise awareness of services.

"ada dukungan insentif atau pendanaan bagi CHW agar kami semakin termotivasi. (I also hope for incentives or funding support for cadres to keep us motivated.)"

"kalau boleh CHW juga diberikan semacam bukan satu penghargaan tapi satu contohnya seperti pin atau adikart begitu supaya merasa lebih berwibawa (Also, giving cadres recognition, like a pin or badge, would motivate us further, showing that our work is valued.)"