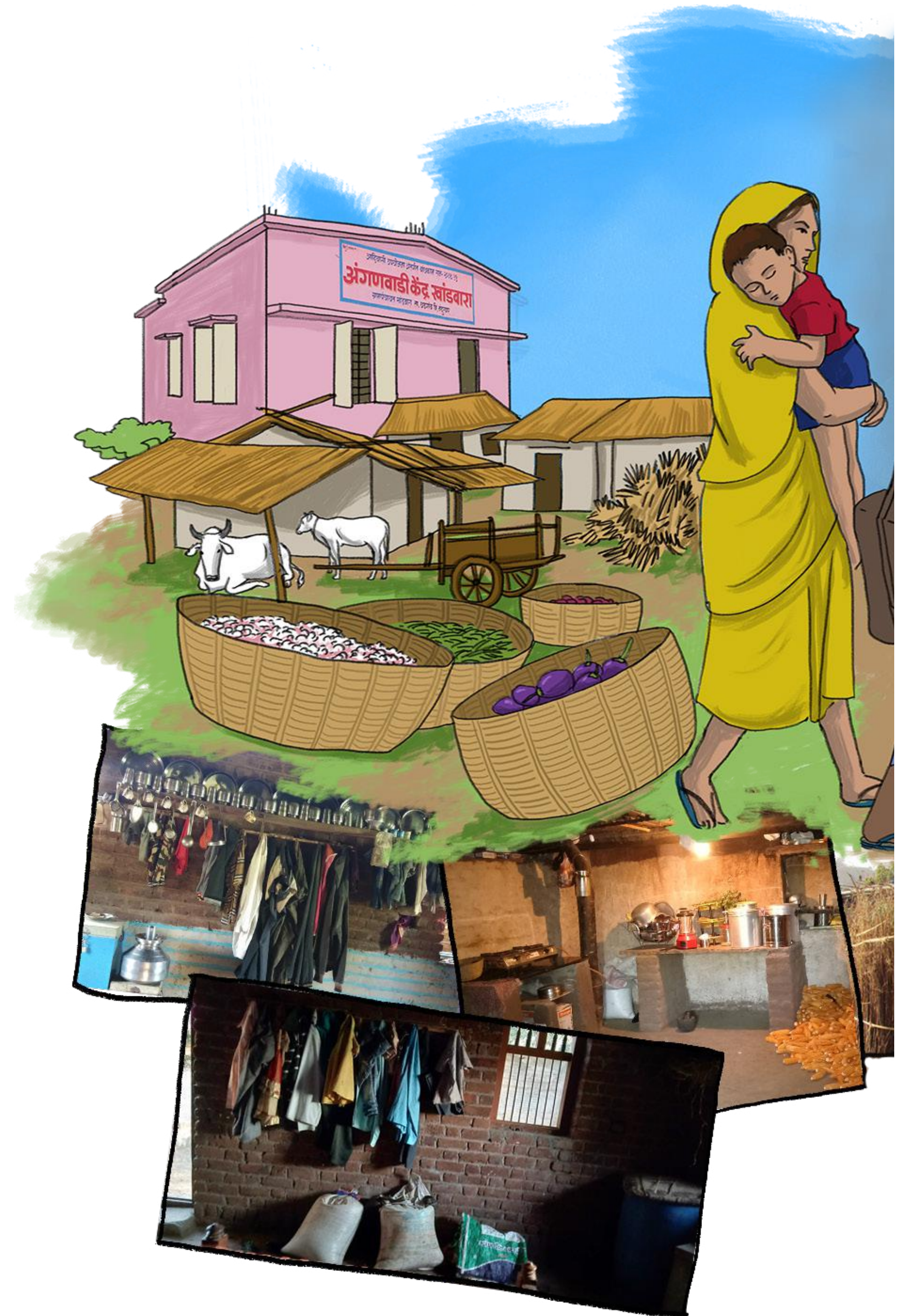
Nourishing Hard to Reach Communities

AN ILLUSTRATED ESSAY BY
VIHARA INNOVATION NETWORK FOR
RECKITT BENCKISER



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An Ethnography and Human Centered Design project to understand and address malnourishment among tribal populations of Nandurbar and Amravati

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Foreword

Gaurav Jain, Senior Vice President, RB Health, AMESA

First 1000 days of a child's life are the foundation of their future health and wellbeing. Hence, it is essential to ensure adequate nutrition and care to expecting mothers, important to exclusively breastfeed children for the first 6 months and timely initiate adequate complementary feeding.

With government's recent commitment to make India malnutrition free by 2022, the Nutrition India Program (NIP) is at the nexus of bringing national priorities at the forefront through designing targeted, effective and scalable interventions. This program is experimenting with both manual and tech driven interventions to nourish tribal belts of Maharashtra. In the light of the program's objective, this research has adopted the essence of ethnographic research to identify the behaviors, practices and perceptions of the communities that need immediate addressal for improving malnutrition indicators.

Excerpts

In April 2019, on a hot, Indian summer afternoon, a young female health researcher took refuge with a young mother in her mud-hut home, somewhere on the periphery of a densely forested, hilly Maharashtra landscape. She'd made a 1,500 kilometer journey, to capture her host's story. The mother described to her guest the steps she had taken six months ago, when her infant girl was dying of malnutrition.

"Did the village ASHA offer to take you to the nearest nutrition rehabilitation center, and pay you Rs. 500 to cover your costs?"

Yes, the mother replied, she did.

"So, did you go?"

No.

But why?

"How could I? I had no idea what the [doctors] were going to do to my child."

Bhumkas (traditional healers) are elusive, and make themselves known only to the people of the villages they live in, who in turn preserve their identities as a (open) secret. Finding a bhumka and interviewing him meant searching door to door, spending long hours over bitter black tea chatting with the locals, before the researcher found a reference. This man claimed his clients came from as far as 50 kilometers away, for solutions to all problems - physical, mental and spiritual. The researcher decided to open up to him as well:

“I’ve got ulcers in my mouth. They’re really painful. Can you have a look?”

While in conversation with him, the bhumka talked of his reach and clientele.

“Now I have the power [to heal them], and they don’t have any other way...”

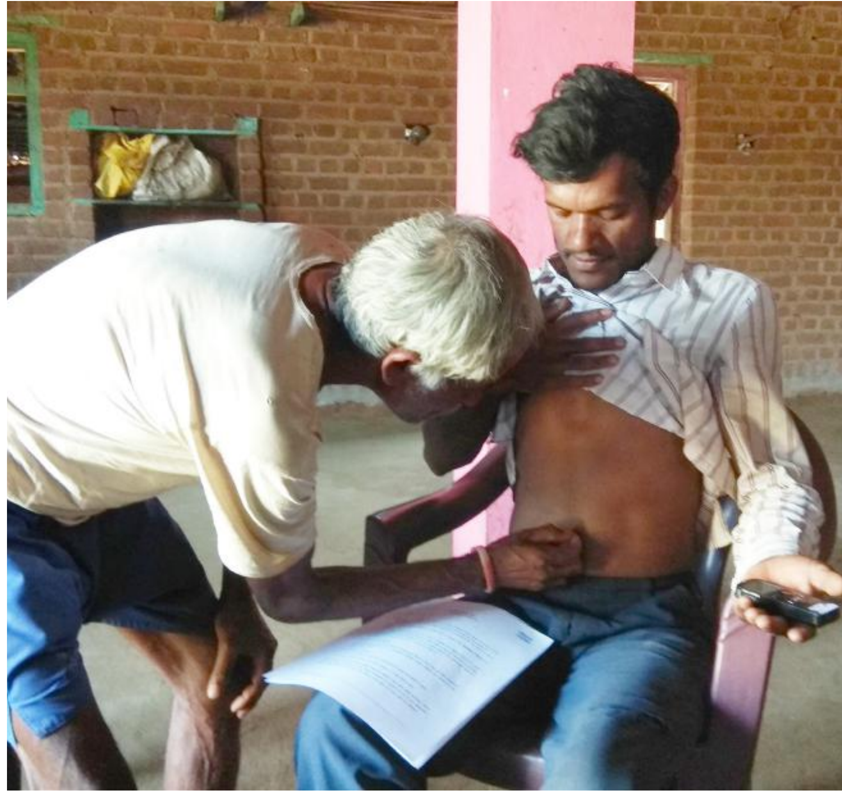
While the conversation went on, a mother came in with her child sick from diarrhoea. The bhumka immediately got distracted; in a trance-like fashion he checked the 8-month-old’s pupils, pulse and stomach. He chanted a few mantras and reached into his bag to remove a small yellow polythene, from which he pulled out a handful of seeds that he handed to the mother, with the instruction: sprinkle these at your door-post. After a minute of silence, he dipped one end of a thread in oil, lit it on fire and touched it on different parts of the child’s stomach - a practice called chatka. The mother thanked the bhumka and left with a wailing child.

The bhumka turned back to the researcher, having switched back to a nonchalant demeanour:

“Now if the child gets well by tomorrow, they will offer the gods a coconut in thanks. “

What if the child didn’t recover?

“If they don’t have faith, the child won’t recover. Then they’ll have to take it to a doctor.”



Samta, a dietician in Akkalkuwan hospital, told a researcher the story of an unknown boy. On a dry and windy day in Akkalkuwan (Nandurbar), the police found a three year old boy eating a packet of Kurkure on top of a trash dump, a few kilometers away from the nearest rural hospital. The local police face numerous cases like this, where children are abandoned because their families can't feed them.

He couldn't explain where he had come from, so an FIR was lodged, following which the boy was brought to the hospital. Samta being the dietician at the Child Treatment Centre there, tested him and found him to be severely malnourished. While the day's investigation was being carried out, she held him and fed him milk and khichdi which he happily lapped up.

Eventually, the boy was registered as "unknown" and it was decided that he should moved to the Nutrition Rehabilitation Centre in Nandurbar town. Samta came to meet him for the last time; holding back tears, she bid the "unknown" boy goodbye, forever.

"The way he looked at me that day, I'll never forget it."

Research

Backdrop

1. https://www.un.org/sustainabledevelopment/sustainable-development-goals/

The alleviation of under-nutrition, malnutrition and micro-nutrient deficiencies for vulnerable populations represents an extraordinarily complex and multi-layered challenge.

Families must not only be food secure but also nutrition secure. They must have consistent access to nutritious and diverse foods and care-givers must be sensitized, motivated and made capable to consistently plan and prepare meals that are nourishing for pregnant women and children. Traditional food cultures must be preserved and augmented and harmful misconceptions and behaviours related to food must be overcome. Family budgets must be influenced to have a larger share dedicated towards food. Immuno-compromised women and children must be shielded from risk and infections that may further perpetuate their adverse conditions. Pregnant women and children must be examined, triaged, referred and given full treatment to restore their health and nutritional status, if found malnourished.

Nutrition is affected by a host of physiological, human behavioural, cultural, economic and biomedical care related factors. Amidst all of these complex factors which require consistency on the part of people and robust and dependable services on the part of the health system, there is no one panacea that can lead to breakthrough results. Rather, where we must look to achieve this is in the careful crafting and tuning of the different elements of the health system towards local community contexts and people's health needs.

In India, where the public health system has expanded so quickly since 2005, and with such a large infrastructure and cadre in compliance, we still witness severe acute malnutrition and deaths of children under two due to the phenomenon. This is because expanding and fortifying public health systems, while being absolutely crucial, aren't enough to deal with the multivariate and complex challenges that affect the most vulnerable. In the last four years however, the Government of India and the State Government of Maharashtra both have shown strong intent and have taken a considerably more aggressive stance in their campaign against malnutrition and under-five mortality. They recognize that multi-modal actions are needed to overcome the challenges of vulnerable communities as they grapple with nutrition and malnutrition.

India has shown immense commitment to ending world hunger - goal number 2[1] in the global Sustainable Development Goals. With the design and launch of the flagship POSHAN Abhiyan

2. "THEFIRST1,000DAYSOFLIFE:THEBRAIN'S WINDOW OF OPPORTUNITY". Cusick, Sarah and Georgieff, Michael. Accessed July 23, 2019. https://www.unicef-irc.org/article/958-the-first-1000-days-of-life-the-brains-window-of-opportunity.html

3. UNICEF2013"IMPROVINGCHILDNUTRITION The achievable imperative for global progress". April 2013. Accessed July 23, 2019. https://in.one.un.org/wp-content/uploads/2016/09/Nutrition_Report_final_lo_res_8_April.pdf

program in December 2017, the government's aim was to push for community mobilization - to marshal a jan andolan, a people's movement to overcome malnutrition. While the Indian government has strong precedents of campaigning aggressively and successfully against deadly diseases such as Polio, Tuberculosis and HIV-AIDs, they rightly recognise that for malnutrition, there is no single silver bullet.

The first 1,000 days is a time period of high potential and vulnerability. In this time period, it is extremely essential for mothers and children to be nourished and cared for. This is because the first 1,000 days are when a child's brain begins to grow and develop and when the foundations for their lifelong health are built. These first 1000 days of life pose a unique period of opportunity when the foundations for optimum health and development across the lifespan are established [2]. The right nutrition and care during the 1,000-day window influences the child's survival rate and the child's ability to grow, learn and thrive. This requires improved nutrition for adolescent girls and young women before, during and after pregnancy, screening for tuberculosis and retention in care, exclusive breastfeeding during the first six months of the infant's life, provision of nutritious, safe and appropriate food to complement breast milk as the baby grows, availability of safe water, improved hygiene and sanitation practices, and regular monitoring to track growth and development.

Exclusive Breastfeeding, in particular, is of critical importance. As a baby's first vaccine, it is the first and best protection they have against illness, disease and death. Promotion, support and protection of exclusive breastfeeding until six months are key to optimize child survival and must be supported by regular growth monitoring, complete immunizations and adequate complementary feeding. Breast milk contains all the nutrients an infant requires in the first six months of life.

Breastfeeding protects against diarrhoea and common childhood illnesses such as pneumonia, and it may also have long-term health benefits, such as reducing the risk of overweight and obesity in childhood and adolescence.

Undernutrition if not tackled in time can cause irreversible damage to a child's physical growth and brain development. It is critical to break the intergenerational cycle of malnutrition and if not, undernourished girls will become undernourished women who give birth to low birth weight infants. According to the 2013 UNICEF Report on 'Improving Child Nutrition – The Achievable Imperative for Global Progress', India has one-third of the world's undernourished children and an

4. National Family Health Survey (NFHS-4). International Institute for Population Sciences. April 2018. Accessed July 23, 2019. http://rchiips.org/nfhs/NFHS-4Reports/Maharashtra.pdf 3 https://niti.gov.in/content/nutrition-charts

estimated 61 million, that is half of the total child population in the country, are stunted due to chronic undernutrition. While progress towards reducing child underweight in India has been made, it has been uneven [3]. One of the major determining factors that could alleviate malnutrition is proper breastfeeding.

The country made impressive strides in curtailing the disease burden and number of deaths of children under five. Even so, 34% of children under five are underweight in rural Maharashtra; 26% under five are wasted. National Family Health Survey 4 data from 2015-'16[4] highlights that in Maharashtra's tribal-dominated districts, malnutrition deaths still number in the hundreds. While Nutrition Rehabilitation Centers have been established, in the case of the young mother who wouldn't take her dying child to the NRC, perhaps having a personal guide in the form of the ASHA and money to cover costs weren't enough to counter her fear of the unfamiliar. The state must not only touch the remotest last mile with counseling, coaching and redressal services, must partner increasingly in lockstep with members of the public and the market, to improve nutrition behaviours but also build a common language of health with communities.

No one entity or state would be equipped to overcome this challenge in isolation. India has increasingly adopted a collaborative and participatory approach to its own development, by inviting partners from social enterprises, business houses, think tanks and innovation practices, to approach the compound problem of malnutrition and hunger from a multi-disciplinary point of view. In doing so, India honours its commitment to goal number 17[1] — establishing multidisciplinary partnerships for goals. SDG 17 requires that all development efforts be brought together and addressed in an inter-connected manner through multi-sectoral partnerships that amplify the ability to produce change. With the invitation to address national developmental challenges in lockstep with government, multinational organisations such as Reckitt Benckiser have taken it upon themselves to work with the development sector, to create sustainable models of development, for some of India's most vulnerable populations. It is presently working to support the government to end malnutrition in Maharashtra, in some of the state's toughest regions.

Project And The Partnership

The Nutrition India Programme is a social insight and innovation led intervention program created with a vision of improving nutrition among 1,77,000 pregnant women and their children under 2 in over a 1,000 villages in Maharashtra, in the next five years. The programs aims to reduce stunting in tribal communities in Nandurbar and Amravati by 40%, and reduce and maintain wasting among children to 5% of the state population.

The programme is building healthy communities through the introduction of a first-of-its-kind female-only cadre of 1,000 community nutrition workers (CNWs). This cadre is sensitized and rigorously trained to carry out a range of screening, referral, mobilization, monitoring, and nutritional and social behaviour change communication activities and care-giver coaching within their communities. Through these activities, the cadre helps generate awareness on feeding practices, symptoms of malnutrition and common childhood diseases, while also implementing measures that would allow vulnerable pregnant women and children to get the timely and critical health care they need. While the program has a targeted focus on identifying, addressing and surveilling the most vulnerable and malnourished pregnant women and children under two, it balances these efforts with innovations and initiatives that aim to build resilience and nutrition capacity across communities.
The program employs a host of behavioural nudges, apps, games, nutrition kits, multimedia stimuli, new kinds of resilience rituals, community festivals and engaging social experiences to build community capacity around nutrition and hygiene. It also deploys technology in various forms across its program; from using real time data monitoring, fin-tech, crowd-sourced feedback and service verification technologies and blockchain to track and enable conditional cash transfers to women who travel to and complete the treatment cycle at a nutritional rehabilitation centre as well as verify service provision at every touch point.

Lastly and most importantly the entire program hinges on its synchronization with local health cultures and close collaboration with a network of traditional health providers and the communities who are not passive beneficiaries but key actors in the process of transformation.

This five year program has been conceptualized and carefully brokered as a collaboration between an array of partners i.e. it curates a strong development expertise through Plan India; a wide-spread and deep rooted implementation infrastructure through Village Social Transformation foundation in Maharashtra, ethnographic learning, behavioural shaping

and human centered design and prototyping through Vihara Innovation Network and monitoring and evaluation through real time data and creative technologies by Dure Technologies who pool in their diverse expertise and resources towards this mission.

Echoing the values of SDG 17 that seeks to strengthen multi-stakeholder partnerships to achieve the ambitious targets of 2030, the Nutrition India Partnership brings a mutuality, collective capacity and immediacy of action to work together, work with technology, work with communities and work with successful interventions accelerate and propagate solutions more rapidly onto the ground. The program leverages the cumulative strength of creative research and learning, design, public health, implementation and evaluation to shape new strategies and calls to action.
The work is crafted to facilitate dialogue and exchange of knowledge to accelerate innovation, allowing individual entities to more effectively build upon one another's achievements and expertise to intervene towards the complex challenge of child malnutrition.

The program is also designed to make dynamic calibrations to the program as a continuous flow of field learnings are fed back to the program team on a periodic basis. The program team measures the end-user experience, perception and community trust to reflect upon its efforts and inform its field initiatives.

Foundational Research

This "Nourishing Hard to Reach Communities" study is the foundational research for the Nutrition India Programme. The research team spent several weeks in locations across Nandurbar and Amravati, and conducted ethnographic and human centred design research, to build a rich first-hand understanding of the affected cultural groups, and the complex and multi-variate challenges of malnutrition therein. We were further focused on identifying social-cultural-behavioural barriers to providing adequate nutrition and to propose critical areas of intervention that would lead to positive gains.

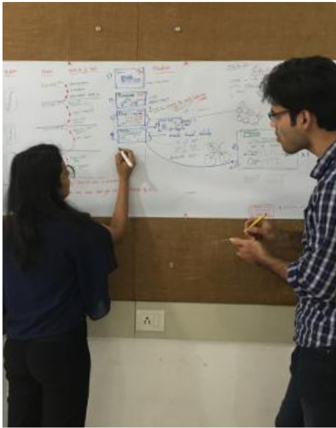
For this task, the team engaged with a number of different community-based and adjacent stakeholders (including several pregnant women and their families, traditional and systems health functionaries, dais, doctors and health officials). They spent extensive periods observing community life and visually documenting material, home and food cultures, and came away with rich narratives and deep understandings around the complexity of malnutrition. They understood how communities think, behave and talk about food, nourishment, health, infections and illness; how they relate to traditional health providers and the public health system; which mix of behavioural, social, environmental and systemic factors inhibit good nutrition; what local cultures, practices and concepts can be leveraged to improve nutrition; and most importantly, the critical needs and opportunities exist that if addressed would lead to positive effects in nutrition for hard to reach children.

This illustrated essay is an account of that study. Our attempt here is to briefly explore the correlation between access to agricultural and forest produce, seasonal migration and malnutrition in Nandurbar and Amravati. In this report we:

i. foreground the lived experience, cultures, and multi-layered challenges of these hard to reach populations,
ii. identify critical gaps that remain unaddressed even after intense development work, and
iii. identify unique opportunities and strategic directions for new interventions that can actually redress behaviours around malnutrition.

This program is the first of many such research led design efforts. In its next phase, the program will disseminate this research in further depth and detail, work alongside implementation agencies to prototype solutions and intervention programs, and finally develop strategic recommendations and intervention programs as an investment thesis for donors, Corporate Social Responsibility initiatives and private sector players who have made it their mission to alleviate malnutrition.

Research Approach And Methodology



The consortium was keen on discerning the vulnerability of the Maharashtrian tribal communities to nutrition deficiency and diseases, while taking into consideration the effects of cultural knowledge and behaviour around pregnancy, the role of family members, knowledge around health facilities and WASH practices in the community, on their vulnerability. The team employed a human centered design (HCD) approach to gather information and insights about cultural systems and beliefs around health and nutrition within these tribal communities. Human Centred Design, or human centred research, gathers and works on from the end user's point of view. In an ideal HCD-driven project, researchers employ qualitative and design research methods that put the subjective and the user experience forward, at all times.

We conducted focused ethnographies and participant observation with young mothers, their family members, and members of the village community who were a part of the local health systems (ex: traditional healers and birthing assistants). The other stakeholders, such as extended family members, ASHAs and officials in the public health system, were engaged in conversation using a combination of focus group discussions, in-depth interviews and key informant interviews.

HUMAN SUBJECT PROTECTION

The research protocols built for primary data gathering and fieldwork were scanned through two rounds of thorough reviews and the tools were submitted for review to the Internal Review Board followed by the External Review Board. The feedback received, was applied and further approved well before the implementation of the primary data collection. Each review emphasized the need to protect human subjects during the process of data collection. The board of reviewers included behavioural scientists, social scientists and design specialists, in addition to nutrition and pediatric advisors as part of the external board. It was strictly ensured that all feedback was incorporated and used as a guiding principle to Vihara's research implementation on the field.

PROTOCOL IMPLEMENTATION

Nourishing Hard to Reach Communities was implemented in two phases:
/ **Phase 1:** Context Setting
/ **Phase 2:** Research Sprint

PHASE 1: CONTEXT SETTING

Extensive secondary research was carried out in preparation for the field visit. This included:

Evidence Review: The team studied journal articles and other secondary literature pertaining to farming, cooking and feeding, health and nutrition, and related practices.

Implementation Review: The team reviewed interventions, best practices and models on community based SAM and MAM, prevention of child morbidity, mortality and nutritional status, and kitchen garden diet diversity that have been in place with the community.

Inferences from secondary literature enabled the research team to carry out a stakeholder mapping exercise. Multiple perspectives were drawn out (stakeholders, experts and consortium members included) to determine a key list of stakeholders who would be at the core of the research.

Introductory Field Visit

The teams made a preliminary visit to Nandurbar and Amravati districts, in order to: **Understand infrastructure availability in the village:** practices with respect to health, nutrition, and WASH; **Explore local knowledge:** life of residing communities, belief systems, culture, practices and perceptions around health, nutrition and WASH, and **Build contextually relevant areas of inquiry:** to identify key stakeholders which are mothers, fathers, mother-in-law, Frontline Workers (FLW), formal and informal health service providers, PRI members, governmental officials and local champions.

PHASE 2: THE RESEARCH SPRINT

Vihara used the purposive sampling technique to select 18 villages in Nandurbar and Amravati. These villages were selected with the support of our field partner: VSTF. An equal proportion of VSTF and non-VSTF villages were selected using the following criteria:
/ Health indicators of the villages
/ Road connectivity to villages
/ Presence of field partner VSTF
/ Villages with cluster migration

Once the villages were identified, the respective FLWs were involved in drawing out a social map of the village which enabled the research team to select households which accommodate diverse characteristics. Households in different directions were preferred to ensure data from differing geo-social locations of the village.

During the primary data collection process the research team split into two sub-teams. In each village, the identified vulnerable households were selected and were scrutinised through a screening process, one team administered household ethnographies to understand perceptions, practices and behaviours around food preferences, health and illness. This team also mapped the health journeys of the children and gathered observations around farming practices and kitchen gardening.

The other sub team proceeded to interview community stakeholders and observed infrastructural facilities such as Anganwadi Centers, Primary Healthcare Centers, schools, Nutritional Rehabilitation Centers. The purpose of this task was to gauge the facilities, resources and services provided to the community and to understand the health seeking behaviour of these stakeholders as well as the caregiving practices towards their children. Formal and informal service providers such as doctors, traditional healers and midwives were also interviewed in this process.

During data collection, the research team drew out emerging themes and topline findings from the debriefing sessions. During the phase of data documentation, the research team focused on charting the most severe and actionable challenges and causes of malnutrition. Triangulating these traces with the topline findings, the research team developed comprehensive narratives and strategic innovation directions, fulfilling the research objectives.

Through the course of our ethnographic research, Mr. Ravi Bhatnagar has provided his kind support in reviewing and providing feedback on the literature review, research design, methodology, areas of inquiry, research tools and the draft report.

RESEARCH PROTOCOLS

Given below are the types of protocols, number of protocols and the types of participants the researchers interacted with during the course of the project:
/ Household ethnography - 8 (Nandurbar), 9 (Amravati)
/ In-depth Interviews with Mothers - 9 (per district)
/ Focus Group Discussions with Fathers - 2 (per district)
/ Focus Group Discussions with Mothers - 4 (per district)
/ In-depth Interview with Traditional Birth Attendant - 1 (per district)
/ In-depth Interviews with Health service providers (ANM & Doctors) - 3 (per district)
/ Health Facility Observations - 4 (per district)
/ In-depth Interview with PRI member - 1 (per district)
/ In-depth Interview with Teachers - 1 (per district)

The Multifaceted problem of Malnutrition in Maharashtra

"Mulga ani mulgi aatun vaaltat ahey" – in Marathi, this translates to 'the boy, or girl, is drying up from the inside'. That's how health system actors in Maharashtra describe children suffering from acute malnutrition. Note that this isn't the story across Maharashtra, unlike what you might find in a few other Indian states. But in those districts that do suffer from poor health indicators, the above phrasing is a description used frequently. Despite the number of development sector interventions that have been implemented to fight malnutrition in the state in the last two decades alone, malnutrition deaths are a perennial feature in Maharashtra.

In 2018, 12 tribal children died of causes linked to malnutrition within the first fortnight of October, all within the Melghat region in Amravati district. In the neighbouring Nandurbar district, stunting and wasting from malnutrition is the highest among all 36 districts. Statistics shared by the Government of Maharashtra in late 2018 indicate that nearly 94,000* children are severely malnourished in the state. In 2017-'18 more than 900* children died as a result of complications from malnutrition, stunting and wasting. Many of these children were from impoverished, backward caste and tribe communities.

Living on the fringes, literally and metaphorically, tribal lives and identities are in limbo – neither are these communities practising hill tribes, nor are they accepted completely in the urban or rural landscapes. Tribal communities were traditionally dependent on forest produce — tubers and rich green vegetables — for their diet. But with the pressure to homogenize with the mainstream populace, they've changed their diets and lifestyles, which has evidently taken a toll on their collective immunity. Many migrate closer to economic touch-points such as Surat, Amravati city, Nasik, Nagpur or Pune, for an improved livelihood, but that shift further deepens their physical and environmental instability.

And yet, drastic as the above picture may appear, it's a significant improvement from previous years' statistics, which reported deaths (of children under five) numbering above a few thousand[5]. There's a starkness to this scenario, given that Maharashtra was declared the richest state economy in 2017-'18. This why the GoI and the state government in Maharashtra is committed to rid the state of malnutrition by the year 2022[6], while assisting communities improve their health, immunity and productivity.

In the past, the multidimensionality of the challenges which impoverished, migrant tribal populations face in Maharashtra didn't get the kind of media traction, or the level of nuanced and multidisciplinary debate or solutioning that they merit. The Indian government is aiming to overcome old problems of lack of plurality, with its increasing push to involve new partners and perspectives on solving malnutrition.

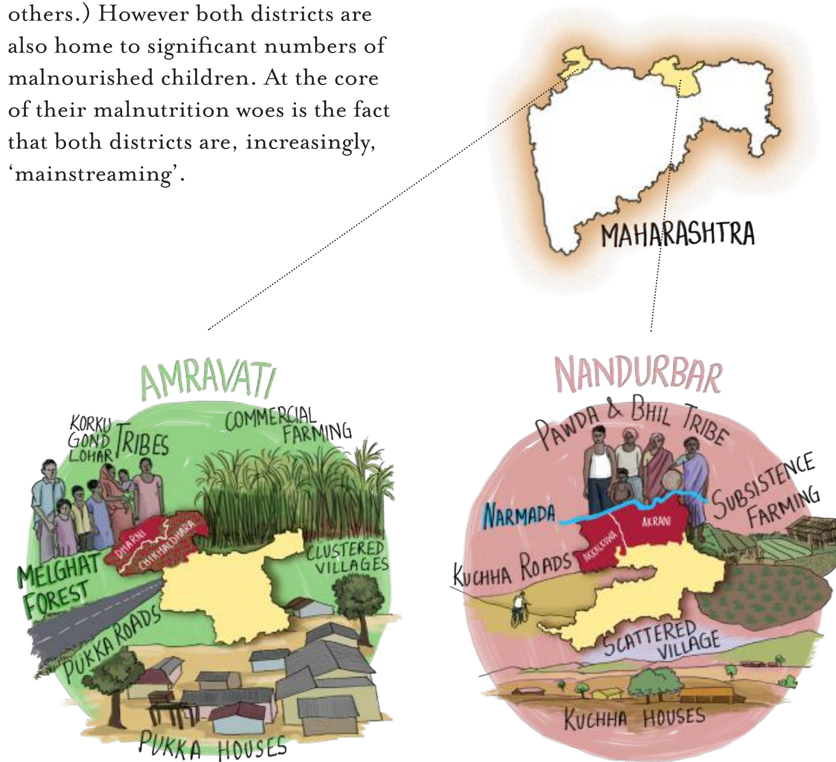
5 NFHS-4 (2018)

6 PIB. "POSHAN Abhiyaan to Address Malnutrition through Convergence, Use of Technology and a Targeted Approach." POSHAN Abhiyaan to Address Malnutrition through Convergence, Use of Technology and a Targeted Approach. March 20, 2018. Accessed July 19, 2019. http://pib.nic.in/newsite/PrintRelease.aspx?relid=177746.

Regions: Amravati & Nandurbar

Nandurbar and Amaravati are both predominantly tribal and hilly, remote districts on the edges of northern Maharashtra. Nandurbar is dominated by the Pawra and Bhil communities, while Amravati's tribal population include the Korku, Gond and Lohar communities. Both are primarily agricultural, Kharif cycle districts, which experience mass seasonal migration to neighbouring states of Gujarat and Madhya Pradesh between November and March.

When compared, some aspects of Nandurbar and Amravati demonstrate a binary dynamic – specifically in terms of their agriculture and infrastructure. (Amravati has witnessed more superficial development than Nandurbar - of roads, agricultural systems, housing materials, among others.) However both districts are also home to significant numbers of malnourished children. At the core of their malnutrition woes is the fact that both districts are, increasingly, 'mainstreaming'.



Challenges of Language

“

“How could I, when there was no one at home? When I couldn’t even properly understand what they were trying to tell me?”

The Pawra and Bhil tribes in Nandurbar speak Bhil while tribe in Amravati speak a combination of Gondi and Hindi dialects. For those who have picked up smatterings of Hindi, Marathi and/or Gujarati, communicating with health system actors and other state functionaries is still possible. But for those who speak only the native tribal language, engaging with ASHAs, Anganwadi workers, doctors and nurses at CHCS, quickly and comprehensively, can all become extremely taxing.

The problematic effects of linguistic barriers are manifest in state-appointed caregivers as well. Public health system actors who aren’t a part of the community and have little or no knowledge of the local tribal language, aren’t able to respond to patient’s needs appropriately without vernacular assistance. Take for instance the case of Nagaya. Her child was sick and she was taking care of him. Imagine her surprise to see an ambulance at her door one afternoon, when she was all alone at home, with medical staff informing her that the local ASHA had red-flagged her child. She was told that she must take him to the local hospital (4 km away). She protested, refusing to take her child; *“How could I, when there was no one at home? When I couldn’t even properly understand what they were trying to tell me?”*

Relationship with the Forest

Traditionally, in forested areas, the incidences of malnutrition have been few due to the natives dietary dependence on seasonal nutrition rich produce. Till date, the Korku tribe living around the forests of Melghat eat a lot of seasonal produce such as bottle gourd (shevga), mangoes and jamun, and are locally known for their fondness of spending long hours fishing in forest streams. But with increased soil and forest degradation, especially around the northern parts of Melghat, the regional climate has degraded, and the numbers and variety of food sources that forests offer have reduced.

In both districts, malnourishment appears to be a result of the fallout of the community's relationship with their green cover. Forests offered villagers refuge, shade, sources of food, income and fuel, at the very least. As a living, dynamic entity, the forest is a lifeline – unobtrusive, yet integral to the tribal routine. Increased degradation and human mismanagement of the forest will only further increase malnutrition among the tribals in the future.

An Agrarian Society

Communities here grow jowar, rice, urad and toor dals, banti (a local rice species), maize, soy bean, and peanuts for their own consumption. There is a systemic dependence on rain-fed agriculture, and a negligible use of irrigation systems, that invariably leads to low diversity in produce and diet. The communities' inability to harness the water systems, in addition to a blind belief in modern seeds and medicines that are sold in the market, and little technological adaptation, gives middling crop yields. In Amravati especially, with the rise of cash crop farming of wheat and sugarcane, a large segment of agricultural land is now earmarked for crops that are being grown for others, not the community.

Nandurbar sees this trend on a smaller scale. Such growth and consumption patterns directly impacts not only diet diversity, but also income and food security when looked at through forest degradation and climate change lens.

Migration, Transient life and Liminality

The heavy dependence on monsoon Kharif crop alone for economic security makes the tribal people extremely vulnerable. This necessitates a need for men in the tribal regions to migrate to the neighbouring states of Gujarat and MP in search of work during the months of November to March. Some move with families, others move alone, leaving wives, children and other dependents behind. People migrate for 4-6 months in a year, likely after Diwali and return before Holi. It's a hard life, made tougher by displacement into alien contexts, lack of community, and general linguistic and socio-cultural alienation that tribal communities experience outside their villages. Children in most households with high vulnerability have been found to suffer from undernutrition and malnutrition.
In migration sites, tribal people live in tarpaulin tents, braving the cold, since they cannot afford to pay rent for a pucca house. Unsurprisingly, it has been observed that they also source unclean food and water, and share their living spaces with stray animals and rodents, leading to poor sanitation and hygiene practices.

Migrants try to find temporary work of harvesting Rabi crops, or else tend to manual labour in urban centres. Men prefer to move with their wives to agricultural farms, where they both are allowed to work side by side. The 'hard' labour of harvesting crops is carried out by men, while the 'soft' labour of cleaning and tying the crops in bundles is a woman's work. Large farms (in Gujarat) have an established kyota system for this: a *kyota* is a man and a woman labourer combined. To get a job on a large farm, a man must take his wife with him. At the end of the day, women also cook meals to reduce expense on food. But if a woman is to travel with her husband, she is likely to take her children with her - especially if they are under the age of two. For the already vulnerable baby, the displacement into such an unrelenting environment can be devastating, leading her or him directly down a path from moderate to severe and then acute malnourishment.

अंगणवाडी केंद्र, खांडवारा

7 All names have been changed to protect our respondents' identities

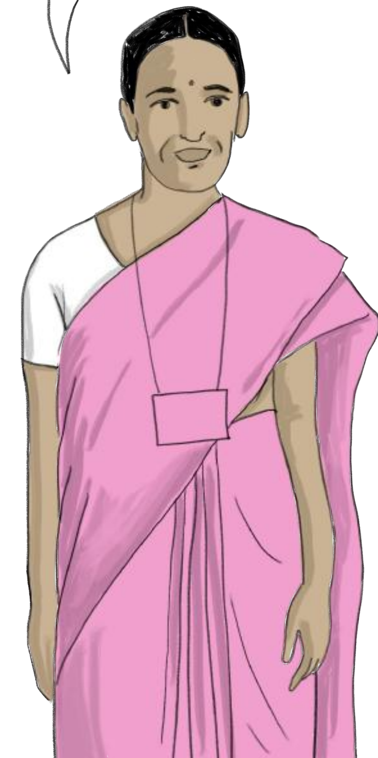
The case of Bindya

Take the case of Bindya[1] and Kallibai Pawra of Nandurbar who move with their sons, Akhil and Raghav, to Gujarat in search of agricultural work every Diwali. The couple works in sugarcane or wheat farms and are able to earn around Rs 45000-50000 in over five months. But they must live under tarpaulin tents, purchase poor quality food at a higher cost, and source unclean water from nullahs and borewells that can be miles away at a time. And if a health crisis arises, they must pinch pennies further.

Away from their homes, Bindya and Kallibai find themselves spending more than they would have liked and manage to save nothing. In February 2017, as the Pawra family was planning to return home, two-year old Akhil came down with repeated cases of diarrhoea and fever. The family was forced to pay for medical assistance as his health deteriorated.
Back home, their village Anganwadi worker upon examining Akhil, declared him as malnourished. He continues to be sickly, and a repeat visit to Gujarat in late 2018-'19 rendered him even more frail.

Every year after Diwali, Bindya and Kallibai Pawra move to the neighbouring state of Gujarat along with their two boys, in search of work as agricultural labourers. The couple works in sugarcane or wheat farms, warning around 45000—50000 rupees in five months.

Last year in February as the Pawra family was planning to return home, their two year younger son Akhil suffered from repeated diarrhoea and fever. The family took medical help as his health started deterioriating.



Health cultures and Ecosystems

“Hum pehle bachche ki nas, aankh aur pet check karte hai. Hum pet pe chatka dete hai. Agle din voh phir dubara check karwane aate hain ki bachcha theek hua ki nahin. Agar bachcha theek hota hai toh ek hafte baad woh hume nariyal lake dete hai.”

Far from the stereotypical picture of poor sanitation, the tribes residing here maintain healthy sanitation practices, ensuring their living areas are clean and organised. Since lizards and snakes are common pests, food items are sealed or protected and kept off the floor. Cultural beliefs around cleanliness lead some members of these communities to bathe more than once a day.

Concepts and cultures around health found here further justify arguments for the culturally-sensitive intervention. The culture of health seeking here is based on a complex layering of notions, around the severity of the symptoms a patient presents; accessibility (convenience), and the perceived efficacy of a treatment. There is some consensus that private, modern health care is most effective when it comes to treating severe conditions. However, despite its reliability, first touch points for health seeking behaviour are nearly always traditional healers*. It has been observed that in the initial stages of any illness, most tribal households present a minimal response -- the symptoms are either ignored or are attempted to be treated through home remedies.

Culturally, poor health is a sign of something ‘evil’, that needs chasing away. For this, the customary thing to do is to turn to practitioners in the hierarchical traditional health system, namely, bhumkas and bhagats, whose repertoire and understanding of symptoms are questionable. Raimal, a 40-year old bhumka from Akhrani block, Nandurbar, describes a typical interaction with a family: *“Hum pehle bachche ki nas, aankh aur pet check karte hai. Hum pet pe chatka dete hai. Agle din voh phir dubara check karwane aate hain ki bachcha theek hua ki nahin. Agar bachcha theek hota hai toh ek hafte baad woh hume nariyal lake dete hai.”* (I first check the child’s pulse, eyes and stomach. I apply a hot road on the stomach. The next day they return to check if the child is recovering or not. If the child gets better, they come back after a week to gift me coconuts.)

BHUMKA

who performs short ritual with the patients to expel the evil spirit out of one's' body.

people receive holy water or chanted food items (mostly dal, jowar) and sacred threads to protect them.

People visit the traditional healers for all kinds of illnesses- common cold and fever, stomach aches, scabies and also suspecting prolonged symptoms to other illnesses.

These players are first sought when universal symptoms such as fevers, aches and/or skin irritations manifest. The treatments the traditional healers use are couched in rituals - for example, the chatka ritual which involves the branding of flesh at certain pain points in the body, with hot metals. (This practice is also very common in northeastern India and in south east Asia). Offering chants, blessing foods that the patient eats, and tying sacred threads are common. Each treatment by a bhumka may go on from one to two weeks.

The traditional birth assistant, or dai, is integral to the process of bringing life into the world. Dais bring knowledge and comfort to the pregnant and lactating women's homes, assuring them respect and privacy. In contrast, ASHAs, ANMs and doctors at the health centres require pregnant patients to come to them, and their brusque and impersonal manner is further alienating. The extent and depth of the dai's presence in these communities is demonstrated by the rituals and ceremonies that are centred around her (blessing event of mother and child, songs and dance).

Breastfeeding is a fairly common practice among new mothers in both the districts. Seasonal migration, poor food habits, severe anemia, sickle cell disease, stress due to work in households or farm fields and lack of understanding of importance of breastfeeding are few factors posing hindrances to proper breastfeeding. Women in these tribal communities usually do not face lactating problems but are majorly unaware of best breastfeeding practices and are not proactive in seeking care. This leads to under nourishment of babies under 1000 days, resulting in extreme malnutrition and stunted growth.

DAI

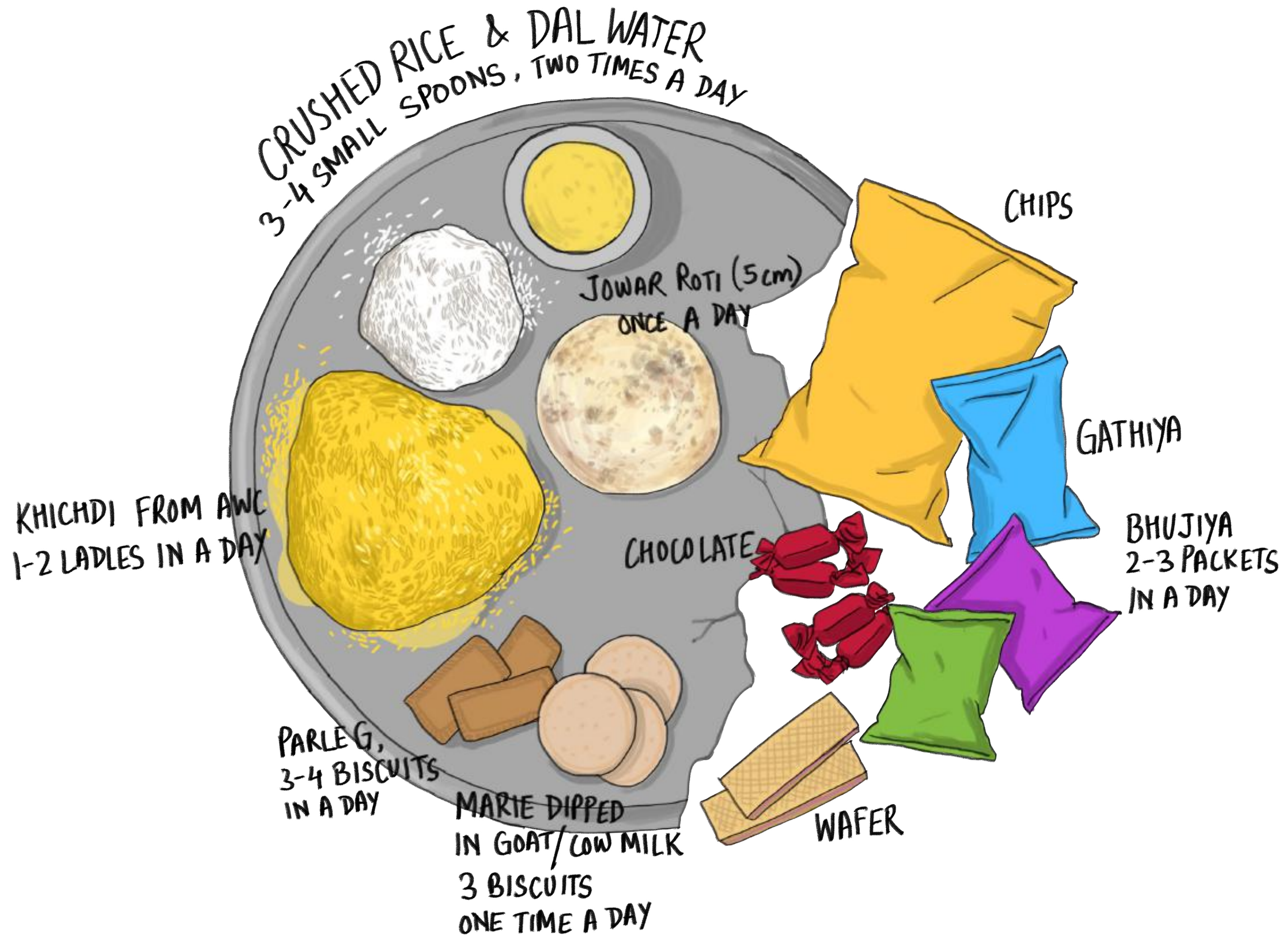
She makes sure that new mothers are being taken care of in the family, given a proper diet including kutki (traditional millet), coconut and jaggery to increase lactation and provide strength

Culture, Diet & Cuisine

On a visit to Nandurbar recently, one of Vihara's researchers asked a respondent why their diet didn't include as many fruits from the forest anymore. Turned out, it was a question of palatability – "*Achha nahin lagta*." The growing presence of junk or fast food, even in remote villages in Nandurbar and Amravati, threatens the life of the local, more nutritious cuisine in these parts.

Traditionally consumers of tubers, leafy green vegetables, wild grain and fish, tribal communities here have replaced the local, cruciferous items on their plates with increasing amounts of processed food.
It would seem that a growing disconnect with now depleting forests is behind this shift, along with an urge (or could it be a perceived need?) to replicate urban popular cuisine cultures.
At the village level, observers find increasing numbers of village shops that sell junk food, and are easily accessible, particularly to young children who prefer the latest flavour of chips and fried cornflour-based snacks, as compared to locally produced healthy food. In another of Vihara's interactions, the respondent, a young mother with a 1.5 year old son, spoke of how one day he refused to suckle, then refused to drink milk. The worried mother finally struck gold when she crushed two biscuits into his drink. Since then, the child has required biscuits with each meal (Even as researchers interacted with his mother, he sat by her side, munching happily on packets of chips and biscuits).

Today, a typical 8-month to two year old child feeds on a combination of rice, dal, rotis, and negligible amounts of cow's milk.
It's also important to note that good nutrition, with diversity in diet, appears to be seasonal in both districts. In the months when migration occurs, food diversity for both, those that migrate and those who stay back, is expectedly lower than in the rainy months.
Kitchen gardens are a common sight, especially in Amravati, when attached to pucca housing. A well cultivated garden can be a lush source of green leafy vegetables, pumpkins, tomatoes, brinjals, cauliflowers, cucumbers and chilies after monsoon, in the months from June to November. But changing palates mean these options can go ignored.

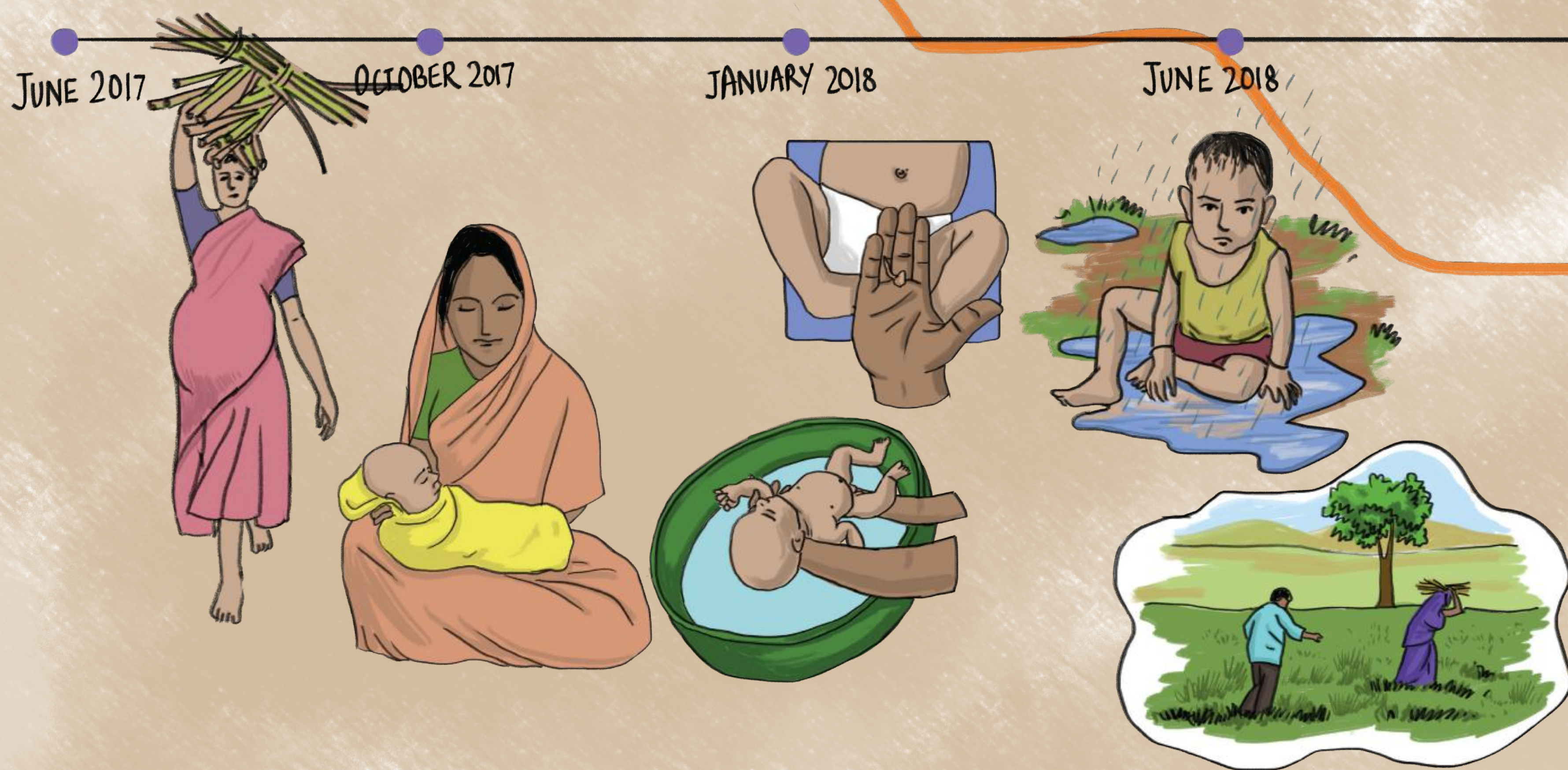

CRUSHED RICE & DAL WATER
3-4 SMALL SPOONS, TWO TIMES A DAY
CHIPS
JOWAR ROTI (5cm)
ONCE A DAY
GATHIYA
KHICHDI FROM AWC
1-2 LADLES IN A DAY
CHOCOLATE
BHUJIYA
2-3 PACKETS
IN A DAY
PARLE G,
3-4 BISCUITS
IN A DAY
MARIE DIPPED
IN GOAT/COW MILK
3 BISCUITS
ONE TIME A DAY
WAFER

The Overall Health Journey of a Two-year old

Children living in larger households of more than 8 members have greater odds of being stunted than children in households with up to 5 members. It was observed that as the children became older their odds of being undernourished increased in larger families. The first caregiver for a child is the mother, who must not only feed her or him but also ensure a safe and clean environment, and flag health concerns, at all times. But babies are also tended to by grandmothers and dais, who in particular have an elevated role to play in deciding the practices around her or him, and the supporting environment. In comparison, ASHAs, ANMs and doctors are seemingly accorded minimal space around the newborn. While the need for early breast milk feeding initiation is acknowledged, in reality, babies appear to struggle with suckling. As they grow and are introduced to solid foods, the average baby reject these in favour of milk, and display lower appetite. In both districts, an average 6 to 9 month old child will have started displaying low growth rates, stunting or even wasting by this time. Landmarks such as the appearance of the first tooth, crawling or walking, are also delayed. By this age the baby also starts to fall ill with minor complaints, sometimes frequently. By the time she or he is two, moderate acute malnourishment will have set in, resulting from a layered possible combination of problems - uninformed caregiving, minimal response to initial symptoms, poor diet diversity and frequent displacement, among others.

Even if an under two child survives acute malnutrition, the marginalization she or he must endure as a migrant adolescent or young adult will further reinforce the nutritional effects they endured as children. Migrancy, lack of access, inability to communicate with the state systems, will all eventually impact their ability to build new, healthy and productive families, unless certain all-round solutions to addressing malnourishment and its causes are implemented soon.

HEALTH JOURNEY OF 1.5 YEAR OLD BOY TARUN WHO WAS DIAGNOSED MALNOURISHED IN JANUARY 2019 (AS REPORTED BY HIS MOTHER, MANI)



Mani works in farm while she is 6 months pregnant with her fourth child. Her ANC test reveals that she is anemic.

Mani gives birth to a 2 kilo baby boy at home, her mother in law assists as the dai of their village. After the navel cord dries and falls off, they name the baby Tarun.

Tarun experiences minor symptoms of cold. Mani and the family chooses to not seek treatment, hoping they will go away.

Tarun experienced high fever and symptoms of cold. Mani believes this illness occured in the monsoon season. As she was busy working at her rain-fed farm, she could not pay active attention to Tarun. He remained wet and cold.

DECEMBER 2018

MARCH 2019

APRIL 2019

The family member visited their village Bhumka. They also visited PHC Horafali 5 times and PHC Helamba 1 time. They consulted with 2-3 renowned bhumka. But, there was no improvement in his health.

Mani reports that Tarun's appetite is low. His complimentary feeding also began at 8-9th month of age. Treatment: Ayurvedic medication were given to Tarun in the hope to cure cold symptoms.

All the recurring illness and running around for treatment has caused another severe sickness episode for Tarun. This time his condition is extremely critical, when he fell unconscious the family chose to take him to a Private Hospital

Design

Designing For Hard To Reach Population

The Nutrition India Program proposes six preliminary strategic directions, based on barriers and opportunities identified from the research undertaken in Nandurbar and Amravati. We have triangulated findings on vulnerability indicators, critical challenges around nutrition, social and environmental risks, local health perceptions, organic health networks, resources, deeply rooted health behaviors and rituals, and the cultural meaning making, to build strategies that are rooted in insight, account for user needs and sensibilities, leverage positive health cultures inherent to this cultural group, target those that have the most need, and make innovative and efficient use of local resources.

Our ethnography-forward design approach has allowed us to identify, foreground and respect positive local health cultures, practices, and ontologies that sustain these populations, whose benefits must be maintained and built upon rather than them being eroded by an unsympathetic line of intervention.

The directions offered here propose interventions at different levels. Some directions are aimed at improving the efficiency of referrals, and timeliness of critical care in the event of acute illness and malnutrition, while ensuring social and monetary incentives to complete treatment and improved quality of care for beneficiaries who've been recalcitrant in their attitude towards the public health system thus far.

Other approaches aim to build resilience of these beneficiaries, enabling healthful and preventive behaviours, building better care-giving capacity and vigilance toward danger signs so that their interactions with the public health system are reduced. These interventions aim to weave trust, faith and better communion with historically marginalized populations.

THE CALL TO ACTION ITEMS ARE AS FOLLOWS

/ Create a community nutrition cadre to mobilize, monitor and coach

/ Build trust and a shared glossary of health knowledge: Enable care-givers and health providers to better understand, relay and address the health and illness patterns amongst children, using mediators and visual cues

/ Incentivize Access To Critical Care And Rehabilitation For The Malnourished: Accelerate timely care through self-identification, networked referrals, incentives to complete care and post illness care counselling

/ Port health across native and migratory settlements: Build resilience by priming and equipping families with information, hand-holding and tools to achieve better nutrition and maintain health even in migratory locations

/ Sync with local cultures of health: Leverage and elevate local health cultures, systems, practices and players to achieve better nutrition outcomes for children

/ Revitalize food cultures for nutrition security: Focused interventions around enabling nutrition diverse and resource efficient kitchen gardens as well as nutrient dense recipes

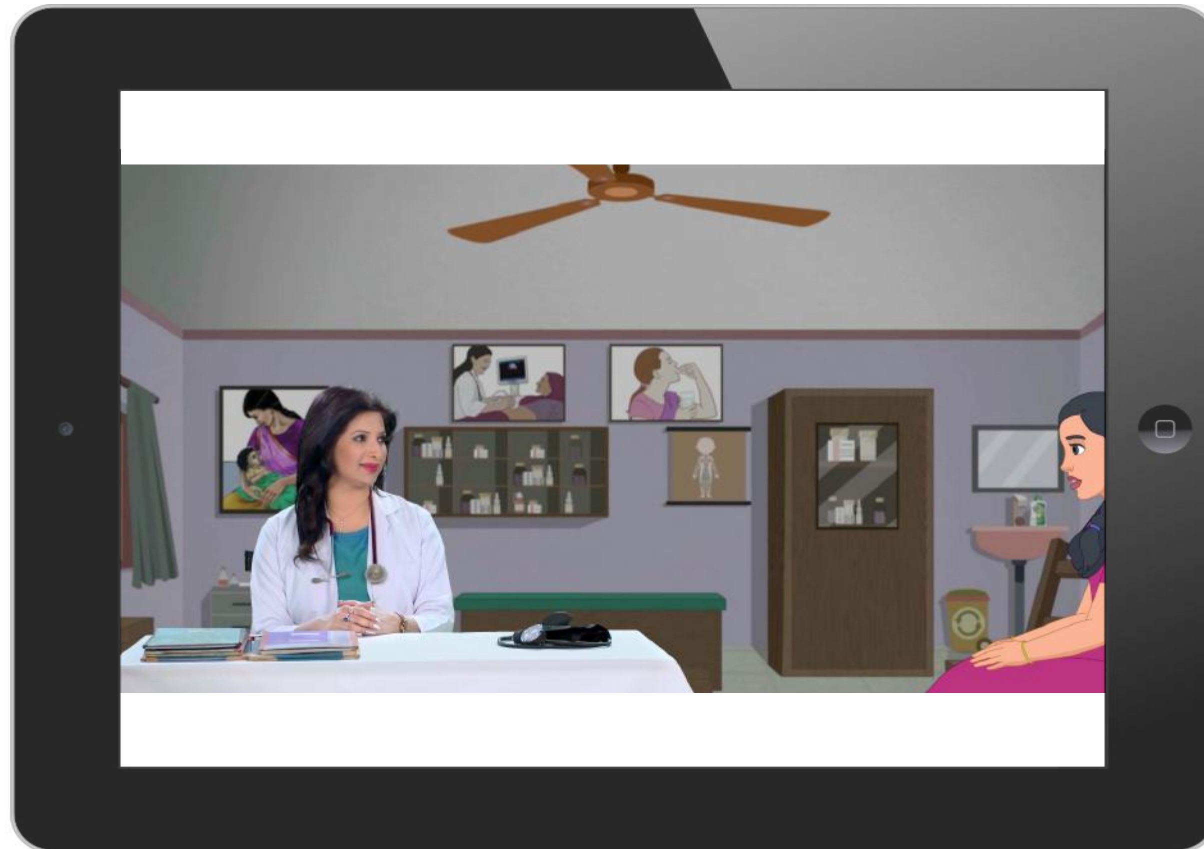
Create A Community Nutrition Cadre To Mobilize, Monitor And Coach

The National Rural Health Mission (NRHM), under the Ministry of Health and Family Welfare (MoHFW), introduced the accredited social health activist (ASHA) system in 2005, to create a vast cadre of village-level female community health workers, with a target of full public health implementation across all villages in India in 2012. Research studies and literature on ASHAs point at extreme workload, lack of or too much of training, lack of means of transportation to cater to far flung villages, inadequate and delayed monetary incentives as some of the broad challenges they face. We found that ASHAs' motivation levels are low and their competencies are not always enough to cater to their communities.

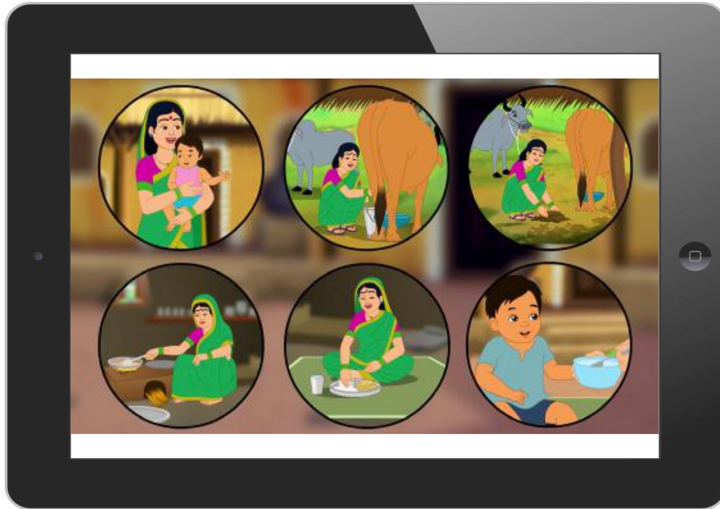
As major part of Nutrition India Program, an informal community nutrition cadre comprising of women from the local regions will be trained and deployed across Nandurbar and Amravati. This cadre is essential to mediate between the community and health care providers in order to promote positive health care behaviors and to facilitate sustainable adoption of health practices. Through this program, an all women volunteer network of nutrition cadre is established. As a pilot, 41 nutrition workers, catering to 5 villages each, targeting SAM/MAM/SUW children, women (high risk pregnant women and women facing issues in lactation) and the community are deployed.

This network of nutrition workers will be equipped with knowledge and skills to mobilize vulnerable populations on adopting healthy nutrition behaviours and practices. Through an interactive and detailed curriculum with multiple training modules, these nutrition workers will be trained by experts and doctors on understanding malnutrition, care of adolescents and young mothers, care during pregnancy, birth preparedness, antenatal and postnatal care, diet diversity, breast feeding practices, health and hygiene practices and so on.

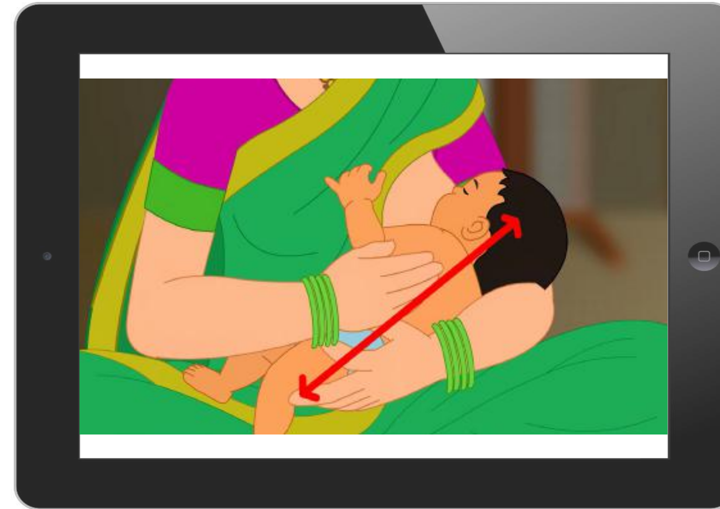
Video Training Module By Experts And Doctors



CNWs representing the community and their queries to a doctor



Counselling around hygiene practices like hand washing before feeding a child

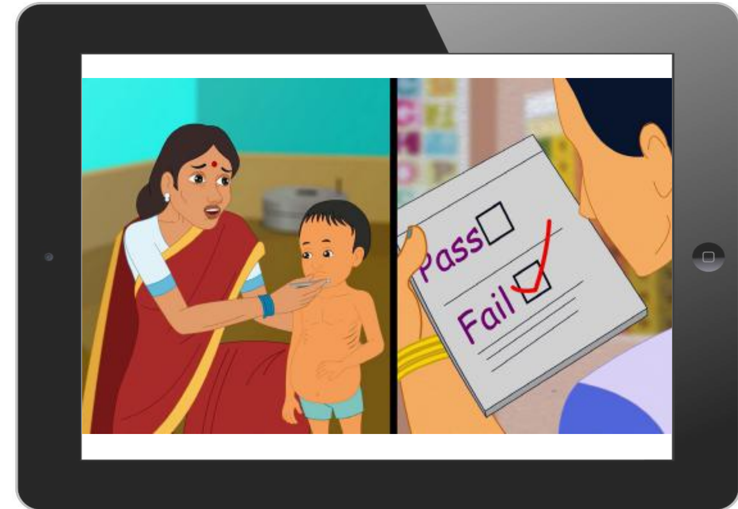


Counselling around safe and proper breastfeeding practices

Counselling around diet diversity during pregnancy

Counselling around required Immunizations for a child

Counselling around necessary steps to be taken around nutrition of a child like treatment at NRC, accessing PHCs for checkups etc



Counselling around symptom identification of a malnourished child

NUTRITION KIT TO AID IN SOCIAL BEHAVIOR CHANGE COMMUNICATION

Community mobilization is key to inculcate healthy-practices among target women and children. At the core of community mobilization is the need to adopt appropriate mechanisms to venture into the community. Social behavior change communication (SBCC) is an interactive way of developing communication strategies through which communities are able to adopt positive behaviors which are appropriate to their settings. SBCC provides a supportive environment which will enable people to initiate, sustain and maintain positive and desirable behavioral outcomes.

To facilitate in SBCC and support the nutrition workers in their tasks, **a Nutrition Kit** targeted towards increasing knowledge, building awareness and practices around healthy nutrition practices and health seeking behaviors among expectant mothers, children (aged 3-5 and 6-10) and front-line health workers is designed. This kit has been designed mindfully and incorporates various tools and games catering towards the above mentioned groups through social and behavior change communication strategies. The proposed modules in this kit are the following: good and bad eating habits during the first 1000 days of life, education on nutritional values of food items, hygiene practices and slides demonstrating best practices during and pre and post-natal stages.

EARLY IDENTIFICATION AND TIMELY REFFERALS OF SAM/MAM CHILDREN

Targeting malnourished children and ensuring their timely care is imperative to improved nutritional outcomes among under 5 children. The nutrition workers will be equipped and trained on identification parameters of SAM/MAM/ SUW children. Thus, early identification and referrals to NRC can be initiated. The workers will begin with mapping village households and identifying the SAM/ MAM children. Such children will be registered and will be monitored to check for their health progress to ensure their timely care. Mothers and family members of severely undernourished children will be counselled at the household level using videos which would be vital to enabling better understanding of nutritional challenges.

It is crucial to ensure monitoring of intervention activities to enable in follow up and to escalate emergency health cases. Prompt identification and treatment of severely under-nourished children and their admission into the closest Nutrition Rehabilitation center is critical to the child's health. The nutrition workers will assure the monitoring of the admitted children who will be followed up on post their treatment period at the Center.

Food required for an infant from birth upto 2 years

Good and bad habits for the first 1000 days

Make your own meal plate

Nutrimania

Hand washing pamphlets and game

Facilitating Communities in availing health care services

The health of a woman pre, during and post pregnancy plays a crucial role in determining the health of the child. Hence, identification of high-risk pregnancy women, those with lactating issues, those suffering with health severities in the journey of giving birth will be identified and counselled. Women in critical conditions will be immediately referred for timely care and health assessment to protect the health of the mother and the unborn child. Women, suffering from health severities during pregnancy (such as high risk pregnancies, anaemia and so on) will be identified and monitored for their health progress. Women will be made aware of best eating practices during pre and postnatal stages through the use of the games in the Nutrition Kit.

Ensuring Breastfeeding practices

Special attention will be paid to breastfeeding and proper breastfeeding practices. Early and exclusive breastfeeding helps children survive and also supports healthy brain development, improves cognitive performance and is associated with better educational achievement at age 5. Breastfeeding is the foundation of good nutrition and protects children against diseases. This project will ensure that breastfeeding practices taught by the community nutrition workers are in alignment with the UN's breastfeeding conduct.

EVIDENCE BASED INTEGRATED APPROACH TO NUTRITION MANAGEMENT

To support mother and child journey through care continuum, a real time monitoring mechanism has been developed by Dure Technology for this project. The key features of this mechanism are to ensure service delivery across the care continuum, use of evidence to support nutrition management and real time data visualization and analysis for intervention refinement.

Nutrition workers, post registration of identified mothers and children, would be able to track them during various stages of health check ups. Through this dashboard, nutrition workers will be able to set a task list and check for alerts for immediate attention towards mothers and children in need of critical care. Such evidence based prioritization would help the nutrition workers in catering to their assigned 5 villages efficiently. The data generated from this dashboard would be utilized to generate data analysis insights and interactive maps to identify individual, village level and block level status quo of identified mothers and children. This real time data analysis and visualization would in turn help in immediate intervention refinement.

Mobilizing communities on the Village Health, Sanitation and Nutrition day:
Anganwadi Centers and front-line health workers such as ASHAs are vital access points to interact with women in a village. These access points not only allow for the initiation of timely referrals for children and women to the closest health care centers but also allow for an opportunity to mobilize and to disseminate information regarding health (ANC, Immunization) and sanitation on the Village Health, Sanitation and Nutrition day (VHSND). Since VHSND presents a platform to engage with the community, the nutrition workers would leverage this platform to ensure dissemination of nutrition related practices. Sub-women groups will be formed at the MATA samiti to provide a forum for discussion and knowledge dissemination with regard to health, nutrition and sanitation.

Driving hygiene practices through digital application

On the hygiene front, a clean village drive using Swachata application will be undertaken periodically to inculcate hygiene practices. The core of the Swachhata application is to use citizen participation and civic engagement to help resolve the Swachh Bharat complaints and this application will be utilized to complement the health, nutrition and sanitation interventions being undertaken. Similarly, VHSND days will be supported in order to interact and sensitize the community.

Swachata Chakra

Swachata chakra is an interactive android game designed for frontline workers to create awareness on personal and environmental hygiene like sanitation practices among the community members especially mothers, caregivers etc. It consists of a set of multiple choice questions around situations and decisions undertaken by an individual pertaining to hygiene and sanitation in daily life. This quiz helps in monitoring the change in knowledge and increase in the understanding of player/s about hygiene and sanitation practices. Moreover, it helps in building connection with frontline workers and motivates the player/s to adopt or improve WASH practices as a part of their daily routine.

स्वच्छता चक्र-एक कदम स्वच्छ भारत की ओर
नया यूज़र
पुराना यूज़र
दर्ज करें
पड़ाव 1
पड़ाव 2
पड़ाव 3
व्यक्तिगत स्वच्छता
घरेलू स्वच्छता
बच्चों से जुड़ी स्वच्छता
भोजन से जुड़ी स्वच्छता
स्कोर बोर्ड

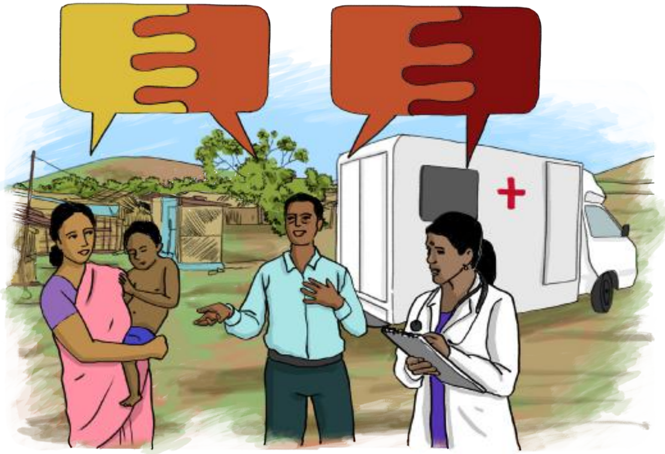
Advocacy Among Community And Government Stakeholders

The nutrition workers will help in implementing targeted activities to develop health habits among children. Early development of health habits among children is pivotal in ensuring responsible and healthy future citizens. To that end, a village child development center focused on health, nutrition and sanitation will be facilitated in tandem with front-line health workers and government stakeholders. At the school level, a curriculum focused on healthy habits will be implemented and school children will be mobilized through interactive exercises and games.

Another essential aim of advocacy is to aid in convergence of government stakeholders for ease of intervention. Networking and developing partnerships with government stakeholders is key to warrant sustenance of the project. Government stakeholders across the district, block and village level need to be aware and in support for the successful project implementation. Health officials at the block level will be coordinated with to enable data collection for project implementation. Additionally, periodic project presentations will be made at the review meetings at the district collectors office to keep the administration in loop with regard to project progress. At the village level, the community will be sensitized to take an active part in the local governance. Participation in the Panchayat and attendance in Gram Sabha is strongly encouraged.

Build trust & a shared glossary of health knowledge

Enable care-givers and health providers to better understand, relay and address the health and illness patterns amongst children, using mediators and visual cues



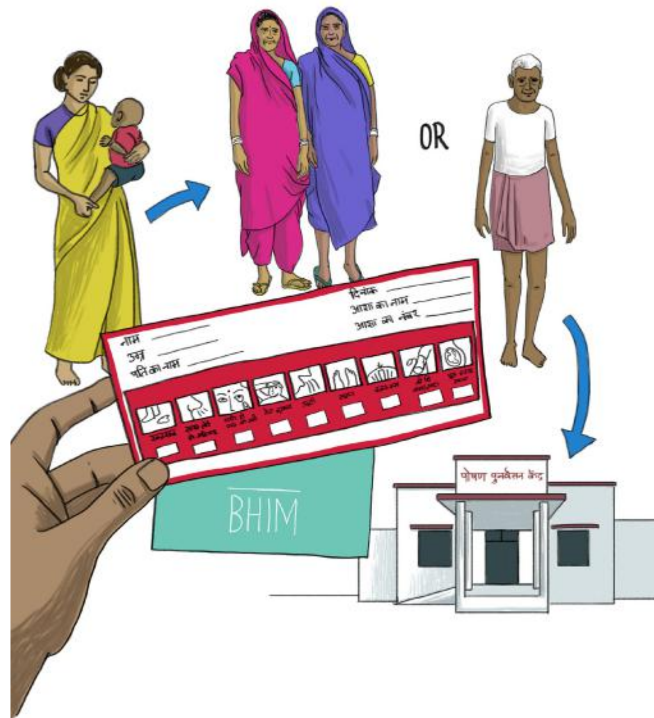
Linguistic dissonance is one of the most understated and overlooked barriers in health, and more so for marginalized and tribal populations. We propose a series of micro-solutions planted at key nodes throughout the health journey, so as to enable smooth communication and comprehension between tribal families and health providers.

Care Mediators, an informal cadre of bilingual members of the local community, can act as bridges between care-givers of children and health providers. They can help bridge not only the language but also the cultural divide between health workers and families at pressing times of sickness. Cadres would translate subtle symptoms and health histories that care-givers have observed to doctors to inform a comprehensive diagnosis. They would also relay to families in their own language the condition of the child; treatment needs; how families should think about home-care and follow up, and encourage questions and clarifications with doctors. In doing so, they would help mediate the overall experience of the public health system, while allowing vulnerable families to feel more informed, in control and confident that their children are receiving reliable care.

A common dictionary of health, for different Marathi, Hindi and tribal dialect speakers, would translate key vocabulary pertaining to cultural concepts of health, illnesses and symptoms, thus improving shared understanding across different cultures and systems of health (tribal communities and health functionaries). These artefacts can be positioned at PHCs and NRCs, with Care Mediators and doctors, and in communities with tribal healers, front-line workers and families in communities. These dictionaries could be designed to be user-friendly, using mix media with rich visual representation and audios in local dialects.

Incentivize access to critical care & rehabilitation for the malnourished

Accelerate Timely Care through Self-Identification, Networked Referrals, Incentives to Complete Care and Post Illness Care Counselling



Challenges such as low recognition of danger signs, lack of urgency to address them, no referral system connecting the traditional and public healthcare system, and expensive travel to and long duration stays at nutrition rehabilitation centres, all act as deterrents for tribal and marginalized populations. The result is that a majority of malnourished children either do not reach NRCs to receive timely and critical care, or leave the NRC before the prescribed treatment course is completed. In addition, a deep faith in and preference of traditional healers often precipitates a gap in the treatment of malnourished children. Unable to identify the underlying malnutrition, parents only address the superficial symptoms by seeking out traditional healers, who aren't necessarily equipped with the training or knowledge on malnutrition. Children are only brought to the local ASHA or FLW's attention once her/his condition has worsened significantly.

We propose the establishment of an interlaced referral and incentive system that allows:
i. families to self-identify and self-mobilize, and, **ii.** traditional care providers and health functionaries to screen and refer malnourished children and nutrition rehabilitation practitioners to receive and provide critical care to acutely malnourished children.

For a tribal migrant population, with a life on the move 5-6 months of the year, a travel coupon with danger signs for health can prove to be an extremely powerful tool to identify health threats and take corrective steps to overcome them. Such a travel coupon would function to:
i. mobilize families to seek appropriate medical attention for their children,
ii. illustrate the danger signs that require care, **iii.** detail the care pathways, and
iv. emphasize the requisite incentive structures that can cover the cost of their travel and stay at the NRC.

At the home site, bhumkas, bhagats and other village-based health functionaries could be trained to help interpret observations of symptoms, screen the child, mark them on a Lal Parcha (red card, or immediate referral card), and guide them to immediately seek care at the nearest PHC or NRC. The child is able to receive timely and critical care at the

NRC and the family is counseled on conditional cash transfers and incentives to be received upon the completion of the 14 day requisite treatment. This hopefully not only motivates the family to complete treatment but also makes the 14 days stay feasible for them financially.

It would be key to for any program to leverage the moments of health crises, when families show high levels of intent and responsiveness to change, to emphasize the need for restorative care and transformation in key health behaviours. This also gives the program a window of opportunity to build faith in public healthcare facilities and doctors. Families can also be given visual recovery action plans to help mobilize best care behaviours by the family, when they return home. This also enables the mother to become more conscious as well as increase her ability and motivation when it comes to the treatment of her child. The travel voucher supports a family economically, especially given that a couple may have more than 3-4 children.

Children who were diagnosed as SAM in Amravati and Nandurbar were being referred to NRC and admitted for treatment, but our research findings show that they have eventually been returning home with their mothers before the completion of their treatment cycle. According to the protocol, after a child is referred to the NRC, they stay there in the care of their mothers, the doctors and the nurse for two weeks, until the improvement of their health and they gain weight.

The NRC caretaker in Dhadgaon shared that the mothers took their children to traditional healers after a week of treatment is completed at NRC. Many a time, the mothers are too worried about their homes, daily chores and of leaving everything behind to live in the NRCs for two weeks without any incentives which is bartered of their times of working in the bears the brunt of this poverty and ignorance.

We propose the introduction of **Conditional Cash Transfers (CCT) to mothers of SAM children**, in order to achieve a sharp reduction in the proportion of underweight, severely malnourished children in the project area and to influence nutrition in other ways. Through CCT, the implementers can credit a certain amount in the name of mothers who come to the NRC with her SAM child complete the treatment cycle, also coming for the first few and very important follow ups at the NRCs.

The cash transfer can be done in different branches, until the child is completely rid of malnourishment. The spending patterns can be decided/influenced through the scheme, predominantly used to diversify their diets, with an increase in consumption of milk, vegetables, meat and other nutritious food items. Right kind of messaging to women along with the cash, attached to certain conditions can

make significant dents in breaking the malnutrition cycle.

To strengthen the interlaced referral and incentive system, blockchain technology will increase transparency of information, efficiency of processes, promote evidence-based actions and collaboration amongst the stakeholders like traditional care providers, health functionaries, nutrition rehabilitation practitioners, patients (mother and child), community based entrepreneurs (CBE) like ASHA, AWW etc.

For example, for the travel coupon on blockchain system will store records for every transaction of the coupon, i.e. when was the voucher issued and by whom to whom, when was the voucher redeemed and by whom; making this information available to a network of participants like mothers and the service providers, thus ensuring transparency and traceability of travel coupon with economic benefits. The blockchain network will allow the entities to transaction and update information on the network which will be accessible to all the participants based on permissions and roles.

PROCESS OF USING BLOCKCHAIN TECHNOLOGY FOR TRAVEL COUPONS

i. The CBE and NRC will be the participants of a permissioned blockchain network.
ii. The CBE will issue the coupon to the target audience (mother) and scan the coupon code. The coupon code will be stored in blockchain, with owner as the CBE.
iii. The mother can redeem the voucher for services/NRC. The service provider/NRC will scan the coupon which will change the corresponding coupon state as "REDEEMED" on the blockchain and the owner as the NRC.
iv. At any point in time the CBE / NRC / Government will be able to view the details of any coupon transaction on blockchain.

The blockchain solution with programme data from core systems will enable traceability of coupons, transparency on usage of coupons and provide indicator on the efficiency of coupon processing and thereby the programme.

Port health across native & migratory settlements

Build resilience by priming and equipping families with information, hand-holding and tools to achieve better nutrition and maintain health even in migratory locations

It is clear that children are most vulnerable when they move with their parents to migratory and makeshift sites, as they lose the nutrition and care-giving cover they enjoyed in their homes. While curative and reactive treatment in SAM and MAM children can ensure survival in acute weather and environmental conditions, they have their limits, and are unable to address the pervasive malnutrition. Post-treatment, children return to the same hazardous environments that reinforce the causes that led to malnutrition in the first place and the cycle of chronic malnutrition perpetuates. Alleviating migration related instability and vulnerabilities is crucial in building sustainable health and resilience in children.

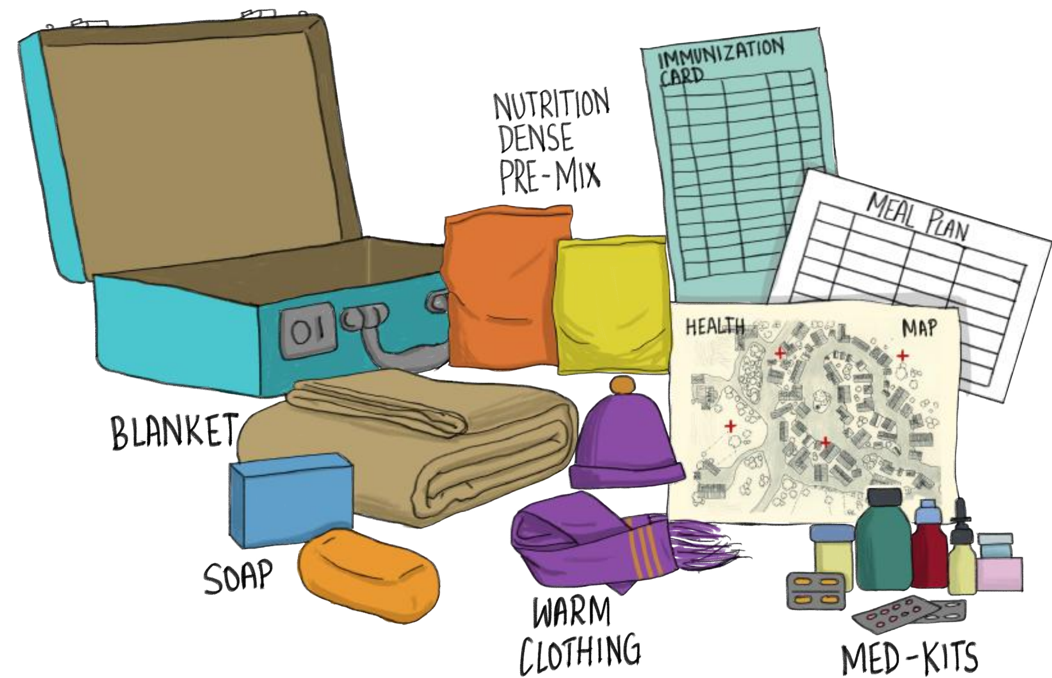
An easy start would be to either directly connect migrating families to the nearest PHCs and NRCs at the site of migration, or else teach them to identify the nearest public health centres. However that alone might not be a satisfactory measure. We propose that migration facilitators are engaged, oriented and re-positioned to initiate a series of resilience rituals in collaboration with local health functionaries.

Migration facilitators can be provided training on how to navigate health in new contexts, where to seek care as well as details on the nearest health facilities. The migration facilitator also actively promotes family planning and spacing among children in the tribal families. They are also provided risk cards to identify early warning signs of social and economic insecurity. The vulnerable families are given focussed solutions from suggestions on nutrition intake to connecting them with available government schemes.

Resilience rituals can be carried out before families and children leave the village around festivals (Diwali and Holi). One component of these rituals can be health camps where through focused communication, risks to child health in new contexts can be made visible to families. They can be given tips and tricks on maintaining health and nutrition of children in migratory sites, shielding from infections, and how and when to seek care. In the health camps, children can also be screened for vulnerabilities. In the month when migrant communities return, focused screenings can be held to identify and refer malnourished children to healthcare facilities.

Families can be given, or instructed on how to create, a portable and user-friendly child health, nutrition and hygiene kits that makes it easy for families to shield their children from risk and adopt positive and healthful home care behaviors in make-shift sites. These Home-Care kits can be provided at the site of migration on loan or on rotation basis. These kits can include information artefacts and tools, such as visual health routine checklists, healthy homes blue-prints, medicines, meal-plans, utensils for children, soap, immunization cards, warm clothing, blankets, mosquito nets, health maps to nearest facility etc. Home-care kits can be made through local Self Help Groups.

The material and habitat cultures of the homes of these populations reveal a practice of keeping homes neat and organized. These inherent healthy behaviours and sensibilities provide a good base to introduce better home-care tools and hacks. Some of these hacks could include assigning complementary feeding bowls to children to help measure quantity of food, teaching the methods of creating DIY tippy tap hand washing stations, and smokeless chulhas, and providing children with abundantly available local bamboo insulated mattress and safe zones to enable positive and healthy behaviours.



Sync With Local Cultures Of Health

Leverage and elevate local health cultures, systems, practices and players to achieve better nutrition outcomes for children

Part of the reason intervention approaches undertaken by the health systems have historically not worked for tribal populations is due to continued conceptualization of these groups in relation to the mainstream. Efforts need to be made to understand the behaviour patterns of the tribal people and their worldview toward health in its own right. Tribal communities in Amravati and Nandurbar have distinct ontologies that view body, disease, health and wellness fairly differently from modern medicine systems. In local cultures, health is a function, not merely of the physical body or biomedical care but also of energy afflictions, evil eye, spirituality, behavioural patterns and familial, social and cultural dimensions.

Bhumkas, bhagats, parihaars, dais etc. are deeply woven into tribal communities, make communities feel understood and attended to, and are always sought out in instances of illness. An alliance between local healers and health system functionaries could be instrumental in achieving better health for these communities. We propose to collaborate with faith based healers, traditional birth attendants and alternative medicine practitioners by undertaking workshops to discuss their view of community health, orient them toward critical nutrition behaviours, co-create local nutrition and referral system solutions and on-board them as nutrition activists and collaborators. We envision that bhumkas as community nutrition catalysts will in the future:
i. provide more integrative nutrition counseling including dietary planning and food procurement, **ii.** screen children for malnourishment or vulnerability, **iii.** be integrated into resilience rituals and health camps **iv.** refer malnourished children to front-line workers and health facilities, and finally **v.** track nutrition status of children along-side health workers to ensure recovery and identification of cases of relapse.

In addition we propose to leverage and train local networks of dais, traditional birth attendants, who are the first touchpoint for mothers so that they **i.** help mothers identify danger signs, **ii.** reduce the time for appropriate treatment, **iii.** refer the cases to NRC when the onset of malnourishment is observed and **iv.** learn and deploy safe and sanitary practices around birthing, maternal care and child care.

Given the existing beliefs attached to cleanliness and hygiene, couching messaging on good health behaviours in larger appreciation around WASH practices could be another approach. Undertaking a co-creation approach will also allow us to understand, identify and fore-ground local practices, rituals and ontologies around health and nutrition, whose benefits must be maintained and leveraged upon.

NUTRITION DENSE
RECIPES

Revitalize Food Cultures For Nutrition Security

Infant and child nutrition pledge to deliver innovative solutions for healthier lives and happier homes

Nana Pawda, a naturalist who has been working in Akhrani, Nandurbar, believes in the local nutritious strains and recipes to alleviate malnutrition, "In a population that relies heavily on subsistence farming, it is imperative for nutrition to reach them through their own farms." Nutrition diverse farming systems, especially in resource-constrained areas such as Nandurbar can not only solve seasonal food shortages but can also be the foundation for setting up annual diet diversity in these communities. This would mean growing resource-compatible and nutritious varieties of local crops. Seed batches of these varieties can be made available as a part of this system, which also ensures growth due to ecological compatibility. We propose nutrition gardening kits that enable families to extend their current kitchen gardening cultures to build a nutrition focused garden, keeping into consideration the resource profile (water, soil, produce suitability) of these villages. Creating water recharge pits must be an essential component of home or community architecture to ensure water security thereby enabling perennial vegetable farming.

Food procurement also affects diet diversity by factors such as accessibility, income, manpower, palatability, seasonality, cultural habits, etc. These factors need to be tapped on to bring an outcome of reduced malnutrition. One of the ways is by introducing new nutrition dense recipes that are made from the locally available produce, with the help of SHGs, on-ground facilitators like FLWs and project volunteers. Existing government schemes could be explored to establish MSMEs & local- nutrition focused businesses that address goals of health, nutrition, livelihood, and gender.

Conclusion

The nutritional status and health in tribal populations cannot be the exclusive domain of medical science -- it must also account for and accommodate cultural beliefs and health and sanitation practices. To ensure that marginalised and migrant native tribal populations of Maharashtra overcome the crisis of malnourishment, it is essential we build into local cultures and lifestyles, the importance of eating nutrition rich food during pregnancy, and during the first 1,000 days of the child, along with recommended practices of breastfeeding and complementary feeding. It will be essential to promote active health seeking among these communities.

The solutions shared above do just that, by leveraging upon their existing cultures and social capital to create a positive outcome. We hope the insights provided in this essay will enrich the understanding of various practitioners involved in this campaign, serve as an open call to action for all of us to join forces, and promote a wider appreciation of the human centered, collaborative approach in all interventions, going forward.

Reckitt Benckiser's Pledge On Breastfeeding

Infant and child nutrition pledge to deliver innovative solutions for healthier lives and happier homes:

We commit to help prevent malnourishment and undernutrition, estimated to be associated with 2.7 million child deaths annually. In-line with the WHO Global Targets 2025, we believe that quality infant and child nutrition is key to improving child survival and promoting healthy growth and development, as well as reducing levels of stunting.

We support the WHO Code recommendation for exclusive breastfeeding in the first six months of life, and encourage continued breastfeeding for up to two years and beyond. We support the introduction of safe and appropriate Complementary Foods from six months of age. We commit to actively support breastfeeding for all families and we will work across our supply chain, with our partners, employees and consumers to promote the best start in life and optimal nutrition for the first 1000 days.

Globally, we commit to respecting all legislation implementing the WHO Code. In Higher-Risk countries, we respect whichever are the stricter requirements relating to BMS Marketing - be that local legislation or our own BMS Marketing Policy, which applies to all Infant Formulas, Follow-On Formulas, Delivery Products and Complementary Foods for Infants under six months of age.

We commit to improve women's empowerment in the communities where we live and work, and to diversity across our organisation. We have a particular focus on improving the lives of mothers and infants.
We commit to improve health, access to clean water and sanitation, because these are the foundations of good health and nutrition.

We commit to continuous improvement and transparency. Our Pledge will evolve as we seek guidance from key stakeholders, conduct internal and external verifications, and changes in the external environment. The CEO has responsibility for this Pledge and we will ensure all updates will be public and that we engage meaningfully with stakeholders to demonstrate progress.

We commit as a key player in science-based infant and child nutrition, to continue our scientific and medical research to provide the highest quality infant nutrition, so that children can achieve their full potential.

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