



An Anganwadi worker distributes Take Home Ration to a woman in Rajasthan.

Improving the Implementation of the Take Home Ration Programme Under ICDS

Findings from Rajasthan and Jharkhand

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CONTENTS

Acronyms	04
Executive Summary	05
Background	08
Study Objectives	10
Methods	11
Sampling Strategy and Sample	11
Interview Tool and Approach	12
Data Collection Protocols	12
Analysis and Interpretation	13
Key Findings: Jharkhand	14
Jharkhand's New THR Production Model	14
Supply-Side Challenges in Jharkhand	15
Demand-Side Findings in Jharkhand	16
Suggested Action in Jharkhand	17
Key Findings: Rajasthan	18
Rajasthan's New THR Production Model	18
Supply-Side Challenges in Rajasthan	18
Demand-Side Findings in Rajasthan	20
Suggested Action in Rajasthan	20
Discussion & Conclusion	22
Appendix	24
Additional Data Collection Protocols	24
Analysis of Qualitative Data	24
Additional Details on our Earlier Quantitative Surveys	25
Supplementary Data	25

ACRONYMS

AWC	Anganwadi Center
AWW	Anganwadi Worker
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activity
CDPO	Child Development Protection Officer
CIFF	Children's Investment Fund Foundation
FCI	Food Corporation of India
ICDS	Integrated Child Development Scheme
IFPRI	International Food Policy Research Institute
MDM	Mid-day Meal Scheme
NAFED	National Agricultural Cooperative Marketing Federation of India
NFHS	National Family Health Survey
NNM	National Nutrition Mission
PDS	Public Distribution System
SHG	Self-help group
SNP	Supplementary Nutrition Program
THR	Take Home Ration
VHSND	Village Health, Sanitation & Nutrition Day
WCD	Ministry of Women and Child Development
WFP	World Food Programme

EXECUTIVE SUMMARY

Adequate nutrition during early life stages is a critical input for lifelong health outcomes, physical growth, cognitive development, and even earning potential. Despite India's substantial progress in the last two decades, 40.6 million children remain stunted – accounting for one-third of the global burden of stunting.¹ Preliminary results from the fifth National Family Health Survey (NFHS-5) indicate that some dimensions of nutrition have worsened recently: 13 of 22 states report an increase in childhood stunting in the last five years. Under India's National Nutrition Mission (NNM), also called POSHAN Abhiyaan, the country has set targets to reduce stunting, undernutrition, anaemia, and low birth weight in children by 2022.

An intervention critical to achieving those goals is the Supplementary Nutrition Program (SNP), under the Integrated Child Development Services (ICDS) scheme. This program is one of the oldest and largest nutrition-focused interventions in India. Under SNP, all pregnant and lactating women, as well as children aged six months to 3 years, are entitled to receive Take Home Ration (THR) from their local Anganwadi Centers, while children aged 3 to 6 years old are eligible to receive Hot Cooked Meals.

Evidence continues to support the use of supplementary food to improve child growth outcomes in food-insecure settings,² but effective program implementation is critical; supplementary foods must first reach and be eaten by intended beneficiaries to have their intended effect. The THR program is implemented at the state-level, with states determining the composition of foods, the sourcing and supply chain, and the production and distribution model based on local availability, diet norms, and feasibility. Both Rajasthan and Jharkhand recently altered their THR production and distribution models. Rajasthan moved towards a more centralized model in March 2020, and Jharkhand towards a more decentralized approach in November 2019.

Rates of access to and use of THR by women and children vary between states as well. In two previous state- and district-representative quantitative surveys that IDinsight conducted in 12 districts across Rajasthan and Jharkhand, we found that access to Take Home Ration was much lower in Rajasthan than in Jharkhand. In Rajasthan, only about one-third of eligible beneficiaries reported receiving THR in the month of January 2020, compared to about two-thirds of eligible beneficiaries in Jharkhand for the same period.³ We also found that access to THR decreased in both states between January and May 2020, as the COVID-19 pandemic disrupted food supply chains and freedom of movement.⁴

Given the lack of existing evidence on the functioning of the newly introduced THR production models in each state, as well as the trend of reduced THR access identified in our previous quantitative surveys and concerns that THR programming may have experienced further challenges during the COVID-19 pandemic, we conducted a qualitative study to map the processes behind the newly introduced production models, uncover and diagnose challenges in implementation and to identify opportunities for improvement. Our study's concurrence with the COVID-19 pandemic allowed us to provide Indian government officials with rapid reporting and insights on the functionality of these systems and the experiences of women and children in the first few months of the COVID-19 pandemic.

We conducted a total of 114 semi-structured qualitative interviews (54 in Rajasthan and 60 in Jharkhand) with supply and demand-side actors in August 2020. On the demand side, we spoke with pregnant women, lactating mothers, and mothers of children aged 6 to 36 months old – women eligible to receive THR either for themselves or their child. On the supply-side, we spoke with Anganwadi workers (AWWs), and in Jharkhand, we also spoke with self-help group (SHG) members. Due to safety and security concerns related to the

1 Beesabathuni, K., Kumari, P., Bajoria, M., eds. (2020). Take Home Rations: A Compendium. https://www.wcdsbp.org/publications/THR-Compendium_220720.pdf

2 Keats, E.C., Das, J.K., Salam, R.A., Lassi, Z.S., Imdad, A., Black, R.E., & Bhutta, Z.A. (2021). Effective interventions to address maternal and child malnutrition: an update of the evidence. *Lancet Child Adolescent Health*. [https://doi.org/10.1016/S2352-4642\(20\)30274-1](https://doi.org/10.1016/S2352-4642(20)30274-1)

3 In January 2020, IDinsight conducted an in-person quantitative survey across 12 districts in Rajasthan and Jharkhand on a variety of health and nutrition topics. All women interviewed were either currently pregnant or had a child under 36 months old. For this indicator, the sample size in Rajasthan was 893 women, with a 90% confidence interval of 23 to 30 percent. In Jharkhand, the sample size for this indicator was 696 women, with a 90% confidence interval of 62 to 69 percent. For more details, refer to the Table 4 in the Appendix.

4 In May 2020, IDinsight conducted a remote quantitative survey with the same panel of respondents in both Rajasthan and Jharkhand on a variety of health and nutrition topics. In this round, only 26 percent of respondents in Rajasthan reported receiving THR in the last 30 days (N=647, 90% CI interval = 23% to 30%). In Jharkhand, 55% of respondents reported receiving THR in the last 30 days (N=423, 90% CI interval = 50 % to 60%). For more information on the second round of this survey, refer to Table 4 in the Appendix.

pandemic, all interviews were conducted remotely via phone call. Interviews were recorded with participants' consent, transcribed into Hindi and English, and analyzed via theme-coding to uncover emerging patterns. Our work was funded by the Children's Investment Fund Foundation (CIFF) and supported by input from NITI Aayog. IDinsight's internal research ethics committee approved our methodology and consent procedures, and NITI Aayog provided a letter of support to authorize our data collection in specified districts of Rajasthan and Jharkhand.

Below is a brief summary of our findings, diagnosis of observed challenges, and recommended solutions.

- Jharkhand introduced a decentralized model of THR distribution in November 2019. Under this model, self-help group members locally procure a selection of items to distribute as THR: this includes lentils, rice, jaggery, peanuts, and potatoes. The self-help groups purchase, package, and deliver the THR to Anganwadi centres, where the Anganwadi workers then distribute THR to local women once a month. Self-help group members reported various challenges with the new model: delays in reimbursements to self-help groups often result in delays of rations reaching beneficiaries. Market prices exceeded reimbursement rates, reducing the amount of ration that self-help groups could afford to buy. We found that these and other issues contributed to reduced access to THR by beneficiaries.
- Rajasthan introduced a centralized model of production and distribution in March 2020. In this model, wheat and lentils are distributed to Fair Price Shops through the Public Distribution System (PDS). Anganwadi workers then collect wheat and lentils from local Fair Price Shops and distribute the food grains to beneficiaries at the Anganwadi Center. Anganwadi workers reported logistical challenges in transporting the grain back from Fair Price Shops. They also noted that wheat and lentils were not consistently available at the Fair Price Shops, leaving Anganwadi workers to procure the food items elsewhere. In some cases, Anganwadi workers were not reimbursed for materials they purchased locally. In other cases, the quantity of ration available at Fair Price Shops was insufficient to provide all women with their full entitled amount.
- On the consumer side, women corroborated reports of gap months in delivery, insufficient quantities,

and missing items in the THR that they received. Once THR reaches recipients, women in both states reported that their families often share the THR rather than having the only intended beneficiary consume it. Although intra-household sharing may increase the food intake of more family members, it dilutes the nutritional benefit of THR for the intended woman or child.⁵ Food stress related to the COVID-19 lockdowns in the early pandemic and the greater "shareability" of raw food grains have likely exacerbated this sharing problem. In some cases, this food stress and the scarcity of rations available for distribution created tension between Anganwadi workers and local women.

To respond to the challenges that we observed, we suggest that state governments address three key areas:

1. **Resolve funding delays for the Anganwadi workers and self-help groups.** Many challenges reported by supply-side respondents are related to delayed, missing, or insufficient reimbursement rates for food items or associated costs, like packaging or transportation. Resolving these issues is essential for the THR program to function smoothly under pandemic or normal conditions.
2. **Develop proactive contingency plans for changes in price or availability of certain foods.** The COVID-19 pandemic jolted local and national food supply chains in India, and other disruptions could also affect the price and availability of prescribed foods in the future. Each state could have a clear plan or approach, e.g., standardizing a menu of alternatives or providing guidance to Anganwadi workers on reimbursements to prepare for future disruptions.
3. **Improve communication on intra-household sharing.** This behaviour is widely noted across literature on THR and within our study. We suggest introducing nudges through THR packaging and formulation and improved counselling from Anganwadi workers to emphasize the importance of THR being eaten by the intended woman or child.

Additional information on our observations and suggested solutions are included in *Table 1*. We suggest the following actions to address challenges in Take Home Ration service delivery in Rajasthan and Jharkhand. These recommendations are based on qualitative data collection in August 2020, quantitative data collection in January 2020 and May 2020, and literature review.

⁵ Beesabathuni, K., Kumari, P., Bajoria, M., eds. (2020). Take Home Rations: A Compendium. https://www.wcdsbp.org/publications/THR-Compendium_220720.pdf

Table 1. Suggestions on addressing issues with Take Home Ration



Challenge: Anganwadi workers in Rajasthan report difficulty in collecting and transporting large sacks of grain from Fair Price Shops.

Cause: In Rajasthan, Anganwadi workers were responsible for collecting and transporting large sacks of grain from Fair Price Shops to their local Anganwadi Center.

Suggestion: Provide procurement support. Perhaps, integrate with PDS supply chain and contracts for local transportation of grain from Fair Price Shops to Anganwadi Centers. Otherwise, establish a clear avenue through which Anganwadi workers can request reimbursements for hiring conveyance vehicles.



Challenge: “Gap months” in which no THR is distributed to any beneficiaries.

Cause: “Gap months” were often due to delays in payments and reimbursements to supply-side actors. When Anganwadi workers or self-help groups did not receive their payments or reimbursements from the previous month’s rations, they were unable to acquire the next month’s ration.

Suggestion: Explore an e-payments system to streamline the flow of funds, or pilot a prepaid system.



Challenge: Insufficient quantities, in which beneficiaries receive less than the quantity they are entitled to (e.g., a woman receives only 1kg pulses when she is eligible for 2kg).

Cause: Insufficient quantities had multiple causes:

- In both states, there were differences in the market price of items and the predetermined reimbursement rate. AWWs and SHGs were unable to procure the full amount of food items required.
- In Jharkhand, SHGs mentioned that AWWs failed to share the list of beneficiaries on time, resulting in SHGs failing to procure THR for newly added beneficiaries.
- In Rajasthan, AWWs reported that Fair Price Shops sometimes did not have enough THR for all beneficiaries, for reasons we could not uncover in the scope of this study.

Suggestion: Update the reimbursement rate quarterly based on market prices.

Ensure SHGs are in communication with AWWs and can request the list directly if there are delays.



Challenge: Missing items, where one type of food item is missing entirely, but others are provided.

Cause: Missing food items occur for a variety of reasons.

In Jharkhand, potatoes and peanuts went bad quickly, and supervisors directed self-help groups to stop distributing them. In Rajasthan, wheat and pulses would sometimes be unavailable from Fair Price Shops for reasons that IDinsight was unable to determine in the scope of this study.

Suggestion: Institutionalize flexibility by providing Anganwadi workers and self-help groups with a menu of alternatives to replace chronically missing items and a clear reimbursement process to cover the cost of doing so.



Challenge: Intra-household allocation (i.e., sharing) of THR amongst family members dilutes the intended nutritional benefit for women and children.

Cause: Lack of knowledge, household food insecurity, and quantity and type of foods received may all contribute to the family’s choice to share the THR amongst themselves, rather than preparing solely for the intended women and children.

Suggestion: Direct resources towards stronger behaviour change communications strategies. For example, ICDS could supply THR packaging that is marked with a label and illustration of the intended recipient. Interpersonal outreach is the most effective behaviour change communication strategy. Strategy, so counselling from AWWs and other health workers to the mother, and where possible, the mother-in-law and husband could help as well.⁶ Other states have seen some success in mitigating sharing by distributing separate THR compositions for women and for children.⁷

⁶ Nair, D., Agarwal, P., Jain, M., Agarwal, N., Huang, C., Pattanayak, A., & Biswal, L. (March 2020). POSHAN Abhiyaan Social and Behaviour Change Communication: What Has Changed in the Last Year (Final Report). <https://www.idinsight.org/projects/generating-evidence-on-social-and-behaviour-change-communication-in-poshan-abhiyaan>

⁷ Kumari, P., Bajoria, M., Beesabathuni, K., Burns, A., Hardin, A., Minnett, D., & Bhandari, N. “A Public-Private Partnership in Gujarat: The Amul Case Study.”. (2020). In Take Home Rations: A Compendium. Eds. Beesabathuni, K., Kumari, P., Bajoria, M. https://www.wcdsb.org/publications/THR-Compendium_220720.pdf

BACKGROUND

Take Home Ration is one of several services offered through India's Integrated Child Development Scheme (ICDS), which aims to establish the foundations of lifelong nutrition through community-based nutrition programming. Across India, more than 2.5 million Anganwadi workers and helpers provide services through ICDS to more than 86 million registered women and children.⁸ More than 2.1 million women and children in Jharkhand and 3.7 million women and children in Rajasthan are registered to receive THR from their Anganwadi Center for use at home.⁹

ICDS and the Supplementary Nutrition Program were launched in 1975, and in 2005, the Supreme Court made supplementary food a universal entitlement. The National Food Security Act of 2013 strengthened universal entitlements by outlining the specific caloric value and protein content that all THR must contain for pregnant & lactating women and for children aged 6 months to 3 years. Both the central governments and state governments contribute funding to the supplementary nutrition program.

The implementation strategy for the Take Home Ration program is set at the state level. States determine (i) the composition of food items and (ii) conceptualize and execute upon the supply chain or production model, generally based on local costs, food availability, and dietary norms. These two areas of variation are important opportunities for innovation and learning between states. The state's production model, or system of sourcing, procuring, processing, packaging, and distributing THR, has important implications for last-mile service delivery, co-benefits for community members, system resilience, and intra-household allocation.¹⁰ The composition of THR also affects consumption or allocation behaviour and the nutritional outcomes of beneficiaries.

THR production models can be categorized into three main types: centralized, decentralized with production units, and decentralized with self-help



groups (see Figure 1).¹¹ Under a centralized model, the THR food items are sourced and produced by the state at one or two production facilities. Under a decentralized model with self-help groups, THR food items are sourced or produced by SHGs at the village-level, or by one SHG for several villages, usually without any specialized machinery. Under the decentralized model with production facilities, THR is produced in factories or facilities run by SHGs at the block-level or district-level and then distributed to local Anganwadi Centers.¹² This is the least common production model and combines automation with relatively more local procurement. In all three models, THR is distributed to Anganwadi workers, and Anganwadi workers distribute the THR to beneficiaries.

⁸ Ministry of Women and Child Development, Government of India. Dashboard updated 13 Nov 2020. <https://wcd.dashboard.nic.in>

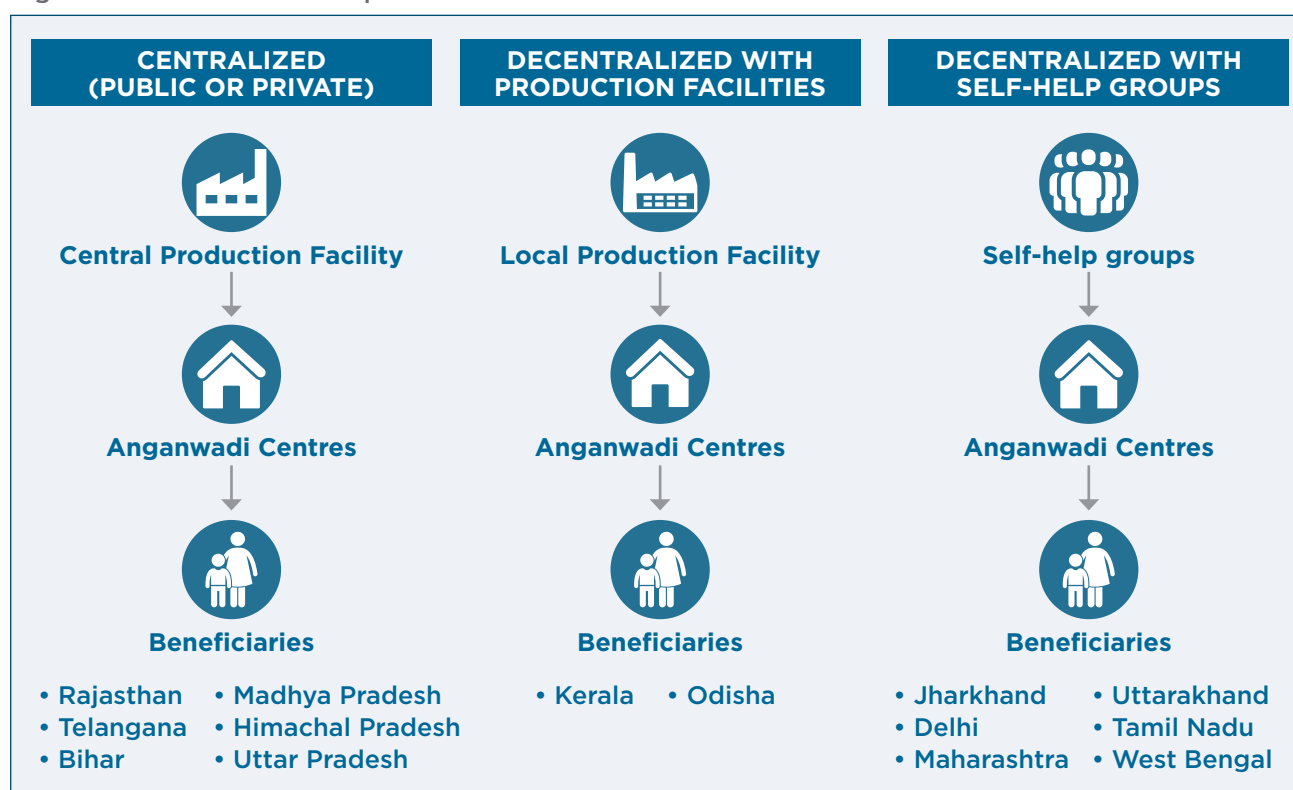
⁹ Ministry of Women and Child Development, Government of India. Dashboard updated 13 Nov 2020. <https://wcd.dashboard.nic.in>

¹⁰ Fraker, A., Shah, N.B., & Abraham, R. (January 2013). Quantitative Assessment: Beneficiary Nutritional Status and Performance of ICDS Supplementary Nutrition Programme in Bihar (Working Paper, S-34114-INB-1). IDinsight. The International Growth Center. <https://www.theigc.org/wp-content/uploads/2013/01/Fraker-Et-Al-2013-Working-Paper1.pdf>

¹¹ Beesabathuni, K., Kumari, P., Bajoria, M., eds. (2020). Take Home Rations: A Compendium. https://www.wcdsbp.org/publications/THR-Compendium_220720.pdf

¹² Flanagan, K. F., Soe-Lin, S., Hecht, R. M., & Schwarz, R.K. (2018). THR Production and Distribution Models- Challenges and Opportunities for Improvement. Policy Brief 4. Pharos Global Health Advisors.

Figure 1. Take Home Ration production models



Generally, there are two main compositions that states distribute: a selection of whole food items or a “premix” of various grains, pulses, or other ingredients. Pregnant and lactating women are entitled to different quantities than young children, and in some states, they receive a different formulation. Recent literature on THR composition generally recommends increased micronutrient and vitamin fortification, specialized formulations for women and for children, and in general, THR formulations should better comply with current evidence on nutrient requirements of the intended recipient.^{13,14} However, in our study, we focus on composition as it pertains to beneficiary preference and consumption behaviours.



¹³ Schwarz, R. K., Flanagan, K. F., Soe-Lin, S., & Hecht, R. M. (2018). ICMR and ICDS guidelines & THR formulation and composition challenges, & opportunities for improvement. Policy Brief 2. Pharos Global Health Advisors. Tata Trust. <https://pharosglohalhealth.com/wp-content/uploads/2018/09/PolicyBrief-2.pdf>

¹⁴ Vaid, A., R. Avula, N.R. George, A. John, P. Menon, and P. Mathews. 2018. Review of the Integrated Child Development Services' Supplementary Nutrition Program: Take Home Ration for Children. POSHAN Research Note 7. New Delhi, India: International Food Policy Research Institute. <http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/132804/filename/133014.pdf>

STUDY OBJECTIVES

IDinsight, CIFF, and NITI Aayog decided to conduct this qualitative study on Take Home Ration for three primary reasons.

First, results from earlier quantitative surveys on nutrition service delivery in Rajasthan and Jharkhand present a troubling picture of THR access. In the first round of our panel survey, conducted in January and February 2020, only 34 percent of women eligible to receive THR in Rajasthan reported receiving any THR in the previous month.¹⁵ That figure is notably higher in Jharkhand, with 65 percent of eligible THR beneficiaries reporting receiving THR in the previous month. Even 65 percent access in Jharkhand is lower than might be anticipated in a state where demand for supplemental nutrition is expected to be high, given that Jharkhand has the highest rate of acute malnutrition (wasting) in India (NFHS-4).¹⁶ Furthermore, the THR reaches intended recipients does not always appear to be sufficient quantity. In both Rajasthan and Jharkhand, more than two-thirds of pregnant women and lactating mothers reported the THR they collected on a monthly basis lasted less than one week. In Jharkhand, more than half of women reported that THR lasted them less than 3 days.¹⁷

Second, both Rajasthan and Jharkhand implemented new THR production and distribution models in the 12 months prior to our study in August 2020. To our knowledge, there are no independent studies on how the new systems in Rajasthan or Jharkhand are functioning. Independently generated feedback on states' differing implementation approaches is important for understanding common challenges and eliciting best practices.

Third, THR became especially important early in the COVID-19 pandemic, which disrupted food systems globally and within India. In our earlier quantitative surveys, we measured a reduction in THR access of -8

percentage points (pp) in Rajasthan (90% confidence interval [CI]: -4pp to -12pp) and -10pp in Jharkhand (90% CIs of -4pp to -16pp) between January and May 2020.¹⁸ This study presented an opportunity to determine how the COVID pandemic had affected the delivery of supplemental nutrition and provide rapid feedback to government actors.

So, in August 2020, IDinsight conducted a qualitative study with women eligible for THR for themselves or their children, Anganwadi workers, self-help group members, and district-level government officials.

Our qualitative study aimed to map the processes behind the newly introduced production models, uncover and diagnose challenges in implementation and identify opportunities for improvement. Our primary research questions were:

- How do food, funds, and information flow in these newly introduced THR production models?
- What challenges do supply-side actors face in delivering THR to beneficiaries?
 - Where and when do disruptions occur in the supply chain?
 - What causes these disruptions in delivery or access?
- What are the barriers to the consumption of THR by the intended beneficiary?
 - What is the formulation of THR that actually reaches beneficiaries?
 - What factors (e.g., taste, quality, etc.) are most important to THR recipients?
 - How do these factors affect their consumption behaviour?
 - To what extent is THR shared among family members?

These research questions were generated by IDinsight based on our review of relevant literature and our past

¹⁵ In January 2020, IDinsight conducted an in-person quantitative survey across 12 districts in Rajasthan and Jharkhand on a variety of health and nutrition topics. All women interviewed were either currently pregnant or had a child under 36 months old. For this indicator, the sample size in Rajasthan was 893 women, with a 90% confidence interval of 23 to 30 percent. In Jharkhand, the sample size for this indicator was 696 women, with a 90% confidence interval of 62 to 69 percent. For more details, refer to Table 4 in the Appendix.

¹⁶ According to NFHS-4 (2015-16), 29.0 percent of children in Jharkhand are acute malnutrition or wasting (weight-for-height z-scores below -2SD). This is the largest proportion of state's population experiencing any kind of wasting, though other states (XYZ) report slightly higher rates of severe wasting (weight-for-height z-scores below -3SD). Jharkhand has the third highest rate of stunting among children (45.3%; height-for-age z-scores below -2SD), trailing behind Bihar (48.3%) and Uttar Pradesh (46.2%).

¹⁷ In Jharkhand, 68.5 percent (N = 483, 95% confidence interval = 62.3% to 74.1%) of pregnant women and lactating mothers who received THR reported that the THR lasted them for less than one week, and 50.9 percent reported THR lasting them less than 3 days (N=483, 95% CI = 43.9% to 57.9%). In Rajasthan, 69.1 percent of respondents (N=335, 95% CI = 63.0% to 74.6%) who received THR reported it lasting them less than one week, and 32.7% reported it lasting them less than 3 days (N=335, 95% CI = 26.8% to 39.2%).

¹⁸ In May 2020, IDinsight conducted a remote quantitative survey with the same panel of respondents in both Rajasthan and Jharkhand on a variety of health and nutrition topics. In this round, only 26 percent of respondents in Rajasthan reported receiving THR in the last 30 days (N=647, 90% CI interval = 23% to 30%). In Jharkhand, 55% of respondents reported receiving THR in the last 30 days (N=423, 90% CI interval = 50 % to 60%). For more information on the second round of this survey, refer to Table 4 in the Appendix.

METHODS

Sampling Strategy and Sample

Our team interviewed two main categories of respondents: THR producers and THR consumers. THR producers comprise Anganwadi workers responsible for the delivery of THR to the beneficiaries in both the states and, in Jharkhand, members of the Self-Help Groups responsible for procurement and packaging. THR consumers comprise pregnant women and mothers of children aged 0-6 months who receive THR for themselves and mothers of children aged 6-36 months who receive THR for their children.

Due to the safety concerns and restrictions on movement related to the COVID-19 pandemic, all interviews were conducted remotely via phone call. Thus, to conduct any interviews, we needed access to the phone numbers of potential respondents. Our process for acquiring these phone numbers varied by respondent group:

- For **mothers of children between 6 months and 3 years old**, we could use phone numbers from the panel of women we spoke with in our quantitative phone surveys in May 2020.¹⁹ Using the information we had previously collected on child age, we created a frame of 979 phone numbers to sample respondents from this group (450 in Jharkhand; 529 in Rajasthan).
- For **lactating mothers** (defined as having a child under 6 months old), we adopted a similar strategy. Using information that we had previously collected on women who delivered a child between our survey rounds in January and May 2020 and the date of delivery, we constructed a frame of 106 phone numbers for this category of respondent (45 in Jharkhand; 61 in Rajasthan).
- To gather phone numbers of **pregnant women**, we adopted a different approach. We conducted a separate enrollment phone survey, using phone numbers we collected from households during in-person surveys in January 2020, to determine if there was a pregnant woman present in the household. After conducting an enrollment survey with 1560 households, we had a frame of phone numbers for 49 pregnant women (22 in Jharkhand; 327 in Rajasthan).

- To gather phone numbers for **Anganwadi workers**, we leveraged other IDinsight surveys happening in the same geography, which asked women to share the phone number of their local AWW if they had it. We created a frame of 119 AWW phone numbers through this process.
- To gather phone numbers of self-help group members, we asked AWWs in Jharkhand to share the phone numbers of **self-help group members** that they worked with. We gathered 13 phone numbers through this process.

In qualitative work, one way of assessing representativeness is thematic saturation or redundancy of additional information. Ideally, new data are collected within each group of interest until saturation, or the point at which little to no new information is being gained in each additional interview.²⁰ Given the timeline constraints we faced with our study, we set targets for the number of interviews we anticipated needing for different respondent groups in each state.²¹

- **Supply-side:** We tried to interview all Anganwadi workers and SHG members for whom we had phone numbers. As these phone numbers were collected via a snowball sampling method, we anticipated high levels of nonresponse.
- **Demand-side:** We selected respondents on the demand-side via random stratified sampling. We used two stratification criteria, leveraging data from our earlier quantitative surveys: (i) the individual's personal history of receiving THR, according to data from our earlier quantitative surveys, and (ii) whether the individual resided in a district that provided above average or below average in access to THR as compared to other districts, according to data from our earlier surveys. Our motivation with these criteria was to ensure we spoke with four types of beneficiaries: women with low access in an environment of low access, women with low access in an environment of high access, women with high access in an environment of high access, and women with high access in an environment of low access. Within strata, respondents were randomly selected.

¹⁹ We spoke to 1,169 women in Rajasthan (N=719) and Jharkhand (N=450) over the phone in May 2020 to generate state- and district-representative estimates on key indicators. We applied adjusted sampling weights to the final estimates to account for noncoverage due to phone ownership and systematic nonresponse rates related to wealth, religion, and caste status of respondents.

²⁰ Lincoln, Y. S., & Guba, E. G. (1986). But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *New directions for program evaluation*, 1986(30), 73-84.

²¹ Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field methods*, 18(1), 59-82. This study presents evidence that informational "saturation" typically occurs within the first 12 interviews conducted, with basic themes beginning to emerge as early as the sixth interview. We used this as a guide for estimating the number of interviews required per subgroup of interest.

These targets proved sufficient in achieving saturation on our primary research questions with results disaggregated at the state-level. That is, within states, we heard consistently similar narratives within each respondent group. However, we were unable to disaggregate trends in responses within different categories of THR recipients according to our stratification criteria or between districts within states. Additional detail on our sampling frame, attempted interviews, and completed interviews can be found in Table 2, and further information on completed interviews by state can be found in Table 3.

Interview Tool and Approach

All interviews were conducted as semi-structured interviews. The introduction and consent guides were fully scripted. The interview guide was organized into sections by learning goals, or sub-research questions. Each learning goal section included a variety of open-ended interview questions and follow-up probes. Interviewers were encouraged to conduct the interview conversationally, letting discussion flow and ask interview questions in the order that felt most natural. Our team conducted debriefs after every day of interviews to discuss what we were learning, where we needed better understanding, and any challenges faced during the process. We also scheduled a two-day pause in the middle of the data collection to assess our progress on answering our research questions and revise our interview guides or retrain our interview team as needed.

Our interview team consisted of five men and one woman, all of whom resided in the states and districts in which our respondents were located. These survey professionals worked with us on our earlier quantitative surveys, both remote and in-person. We trained and coached our interview team on qualitative methodology, qualitative interviewing techniques, and the THR program context to prepare them for the interviews.

Data Collection Protocols

Phone surveys can be an effective tool to collect high-quality data, but they require their own set of protocols to maximize response rates, ensure survey productivity, and monitor data quality. Our team followed protocols developed and tested across more than 30 phone surveys engagements in 11 countries that IDinsight has conducted since January 2020. For example, to maximize response rates, we called respondents in three slots: morning (7 am - 11 am), afternoon (11 am - 3 pm), and evening (3 pm - 7 pm). If a respondent did not pick up the phone, we called back up to seven times, trying each different time slot over the course of three days.²²

When we reached a respondent over the phone, the interviewer requested verbal consent from the respondent and only then proceeded with the survey. Surveyors also requested verbal consent from the respondent to record the interviews, and these recordings were stored on the local devices used to

Table 2. Sampling frame, attempts, and yield for phone-based qualitative interviews conducted in August 2020

Respondent Group	Sampling Frame	Attempted Interviews	Completed Interviews
Pregnant Women	49	30	15
Lactating mothers	102	30	13
Mothers of children aged 6-36 months	979	60	26
Anganwadi workers (AWWs)	119	119	54
Self-help group (SHG) members	13	13	6

Table 3. Total completed interviews by state and respondent group

Respondent Type	Rajasthan	Jharkhand	Total
Pregnant Women	7	8	15
Lactating Mothers	6	7	13
Mothers of children age 6-36 months	14	12	26
Anganwadi workers	27	27	54
Self-help group members	0	6	6
Total	54	60	114



THR distribution during COVID-19 pandemic in Rajasthan.

make the calls. A separate team of survey professionals transcribed the audio files word-for-word into Hindi text, and an external vendor translated these anonymized transcripts into English.

Analysis and Interpretation

Qualitative analysis is an iterative process. In addition to daily debriefs and scheduled pauses for reflection and discussion and reflection on information gathered, we set up an analysis structure to draw out themes in responses and ascertain the salience of certain themes across the group of respondents.

The first stage in this analysis structure was data preparation. This involved segmenting interview transcripts by learning goals, which served to better organize the dense narratives of information. Then, we paraphrased to capture the respondent's meaning in a clear, concise way, without omitting any information. This exercise forced us to scrutinize,

and in some cases revise, our initial interpretations of the response.

The next stage was theme-coding and interpretation. We assigned short, descriptive "codes" to each paraphrased interview segment. These theme codes allow us to quickly summarize information captured in interviews and rigorously assess patterns in responses. This process was conducted in a custom-built qualitative information management system which we built in Google Sheets.

These steps were conducted iteratively as the team built the narrative of the THR implementation challenges experienced in Rajasthan and Jharkhand. After completing our main analysis, we also conducted additional key informant interviews with district-level ICDS officials in both states and Jharkhand State Livelihood Promotion Society officials to clarify lingering questions and validate our findings.

22 Mathur, M. (2020, April 2). 3 steps to designing an effective phone survey that reaches respondents. IDinsight Blog. <https://medium.com/idinsight-blog/three-steps-for-designing-a-phone-survey-reaching-respondents-part-i-fb968828ba4b>

KEY FINDINGS: JHARKHAND

Jharkhand's New THR Production Model

Jharkhand adopted a decentralized self-help group THR production model in November 2019. The prior system, which was in place from June 2013 to October 2019, was a centralized system in which private firms produced a nutrition premix and delivered it to Anganwadi Centers (AWCs) all across the state. Under the new system, self-help groups procured, packaged, and delivered a basket of five different dry rations, including rice, lentils, jaggery, peanuts, and potato.

Through our interviews with supply-side actors in Jharkhand, we created a detailed mapping of how food, funds, and information flow through the decentralized THR production model introduced in November 2019 (Figure 2 illustrates this process).

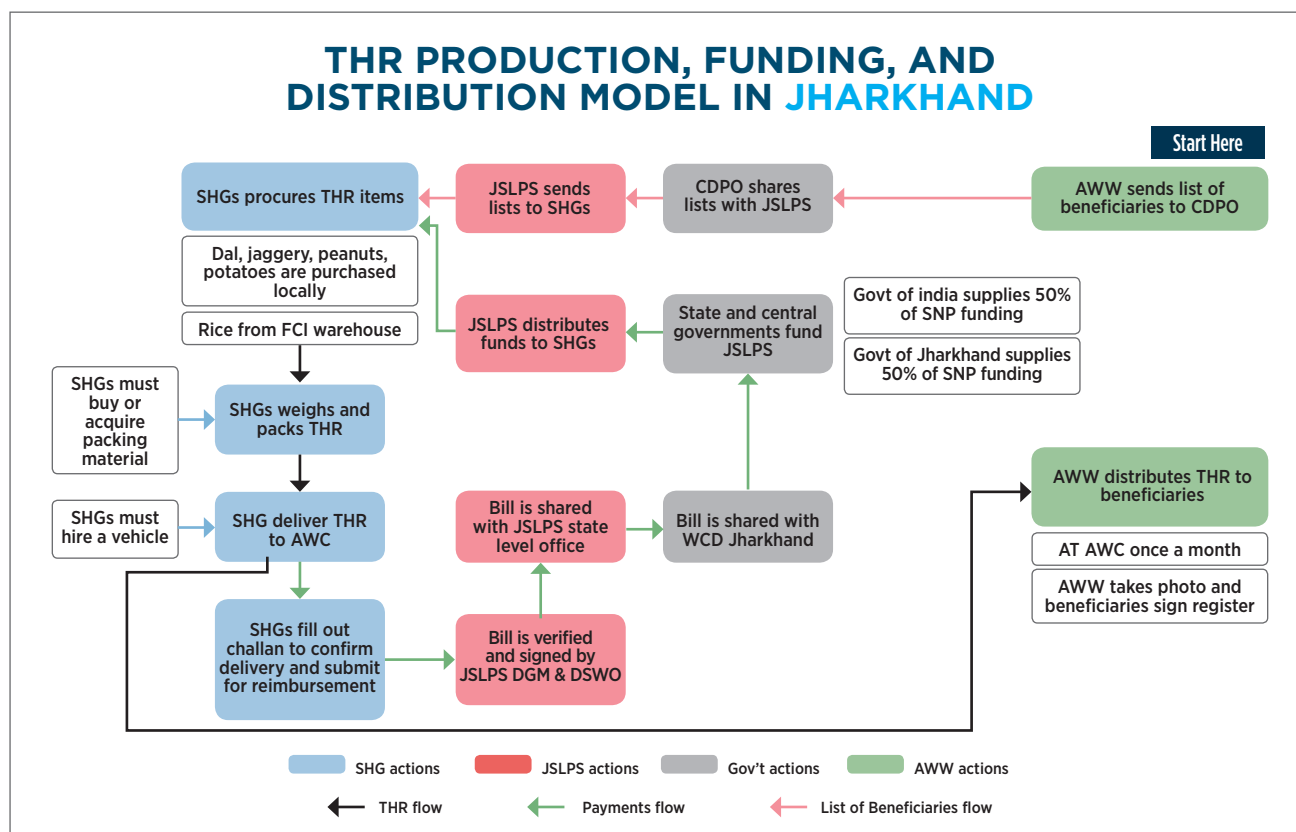
First, the Anganwadi worker sends a list of women and children who are registered at the Anganwadi Center and eligible to receive THR to the Child Development Protection Officer (CDPO), an ICDS official operating at the block-level. The CDPO, in turn, shares the list with

local agents for the Jharkhand State Livelihood Promotion Society (JSLPS), a civil society group responsible for organizing, training, and handling payments to self-help groups in Jharkhand. The JSLPS agent shares the list of eligible beneficiaries to the self-help groups so that they can procure the correct amount of food.

Self-help groups then procure the THR items. The SHGs purchase dal, jaggery, peanuts, and potatoes locally, but rice is collected from the nearest Food Corporation of India (FCI) warehouse. SHGs then weigh and pack THR and subsequently deliver the THR to the local Anganwadi Center. In Jharkhand, SHGs were generally responsible for distributing THR to 5-10 Anganwadi Centers. Anganwadi workers then distribute THR to beneficiaries once a month, taking photos and asking beneficiaries to sign a register to track distribution.

Meanwhile, SHGs fill out a challan to confirm delivery and submit it for reimbursement. The bill is verified by the district general manager (DGM) for JSLPS and by the District Social Welfare Office (DSWO). It is then shared and verified by the state-level JSLPS office and

Figure 2. IDinsight mapped the THR production model introduced in Jharkhand in November 2019, including the flow of food items, funds, and information



the Ministry of Women & Child Development (WCD) in Jharkhand. The Jharkhand state government eventually releases funds to JSLPS, which in turn allocates funds to specific SHGs.

Supply-Side Challenges in Jharkhand

The flow of food, funds, and information in Jharkhand's THR supply chain (described above) was disrupted several times over the course of 2020. IDinsight measured a moderate decline in THR access among eligible beneficiaries from 65 percent in February 2020 to 55 percent in May 2020 in a survey of households across five districts in Jharkhand.²³ There was notable variation across the five sample districts (see Table 4 in the Appendix for more details). Our qualitative study revealed that these disruptions continued beyond May. Only a handful of women eligible to receive THR in Jharkhand reported receiving any THR at all in the five months between India's nationwide COVID-10 lockdown in late March 2020 and our study in August.

Missing Months

Supply-side actors corroborated the irregular delivery of Take Home Ration between April and August 2020. Most Anganwadi workers in Jharkhand reported that they had been unable to distribute THR since April or earlier. As the link between supply chain and consumer, many Anganwadi workers in Jharkhand reported feeling stress and frustration with these supply chain disruptions.

“When we call and ask people from the ICDS department, they tell us that money has not been disbursed from the top, and we will get the THR [for distribution] when money comes from there. Right now, it's very difficult to run the program and make ends meet. Even if they do not give us money, we still must distribute the ration to people.”

– Anganwadi worker in Simdega, Jharkhand

The consequences of disruptions in access to THR can be severe for women who rely on the additional nutrition it provides, as in the case of a new mother in Hazaribagh district. She describes how a lack of THR affected the birth of her child:



Women's self-help groups in Jharkhand assist in producing, procuring, and delivering THR.

“I received THR only once during pregnancy. Had I received this nutritious food regularly, I would have gotten more nutrition and strength. But we didn't get it regularly, and so I had to be operated on during the delivery because of physical weakness.”

– Mother in Hazaribagh, Jharkhand

Missing Items

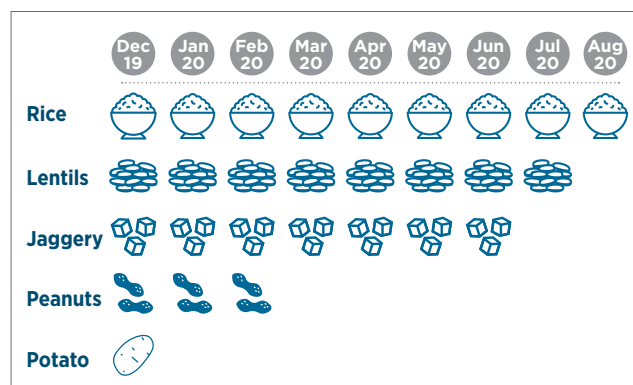
Disruptions in access to THR took other forms as well. Jharkhand's Take Home Ration contains five different food items that collectively provide beneficiaries with the nutrition requirements. However, women and children did not always receive all five items or their full entitled amount of all items. Figure 3 is a stylized illustration of the average number of months that different THR items were available in the ten-month period between November 2019 and August 2020, based on our interviews with Anganwadi workers, self-help group members, and THR recipients. Rice and lentils were the most commonly available items, available almost every month. In contrast, potatoes were distributed only once for most women, and peanuts only a few times pre-lockdown. After one month of distribution, beneficiaries complained that potatoes distributed rotted quickly, and potatoes were discontinued. Peanuts were distributed rarely due to price fluctuations. During the COVID-19 lockdowns, the price of peanuts fluctuated substantially.

“Earlier we used to get rice, jaggery, pulses, and peanuts, but now its only pulses and jaggery – how can we eat only pulses?”

– Mother in Garhwa, Jharkhand

²³ In February 2020, N=696 and 90% confidence intervals 62% to 69%. In May 2020, N=423 and 90% confidence intervals are 50% to 60%.

Figure 3.²⁴ A stylized illustration of the average number of months that different THR food items were available in Jharkhand in the ten months between the inception of the new THR production model in November 2019 and IDinsight's qualitative study in August 2020



Potential Causes

These supply chain disruptions occurred for a variety of reasons. IDinsight spoke to six women who are members of different self-help groups across the state. The three most common challenges mentioned by these self-help group members are described below.

- **Delayed or missing reimbursements** to self-help groups have adversely affected access to THR. As noted in Figure 2, the reimbursement process for self-help group members is a complicated process. Each self-help group submits challans for each Anganwadi Center it distributes to, and these challans are verified, aggregated, and funding is disbursed from state-level ICDS office to the Jharkhand State Livelihood Promotion Society (JSLPS), which in turn processes and disburses funds into the self-help group bank accounts. However, delays in this paperwork review have affected access to supplemental food. Most self-help groups do not hold substantial amounts of capital, and without the reimbursement for the last month's purchases, they are unable to purchase the next month's ration. A self-help group member in Garhwa district, Jharkhand, said, "The Anganwadi worker thinks that we keep the THR items for ourselves, but the truth is that we don't receive the money from the government on time... How can we distribute THR again if we don't get our old money back?"

- **Self-help groups** mentioned that even when they do receive reimbursements or payments, the amount is often insufficient to cover the cost of the rations. This is due to incongruence between market prices and reimbursement rates. Prices for many food items increased in India as food systems were disrupted with early COVID-19 lockdowns. However, reimbursement rates remained fixed. This mismatch means that self-help groups must decide between purchasing only as many rations as the reimbursement rate will cover, which leads to beneficiaries receiving insufficient quantities of THR, or the self-help group covered the additional cost themselves, reducing any opportunity to benefit from the procure.

- **Some self-help group members** reported a delay in receiving the list of beneficiaries from the Anganwadi workers. Self-help groups use these lists to determine the amount of ration that they need to purchase, and the lists are used to verify the challans submitted for reimbursements later. Delays in lists can also result in a mismatch between the amount of ration supplied to Anganwadi Centers and the amount prescribed in beneficiary entitlements.

Some Anganwadi workers reported that women are angry with them about the amount of THR that they received. Others have been accused of skimming rations, like this Anganwadi worker in Pakur district:

"We have to hear all the bad words. People accuse us of taking the rice and peanuts from their THR packets. We only give them as we get."

- Anganwadi worker in Pakur, Jharkhand

Demand-Side Findings in Jharkhand

We also spoke with eligible beneficiaries – pregnant women, lactating women, and mothers of young children – about their experiences with and feedback on the new system. Beneficiary preferences varied, but among the 20 women we spoke with who had received THR under both the new and old systems, 13 preferred the newer ration to the older system. Most women stated reasons like taste, flexibility or ease of cooking, variety, and nutritional value as the reasons for their preferences.

²⁴ Figure 3 does not represent the specific months that all foods were available. For example, only rice may have been available in April 2020 in some districts, whereas rice, lentils, and jaggery may have been available in April 2020 in other districts. This figure does show the typical number of months, within the 10 month period, that respondents reported different food items were available to them. For example, almost all respondents reported that they received potatoes only once, but that they received lentils almost every month.

“I like the present ration because I can cook it and make something my child likes to eat. I can make rice and dal, but with the earlier ration, I could only make halwa. This has added a choice in taste now. The ration is satisfactory, but it is a bit less in quantity.”

- Woman from Hazaribagh, Jharkhand

Even among the majority who prefer the THR system introduced in November 2019, women call for more consistent delivery and greater quantities of goods. The two most common pieces of feedback that beneficiaries gave were (i) deliver THR regularly and on time, and (ii) increase the quantity of Take Home Ration that is provided. Many of our conversations with THR beneficiaries revealed their frustration.

“We only get 2 kg in two months. You tell me then how long it should last! It lasts for only two days.”

- Mother in Garhwa, Jharkhand

We also asked THR recipients who consumes THR within their household. Our findings are consistent with other literature on THR:²⁵ Particularly when experiencing food stress, beneficiaries share THR among the whole family. Moreover, the five food items distributed in the new THR regime are more easily incorporated into family diets than the nutrition premix distributed under the former system. This practice of sharing exacerbates existing quantity problems, further reducing the amount of THR that reaches the intended beneficiary.

Suggested Action in Jharkhand

In light of these findings, we suggest actions in three key areas.²⁶

First, addressing delays in payments to self-help groups is critical to ensuring the availability of THR for beneficiaries. Jharkhand should implement the following strategies to streamline the flow of funds and reimbursements in order to facilitate timely and consistent THR delivery.

- Introduce pre-payments to SHGs, rather than post-payments through reimbursements
- ICDS should consider updating the reimbursement rate for THR items at least quarterly to address price fluctuations in the market.
- Transition all state ICDS payments to e-payment²⁷ systems to allow for seamless money transfer
- Beneficiary lists should be provided to SHGs through AWWs in real-time by utilizing existing technologies (e.g., CAS)

Second, Jharkhand should be proactive about future disruptions by developing contingency plans for cases in which certain items are too expensive or unavailable.

- Decide on a menu of acceptable, energy-dense, and nutrient-rich THR items to replace items that have chronically been missing, like potatoes and peanuts.

Third, address household allocation issues through a creative communications campaign.

- Ensure that AWWs counsel THR recipients on the intended use and benefits of THR for the intended user.
- Provide SHGs with THR packaging or bags they can use to distribute the various food items to recipients. The packaging should have an image and illustration of the intended recipient.
- Use other public art or murals²⁸ to impart the importance of THR being eaten by the intended woman or child.

²⁵ Beesabathuni, K., Kumari, P., Bajoria, M., eds. (2020). Take Home Rations: A Compendium. https://www.wcdsbp.org/publications/THR-Compendium_220720.pdf

²⁶ These recommendations are in line with earlier recommendations from the World Food Programme (WFP) and Tata Trust. (a) WFP. (2019). Review of Take-Home Rations under the Integrated Child Development Services in India. <https://docs.wfp.org/api/documents/WFP-0000111827/download/>. (b) Schwarz, R. K., Flanagan, K. F., Soe-Lin, S., & Hecht, R. M. (2018). Opportunities & Challenges in the Integrated Child Development Services' Take-Home Rations program. Policy Brief 1. Pharos Global Health Advisors, Tata Trust.

²⁷ E-payments systems are associated with reductions in payment delays. Beesabathuni, K., Kumari, P., Bajoria, M., eds. (2020). Take Home Rations: A Compendium. p. 32. https://www.wcdsbp.org/publications/THR-Compendium_220720.pdf

²⁸ S. John & S. Prakash. (16 Sept 2020). “When Walls Talk”. Outlook POSHAN. <https://poshan.outlookindia.com/story/poshan-news-when-walls-talk/360390>

KEY FINDINGS: RAJASTHAN

Rajasthan's New THR Production Model

In March 2020, Rajasthan adopted a new, more centralized THR production model seemingly to respond to the emerging needs from COVID-19. Under the previous system, Anganwadi workers organized and managed self-help groups to distribute a nutrition premix. The self-help groups procured materials, roasted grains, created a nutrition premix, packaged and helped distribute THR. Under the new system, Anganwadi workers procured wheat and dal from local Fair Price Shops and distributed the raw grains to beneficiaries as THR. The wheat is generally sourced from Food Corporation of India (FCI) godowns and distributed to Fair Price Shops through the PDS. The dal is generally procured centrally by the ICDS directorate from NAFED and delivered to the Fair Price Shops. *Figure 4* is a stylized illustration of the newer THR production model. This is a centralized model in which the state directly provides the THR to the Fair Price Shops.

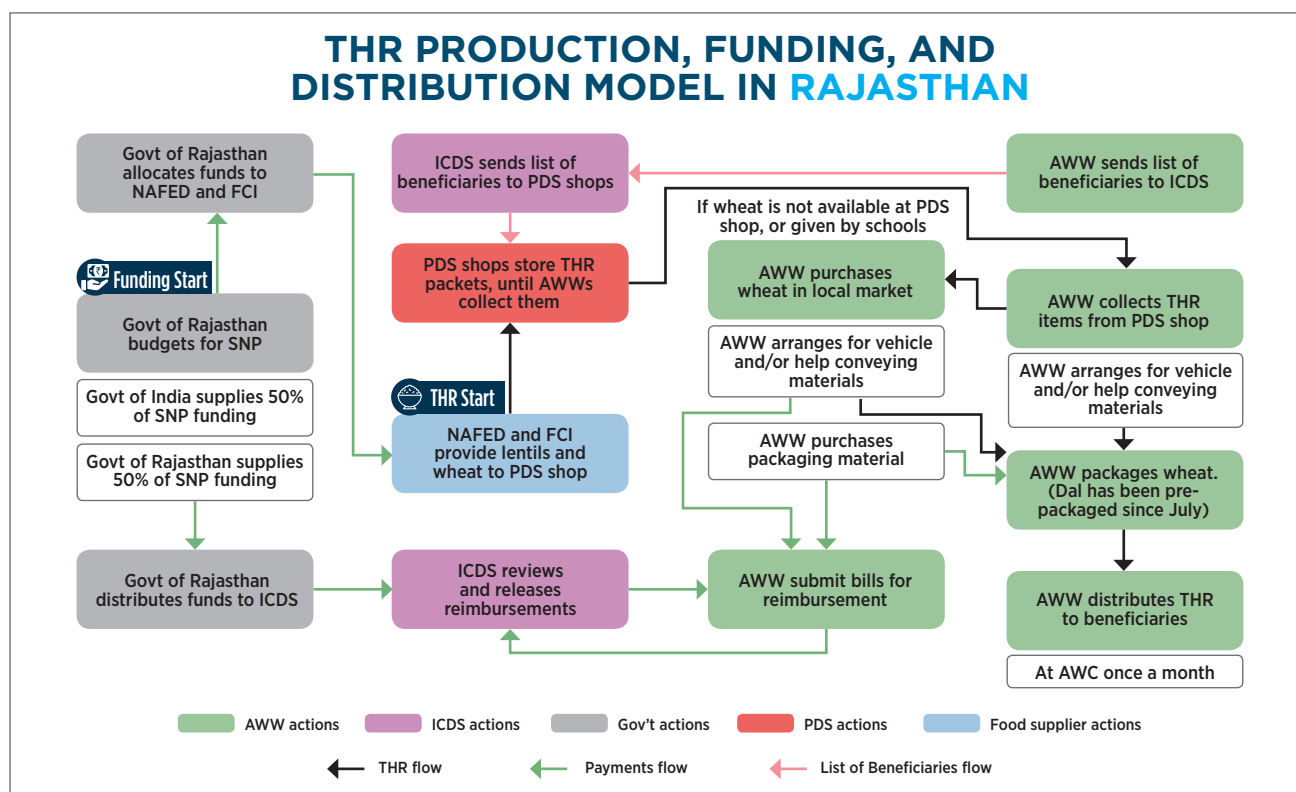
In this model, Anganwadi workers first share the list of beneficiaries with block-level ICDS officers, who in turn share the list with Fair Price Shops, which

reserve the required amount of grains for THR from the PDS procurement. The Anganwadi worker then collects the wheat and dal from the Fair Price Shops at no cost, transports it back to her Anganwadi Center, packages the grains, and distributes THR to beneficiaries. Often, however, wheat and dal were not available at Fair Price Shops, and Anganwadi workers instead purchased the grains locally or collected grain originally intended for use in school meals under the Mid-Day Meal Scheme. Anganwadi workers submit reimbursements for any locally purchased grains, packaging materials, and transport at the ICDS office. These expenses are reviewed and approved at the district-level.

Supply-Side Challenges in Rajasthan

Rajasthan's switch to this new THR system occurred only five months before our study and within the context of the COVID-19 pandemic and related lockdowns. Thus, there are fewer reference points than in Jharkhand for the system working as intended. Nonetheless, a greater proportion of Anganwadi workers from Rajasthan reported more consistent THR delivery in the months since lockdown as compared to Jharkhand. However, IDinsight did observe a small

Figure 4. Take Home Ration production and distribution in 2020

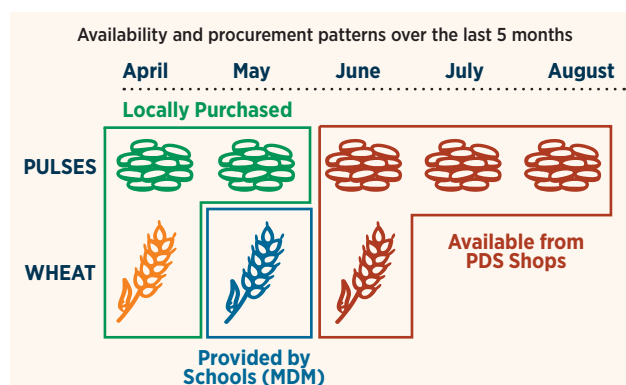


decline in THR access in Rajasthan from 34 percent in January 2020 to 26 percent in May 2020²⁹ (see Table 4 in the Appendix for more details on district variation). Still, some challenges do remain:

- **Insufficient THR is available** at the Fair Price Shops and other suppliers. An Anganwadi worker in Jodhpur district described a situation in which the Fair Price Shop gave her only 100 kilos of pulses for 135 recipients, each of whom are entitled to receive at least one kilo of pulses. She then must decide to deny some eligible beneficiaries their entitlement, distribute a little less to everyone, or pay for the additional sum herself with no guarantee of reimbursement.
- **Reimbursement issues.** A few AWWs reported that ICDS had not reimbursed the amount for the THR procured from their own money. Some AWWs reported that ICDS had reimbursed less amount, and many reported that there had been delays in the reimbursement. For example, an AWW in Ajmer district told us that, for two months, she purchased wheat and bags and followed instructions to distribute THR door-to-door to beneficiaries (a temporary measure due to COVID-19 lockdowns). She then learned that she would not be reimbursed for any of the THR she purchased for women in her community.
- **Transportation.** Some AWWs reported that bringing large 50 to 100 kg sacks of wheat on their own from the Fair Price Shop is logistically difficult. The cost of hiring vehicles also became more expensive, and Anganwadi workers reported that reimbursements for transport were not consistently provided.
- **Multiple sources for THR procurement.** Rajasthan's ICDS office issued at least 12 orders in only four months, rapidly changing the rules for procurement and reimbursement. The source of procurement has been shifting between Fair Price Shops, schools, markets, etc., adding to the confusion and logistical challenges experienced by Anganwadi workers.

The procurement of wheat seemed to be particularly challenging. In the five-month period between March 2020 and August 2020, most Anganwadi workers distributed wheat only three times. Each time, it was procured from a different source. Figure 5 illustrates the inconsistent availability of wheat and the shifting sources of procurement.

Figure 5. Availability of wheat and pulses and sources of procurement in Rajasthan between April and August 2020



Anganwadi workers in Rajasthan reported poor communication on what they should do when wheat was not available. It seems that initially, Anganwadi workers could be reimbursed for local procurement, but many later reported that they were told they would not be reimbursed after they had already purchased all the ration materials for the month. One Anganwadi worker in Jhalawar district captured the frustration that many Anganwadi workers also expressed:

“We don’t have to pay for the ration at the Fair Price Shop, but if the items are not enough, then we have to purchase them with our own money. We inform our supervisors how much THR we got free and how much we had to purchase. But now, reimbursements on local purchases have been denied. Now our supervisors have instructed us to distribute three kilos each for 150 women. It totals 450 kilos. But we get only 350 kilos in supplies. If I do not give THR to 33 women, then they will call me a thief, and then they will make complaints to my supervisors. However you work here, it is a thankless job.”

- Anganwadi worker in Jhalawar, Rajasthan

²⁹ This finding comes from our earlier quantitative surveys. In Round 1 (January), confidence intervals (CIs) 30.4% to 37.5% and N=893. In Round 2 (May), CIs 22.5% to 29.6% with N=647.



An Anganwadi worker distributes THR in Rajasthan.

Demand-Side Findings in Rajasthan

Almost all the women that we spoke with in Rajasthan preferred receiving wheat and lentils as THR rather than the nutrition premix distributed under the old system. Respondents cited reasons like the ease and flexibility of cooking, quality, taste, or the fact that their children liked to eat this ration, but not the former ration.

“Children like the taste of food items cooked with the wheat, and they eat it also. When I was getting Panjiri, even I didn’t like the taste of it, then how can children like it! I prefer the grains over Panjiri because the food cooked with the grains are salty and children like it.”

- Mother in Ajmer district, Rajasthan

However, despite substantial support for this new THR system, women called for greater quantities of THR, more frequency delivery, and additional items to be added. As in Jharkhand, many families experienced additional food stress due to COVID-related disruptions. This food stress likely led to greater sharing of the THR among family members. Additionally, the raw grains are more easily incorporated into family meals than the nutrition premix. However, this sharing can exacerbate existing quantity issues, as it reduces

the nutritional benefit of the Take Home Ration that reaches the intended beneficiary. Respondents also asked for a greater frequency of distribution (more than the once a month distribution) under the new system. This is possibly an implicit request for greater quantity to be distributed. In the old system, THR was distributed once a week, and some women may prefer that system. Many women also pointed out that wheat and pulses alone are insufficient to meet any supplementary nutrition needs and called for the addition of other items, such as rice, moong dal, or edible oil.

Suggested Action in Rajasthan

Many of the challenges reported by Anganwadi workers in Rajasthan were due to complications in the procurement process. We suggest actions in the following areas.

- **Reimburse Anganwadi workers** on their actual costs if they are locally purchasing Take Home Ration materials. An e-payments system may facilitate more efficient reimbursements.
- **Provide logistical support to AWWs.** Arrange transport for AWWs to collect THR or ensure Fair Price Shops deliver directly to the AWCs. Provide AWCs with the packaging materials to package wheat.
- **Make contingency plans.** If wheat and lentils are not available at Fair Price Shops, Anganwadi workers should have clear, consistent guidance on the next actions to take, whether that is locally

procuring wheat and lentils or providing an alternative menu instead.

In addition to challenges faced in the procurement stages, the Government of Rajasthan should address household allocation of THR, as well as feedback from women who received THR.

- **Address intra-household allocation issues.**

Direct resources towards a strong and creative communications campaign, with the message that THR should be consumed by pregnant women and children only, such as posters, wall paintings, counselling, THR packaging, etc. Additionally, interpersonal outreach, via counselling or community events like VHSNDS, is one of the most effective modes of behaviour change communication. AWWs, as well as ANMs and ASHAs, should counsel pregnant women and young mothers on the importance of consuming the THR themselves. Where possible, mothers-in-law and husbands should receive counselling as well.³⁰ Another option is to add items in the THR package which can be easily set aside for the intended beneficiaries and reduce intra-household consumption. Adding a nutrition premix alongside other dry ration could ensure there is something always available for the most vulnerable.

- **Rebuild transparency and trust.** Gap months in delivery degraded trust between beneficiaries and Anganwadi workers. Package THR items uniformly, with clear labels on THR entitlements for different beneficiaries. Provide AWCs with weighing machines and encourage AWWs to re-weigh contents in a visible way to the beneficiaries.

- **Provide additional items beyond wheat and pulses.**

To bolster dietary diversity and micronutrient richness, Anganwadi Centers should distribute other food items as well.

Since we conducted our qualitative interviews in August 2020, Rajasthan's Ministry of Women & Child Development has issued a series of orders on the supplementary nutrition program. Notably,



WCD temporarily increased the allotment of chana dal, pulses, and rice for THR recipients in response to the challenges related to the COVID-19 pandemic. In addition, in September 2020, an order was released acknowledging that, in many places, women and children were deprived of the full allotment of THR because the allocation of THR foods was based on outdated information about the number of beneficiaries. The order instructs all CDPOs to ensure that THR beneficiaries are registered at Anganwadi Centers before the 10th of each month and holds them accountable for any case where women and children are denied access to THR due to allotments due to delays in the registration process or reporting.³¹

³⁰ Nair, D., Agarwal, P., Jain, M., Agarwal, N., Huang, C., Pattanayak, A., & Biswal, L. (March 2020). POSHAN Abhiyaan Social and Behaviour Change Communication: What Has Changed in the Last Year (Final Report). <https://www.idinsight.org/projects/generating-evidence-on-social-and-behaviour-change-communication-in-poshan-abhiyaan>

³¹ ICDS Rajasthan. (2020, September 22). Order No. 103684, Regarding making available nutritional supplements regularly to all registered beneficiaries. <https://wcd.rajasthan.gov.in/content/dam/wcd-cms/icds/order/2020/103684%202292020.pdf>

DISCUSSION & CONCLUSION

While findings differ between Jharkhand and Rajasthan, there are three common areas of potential improvement, which may also be of relevance to other Indian states as well. Detailed mapping of key challenges and associated recommendations are available in *Table 1*.

First, resolve funding delays for the Anganwadi workers and self-help groups. Moving to a prepaid system or expediting the reimbursement process is important. We propose setting up an e-payments system for ICDS and SHGs and regularly updating the reimbursement price of THR items based on market fluctuations.

States which use e-payment mechanisms for ICDS reimbursements generally deliver more regular payments to Anganwadi workers and self-help groups.³² These digitized payment systems can also introduce greater transparency and accountability mechanisms. In Odisha, the SHGs produce THR in a decentralized way and are reimbursed through an e-payments system.³³ SHGs deliver THR to Anganwadi Centers and receive a signed challan from the Anganwadi worker as verification that the proper amount has been supplied. SHGs submit that challan as well as a payment receipt to the CDPO. Within seven days of the submission of receipts, the CDPO makes direct e-payments to bank accounts that are jointly set up for SHGs and ICDS specifically for supplementary nutrition reimbursements. The CDPO is monitored by the district sub-collector and held "personally liable" if there are any delays in feeding due to delayed reimbursements. In order to build consistency, SHGs submit receipts and challans to the CDPO by the end of each month, and payments are disbursed on the 7th day of each month.³⁴

Second, develop proactive contingency plans for changes in price or availability of certain foods and providesupportforthewholeprocessofprocurement.

In Jharkhand, plan a menu of alternative ration items to replace chronically missing items like peanuts and potatoes. In Rajasthan, a single source of procurement would reduce logistical complexity. Anganwadi workers should also be provided transportation support to get materials from Fair Price Shops or local markets.

There are opportunities for efficiency gains in the integration of supply chains for different food-based social protection programs. Along with THR, there is the Mid-Day Meal (MDM) scheme, which provides nutritious meals to school-going children, and the Public Distribution System, which is a system of procurement, storage, and delivery of food grains from farmers to consumers at subsidized rates. In addition, there are Hot Cooked Meal and Morning Snacks, another important component of the Supplementary Nutrition Program under ICDS in which Anganwadi workers and helpers prepare and serve hot, nutritious meals to children age 3 to 6 years old at the Anganwadi Center. Generally, these schemes use separate transportation and handling contractors to move large amounts of grain from state warehouses to locations that are within a 2-7 km radius of Fair Price Shops, duplicating efforts and resources.³⁵ If states are following a centralized procurement and production model for THR, they should consider following Rajasthan's example and leveraging the existing transportation network established through PDS for at least some of the component THR items.³⁶

However, integration with the PDS supply chain should be paired with additional last-mile transportation support. Our interviews revealed that AWWs often did not receive logistical support to transport food items (sometimes sacks of more than 100kg of raw grain) back to their Anganwadi centre on their own or hire a conveyance without a guarantee of reimbursement. States should consider options for supporting Anganwadi workers in the final transportation stage, perhaps by negotiating

³² Flanagan, K. F., Soe-Lin, S., Hecht, R. M., & Schwarz, R.K. (2018). THR Production and Distribution Models- Challenges and Opportunities for Improvement. Policy Brief 4. Pharos Global Health Advisors.

³³ Beesabathuni, K., Kumari, P., Bajoria, M., eds. (2020). Governance and Accountability: Experience of Odisha. In Take Home Rations: A Compendium. https://www.wcdsb.org/publications/THR-Compendium_220720.pdf

³⁴ WCD, Government of Odisha (n.d.) Guidelines for the Decentralized Implementation of Morning Snacks, Hot Cooked Meal, Supplementary Nutrition Programme & Emergency Feeding Programme. http://wcdodisha.gov.in/Application/uploadDocuments/plugin/doc20170527_121846.pdf

³⁵ World Food Programme (n.d.) Transformation of Mid-Day Meal Supply Chain in Odisha Integration with PDS Supply Chain (Detailed Project Report).

³⁶ Nair, D., Gupta, A., Stroming, S. Raj., R., & Thompson, W.M. (December 2020). Supply Chain Integration of Food-Based Social Protection Schemes: Opportunities & Challenges (Policy Brief for NITI Aayog). IDinsight.



A women's group in Rajasthan

local contracts for transport from the Fair Price Shop to AWCs or by establishing a system for processing reimbursements for conveyance costs.

Third, improve communication on intra-household sharing. We suggest designing a strong communications campaign that messages the intended beneficiaries under THR, i.e., pregnant women and children. This will help in limiting intra-household consumption of THR and lead to desired nutritional outcomes among women and children.

Evidence from IDinsight surveys conducted in 2018 and 2019 from 10 states suggests that the most effective mode for behaviour change communication is one-on-one interpersonal counselling. ASHAs and

ANMs, in addition to Anganwadi workers, should be trained on counselling women even before pregnancy on the importance of supplemental nutrition for the mother during pregnancy and postnatal period and for young children. Where possible, AWWs and others should also communicate the importance of THR for mothers and young children to mothers-in-law and husbands as well.³⁷

THR remains an important source of supplemental nutrition for pregnant & lactating women and young children. Ensuring all women and children regularly receive and consume their entitled amount of food rations is critical to achieving the goals of POSHAN Abhiyaan and improving lifelong health outcomes for millions of people.

³⁷ Nair, D., Agarwal, P., Jain, M., Agarwal, N., Huang, C., Pattanayak, A., & Biswal, L. (March 2020). POSHAN Abhiyaan Social and Behaviour Change Communication: What Has Changed in the Last Year (Final Report). <https://www.idinsight.org/projects/generating-evidence-on-social-and-behaviour-change-communication-in-poshan-abhiyaan>

APPENDIX

Appendix 1 Additional Data Collection Protocols

Below are additional details on IDinsight's data collection practices and interview protocols:

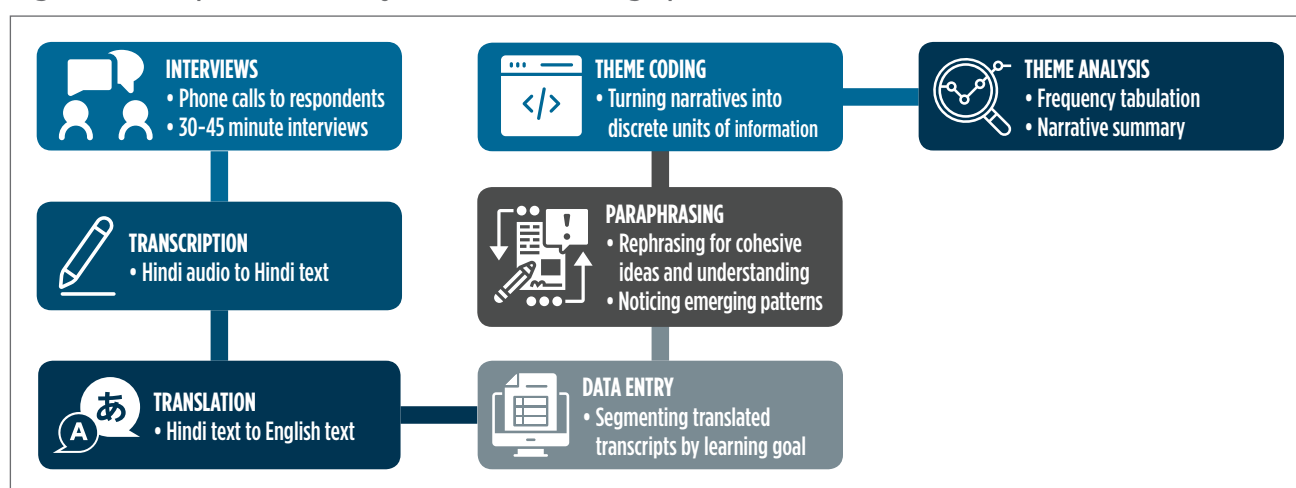
- **Informed consent for participation in the survey:** Many of our potential respondents, especially pregnant and nursing mothers, do not own their own mobile phones. Instead, IDinsight has the phone number of another family member, often the male head of household. In such scenarios, surveyors first explained the purpose of the survey to the person who picked up the call, sought consent, and requested to pass the mobile phone to the actual respondent. The surveyor asked for verbal consent from the respondent and only then proceeded with the survey.
- **Incentive for respondents:** We provided a mobile phone recharge of INR 50 as a token of appreciation to participate in the survey to every respondent who completed a survey with us. Some of the respondents were informed about this at the start of the survey, whereas others were told about it at the end of the survey.
- **Audio recording calls:** We recorded all the interviews on the local devices, which are used to making calls to the respondents. As per our protocol, we were unable to proceed with a survey if the respondent did not consent to the recording. However, there was no instance of a consenting respondent objecting to recording the calls. After completing a survey, the surveyors uploaded the recordings to a cloud-based folder and deleted the recording from their local device. These recordings are accessible by only a handful of the field staff working on the transcription and by the members of the research team.
- **Data Transcription and Translation:** A separate team of survey professionals was tasked with transcribing the audio files word-for-word into Hindi text. This team would complete the task in real-time as a separate team was responsible for collecting the data. All the personal identifiable information (PII) is removed from the transcripts before sharing with an external vendor who translates these transcripts into English.

Appendix 2 Analysis of Qualitative Data

Our qualitative analysis was a multi-stage, iterative process. Figure 8 shows the general flow of the qualitative analysis, although several steps were conducted iteratively or revisited at several stages in the analysis.

- **The first discrete stage in our analysis was data entry.** In this step, each translated interview transcript is segmented out; the data is entered into a spreadsheet and categorized based on the primary learning goals of the survey. The purpose of this step is to organize the information captured in our interviews so that we can answer our learning goals more efficiently.
- **The second discrete stage in analysis is paraphrasing.** In this step, each interview transcript segment for a given learning goal is paraphrased. The purpose of this step is to capture the meaning of the respondent's answers in a clear, concise way, without omitting any information. It facilitates easier theme coding.
- **The third discrete stage in analysis is theme-coding.** In this step, short, descriptive "codes" are assigned to each paraphrased interview segment for a given learning goal. These "codes" allow us to quickly summarize information captured in interviews and rigorously assess patterns in responses. Once the codes have been assigned for each learning goal, we run frequency tabulations to understand the most emerging themes. This helps us in building the narrative and bring out the larger story for each learning goal, as well as assessing the salience of certain perspectives among our respondents.

Figure 6. Our qualitative analysis was a multi-stage process



Appendix 3 Additional Details on Our Earlier Quantitative Surveys

While this report focuses primarily on our qualitative study conducted in August 2020, but our work was informed and motivated in part by our quantitative survey findings from two earlier rounds of data collection. In January and February 2020, we conducted in-person data collection, and in May 2020, we conducted a phone survey. The two rounds were a panel survey of more than 2000 respondents across five districts in Jharkhand and seven districts in Rajasthan, selected to provide both district-representative and state-representative estimates. The surveys were intended to monitor the implementation efforts of various nutrition services under POSHAN Abhiyaan.

Appendix 4 Supplementary Data

Table 4. Eligible women who received Take Home Ration for themselves or their child in the 30 days prior to the survey, by state and district

Geographic Unit		Jan-Feb 2020	May 2020	Delta	P-value
JHARKHAND					
Jharkhand (state-level)	Point	65%	55%	-10%	0.00434
	Upper	62%	50%	-16%	
	Lower	69%	60%	-4%	
	N	696	423		
Garhwa, Jharkhand	Point	65.6%	54.4%	-11.2%	0.04753
	Upper	58.1%	44.7%	-20.5%	
	Lower	72.4%	63.7%	-2.0%	
	N	169	119		
Pakur, Jharkhand	Point	43.8%	57.0%	13.2%	0.1338
	Upper	37.1%	44.8%	-1.3%	
	Lower	50.8%	68.4%	27.7%	
	N	154	70		
Hazaribagh, Jharkhand	Point	77.2%	39.5%	-37.7%	0
	Upper	69.7%	28.3%	-48.8%	
	Lower	83.3%	52.0%	-26.6%	
	N	133	90		

Khunti, Jharkhand	Point	78.3%	69.1%	-9.3%	0.11697
	Upper	71.2%	61.1%	-19.0%	
	Lower	84.1%	76.0%	0.5%	
	N	108	73		
Simdega, Jharkhand	Point	56.9%	69.7%	12.8%	0.14871
	Upper	46.4%	56.2%	-1.9%	
	Lower	66.8%	80.5%	27.5%	
	N	132	71		
Bikaner, Rajasthan	Point	20.3%	18.5%	-1.8%	0.80616
	Upper	12.7%	11.2%	-14.0%	
	Lower	30.9%	29.1%	10.4%	
	N	121	82		
Jodhpur, Rajasthan	Point	23.7%	12.6%	-11.1%	0.04582
	Upper	16.9%	7.0%	-20.1%	
	Lower	32.1%	21.6%	-2.1%	
	N	137	75		
Ajmer, Rajasthan	Point	32.3%	13.0%	-19.2%	0.00286
	Upper	23.6%	8.5%	-29.2%	
	Lower	42.3%	19.4%	-9.3%	
	N	138	95		
RAJASTHAN					
Rajasthan (state-level)	Point	34%	26%	-8%	0.00273
	Upper	30%	23%	-12%	
	Lower	38%	30%	-4%	
	N	893	647		
Tonk, Rajasthan	Point	42.8%	42.4%	-0.4%	0.95537
	Upper	35.3%	32.7%	-11.7%	
	Lower	50.7%	52.8%	11.0%	
	N	139	114		
Bhilwara, Rajasthan	Point	40.2%	36.1%	-4.2%	0.56712
	Upper	32.0%	27.2%	-16.5%	
	Lower	49.1%	46.0%	8.1%	
	N	126	86		
Baran, Rajasthan	Point	59.1%	44.0%	-15.1%	0.08462
	Upper	47.7%	33.4%	-29.4%	
	Lower	69.5%	55.2%	-0.7%	
	N	109	105		
Jhalawar, Rajasthan	Point	43.7%	52.3%	8.6%	0.20631
	Upper	31.6%	42.6%	-2.7%	
	Lower	56.7%	61.9%	19.9%	
	N	123	90		

Table 5. Reports from THR recipients in Jharkhand and Rajasthan on the quantity or sufficiency of THR, through the question, “For how many days, approximately, did the Take Home Ration distributed this time last you?”

Indicator	JHARKHAND				RAJASTHAN			
	Estimate	95% CI lower	95% CI upper	N	Estimate	95% CI lower	95% CI upper	N
Women who reported that THR lasted less than 3 days , of women who collected THR in the last month	50.9%	43.9%	57.9%	483	32.7%	26.8%	39.2%	335
Women who reported that THR lasted less than 1 week , of women who collected THR in the last month	68.5%	62.4%	74.1%	483	69.1%	63.0%	74.5%	335
Women who reported that THR lasted 1-2 weeks , of women who collected THR in the last month	15.2%	11.5%	19.9%	483	24.9%	20.1%	30.5%	335
Women who reported that THR lasted 2-3 weeks , of women who collected THR in the last month	12.9%	9.8%	16.9%	483	5.4%	2.7%	10.7%	335
Women who reported that THR lasted 3-4 weeks , of women who collected THR in the last month	1.2%	0.6%	2.5%	483	0.3%	0.2%	0.3%	335

Note: This is data from the first round of our quantitative survey. Data from Rajasthan was collected in January 2020, and data from Jharkhand was collected in February 2020. We applied adjusted sampling weights to the final estimates to account for noncoverage due to phone ownership and systematic nonresponse rates related to the wealth, religion, and caste status of respondents.

* This is inclusive of women who reported that THR lasted less than 3 days.



An Anganwadi Center in Khunti, Jharkhand. Anganwadi Centers are the typical point of distribution of THR from Anganwadi workers to women in the community.

PHOTO: Signe Stroming, 2020



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