Planning | Recruiting | Conducting | Analysing

Research Plan

Research Plan

Design for nutrition

- **Background:**

Malnutrition is one of the most persistent problems in the country. With 130+ government schemes, the reach and impact could be more satisfactory than what we see in the day. India still has a massive chunk of the population that faces nutrition conditions for various reasons.
Based on secondary research, these problems can be categorised under the bigger issue of **Malnutrition** and can be caused due to 3 main reasons: **1. Poverty; 2. Medical conditions & 3. Ageing.** Most of these problems can be curbed with clinical nutrition methods.

The market for clinical nutrition is growing due to the emergence of lifestyle-related disorders. A variety of NGOs and government initiatives to adopt **Nutritional Rehabilitation(NR)** and **Medical Nutritional therapy(MNT)** as ways to curb the nutrition crisis of the country.

The research aims to understand the possibilities of designing nutrition in the Indian context. This research will help to identify the vulnerable user segment to design for, leading to a deeper understanding of the problems faced by them.

- **Research Goal:**

To gain a deeper understanding of **Malnourishment** in various age groups and the scope of the Nutritional rehabilitation approach to cater to it.

Research Objective:

1. To understand the ground reality of the **Nutrition Industry & Nutritional Rehabilitation** in the country and its **potential & viability**.
2. To gain qualitative insights into problems faced by various stakeholders involved in the chain.
   For starters, Nutritionists & experts.
3. The research insights will help to **identify and prioritise the problem areas** to focus on for a possible design intervention.
4. The research aims to deliver a **final problem statement with a defined target audience** for a service-based design intervention.

- **Hypothesis:**

1. A. There is a lack of trust in **Nutrition as curative health** for medical conditions.
   B. Possible reason being lack of awareness of benefits of nutrition as promotional health.
   C. *We can learn more about this assumption by speaking to a **Nutritionist** who works with Chronic Patients who deny seeking nutrition therapy.*
2. A. Malnutrition & Hunger are treated by the same approach.
   B. It could be happening due to a lack of emphasis on person-specific assessment.
   C. *We can learn more about this assumption by speaking to a **Nutritionist** who works with **Severe Acute Malnutrition** patients. A perspective of an **Anganwadi Worker(AWWs)** could be helpful too.*
3. A. Malnutrition for every type of patient can be treated with NR.NR could be relatively more expensive than current measures.
   B. There's a possibility of making it accessible & affordable.
   C. *We can learn more about this assumption by speaking to a **Nutritionist** who is expertise in **Nutritional therapy**.*
4. A. Inconsistency in the treatment methods in a culturally diverse nation like ours; possibly leads to a lack of trust & adherence from patients' side towards diets & nutrition plans.
   B. There is a possibility of an easy to follow & seamless experience for Healthcare Providers and patients while on treatment.
   C. *We can learn more about this assumption by speaking to a **Nutritionist & Chronic disease patient who follows a nutrition plan.***
5. A. Complications with malnutrition increase if it is not detected at its earlier stages. This could lead to increased volumes of people affected by it.
   B. There is an opportunity for better tools and equipment which can ease the experience for people in the industry.
   C. *We can learn more about this assumption by speaking to **Anganwadi Workers(AWWs)** who work with detecting and treating malnourished children.*

Know more about the framework followed for ***Formulating Hypothesis Here***

- **User Segment:**

USER SEGMENT A: NUTRITIONIST
1. Nutritionists who work with Chronic Health Patients. ***(x3)***
2. A nutritionist who works with Nutritional Rehabilitation/ Medical Nutrition Therapy(MNT) ***(1)***

USER SEGMENT B: ANGANWADI WORKER/ NGO worker
1. Who has worked with Malnuorished kids. ***(x3)***

USER SEGMENT C: CHRONIC HEALTH PATIENT
1. A patient who is forced/suggested to follow a nutritional plan for his/her medical condition. (E.g. Gastrointesinal disease)
2. A patient who could not adhere to a nutrition plan.

- **Methodology:**

1. **For Nutritionists & HCPs:**
   A.Personal Interviews.
2. **For AWWs:**
   A.Group Interviews.
   B.Contextual inquiry.
   C.A Guided Tour.
3. **For patients:**
   A. 5 whys technique
   B. Diary study(If needed)

- **Location & Timeline:**

LOCATION:
1. **Nutritionists:**
   A. Bengaluru (Tier 1): *Online*
   B. Ahmednagar (Tier 3): *In-person*

TIMELINE:

Nutritionist Interviews: 31st Oct- 3rd Nov
AWWs & NGOs: 4th Nov- 8th Nov
Patients: TBD

- **Participant Details**

https://docs.google.com/spreadsheets/d/1197RiyoXHFSoPJPEwGJeH8es368Ow_J1r00PLjh5p5M/edit#gid=0

Interview Questions:

Nutritionist:

Reach India:
1. I am a master's program student at NID, Bengaluru.
2. I am currently working on a service design project named: **Design for Nutrition.** The main idea of the project is to cater to malnourished kids and ease the experience of the stakeholders involved in the ecology.
3. I came across Reach lives' work in the domain and wanted to know more about it.
4. I wanted to understand if there's any scope for me to interview someone who's worked first-hand with the rehabilitation of these kids.
5. **Ask for Data: Data about how many malnutrition cases they cater to each month.**

Interview Structure

DOCTORS & DOMIAN EXPERTS

Hypothesis to be validated:

A. **There is a lack of trust in Nutrition as curative health for medical conditions.**
B. Possible reason being lack of awareness of benefits of nutrition as promotional health.
C. *We can learn more about this assumption by speaking to a **Nutritionist** who works with Chronic Patients who deny seeking nutrition therapy.*

A. **Malnutrition & Hunger are treated by the same approach.**
B. It could be happening due to a lack of emphasis on person-specific assessment.
C. *We can learn more about this assumption by speaking to a **Nutritionist** who works with **Severe Acute Malnutrition** patients. A perspective of an **Anganwadi Worker(AWWs)** could be helpful too.*

A. **Malnutrition for every type of patient can be treated with NR.NR could be relatively more expensive than current measures.**
B. There's a possibility of making it accessible & affordable.
C. *We can learn more about this assumption by speaking to a **Nutritionist** who is expertise in **Nutritional therapy**.*

Dr. Vikram Palsambar(In-Person)

1. Introduction
2. What do they do?
3. Have they worked with Malnutrition before?
4. Who all were involved?
5. When was this?
6. What are the challenges he faced while working with the kids?
7. What is his way of treating patients?
8. What is the general type of patients he encounters?
9. How often he needs to check in with a certain patient?
10. Where does he think he can see designers intervention?
11. What are his thoughts on the ideas?

Activities:
- [ ] Card Sort

Dr. Sushma Jaiswal (Online)

1. Introduction
2. What do they do?
3. What are his thoughts on the ideas?
4. Have they worked with Malnutrition before?
5. Who were involved?
6. When was this?
7. Thoughts on Nutrition Rehabilitation Therapy
8. What are the challenges he faced while working with the kids?
9. What is his way of treating patients?
10. What is the general type of patients he encounters?
11. How often he needs to check in with a certain patient?
12. Where does he think he can see designers' intervention?
12. What are his thoughts on the ideas?

Activities:
- [ ] Card Sort: LINK

NRC Workers & Dieticians

Dt. Ashwini Gadekar (In-person)

1. Introduction
2. What is their role?
3. What are the tasks expected from them?
4. A day in the life of an NRC dietician.
5. How many kids have they treated so far?
6. What is the protocol of patients to get treatment from NRC?
7. Screening criteria?
8. What are the types of treatments provided?
9. What are the facilities provided to the kids and guardians?
10. What are the challenges faced by them day to day?
11. What are the problems they've observed with the current system/patients?
12. What are the administrative tasks?
13. How do they maintain records of kids to avoid future health issues?
14. Thoughts on Nutrition Rehabilitation Therapy
15. What are the digital tools they use currently?
16. What are the shortcomings of these tools?

Activities:
- [ ] Card Sort
- [ ] Guided Tour
- [ ] Contextual enquiry

Dt. Aditi Pansambal (In-person)

1. Introduction
2. How long have they been working with AWW & NGOs?
3. How many kids have they treated so far?
4. How often do they visit?
5. What are the types of treatements provided?
6. What are the challenges faced by them day to day while working with the kids & their parents?
7. What are the problems they've observed with current system/patients?
8. What are the administrative tasks?
9. How do they maintain record of kids to avoid future health issues?
10. Thoughts on Nutrition Rehabilitation Therapy
11. What are the digital tools they use currently?
12. What are the shortcomings of these tools?
13. What would ease their job?

Activities:
- [ ] Card Sort
- [ ] Guided tour in the Anaganwadi(if possible)

PATIENTS

Hypothesis:
A. **Inconsistency in the treatment methods** in a culturally diverse nation like ours; possibly leads to a lack of trust & adherence from patients' side towards diets & nutrition plans.
B. There is a possibility of an easy to follow & seamless experience for Healthcare Providers and patients while on treatment.
C. *We can learn more about this assumption by speaking to a **Nutritionist & Chronic disease patient who follows a nutrition plan.***

Patients with Nutrition conditions (Trying to follow)

1. Introduction
2. What do they do?
3. Have you ever consulted a Nutritionsist?
4. **Tell me more** about your experience with the Nutritionist?
5. **Explain** challenges you faced with the condition and how Nutrition came in the picture?
6. **Describe** to what all were you expected to do while being on the therapy
7. **Walk me through** the experience of how you are navigating the situation.
8. Can you pin point any challenges/ situations you faced which were particularly challenging or places where you thought it would have been better.
9. Are they aware of NR?

- [ ] TEDW framework

A patient who failed to follow a diet

1. Introduction
2. What do they do?
3. Why did they consult a nutritionist?
4. **Tell me more** about your experience with the Nutritionist?
5. **Explain** challenges you faced with the condition
6. **Describe** to what all were you expected to do while being on the therapy
7. **Walk me through** the experience of how you are navigating the situation.
8. Why do you think it did not work out?
9. What do they do now if not the therapy?

- [ ] 5 Whys

NGO & Anganwadi Workers(AWWs)

Hypothesis to be validated:

A. **Malnutrition & Hunger are treated with the same approach.**
B. It could be happening due to a lack of emphasis on person-specific assessment.
C. *We can learn more about this assumption by speaking to a **Nutritionist** who works with **Severe Acute Malnutrition** patients. A perspective of an **Anganwadi Worker(AWWs)** could be helpful too.*

A. **Complications with malnutrition increase if it is not detected at its earlier stages. This could lead to increased volumes of people affected by it.**
B. There is an opportunity for better tools and equipment which can ease the experience for people in the industry.
C. *We can learn more about this assumption by speaking to **Anganwadi Workers(AWWs)** who work with detecting and treating malnourished children.*

1. Introduction
2. What do they do?
3. Tell me more about your day-in-day-out tasks.
4. How many kids are registered in the Anganwadi/NGO?
5. What are the main activities that these kids are made to do?
6. What are the facilities provided for the kids?
7. What are the facilities provided for the AWWs?
8. What does a day in the life of an AWW look like?
9. What are the administrative tasks?
10. How do they cater to the Nutrition needs of the kids?
11. How often are these kids screened for SAM?
12. What are the general demographics of the kids?
13. What are the digital tools provided/used currently?
14. What is the AWWs to kids ratio?
15. What are the challenges faced by the Kids?
16. What are the challenges faced by the AWWs?
17. Can I talk to a Parent?
18. What are the thoughts of the parents about AWWs?
19. What is the vision?

- [ ] Card Sort
- [ ] Guided Tour
- [ ] Contextual enquiry

Guidelines:

State the context and background
- Explain what you've learned
- Articulate the root cause (the why)
- Talk about motivation

- Communicate the consequences
- Recommend the next steps/problem statement

1. **Use of Ground-up approach for designing tools:**

   2/3 **stakeholders** are are from **less literate** backgrounds and are also less comfortable with technology.
   The current tools which are designed for AWWs(e.g.Poshan Tracker) are strategically **designed to collect data**. It keeps assisting the AWWs as a secondary objective and reduces down the impact to mere numbers for reports.
   A lot of **first hand knowledge is wasted due to lack of autonomy** given to them through the platform and the increased burden of avoidable paperwork. It leads to women dropping out of the system.

   Hence, tools for such complex workflows could function better with ground-up strategy.

2. **Efficient Information Handoff**
   I, a Primary center doctor, wish to provide prompt & accurate treatement to the patients. It involves me working with other specialist doctors from district hospitals and many others. Most of the protocols and information is passed through patients or staff. But due to our individual busy schedules, we often recieve multi-filtered information on the treatment followed. It leads to information loss and could result in delayed treatment for the patients.

3. **Post-discharge assistance** is more crucial to deciding the health of the child:

   The NRCs effectively improve the condition of admitted children, but the effects are not sustained post- discharge. About 50% of the children lose weight within 15 days of discharge due to high drop-out rate and lack of awareness about appropriate practices in parents.
   There are follow-up protocols in place but most of the parents fail on it reversing the benefits of the treatment.
   This could be tackled by providing extensive post-discharge assistance with stringent community-based models for follow-ups.

4. Bridging the information gap between guardians and the doctors:

   I, the mother of a 9 month old admitted in the NRC,wants to know the progress of my child but fail to understand the reports because of their complex nature. I am visiting this doctor for the first time and I don't know if I should trust him. It makes me worried and uncertain.

5. Home to home over of end to end:

   I, a parent of a 16 month old wants to get her checked since her growth is delayed. I stay in a remote village and public transport is not frequent here due to which I have to be dependent on my neighbor to drop me. I don't like bothering them and hence I've not been able to get her checked for last few months. It makes me feel hesitant of seeking medication.

Planning | Recruiting | Conducting | Analysing

Recruiting the right candidates for on-filed study

NUTRITIONISTS

Working with Malnutrition

Objective	*Name*	*Email*	*Contact*	*City*	*Address*	*Link*	*Reach out*	*POA*	*Date of Interview*	*Status*
Malnutrition	**Dr. Vikram Pansambal**	NA	[redacted]	Ahmednagar	Civil Hospital	NA	Connected	**Call on 3rd Nov**	**4th Nov**	Visit Done
Malnutrition	**Dt. Aditi Pansambal**	NA	[redacted]	Ahmednagar	NGOs	NA	Connected	**Call on 7th Nov**	**11th Nov**	Visit Done
NRC	**Dr. Ashwini Gadekar**	NA	[redacted]	Ahmednagar	NRC	NA	Connected	**Call on 3rd Nov**	**5th Nov**	Visit Done

Malnutrition in Bengaluru, is difficult

Working with Chronic Patients

Clinical Nutrtion	**Ms. Sheela Joseph**	NA	NA	Bengaluru	Sparsh, Infantry Road	LINK	Not able to connect	Call on 7th Nov	NA	Fail
Clinical Nutrtion	**Dt Sushmaa Jaiswal**	sushma.nutritionist@gmail.com	91 [redacted], +91 [redacted]	Bengaluru	Whitefield	LINK	Connected	**Mail outline of the interview & Call on 4th Nov**	**7th Nov**	Visit Done

NGOs & Anganwadi Workers

Hunger & Malnutrition	**Reach Lives**	admin@reachlives.com	[redacted]	Bengaluru	Hebbal	LINK	Connected	Call on 14th Nov	**15th Dec**	On Hold/backup
Nutritional Rehabilitation	**Action against Hunger**	contact@actionagainsthunger.in	91 [redacted]	Mumbai	Santacruz	LINK	No Response	Call on 7th Nov	NA	On Hold/backup
Nutritional Rehabilitation	**Committed Communities Development Trust**	contact@ccdtrust.org	22 [redacted]	Mumbai	Bandra West	LINK	Not able to connect	Call on 7th Nov	NA	On Hold/backup
Malnutrition	**Snehalay (Dr. Archana Jadhav)**	NA	[redacted]	Ahmednagar	Ahmednagar	LINK	Connected	Call on 7th Nov	**8th Nov**	Visit Done
Anganwadi	**Suman Sapre**	NA	[redacted]	Ahmednagar	Nagapur MIDC	NA	Connected	Call on 5th Nov	**7th Nov**	Visit Done
Malnutrition	**Anaam Prem**			Ahmednagar	Ahmednagar		Not able to connect		7th Nov	Fail
Nutritional Rehabilitation	**Jui Zaware**		[redacted]	Ahmednagar	Ahmednagar		No Response		**NA**	Fail

Chronic Patients

Clinical Nutrtion	**Pallavi Herwade**	NA	[redacted]	Pune	Online	NA	Connected	Call on 6th Nov	**6th Nov**	Visit Done
Clinical Nutrtion	**Swati Unde**	NA	[redacted]	Ahmednagar	NA	NA	Connected	NA	**6th Nov**	Visit Done
Nutrtion Management	**Ajinkya Kulkarni**	NA	[redacted]	Ahmednagar	NA	NA	Connected	NA	**6th Nov**	Visit Done

Planning → Recruiting → Conducting → Analysing

HCPs

District Civil Hospital, Ahmednagar

medical officer

Dr. Vikram Pansambal
Senior Medical Officer at
Ahmednagar District Hospital

Visit 1: Nov 4th 2022

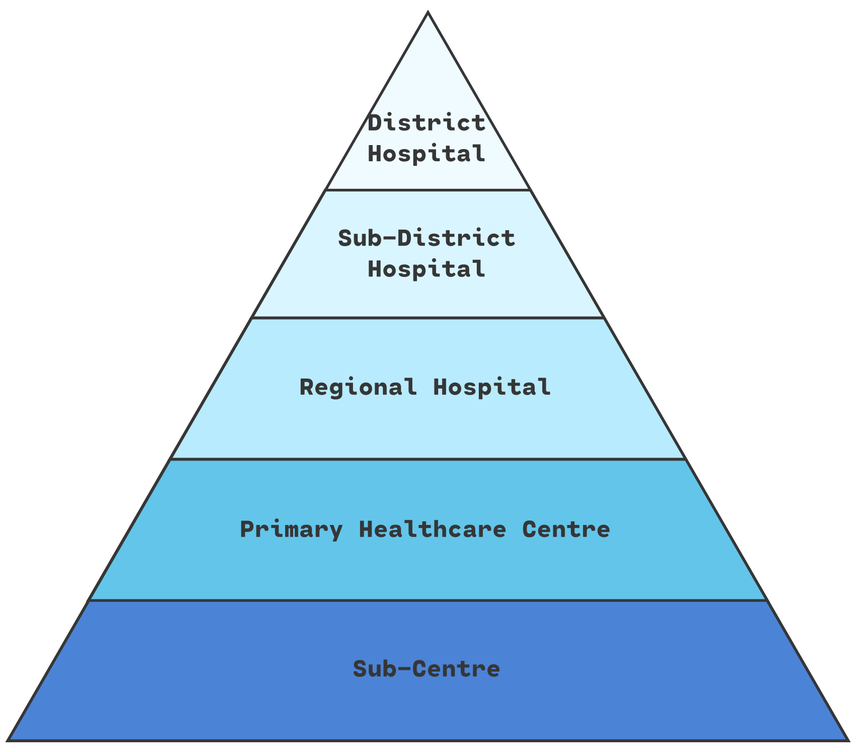
objectives

1. Understanding zoomed-out lens at the system.
2. Understanding demographics of patients
3. Validating problems & hypothesis

methods

- [x] 1-on-1 Interview
- [x] Card Sort
  to validate hypothesis

journey of an average patient reaching any district hospital



Healthcare facility pyramid

observations & highlights

1. Government has provided all of the facilities. But utilisation of is not done to its full potential due to lack of awareness in the public.
2. There is Social Stigma about seeking Nutrition Therapy.
3. Ground reality is way worse than portrayed in media. Poverty & Malnutrition Crisis are for Real.

> *People think, if I can satisfy my child's hunger by a Rs.10 Kurkure, why should I buy groundnuts that cost Rs.20!*

takeaway

commute

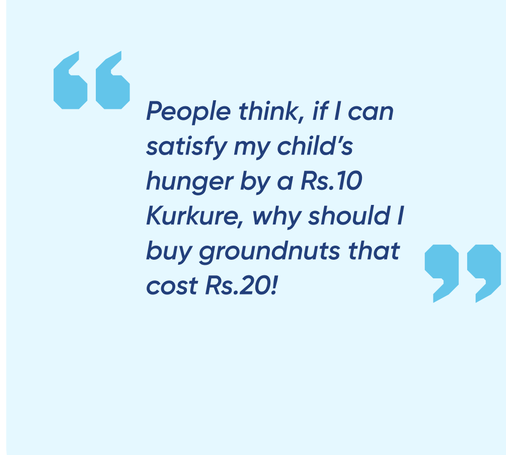
from remote to District hospitals is a costly affair for daily-wage worker.

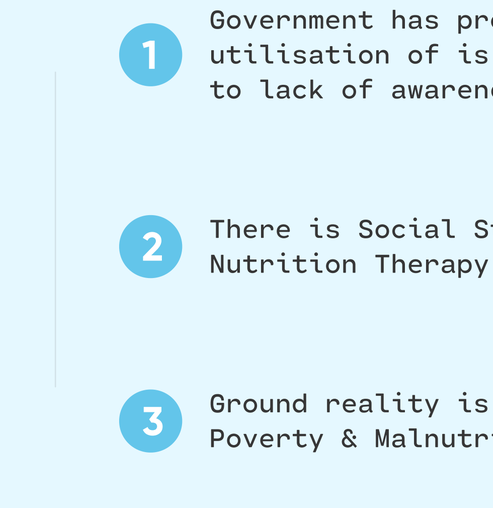
dependencies

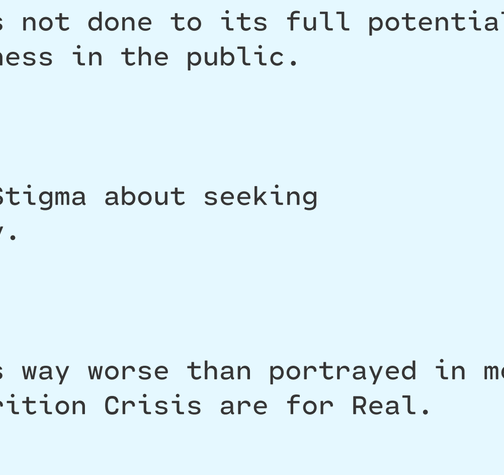
of the entire family
Government provided
Food is common

> *People think, if I can satisfy my child's hunger by a Rs.10 Kurkure, why should I buy groundnuts that cost Rs.20!*

All of the pictures displayed are taken after an informed consent of the participants.







Feedback for further interviews:

Need to take clearer and printed cards that can give better context to the stakeholder.

NRC Ward, District Hospital, Ahmednagar

Nutrition Rehabilitation Centres (NRC) are government funded facilities for Severely Acute Malnourished (SAM) Children.

NRC Ward Head

Dr. Ashwini Gadekar
Nutrition Rehabilitation Center at Ahmednagar District Hospital

Visit 2: Nov 5th 2022

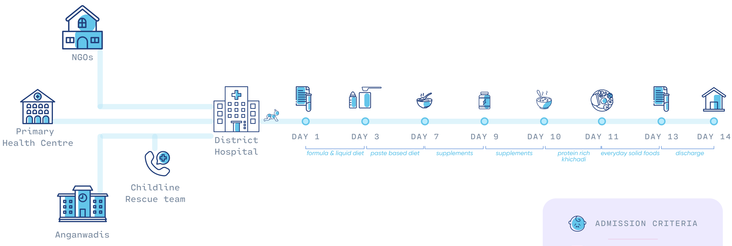
objectives

1. To know workflow of an NRC
2. Observe the challenges faced by NRC workers
3. Know Child's rehab journey

methods

- [x] Guided Tour
- [x] Card Sort
  to prioritise problem areas
- [x] Sacrificial Concepts
- [x] Challenge mapping

journey of a child in NRC



ADMISSION CRITERIA

- [x] MUAC<11.5cm
- [x] W/H< -3SD
- [x] Bilateral oedema

frustrations

Visit 3: Nov 11th 2022

1. Co-operation from parents
2. Hygiene maintenance in the ward
3. Negligence after discharge

what she expects the patients do?

Ideal Flow

observations & highlights

> *No matter how much facilities provided, the parents' DO NOT complete the treatment and look for excuses to skip it.*

1. Kids are referred to NRCs through a multi-channel network of Primary healthcare centre, Anganwadis & NGO's. It mostly works on word of mouth & referrals.
2. Doctor's monitors daily. Weight gain is the biggest goal. Multiple systems are integrated with diagnosis.
3. Detection, Identification & record keeping was all one manually
4. Food for guardians is also provided along with daily min. wage; along with day wise diet plan

takeaway

completion

Of the treatment is the biggest hurdle while treating malnutrition.

identification

though looks simple, has complex parameters.

post-discharge

follow-ups are highly dependent on parent's co-operation

All of the pictures displayed are taken after informed consent of the participants.

NRC Ward

Identification MUAC Band

NRC Child being measured

BTS

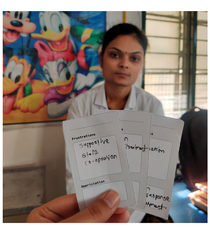
In the first visit, asking them their problems gave obvious answers. **Physical cues & prompts helped in second visit**

Middle-Upper Arm Circumference(MUAC)

Height measuring scale

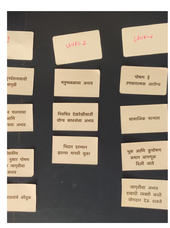
Patient with it's gaurdian

Record keeping page



Frustration Cards

Mapping Ideal flow of the patient



Prioritising problems

Record keeping page

Nutritionists

Online & In-person in Ahmednagar

For Clinical Nutrition

In chronic disease patients

Dr. Sushma Jaiswal
Bengaluru based Nutritionist
Online: Nov 7th 2022

objectives

1. Understanding why & hows of Nutrition Crisis
2. Challenges faced in Nutrition Therapy

methods

- [x] Card Sort(Online)
- [x] Interview

For Malnutrition

amongst kids

Dt. Aditi Pansambal
Nutritionist working with NGOs
Visit 6: Nov 11th 2022

objectives

1. Understanding custom dietary plan management
2. Special cases & cultural preferences
3. Designing Diet

methods

- [x] Interview
- [x] Card Sort to prioritise problem areas
- [x] Sacrificial Concepts
- [x] Challenge mapping

> *People are blinded by the results others have gotten. Failing to understand that their body could require different treatment & would react differently.*

observations & highlights

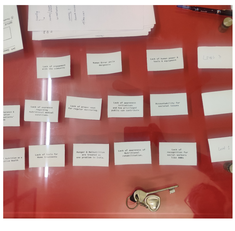
1. The Screening in NGOs and schools/Anganwadis, happen once in 3 months. Keeping record of the kids And treatment provided is highly manual.
2. Co-ordination with NGOs and the Medical team was Unstructured.
3. There is no update of what is actually happening after the diet/ plan. How much of it is actually followed.

takeaway

self-daignosis
& treatment is the biggest problem for chronic patients

tracking
and keeping them updated with the treatment requires a lot of efforts from the team.

All of the pictures displayed are taken after informed consent of the participants.

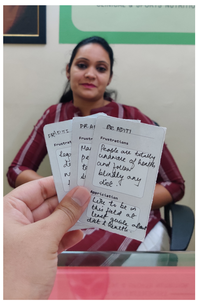


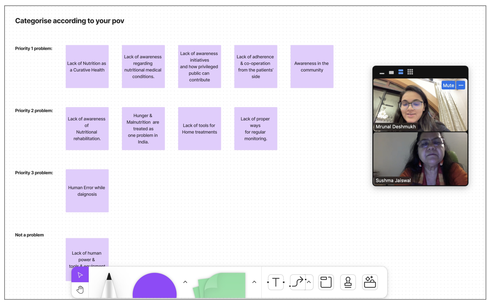
Problem prioritisation

Dt. Aditi during card sort

The conversation was much smoother since they had been working in similar areas with people & understood the context better.

The conversation with Dr.Sushma led to understanding of how complex and multifaceted clinical Nutrition can be.
Would it be even wise to intervene with a service where there can be no one size fits all approach?





Anganwadi

Nagapur, 20km from Ahmednagar

Anganwadi Workers(AWWs) are government authorised women of villages who run Government sponsored day care centres for children under 5 years.

AWW Head

Smt. Suman Sapre
AWW at Nagapur MIDC, Ahmednagar
Visit 4: Nov 7th 2022

objectives

1. To understand detection & identification outside hospitals
2. Knowing their challenges while dealing with the system
3. Review of Poshan Tracker

methods

- [x] Contextual Inquiry
- [x] Interview

> *Making sure my children eat all the good food is a fulfilling tasks. But how long should I sustain in just token of application amounts?*

observations & highlights

1. Kids are referred to NRCs through a multi-channel network of Primary healthcare centre, Anganwadis & NGO's. It mostly works on word of mouth & referrals.
2. Doctor's monitors daily. Weight gain is the biggest goal. Multiple systems are integrated with diagnosis.
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takeaway

completion

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identification

though looks simple, has complex parameters.

post-discharge

follow-ups are highly dependent on parent's co-operation

All of the pictures displayed are taken after informed consent of the participants.

AWW Head- Suman Sabre

Khichadi being served

AWW helper/assistant

Observing them got them talking and they felt appreciated of their work.

NGO

Snehalay, 20km from Ahmednagar

Snehalay is the biggest NGOs in Ahmednagar district, known for rescuing & rehabilitating orphan children.

Health Consultant

Dr. Archana Jadhav
Panel Doctor at Snehalay
Visit 5: Nov 8th 2022

objectives

1. Understanding rescue to recovery journey
2. How can organisations help in the system
3. POV of a person designing meals for 300+ kids

methods

- [x] Card Sort
- [x] Interview

Meal Planner

Mrs. Yogita Shinde
Panel Doctor at Snehalay
Visit 5: Nov 8th 2022

objectives

1. Understanding custom dietary plan management
2. Special cases & cultural preferences
3. Designing Diet

methods

- [x] Interview

> *Making special foods for special children becomes challenging. But we try to provide the nutrients through extra fruits or snacks*

observations & highlights

1. During visit, I witnessed one of the patients' being discharged without the knowledge of the consultant due to lack of co-ordination between the visiting doctors
2. Rehabilitating an extreme case kid takes specialised doctors. Commute for treatment is arranged by the NGO
3. With multiple doctors treating the child, updating them with history and treatments so far is a task but very crucial since there are HIV children as well.

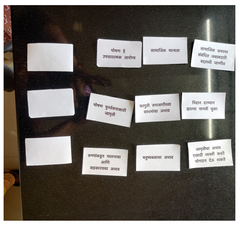
takeaway

communication
with big organisations need more structured channel

follow-up
by the assigned caretaker of the kid is a hassle as caretaker to kid ratio is 1:50

All of the pictures displayed are taken after informed consent of the participants.

Building of NGO



Problem Prioritization

Dr.Archana's interview

Explaining what Design is to layman in the localities becomes a challenge.
People in bigger organisations tend to cover-up for things as they want to show the best representation.

NGO's political agenda was the biggest hurdle during the visit in understanding the ground reality.

Kids serving food for other kids

NGO Hospital

Meal Planner of the NGO

Open Kitchen

Gaurdians

NRC Ward, District Hospital, Ahmednagar

Patient's Mothers

Mrs. Rajashree Gurhade(20 yr)
Mother of a 9 month old
Travelled from: Parner(40km)
Visit 2: Nov 5th 2022

Mrs. Parveen Khan
Mother of 4 year old
Travelled from: Valunj(26km)
Visit 2: Nov 5th 2022

objective

1

Patient's guardians journey in NRC

methods

- [x] Interview/ Conversation

observations & highlights

> *If I am staying here for 14 days, I am here for my child. Its health is important but* ***my husband keeps nagging me to come back!***

1. The kid's guardians were provided mini. daily wage of Rs. 300 and daily food for 14 days.
2. The guardians started picking up chores in hospital wards and were provided with TV & entertainment.
3. They formed a friend's circle by my second visit a week later.

takeaway

completion

stays in the parents' co-operation.

language

barrier is real for especially when there's a gap in local dialect.

All of the pictures displayed are taken after informed consent of the participants.

Grandparent visiting the patient

Mrs. Rajashree Gurhade

Mrs. Parveen Khan

Parents's were skeptical about stating challenges. Observing them interact within themselves gave better understanding of their POV.

Patient's Story

**Note: Patients' pictures and data is confidential and hence names are tweaked

Malnourished Kid

Supriya

14 year old Orphan
who lives in Snehalay NGO, Ahemdnagar
Visit 5: Nov 8th 2022

From Rescue to Recovery

Age: 14 years

Weight: 9.2kgs

Height: 3.6 ft(109 cm)

Diagnosed with
SAM
Leading to stunting,
Skin issues &
mental growth problems

Supriya was rescued from Pathardhi village of Ahmednagar, 9 months ago. She was 14 years old and weighed 9 Kgs when rescued from her village. The reasons for her malnutrition was being a girl child of the already poor family and ignorance to her health. She lost her parents and was staying with her uncle.

The NGO rescued her from the village and has been since then has been staying there.
When she arrived she had visible edema and extremely anaemic. The doctors said her survival is difficult.
She weighs 18kgs currently and is on high pace of recovery. Though the years **she's lost years of growth will not be recovered and she might not develop further physically.**

No one used to play with me because of my skin. Everything used to taste spicy. Yogita Tai, made it special food for me. Other kids play with me now!
- Supriya

She took 1/2 hour to walk 100 meters distance. Her skin was oozing water, and the sight was horrid. Her body used to refuse good food. We had to tweak a lot of processes during her meal planning.
- Yogita, Meal planner

Chronic Disease Patient

Pallavi

Age: 39
Pune
Online : Nov 6th 2022

From Rescue to Recovery

Tracking diet for
2 years
Height: **5 ft 4"**
Weight: **79kgs**

Diagnosed with food
Allergies
to 28 ingredients along with being Lactose Intolerant.

Pallavi started following an online company recommended diet to tackle her obesity in 2018.

She followed it strictly and was successful at reducing her weight down from 98Kgs to 72Kgs in 6 months.

She discontinued it after the results started slowing down as the diet was not always sustainable. In 2019 Jan, she had a horrible skin reaction after eating out for the first time. She ignored it for a few months before it became unbearably painful.
She visited 3 doctors in Pune, and was unable to unable to understand. It took her 2 years to track down her allergy to 28 ingredients which appeared as a medical condition due to follow unmonitored diets.

Before I took up the online diet to tackle my obesity; I had no symptoms and was able eat everything. Post the diet side-effects, I am allergic to 28 ingredients.

It took me 5 doctors, a million tests, and 2 years of me tracking my diet to find out exact combinations of foods I am allergic to.

Validating Idea Cues

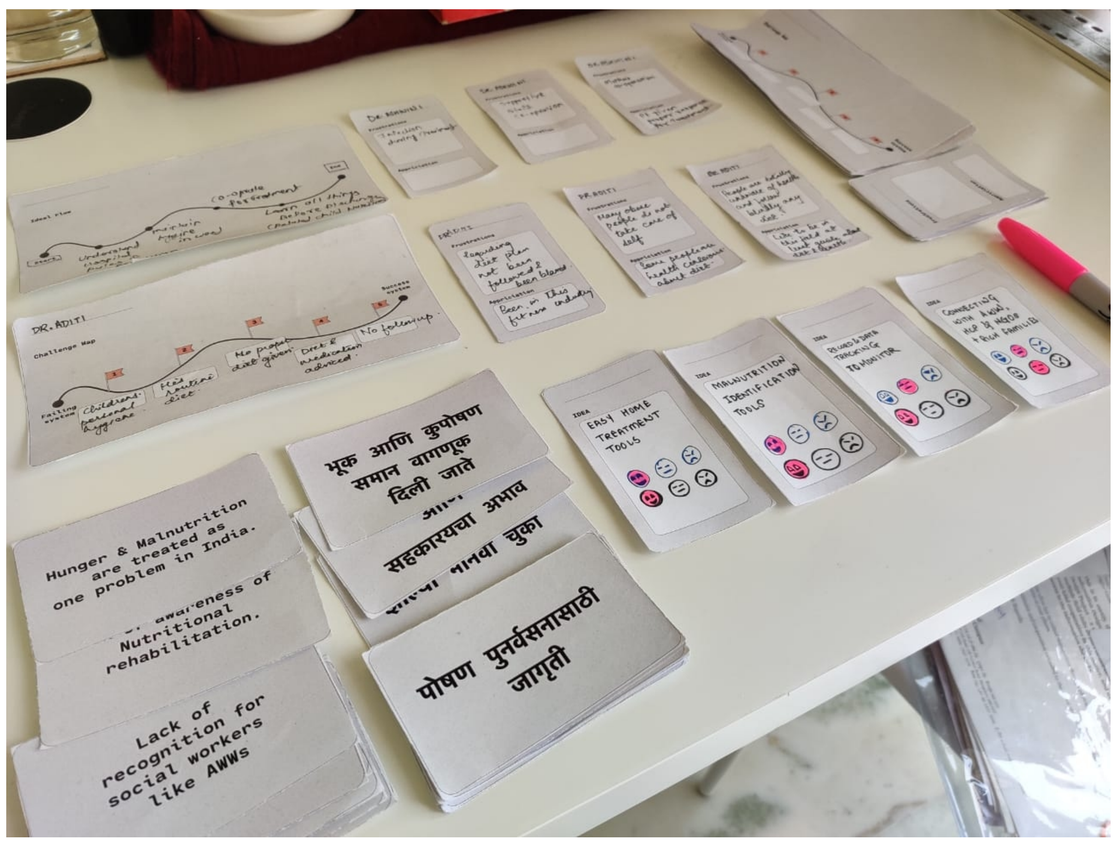
IDEA CUES: The participant's were given cards to colour their emotions on.
The objective was to capture the first reaction to the problem areas I thought would be worthy of attention.
The participants rated it based on how much relevant any products/services that help them cater to these issues/shortcomings woud be.
** NO FURTHER INFORMATION WAS GIVEN TO THE CANDIDATES EXCEPT THE ONE LINER.

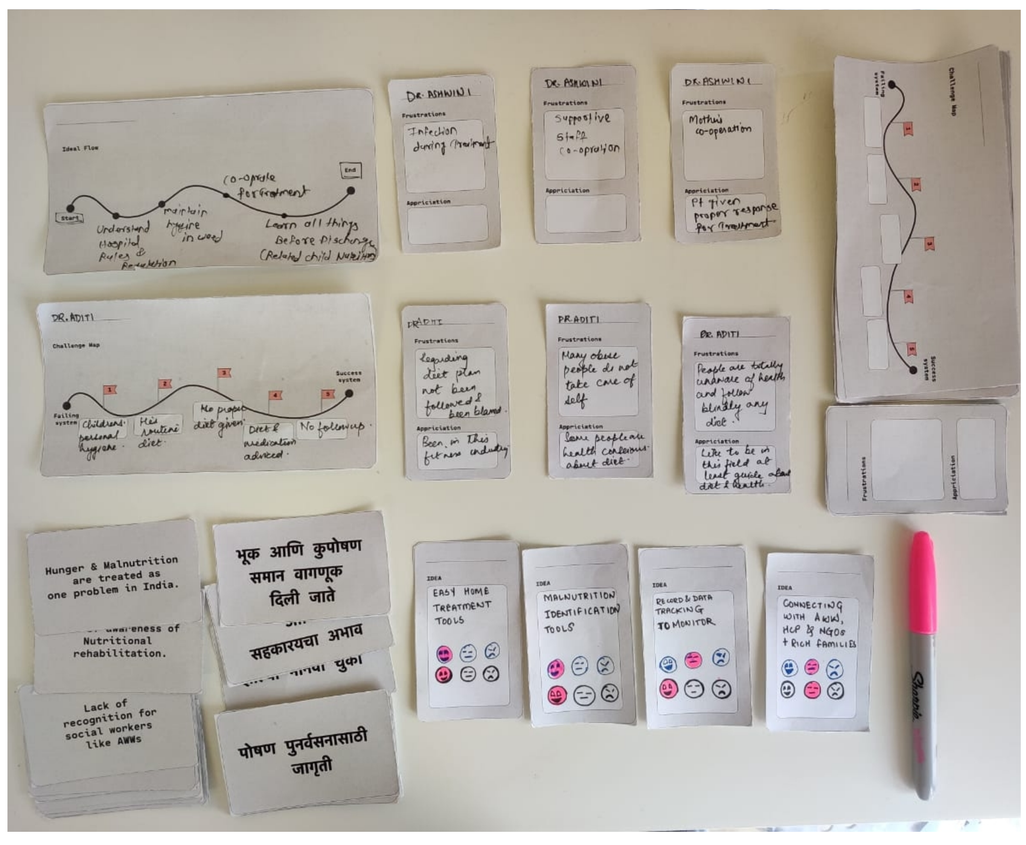
I had a small opportunity to get first reactions to the problems which seemed promising & worth the intervention.

NRC WARD HEAD

NUTRITIONIST WORKED WITH CHILDREN

Entire set of activity props





Planning → Recruiting → Conducting → Analysing

Transcribing the interviews to find patterns

01 HCPs

HCPs

Working with Malnutrition

Name	Designation	Age	Exp (Yrs)	What kind of patients has they dealt with	Demographics of the patients	How often does he feels need to follow-up with patients?				Methodologies used					Challenges they mentioned	Highlight/ Take Away/observations	Image	Card Sort picture	Frustration Card	Flow Images
						Weekly	Fortnightly	Monthly	Quarter Yearly	Card Sort	Contextual Inquiry	Guided Tour	Interview	Incrificial concepts						
Dr. Vikram Pansambal	Senior Medical Officer, Ahmednagar	RA	14 yrs in district hospital	HIV Cases	Lowerincome families										Awareness of Gov programmes	Schemes marketted on Gov radios & TV channels				
				Pediatric	Daily-wage earners										Hesitation in seeking help	E-sanjeevani				
				Ayaan& Ayruda	From the remote villages										Hunger is curbed at the min. cost	Resource Allocation				
				Malnutrition	No educated backgrounds	☐	☑	☑	☐	☑	☑	☐	☑	☐	Easy access to packaged good	Gov schemes are only restricted to In-patients			NA	NA
															People deny about nutrition deficiency as if it is something to be ashamed	Commute to the hospital is cost higher than their daily wage for some				
															Gov programmes that give ration do not show results as expected					
															Patients want medicines for 2 months as they don't want to visit often					
Dr. Ashwini Gaikwad	NRC Ward head	34	6 years in NRC		Lowerincome families										Awareness of Gov programmes	Treatement Completion				
					Daily-wage earners										Identification from NGOs & AWWs	The MUAC band was worn out				
					From the remote villages										Co-operation from parents	No home treatment ways possible.				
				Malnutrition	No educated backgrounds	☑	☑	☑	☐	☑	☐	☑	☑	☑	Journey: Consultation -> Screening -> 3 factor screening -> day 1 to day 3: Liquid diet -> Day 4 to	4 follow ups mandatory				
															People come here with expectations of a hotel like service and are dissappointed.	Setting the right expectations				
															Mini wage of Rs. 498 is paid	Patinet records are kept manually				
															A doctor visits NGOs & Anganwadis. Child is measured with age/height	ICDS is still not known about				
Dr. Archana Jadhav	NGO Doctor	38	8 years	Children under 14											Incase of specialists, the child is sent to the gov hospital	They sent a file of patient via ambulance to the specialist doctor.			NA	NA
				Malnutrition	Orphan Kids	☑	☑	☐	☐	☑	☐	☐	☑	☐	Nutrition screening is done every month	A patient was discharged early without the doctor knowing. Mis-communication amongst				
				HIV Cases											Tests like BMI, Psychological testings, MRI & CT scans along with Blood Samples					
Dr. Aditi Pansambal	Pediatrition working with NGOs & Schools	34	6 years	Children	Children under &										People fail to follow the diets	Self-diagnosis harms more in Nutrition and diets				
				Chronic Patients	Teenage girls										Children's intake is not monitored for longer duration	Behavioral study becomes important in nutrition. Like do they binge eat?				

HCPs

Working with Malnutrition

Name	Designation	Age	Exp (Yrs)	What kind of patients has they dealt with	Demographics of the patients	How often does he feels need to follow-up with patients?				Methodologies used					Challenges they mentioned	Highlight/ Take Away/observations	Image	Card Sort picture	Frustration Card	Flow Images
						Weekly	Fortnightly	Monthly	Quarter Yearly	Card Sort	Contextual Inquiry	Guided Tour	Interview	Incrificial concepts						
Pansambal	working with NGOs & Schools	34	6 years			☐	☑	☑	☐	☑	☐	☐	☑	☐	People seek nutrition as the last resort					
															Food regulation is not seen as important unless you reach a disease stage.					

02 AWWs

Name	Designation	Age	Exp (Yrs)	Have they dealt with Malnutrition case?	Demographics of the students	How often do they check child's health?				Methodologies used					Challenges they mentioned	Highlight/ Take Away/observations	Image	Card Sort picture	Frustration Card	Flow Images
						Weekly	Fortnightly	Monthly	Quarter Yearly	Card Sort	Contextual Inquiry	Guided Tour	Group Interview	Incrificial concepts						
Suman Sapre	ANM head in Rayapur, Ahmednagar	54	22 yrs	Yes	Lower income group kids	☐	☐	☑	☐	☐	☑	☐	☑	☐	Operations: 1. Screening 2. Vaccinations 3. Provide Vaccination schedule card 4. Update Poshan tracker 5. maintian record for food & ration 6. Maintain hygeine & sanitation	VCDC (Village Child Development Center)		NA	NA	NA
					Kid's whose both the parents are working										Teaching kids	She did a 9 months course and then started this ANM in Rayapur after her marraige about 22 years ago.				
					Kids from uneducated families										Meeting and training for ANMs	They measure the BMI in a fairly simplified weighing scale but the scale was out-of order for a few months.				
															Poshan Tracker is not available on Marathi so cannot use it.	They identify with weight/age				
															She gets Rs.8888 for running the entire ANF and as her own remuneration.	Menu is fixed by the gov.				
															In case of malnutrition, the chilk is provided with 4 meals	Child's health record is kept manually				
															Food is supplied for ANMs					
															They connect a malnourished child with a wealthy family as well.					
															Uniform is provided by the Gram Panchayat					
															Not every child can come, so they work along with ASHA workers to provide meals to the child					
															Each 3Ø Aw has a headquarter					
Vaishalie Salve	ANM Assistant	49	12 yrs	Yes	Same as above										I cannot sustain on just working here. I have to juggle with other jobs.	Picked up a heavy vessel of Khichadi to serve.	NA	NA	NA	NA

03 NGOs Canteen heads & cooks

Name	Designation	Age	Exp (Yrs)	Have they dealt with Malnutrition case?	Demographics of the Kids	How often do they check child's health?				Methodologies used					Challenges they mentioned	Highlight/ Take Away/observations	Image	Card Sort picture	Frustration Card	Flow Images
						Weekly	Fortnightly	Monthly	Quarter Yearly	Card Sort	Contextual Inquiry	Guided Tour	Group Interview	Incrificial concepts						
Yogita Shinde	Head Planner of an NGO	26	2.5 yrs	Yes	Orphans age: 8-18	☐	☑	☐	☐	☐	☐	☑	☑	☐	Provides 4 meals a day	Making special foods for special children becomes challenging. But we try to provide the nutrients through extra fruits or snacks		NA	NA	NA
															The food is usually same for all the kids	We do not know how a kid is doing nutrient wise unless his condition is too bad to ignore.				
Renuka Bahatonde	Head Planner of an NGO	39	14yrs	yes											Unless the caretaker informs us specifically for a child, special food is not made.					
															Usually the food is seasonal and balanced in overall nutrition					

04 Guardians

Name	Occupation	Age	Relation with the patient	How did they know about NRC?	What day are they on?	How often would they be willing to come to get a check-up after discharge?				Methodologies used						Challenges they mentioned	Highlight/ Take Away/observations	Remarks	Image	Card Sort picture	Frustration Card	Flow Images
						Weekly	Fortnightly	Monthly	Quarter Yearly	Card Sort	Contextual Inquiry	Guided Tour	Group Interview	Card Sort	Incrificial concepts							
Rajashree Guradhe	Owns a Bangle shop	20	Mother of 9 month old	Primary Health Care Center	3	☐	☐	☑	☐	☐	☐	☐	☑	☐		Finding the daignosis lab took them a while for MRI scan	They needed to keep themselves occupied	The child weighed only 4.9kgs The weight incresed by 1.8 kg on my second visit. i.e. Day 10		NA	NA	NA
Parveen Khan	House Help	24	Mother of 2 kids. 2.5 yr old is admitted in NRC	District Hospital	1	☐	☑	☐	☐	☐	☐	☐	☑	☐		Managing work holidays to stay here	Was social and started making friends with people around	The child weighed only 11 kgs The weight incresed by 2.3 kg on my second visit. i.e. Day 8		NA	NA	NA

Planning → Recruiting → Conducting → Analysing

A heatmap of the card sorts for problem prioritisation

Problem	Lack of home treatement methods	Lack of adherance from patients	Nutrition not being seen as a curative health	Lack of awareness about nutritional rehabilitation	Hunger and Malnutrition are treated same	Lack of recognition for social workers like AWWs	Lack of awareness initiatives and how can you contribute	Lack of awareness for nutritional medical conditions	Lack of easy monitoring tools	Lack of Human Power	Human error during Daignosis	Lack of acceptance from society for Nutrition therapy
Participant 1	High	High	NA	Low	Medium	Low	High	Medium	Low	High	NA	Medium
Participant 2	High	High	Low	High	Low	High	Low	High	Medium	Medium	Medium	Low
Participant 3	High	Medium	High	High	High	High	Medium	NA	Medium	Low	Low	NA
Participant 4	Medium	Low	High	Medium	Medium	Low	Low	NA	High	Low	Medium	High
Participant 5	Medium	High	High	Medium	Medium	NA	High	High	Medium	NA	Low	NA

Results of analysis

Identification

Diagnosis of Malnourished children has multiple factors. Sometimes can be missed incase the child does not show visible symptoms.

Since it is diagnosed by multiple stakeholders, the accuracy & simplicity of the process is crucial.

Commute & Accessibility

Most of the people come from extremely remote villages of the district. They have to be dependent on the people around to reach the Hospital missing their daily wage.

Commute cost is not covered in any gov. Schemes. Leading to delay & ignorance in seeking medical help.

Support system

Most of the people do not have luxury to be off work for 14 days as the schemes provide minimum wage.

If I stay here,
“Gharka kaam don karega?”

Adherence

Adherence and co-operation is crucial yet the most common problem faced By all the HCPs.

Procedures

Workflows are very complex for most of The stakeholders like NRC & AWWs. Documentation is one crucial step of Them.

High drop-out rates

People do not complete the treatment Leading to re-emergence of the condition in the child.

AWWs workflow

The workers are not from high quality education background. They face misalignment in expectations.

Poshan Trackers do not work in reality. Language and accessibility being one of the issues.

Resource hunting for the Anganwadi is a Tediuos task.

Awareness

People are not aware of facilities of NRCs

On the other hand, a lot of information being available to chronic patients, lead to self treatment.

Gender Roles

Husband’s expecting the women to be doing the house chores and still be taking care of the child.

Data collection

AWWs workflow is very tight and loaded with paperwork to generate data.

Tools provided are designed for the government and not for the user!

Post dis-charge

The post discharge workflow is not Given much attention for innovation.

Community engagement

There’s lack of accountability to societal issues due to lack of knowledge on how can the individual help.

Resource allocation

There’s a huge problem of tracking the Food allocated for each child as there are cases where the entire family feeds on one person’s food quota.

People end up selling the grains and foods after sourcing them from gov. Programmes.

Social Stigma

People seeking Nutrition as a curative Health as the Last resort

For poor families, it becomes a point of prestige/ ego to accept their child is not healthy/ undernourished.

Hesitation to supplements

Counselling

Creating awareness amongst the parents Is the most challenging with the Demographic HCPs deal with.

Information Handoff

With multiple stakeholders in the situation, information handoff becomes Challenging.

Tech literacy

Most of the stakeholders especially Gaurdians and AWWs are not literate Making them uncomfortable with technology.
Hence the current tools fail to provide Assistance and perceived as complexity.

Language barrier

Migrant workers are the ones seeking these facilities the most. Language Becomes a challenge to navigate.

4. Future Linkage with Community Based Management

For the management of children with severe malnutrition it is desirable to have a community-based and a facility-based component, so that severely malnourished children with no complications can be treated in the community, while those with complications can be referred to an inpatient treatment facility with trained staff. Community based management of SAM is also required for continuing the management of SAM children discharged from the health facility.