

# Redesigning a service to assist anaemia treatment and prevention amongst women in Urban Slums in India

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## Approval Sheet (Shivangi)

Interaction Design Project 2 titled “**Redesigning a service to assist anaemia treatment and prevention amongst women in Urban Slums in India**” by Shivangi Negi, (Roll Number 216330018) is approved for partial fulfillment of the requirement for the degree of ‘Masters in Design’ in Interaction Design at IDC School of Design, Indian Institute of Technology, Bombay.

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## Declaration

I declare that this written document represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea, data, fact, or source in my submission. I understand that any violation of the above will be cause for disciplinary action by the institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.



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## Acknowledgment

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I also extend my heartiest thanks to my senior Gauri Tillu, interaction design for the academic year 2019-20 for the insights and discussions around the project.

Finally, my gratitude to the Interaction Design faculty for their input and my classmates for their motivation along with the constant support from my family.

Shivangi Negi



# Abstract

Anaemia is one of the main issues with public health in India & is the most common around the globe, affecting 24.8% of the global population. According to the results of the NFHS-III study conducted in 2005–2006, India has one of the highest rates of anaemia in the world, afflicting 50% of the population. One in every two Indian women (56%) has some form of anaemia, and it is thought that 20% to 40% of maternal mortality in India is related to anaemia. Although it affects people of all ages, young children, pregnant women, and women who are not pregnant but are of childbearing age are the most at risk.

The aim of this project is to help anaemic women from Urban Slums recover & to eventually prevent anaemia. The route will be of service design. This is done by providing the interventions that Enable the customers to take charge of their own recovery in the right (medically prescribed ) way. The interventions will also help them sustain this behaviour in order to prevent anaemia after recovery.

The services are targeted towards anaemic women of reproductive age (12-45 age group), in an Urban Slum called Milind Nagar in Aurangabad. To understand the context more & gain better insights, I spoke with Dr. Pratibha Phatak, (Ayurvedic Doctor & HOD- specialisation in Rural Healthcare) , Dr. Sandeep Dapale (Medical Officer & HOD-HR) & their team in Savitribai Phule Mahila Ekatma Samaj Mandal, an NGO that focuses on serving the underprivileged sections of the society by assisting them for a healthy and happy life. I also visited and spoke with the patients & their families in the slums.

A service design approach, leveraging & strengthening existing value co-creation within the community, along with other aspects was taken to explore challenges and opportunities in the field through practices followed by social organization. The analysis of this study is reported. The findings helped in understanding the existing practices by the service provider, other stakeholders & customers.

It helped in gaining insights with respect to customers motivations & constraints. Interviews were conducted with customers, community & representatives of social organizations are also reported. Key findings include the process of recovery & behavior change practices , methods of communication, and support provided by the organizations. These findings helped form the design strategies and directions regarding the scope of the project. Finally, the paper concludes with the limitations of this study and directions for further research.

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# 1. Introduction

## 1.1 Anaemia in India

Anaemia is a condition when there aren't enough red blood cells to meet the body's physiologic requirements. It is one of the main issues with public health in India. The disorder caused by nutritional inadequacy is the most common around the globe. Although it affects people of all ages, young children, pregnant women, and women who are not pregnant but are of childbearing age are the most at risk. 1.62 billion individuals around the world, or 24.8% of the population, suffer from anaemia. Nutritional anaemia is more likely to occur to these categories of people.

Due to the increased need for iron in haemoglobin and myoglobin, as well as to make up for the iron lost during menstruation and due to poor dietary practices, adolescent girls are more susceptible to iron deficiency anaemia than other age groups. According to the results of the NFHS-III study conducted in 2005–2006, India has one of the highest rates of anaemia in the world. The causes include the high expense of healthcare services, the low status of women, and poor food quality. According to the survey, Assam has the worst situation among the states, with 72% of married women anaemic, followed by Haryana (69.7%) and Jharkhand (68.4%). Malaria is common in some states, including the developing world, where anaemia is most prevalent, and has a variety of contributing factors. According to data from the National Family Health Survey, one in five maternal fatalities in India are directly attributable to anaemia, and every second Indian woman is anaemic. This review will concentrate on recent developments in our comprehension. India has a greater prevalence of anaemia than other developing nations in all demographics. Anaemia is thought to afflict 50% of people in India. More women than men are impacted by the issue, making it more serious.

One in every two Indian women (56%) has some form of anaemia, and it is thought that 20% to 40% of maternal mortality in India is related to anaemia. Anaemia is described as having a haemoglobin level in females of less than 12 g/dl, according to the National Consultation on Control of Nutritional Anaemia in India. Haemoglobin levels of 10–11.9 g/dl are considered mild anaemia, 7–9.9 g/dl is considered moderate anaemia, and more than 9.9 g/dl is considered severe anaemia.

## 1.2 Socio-economic inequality in anaemia among women in India

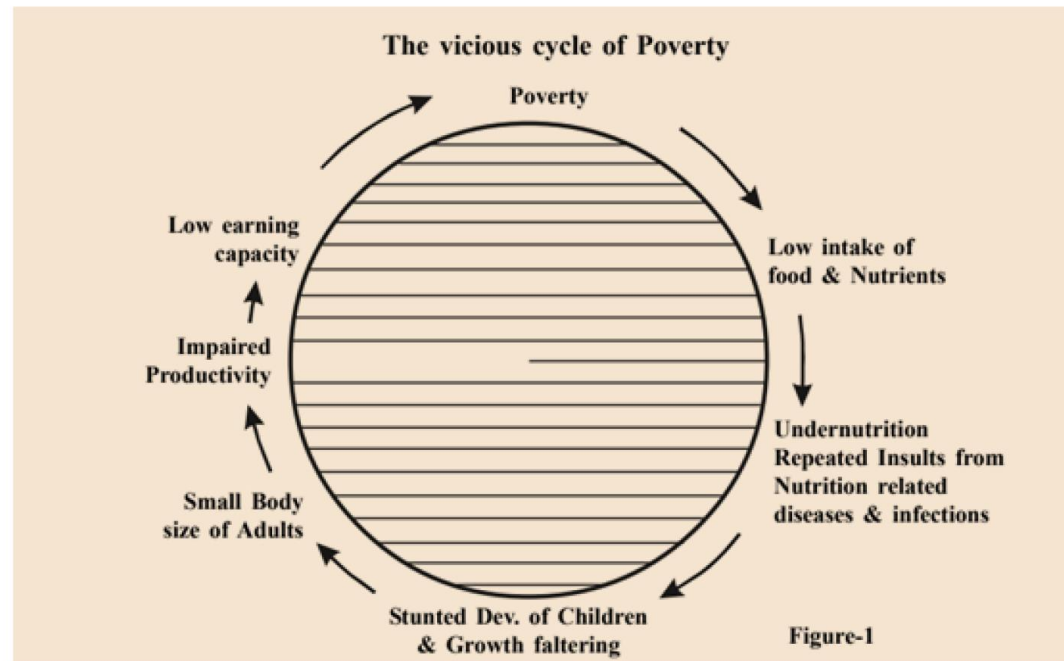


fig 1: Vicious Cycle of poverty

Image source: Internet

There are multiple factors that affect the purpose: the socio-economic group that the patient is a part of, the undernourished & underdeveloped growth of the patient, and lack of proper education or skills make it difficult for the person to get the job this, in turn, lets them stay poor.



**1. Poverty-** A poor household cannot afford to fulfil the basic necessities, which leads to undernutrition, lack of awareness about nutrition or their health and being able to afford medicines or health checkups.

**2. Nutrition Deficiency** - Deficient iron status or anaemia among adolescent girls is a major cause of growth retardation, impaired physical and mental development, morbidity, and future poor reproductive outcomes. Besides inadequate iron consumption, other major direct causes of anaemia are high menstrual blood loss, malaria, and hookworm infestation. A vegetarian diet is also linked with iron-deficiency anaemia.

**3. Unhealthy/ unhygienic eating habits** - No proper attention towards cleanliness, as they might be barely making up the money to afford food.

**4. Medical checkup** - People often are not careful about treatment and are carefree about getting treatment

**5. Lack of infrastructure** - Health organisations are not willing to form medical facilities that can cater to various severe conditions because there is less/ no chance of revenue generation that can support the functioning of the organization itself. Doctors are unwilling to go to such places. The condition and treatment of patients in government and rural hospitals make them hesitant to visit the institutes. Improper hygiene surrounding the area, accompanied by anaemia makes the patients more prone to malaria, and hookworm infestation.

**6. Lack of Education or jobs:** People who were highly educated will usually act more rationally. Therefore, educated people would more easily accept new ideas. Likewise, a highly educated mother will have her pregnancy checked regularly to maintain the health of herself and her child in the womb. The higher the education correlated the higher the awareness of the mother to get good nutrition so that it does not cause anaemia during pregnancy. Anaemic pregnant women with low education have a higher prevalence than highly educated mothers.

**6. Genetics-** Anaemia mother proved to be a significant biological factor in children suffering from anaemia. Underweight mothers posed a threat to their children to acquire anaemia whereas children born to overweight mothers had shown the least likelihood.

**7. Lack of Productivity:** Anaemia “reduces the work capacity of individuals and entire populations, bringing serious economic consequences and obstacles to national development”. India loses 0.9% of its gross domestic product (GDP) due to iron-deficiency anaemia, according to a 2003 [paper](#) published in Food Policy. This could mean a loss of up to \$20.25 billion (Rs.1.35 lakh crore), according to the World Bank’s estimate of India’s [GDP](#) in 2016.

**8: Undernourished development:** Anaemia during pregnancy also increases the chances of foetal deaths, abnormalities, and pre-term and underweight babies. Anaemia during pregnancy also increases the chances of foetal deaths, abnormalities, and pre-term and underweight babies. Anaemia also impacts the immune system and increases the chances of infections and inflammatory disease, further affecting individual productivity.

# Why Service Design?

The condition of anemia is more prevalent in amongst the marginalised society in India & at a global level. There are Multiple factors that drive this, including social & cultural factors, skill development lack of jobs etc. Service design helps establish interaction between humans through channels, products and in varying contexts. Service design let's us:

**1. Take on a holistic approach:** Service designers zoom out and analyze an ecosystem, various stakeholders, value flows and the context as they design. In social practices, it is not just the artefacts, but an interconnected complex of people, systems and behaviours that drive interaction.

**2. Co-creates value:** Service providers and service beneficiaries attain value by interacting and working together to realize value of the service. Social practice looks at how collectives co-create value by performing the practice as a result of shared knowledge and understanding of the practice. Collaboration with the consumer as per a service-dominant logic can make consumer experiences richer. This participation can be driven by the consumer's expertise to be an operant and if perceive benefits by being a contributor in the service. (Lusch et al. 2006)

**3. Human-centered:** Having a service-centred view lets designers focus on building interconnections that develop value that are customer focused and relational. Services afford the building of relations that make sure that the customer gains value from the interactions and the various experiences cater to their needs. In this project, the models of social practice have been valuable when designing for complex spaces such as this. Through the synthesis of a communities of practice and practice theory framework, we aim to analyze and detail service design solutions for a collective rather than an individual.

## **4. Conceptualising overall service rather than one touchpoint:**

Gaps could be identified at multiple encounters. Also, when mapping the lifetime trajectory, Customer needed help at multiple stages.

## **5. Temporal Nature, Value builds cumulatively**

## 1.3 About Savitribai Phule Mahila Ekatma Samaj Mandal

SPMESM is a Non Profit Organisation based in Aurangabad. It is well- known for its exclusive and extraordinary need based social projects and activities. It is active through its 42 social initiatives across 270 villages and 68 densely populated slums in Central Maharashtra.

Their mission is “ be a Catalyst with sustainable solutions in Health, Livelihood, Inclusivity and Educational development of the marginalized and the Environment.”

SPMESM has its genesis from a healthcare institute of Maharashtra- Dr Hedgewar Hospital. SPMES Mandal remains true to its roots by focusing on the vital aspects of Development of Less-Privileged and the marginalized communitiy in India. The organisation has multiple programs under 8 domains which are: Community Health, Natural Resources Management, Skill Development, Women Empowerment, Education, Sustainable Development, Relief Work & Mass Education.

The organisation’s senior board members, head of projects ( HOD) are the doctors themselves. They are assigned a program and has a team of other members & volunteers from different education levels & backgrounds. A good section of their team lives in the marginalised area they working for. Most of the team including the HOD’s have to go on site on daily basis, & meet with the locals, perform checkups as part of their job. In terms of approachability, there are no levels. Everyone is willing to help the community & to work.

The organisation only caters to OPD patients, and for anemia, they offer treatment to mild & moderate anemic patients only. If someone is detected with high level of anemia, they are shifted to Hedgewar hospital for getting the right care.

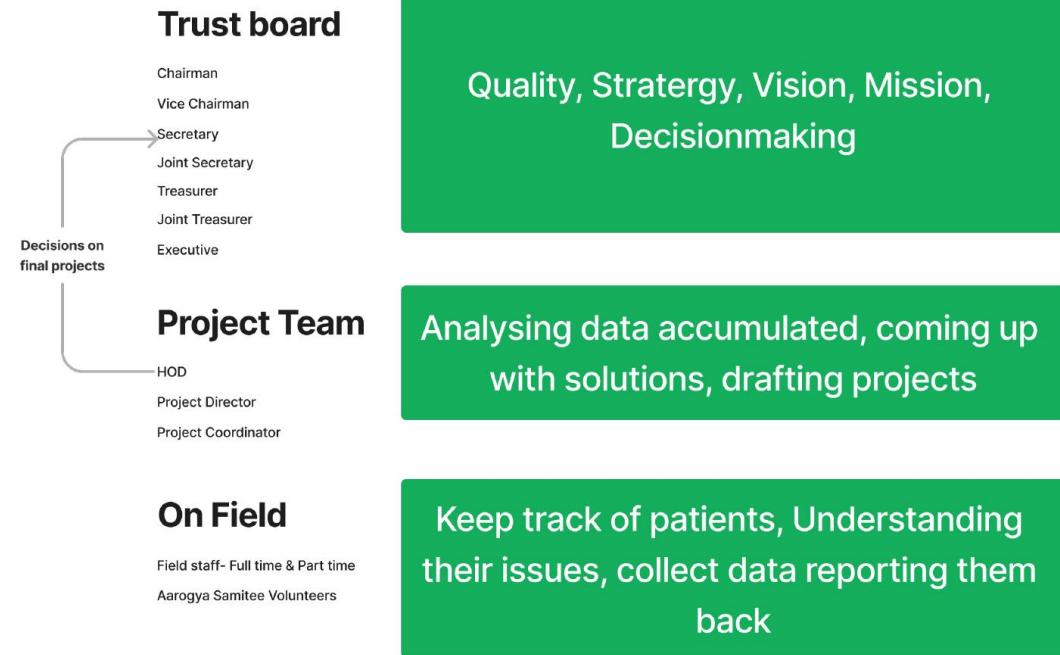


fig 2: Hierarchy in SPMESM

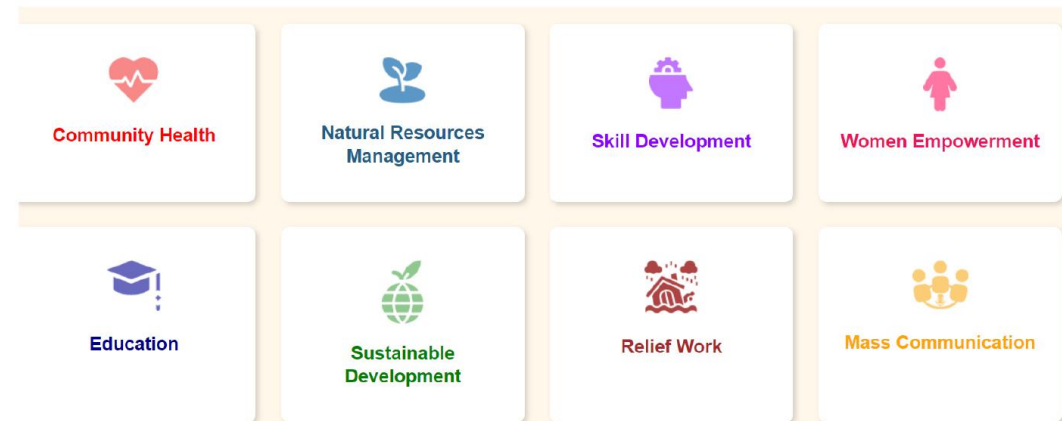


fig 3: Primary Domains that the organisation caters to.



## 2. Primary Research

Through the organisation SPMESM in Aurangabad, I went to visit an Urban slum. The first observation was that organisation is well established and has gained trust from the customers it caters too.

The Urban slum was in an area called Milind nagar

- Location- Milindnagar , Aurangabad
- Population- 35,000 approx
- Dominated by Dalit population, who follow Dr. B. R. Ambedkar, People of all religions, & Caste
- People above 35 - max. 6th pass
- below 35- 12th pass



fig 4: View of Milind Nagar Slum From the Service Provider's Health Centre

Primary research for this project consisted of

### 2.1 Interviews with the Users & their families.

a. Semi-structured interviews with branching and laddering with 6 user group who had anemia & their families. The active participants during these interviews were the users, their children, their mother or mother in law.

b. The interviews were conducted after obtaining informed consent from the families.

c. A lot of insights were triangulated by collecting data from family, field workers and doctors and other experts at SPMESM. I was always assisted by the project manager from SPMESM,

d. Observations & Insights:



Img source: Organisation Website



fig 5: Distinct division of houses based on income groups

**A. There are 3 kind of income groups in the locality, & the clear distinction was marked through their houses. This difference is also reflected on the conduct of one family towards the other.**

- Lowest income group:

The families here are doing menial jobs such as cleaners, garbage collectors etc. These households, essentially had family members who are illiterate and really struggled to make their ends meet.

- Middle Low Income group & Upper Middle Income Group:

In these households, some parents had gained education & their children were enrolled in a school or college.

**B. In most of the families, if the mother in a family has anemia, the daughter/s have it too.**

**C. There is a symbiotic relationship between the mother & the daughter; if one of them is motivated/demotivated to follow the treatment or rehabilitation, the other person does it too.**

**D. Users long for recognition.**

Even small incentives help in building user's confidence tremendously

**E. The organisation is well know and trusted by alot of people in the community.** But it takes alot of time for the organisation to achieve so.

**F. Users Badmouth with the aarogya volunteers from organisation, when they reach out to them for follow up because the feel that they are being used and their interest is not being protected.**

*Becoming the idol was an amazing experience, I am just sad that my mother wasn't there to witness it. I was missing her. \*her and mom start crying\**

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**G. It takes the support and acceptance of the whole family** for the women to even go for the checkup, even if they are earning.

**H. Staying connected with the community helps the women,** in adapting to the better lifestyle

**I. Any update in the community spreads across in minutes.**

**J. Users arent really aware about what anemia is.**

They think is reduced blood in their body. Hence users aren't able to understand the severe repercussions of anemia.

**K. Diet** of a child to a pregnant mother involves more of carbohydrates rather than green leafy vegetables. This is primarily because they are not aware.

**L. There is an internal competition amongst women in the basti,** about getting the highest number or the most amount of anything. It is also a drive to do better than each other.

**M. There is a trend to eat Biscuits or Rusk (dried toast) for breakfast in the basti for breakfast & snacks.** Hence everyone follows it. The nearby shops do not provide healthy & affordable snacking options.



*No one in my family knew what it means to have anemia. I myself didn't know what I was feeling and why I was feeling this way.*

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## 2.2 Interviews with the Organisation.

I interviewed the organisation's Doctors who were the project leads ( HOD), I was constantly in contact with Dr. Pratibha Phatak & Dr. Sandeep Dapahale. Dr. Pathak is the project lead for “ RAMA: Reduce Anemia Prevalence In Mothers & Adolescent Girls Project” . I got to meet her team, shadowed, & interviewed the Project manager : Varsha Pimple & her team. She is the head of field staff for RAMA. She primarily works from the health centre in the slum. The health centre also has different workshops, studios & activities that cater to issues in that slum. Some of them are :

- Women Empowerment- Tailoring, Cooking & Beauty Parlour Classes
- Education for kids- DayCare Centres, Electronics & Computer Classes & much more.
- Counselling Rooms for different sessions.



fig 6: Activities hosted by the health centre

## • Interview with Dr. Pratibha Phatak & Dr. Sandeep Daphale

While discussing and interviewing them, I tried to understand why were the patients/users becoming anemic in Slums & in this Slums in specific? What were the reasons & the mental models behind this? Post the interview, I discussed the same with my guide: Prof. Pramod Khambete & did some secondary research on the same.

Some of the mental models that were identified was:

### 1. Reluctance to go for health checkups -

The hesitation of patients towards the way they will be treated in a hospital. If an organisation comes to their doorstep, they might be afraid to share their personal information or give them samples of their blood because of the fear of exploitation. The family of an anaemic patient.

### 2. Religious beliefs -

The treatment for anaemia, at times, counter the religious beliefs of the patient & their family, so they would not agree to follow the prescribed methods for treatment. A study showed that Religion-wise, Christians were least likely to have any anaemia, in comparison to Hindus.

### 3. Lack of awareness-

Many types of anaemia are mild and short-term. Also, the symptoms of anaemia are such that the patient can easily ignore, hence instead of getting it checked, patients assume it to them being laziness or procrastination.

### 4. Lack of Family support-

Patriarchy also contributes to the marginalization of women and limits their access to resources. Patriarchy does not allow a woman to have control over her own income and resources and she has to constantly compromise her interests and individuality for the larger well-being of the family. The same does not apply to men. Due to her symptoms of anaemia, a female patient is

does not apply to men. Due to her symptoms of anaemia, a female patient is sometimes unable to perform the conventional responsibilities of the household, for which is judged and ridiculed. She also faces exploitation & abuse due to it. Getting tested for anaemia appears as an excuse to get out of her responsibilities to her family and so she doesn't treat it.

**5. Caste , Religious Traditions-based social inequalities:**

Caste is one of the traditional measures of social segregation in India and differs from other indicators as it is both, endogamous and hereditary. Evidence suggests that belonging to lower castes exposes one to social inequalities and affects health adversely. The level of adult education and household wealth did not modify the association between caste and childhood anaemia.

• **Insights & Observations:**

Some of the insights mentioned above are derived with interviewing the organisation aswell

A. There is alot of religious prejudice associated that hinders the basic nutrition needs of an infant & its mother

**B. For the middle lower & upper lower class income group, having tea and biscuit for breakfast is more of a choice, rather than the only option.**

**C. Literacy Level and Level of income guides**

whether a patient is willing to take the treatment and adapt to the lifestyle change.

D. In order to motivate the patients/user providing incentives works in great ways.

E. Smallest things can also act as a trigger for the patient to give up.

- E. The mother/wife/daughter-in-law comes last in the hierarchy, when it comes to her health and wellbeing.
- F. Focusing on the health & eating right is a menial concern for them because for them, bigger issues to face are bringing food to the table, dealing with abusive inlaws & spouse.

• **Interview & shadowing project manager Varsha Pimple & her team.**

Insights:

- A. Tremendous amount of empathy and patience is required to motivate the patient
- B. It is important to have patient's trust
- C. Follow Up is a must with the patient.
- D. It is important to keep up to date with the patients life, so that the solutions offered can be valued.

**Under the Project RAMA, the service provider focuses on the following.**

Prevention of Nutritional Anemia in 3000 (12- 45 age group) females of Aurangabad slum with surveillance, peer based behavior change communication and direct health interventions.



Urban Slums		Rural	Tribal
 <ul style="list-style-type: none"> <li>• Mild/ Moderate/ Severe</li> </ul>	 <ul style="list-style-type: none"> <li>• Pre natal&gt; during&gt; post pregnancy</li> <li>• Mild/ Moderate/ Severe</li> </ul>	<ul style="list-style-type: none"> <li>• home makers</li> </ul>	<ul style="list-style-type: none"> <li>• home makers</li> <li>• working at farms</li> <li>• vegetable sellers</li> </ul>
	<ul style="list-style-type: none"> <li>• dalit community</li> <li>• daily wage workers</li> </ul>		

fig 7: Aneamic Users at SPMESM



## USER NEEDS SUPPORT FOR RECOVERY & PREVENTION

**The community has a strong network where everyone knows each other**

Easy communication

Internal Competetion

Support

People follow trends within basti

**Family support is crucial for user to stay on track**

Symbiotic relationship b/w mother & daughter users

User puts family needs first, and then hers

User family doesnt recognise the importance of user

## USER NEEDS TO BE EMPOWERED

**Users lack self worth**

Small wins really count to the user

User longs for support from family & friends

## USER LACK KNOWLEDGE ABOUT ANEAMIA

**Users do not know what aneamia is**

Think that means lack of blood

User does not know the food habits

## USER LACK AWARENESS ABOUT ANEAMIA

**Users arent aware about what anemia can lead to**

**Users arent aware about the symptoms of aneamia**

**Religious Prejudices prevent users from taking measures to treat & prevent aneamia**

**Education & Financial independence of users understanding to measures to treat & prevent aneamia**

- Insights, where design interventions can directly affect
- Insights, where design interventions cannot directly affect

I tried to map the Process that is adapted by the Service Provider for the same

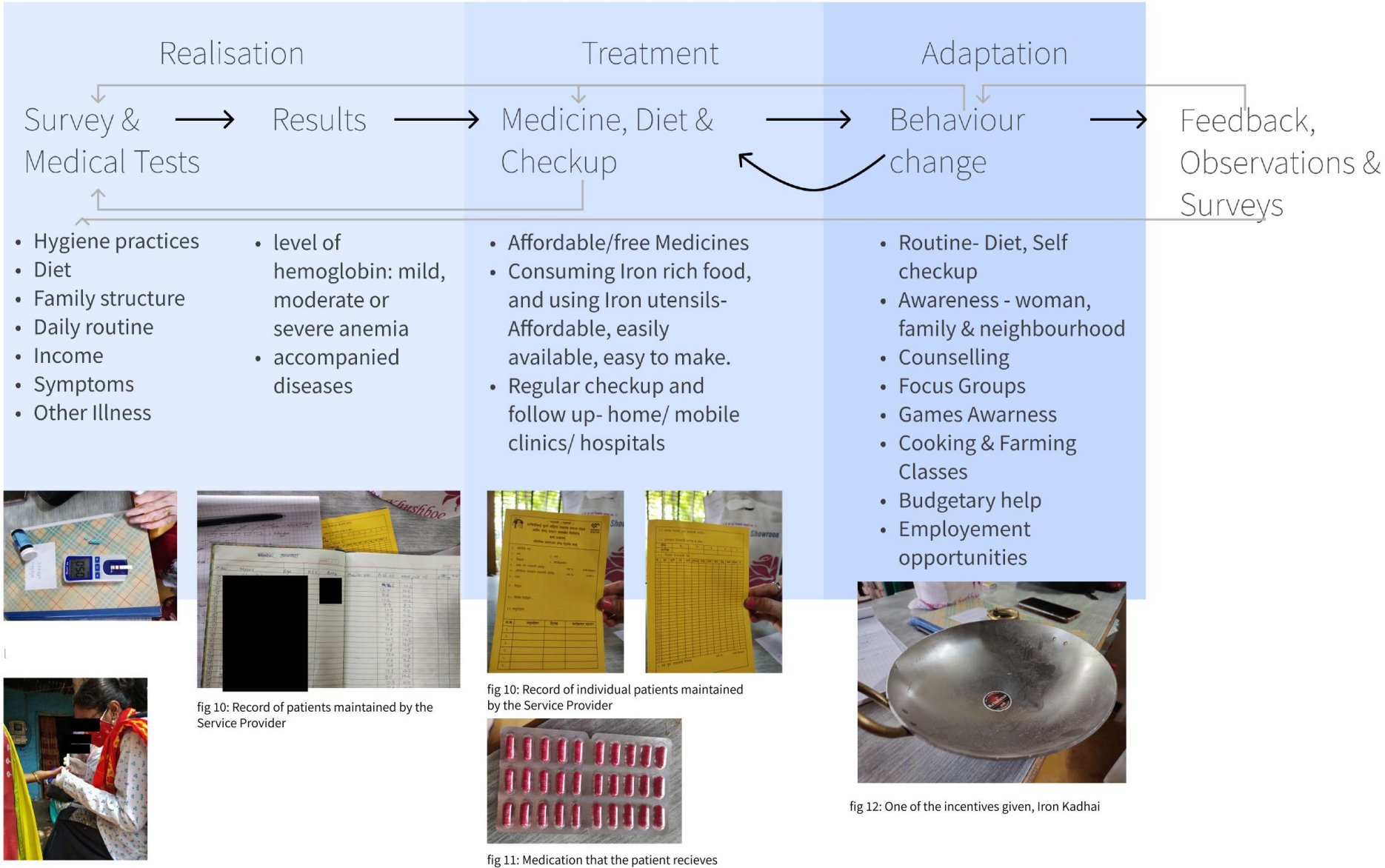


fig 8: Process of SPMESM for aneamia treatment

They conducted a survey on 3000 women from the basti, and took their HB blood test. Based on the severity of anemia, They were provided a medication plan for 3 months and asked to eat healthy.

Post that they hosted counselling sessions for the patients, to spread awareness and help patients adapt to a healthier lifestyle & eating habits. These were termed as “behaviour change sessions.” The major aim of these sessions is to help customer and stakeholders to adapt healthy habits and lifestyle for prevention of anemia. They primarily do that by creating awareness & motivating them through counselling, workshops, competitions and other such activities. These are focused from individual customer, to a group of customers to stakeholders & community.

These involve a bunch of activities including:

- Group Counselling with anemia patients :

In these counselling sessions an expert like a nutritionist, counsellor is called that talks about a healthy lifestyle, and how it can be easily adapted into the life of an anemia patient.

-Regular Follow Ups with the User:

These take place through phone, text or home visits. It is done by field workers & volunteers who are from the same basti. It is not a long session, but takes place at least twice in a week. If the user wishes, they share issues about their life, and the role of a volunteer & field worker is to guide/help them through the organisation.

- Quiz Activities:

This session is awareness & building morale with the users.

Knowledge

Awareness

Empowerment

Value Co creation

## Nutrition Workshops

Iron & vitamin rich food at home

## Counselling

Empower women to take care of herself

Encourage families to support her

## Potluck & Quiz

## Skill Development

Health Center

Aarogya Volunteers

Field Workers

Incentives

fig 9: Workshops hosted by Service Provider called behaviour change sessions 11

# 3. Project Focus

## 3.1 Who is this solution for?

The solution is for patients who know that they are suffering from anemia. The target user group are female from 15-45 years of age. This age group was targeted, because 15 is when they start menstruation, and in some households in the basti, the females are married off at this age. A lot of women the similar age group get married and migrate to this basti and live with their in-laws. The age group from 45-55 is the menopause or post menopause phase. The health interventions at this stage are very different. Since they have stopped menstruation, repercussions of anemia are not as fatal.

## 3.2 Which service are we designing

There are multiple services & service encounters that are offered to the patients in the existing service constellation. These encounters and interventions are tailored to the needs of the basti. Hence, the aim was to recognise the gaps, ideate and propose interventions that are either an improvement on the existing encounters & services or as an add-on. This depended on customer needs & service provider's goals, along with their scope of work in this project.

Hence it was important to narrow down my focus:

1. Empowering individuals with the knowledge and resources to navigate their own anemia treatment and recovery.
2. Enhancing awareness about anemia prevention and treatment strategies amongst users and their families for an informed health management approach.
3. Fostering a supportive and encouraging environment within families and communities to facilitate effective anemia treatment and prevention.
4. Crafting sustainable solutions that not only address current anemia concerns, but also prevent future occurrences.

## 3.3 What is the key focus ?

**Enabling the customers to take charge of their own recovery & prevention from anemia in the right ( medically prescribed ) way. Helping them sustain this behaviour in order to prevent anemia after recovery.**

The key areas that were highlighted during interaction with the organization were:

- 1. Helping ownership for their own treatment & recovery**
- 2. Aiding the user to be of awareness about anemia treatment & prevention amongst the User & their families**
- 3. Getting support & motivation from family & community to treat & prevent anemia**
- 4. Making the solutions sustainable**



# 4. Persona

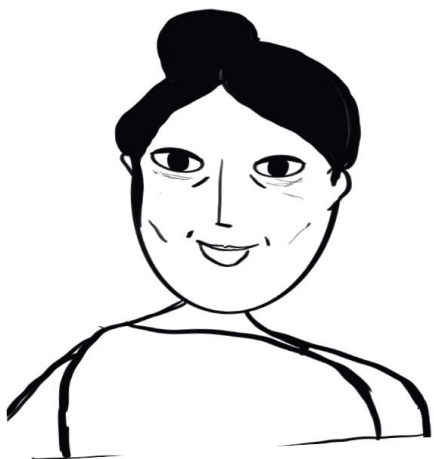
Each persona serves as a reference model for a certain group of consumers. When they concentrate on capturing various actions (such as "the aware chooser") without reflecting a specific personality or socio-demographic, they can technically be referred to as behavioral archetypes. Archetypes become more realistic personalities that accurately reflect the requirements, wants, routines, and cultural backgrounds of certain user groups the more realistically the archetypes are given (e.g., name, age, household composition, etc.).

In this context, the traits of each persona were based on broad categories, that differentiated the user groups. These aspects were as follows: Age, Marital status, Job, Family type & Responsibilities, Education Level & Tech Literacy, Stage of anemia & associated conditions, Personal Mindset & family Mindset towards anemia, Her & her family's concern for her wellbeing. Level of involvement with the community, trust with SPMESM. Her own nature

User		User's Family	Organisation
Aspects that she cannot control anymore	Aspects that she can control	<ul style="list-style-type: none"> <li>• Her family's concern for her wellbeing.</li> <li>• Their attitude towards her</li> <li>• Recognition towards her importance in their life</li> <li>• Level of involvement with the community,</li> <li>• trust with SPMESM.</li> <li>• Responsibilities &amp; duties of family members</li> </ul>	<ul style="list-style-type: none"> <li>• Level of trust</li> <li>• Communication with Organisation's touchpoints</li> </ul>
<ul style="list-style-type: none"> <li>• Age</li> <li>• Marital status</li> <li>• Religion</li> <li>• Caste</li> <li>• Type of family &amp; family members</li> <li>• Responsibilities &amp; Duties</li> <li>• Education Level</li> </ul>	<ul style="list-style-type: none"> <li>• Tech Literacy</li> <li>• Concern for her own wellbeing</li> <li>• Her Personal Mindset &amp; beliefs</li> <li>• family Mindset towards anemia,</li> <li>• Level of involvement with the community,</li> <li>• trust with SPMESM.</li> <li>• Communication with family, friends &amp; neighbourhood</li> </ul>		

fig 10: Parameters considered to define the personas

# a. Raza



**Methodical**  
**Reliable**  
**Preplanner**  
**Breadwinner**

She was born and brought up in the locality itself. Lives with her husband, mother in law, father in law and her children. Her parents live nearby. Her mother in law watches the kids when she isn't at home. She is ambitious & Hardworking, & wants to gain recognition. But her husband is not able to find work and is an alcoholic.

**Age:** 35 years

**Gender:** Female

**Education:** 3rd pass

**Residence:** Aurangabad

**Marriage:** Married with 4 children

**Occupation:** Garbage picker and maid

## Activities:

1. Looking after her children & in laws
2. Managing her alcoholic husband
3. Enjoying her time with her group

## A day in her life:

1. Gets up early in the morning
2. Gets fresh and has tea with her family
3. Visits the mosque before going to work
4. Goes on her maid duty
5. Comes back at around 8.30 am
6. Prepares food for everyone
7. Goes for garbage collection, works till 2.30 pm in the afternoon
8. Comes back and eats whatever she can and goes on her maid duty till 5.00 pm
9. Returns home, gets fresh and takes rest for sometime
10. Has tea before going out to meet her group
11. Makes food and goes to bed at around 8.30 in the evening

**Likes:** Stitching

Listening to the radio  
Likes working in a structured environment

## Dislikes:

Unorganised spaces  
hates to see litter

## Habits:

Visits a mosque before arriving at her work place  
Follows the same route for garbage collection

**Devices:** Has a non smart phone (feature phone) and a basic earphone

**Places:** Work place, mosque, grocery store, neighbours place, etc.

## Situation:

1. She earns for the family
2. Has to take care of her children
3. Has to deal with her alcoholic husband
4. Has to prepare food for everyone
5. Has to do cleaning and sanitation of the house
6. Listen to verbal abuse from family
7. Has an anaemic daughter

## Goals:

1. Wants her children to be healthy and safe.
2. Wants to fulfill her responsibilities
3. Wants to earn and provide for the family
4. Wants to save money for her kids future

## Pain points:

1. Does not know what anaemia and its effects are
2. The family blames her for her condition

## Constraints:

1. She cannot fulfill her desires due to financial constraints
2. She cannot stop her husband from abusing
3. Listens and acts only after getting her mother in laws's or husbands opinion.
4. Has to juggle between work and family life.
5. Her family is Orthodox.
6. Skeptical about sharing her condition to others
7. Her kids offer little to no help at home and stay outside for most of the day
8. Her boss doesn't give her many leaves.
9. Even though she feels sick and tired all the time she has to work



## b. Meena



### **Reliable** **Religious (superstitious)**

She was born and brought up in the locality itself. Lives with her husband, mother in law and father in law. Her parents live nearby. She is ambitious & hardworking.

**Age:** 20 years  
**Gender:** Female  
**Education:** Undergraduate  
**Residence:** Aurangabad  
**Marriage:** Married and expecting their first children  
**Occupation:** Home maker

**Activities:**

1. Looking after her in-laws
2. Takes care of her still born
3. Does all the household chore

**A day in her life:**

1. Gets up early in the morning
2. Gets fresh and has tea with her family
3. Performs puja
4. Performs fasting regularly
5. Skips breakfast
6. Prepares food for everyone but does not eat on the fasting days. Just has tea or water
7. Goes out to meet her neighbours
8. Eats only after her husband has eaten
9. Goes to bed at around 10 pm.

**Likes:**

- Stitching
- Eating junk food
- Interacting with neighbours

**Dislikes:**

- Asking for money
- Not being able to follow trends

**Habits:**

- Watching tv
- Gossiping

**Devices:** Husband has a smart phone (feature phone) and a basic earphone

**Places:** Home, health centre, grocery store, neighbours place, cosmetic store, etc.

**Situation:**

1. Has to take care of her family and her still born
2. Has to prepare food for everyone
3. Has to do cleaning and sanitation of the house
4. She is financially dependent

**Goals:**

1. Being a good wife and a daughter in law
2. Wants to fulfill her dream of setting her own
3. Wants to earn and provide to her family and save for her future kid/s

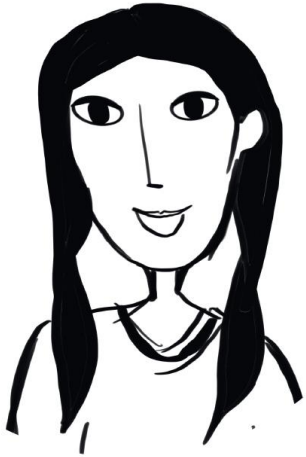
**Pain points:**

1. Does not know what anemia is
2. She and her family blames her for the symptoms she is facing
3. Not aware about the effect of anemia on child health

**Constraints:**

1. She cannot fulfill her dreams and desired due to financial constraints
2. She has to ask her husband for money
3. Listens and acts only after getting her mother in laws's or husbands opinion.

# c. Sudha



**Reliable**  
**Religious (superstitious)**

She was born and brought up in the locality itself. Lives with her husband, mother in law and father in law. Her parents live nearby. She is ambitious & hardworking.

**Age:** 21 years  
**Gender:** Female  
**Education:** Pursuing undergraduation  
**Residence:** Aurangabad  
**Marriage:** Single  
**Occupation:** Student

**Activities:**

1. Takes care of her mother and assists her
2. Practices singing
3. Does some of the household chore

**A day in her life:**

1. Gets up early in the morning
2. Gets fresh and has tea with her family
3. Performs riyaz
4. Attends college
5. Goes out to meet her friends
6. Does her studies
7. She often performs on radio
8. Eats dinner
9. Goes to bed at around 10 pm.

**Likes:**

- Singing
- Eating junk food
- Interacting with friends and neighbours

**Dislikes:**

- Asking for money from her mother
- Not being able to support her mother

**Habits:**

- Participating in events
- Being a good child to her mother

**Devices:** Has a smart phone (feature phone) and a basic earphone

**Places:** Home, health centre, grocery store, neighbours place, cosmetic store, etc.

**Goals:**

1. Wants to persue singing as a career
2. Wants to gain recognition in the future
3. Wants to become like her mother and look upon her

**Pain points:**

1. Does not know what anemia is
2. She and her family blames her for the symptoms she is facing
3. Not aware about the effect of anemia on child health

**Constraints:**

1. She cannot fulfill her dreams and desired due to financial constraints
2. She has to ask her husband for money
3. Listens and acts only after getting her mother in laws's or husbands opinion.

**Situation:**

1. She is finantially independent
2. Likes to take of her mother

## d. Scenario

Raza, Meena & Sudha are all friends who live in the same neighbourhood in the basti. They communicate on regular basis & know about each other's lives. Meena sometimes helps out with chores at Raza's house. Sudha is close to Raza's daughter who is closer to her age and they often visit each other's homes.

On the day of the survey, Sunday, an aarogya volunteer along with her team came to their homes to do the tests. She is also from the neighbourhood and familiar face. They agree to give the tests although they had their hesitations about it. They got to know that all 3 of them along with Raza's daughter have anaemia. Raza didn't bother much about it, Meena had her scepticism because of the inborn, but she did not want to tell her family. Whereas Raza's daughter and Meena, thought that they should take the help of this organisation about it. They spoke with the volunteer friend of hers after she was done with the work and got to know about anaemia.

As recommended by her friend, they decided to follow up with the routine recommended by the organisation.

### Raza's Household

Her daughter, waits for her mother to come back and talk about anaemia with her. By the time Raza reached home, she saw her mother was really tired & dizzy, so she put this conversation for later. Raza prepared snacks and meals for the whole family just like a regular day. Her daughter then went to study finish her homework and then she told that her mother that they would follow this process and Raza agreed. Their mother in law overheard the conversation and said these are just excuses to get out of work. Seeing her daughter determined about it, she thought of speaking with her husband. He was not home yet from his drinking session. Since her husband took most of the payment from what she had earned that day, she could buy less food for the family. Hence she ate less food and saved some for her husband.

Upon his arrival, she cleans him and serves him food. He sleeps on the floor while eating. Raza cleans up the house after him and goes to sleep. She wonders if she will have time to go for the consultation. The next day Raza asks for a day leave from her employers and they were not happy. Some even said that they would deduct her pay. On the day of the consultation, her daughter accompanies her to the clinic. They have to wait for a while so Raza gets restless because she feels she is wasting her time. On arrival of their turn, she understands what the doctor is saying but is unbothered by even when the consequences are told to her.

After the consultation is over, they collect the medication and come back home. Unlike Raza, her daughter was regular with the medication. But both of them did not follow the eating adaptation because of the ongoing trend & affordability. Raza's daughter did not want to help her in house chores. One day Raza saw her daughter puking and high fever, on taking her to the health center, she got to know that this is a side effect to the medication. This raised alarm for Raza because she knew she cannot afford a good hospital in case things go worse. So she and her daughter stop taking the treatment. Raza's daughter still went for the workshops & quiz with Sudha and Meena sometimes because it is like a social activity in their basti

### Sudha's Household

Sudha calls her mother and tells her about it. Sudha's mother who is a health volunteer for AIDS patient in another NGO, tells her that she should go forward with the treatment at least because it is necessary. She shows her compassion and support. Sudha was motivated since & she went for the treatment. But just like Raza's daughter she got a reaction too. On contacting the field worker she got to know that it is normal for it to happen, if Sudha takes proper food, she will be able to get out of this issue. Sudha who is determined to follow every step attends a workshop. When she comes back home, she is not able to recall all the steps & process. So her motivation to continue it goes down.



## Meena's Household

Meena also breaks the news to her inlaws & husband. Her mother in law seems unbothered by it and asks her to stop making excuses and finish the house chores. Her husband goes off to work. She finishes the tasks and thinks maybe they are right. But she stills decides to visit the hospital and make sure everything is okay. She sneaks out of the house and visits the hospital. Over there she gets the consultation and is determined to make the changes. On the way back home she saw palak at the store. She thought of buying it but realised her husband does not like it so it will be wastage of money. She comes back home where her mother in law is waiting for her and expecting her to make tea and snacks. She quickly proceeds to work on the same.

Next day, she met with Sudha, and got to know that there is a family counselling session regarding it. She thought of taking her family but was scared. The field worker then contacted her to track her medication. Meena then told her about the issue and asked if she can come to her house and convince the family to come & she agreed.

The project manager visit their house to convince the family to which they unwillingly agree. Upon consultation, & coming back home, her family's behaviour was the same. Meena made her peace with it.

# 5. The Transtheoretical Model (Stages of Change)

The TTM posits that individuals move through six stages of change: precontemplation, contemplation, preparation, action, maintenance, and termination. Termination was not part of the original model and is less often used in application of stages of change for health-related behaviors. For each stage of change, different intervention strategies are most effective at moving the person to the next stage of change and subsequently through the model to maintenance, the ideal stage of behavior.

The goal was to map the persona & their journey to the stages of change model to find their actions at that stage.

1. Precontemplation - In this stage, people do not intend to take action in the foreseeable future (defined as within the next 6 months). People are often unaware that their behavior is problematic or produces negative consequences. People in this stage often underestimate the pros of changing behavior and place too much emphasis on the cons of changing behavior.
2. Contemplation - In this stage, people are intending to start the healthy behavior in the foreseeable future (defined as within the next 6 months). People recognize that their behavior may be problematic, and a more thoughtful and practical consideration of the pros and cons of changing the behavior takes place, with equal emphasis placed on both. Even with this recognition, people may still feel ambivalent toward changing their behavior.
3. Preparation (Determination) - In this stage, people are ready to take action within the next 30 days. People start to take small steps toward the behavior change, and they believe changing their behavior can lead to a healthier life.
4. Action - In this stage, people have recently changed their behavior (defined as within the last 6 months) and intend to keep moving forward with that behavior change. People may exhibit this by modifying their problem behavior or acquiring new healthy behaviors.

5. Maintenance - In this stage, people have sustained their behavior change for a while (defined as more than 6 months) and intend to maintain the behavior change going forward. People in this stage work to prevent relapse to earlier stages.

6. Termination - In this stage, people have no desire to return to their unhealthy behaviors and are sure they will not relapse. Since this is rarely reached, and people tend to stay in the maintenance stage, this stage is often not considered in health promotion programs.

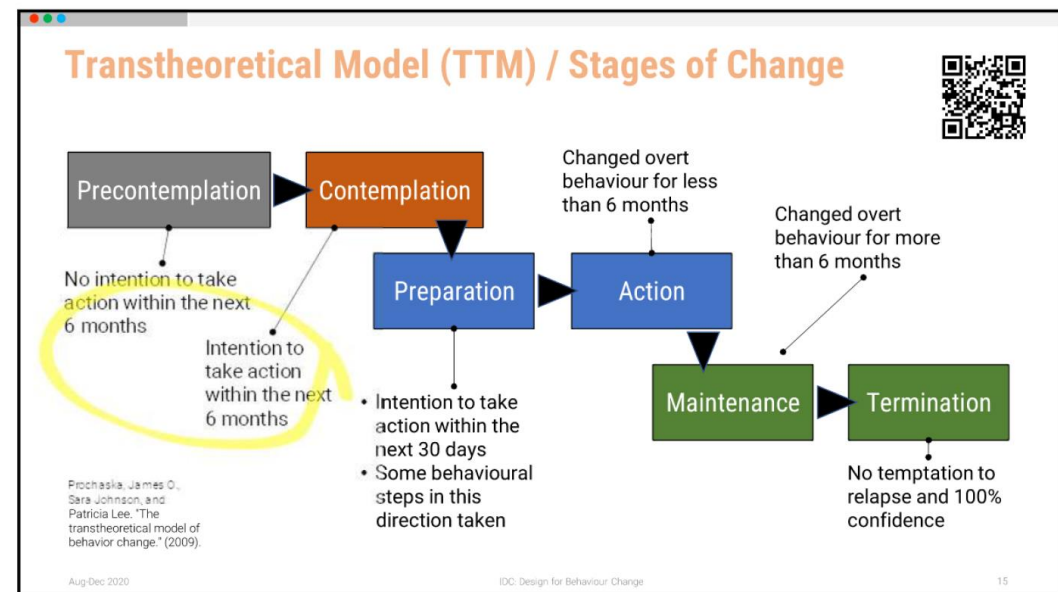


fig 11: Transtheoretical Model

## 6. Service Ecosystem

Through primary research, multiple stakeholders in the anemia care domain were identified. Iterations of the ecosystem map were made to refine it. The anemic patient, their family & the Organisation form the core of the services. (shown with bold connections) SPMESM and the family of the user are the primary value co-creators while the family and the respective anemic users, their community would be the primary beneficiaries of the service. The primary customers in this service are the family members and the service provider is SPMESM. SPMESM has a panel of doctors, field staff & volunteers that can be leveraged in this service.

SPMESM has aarogya volunteers who trust the organisation because they were recovered from anemia with the help of the organisation & on the premises. They are somewhat trained, in the skills of counselling & anemia treatment. They could play an important role in care at home. Other players consist of miscellaneous connections which would prove to be beneficial to the family. Some flows between the entities of the map have also been identified. At every stage of designing interactions, these flows have been taken into consideration and a suitable touchpoint is designed.

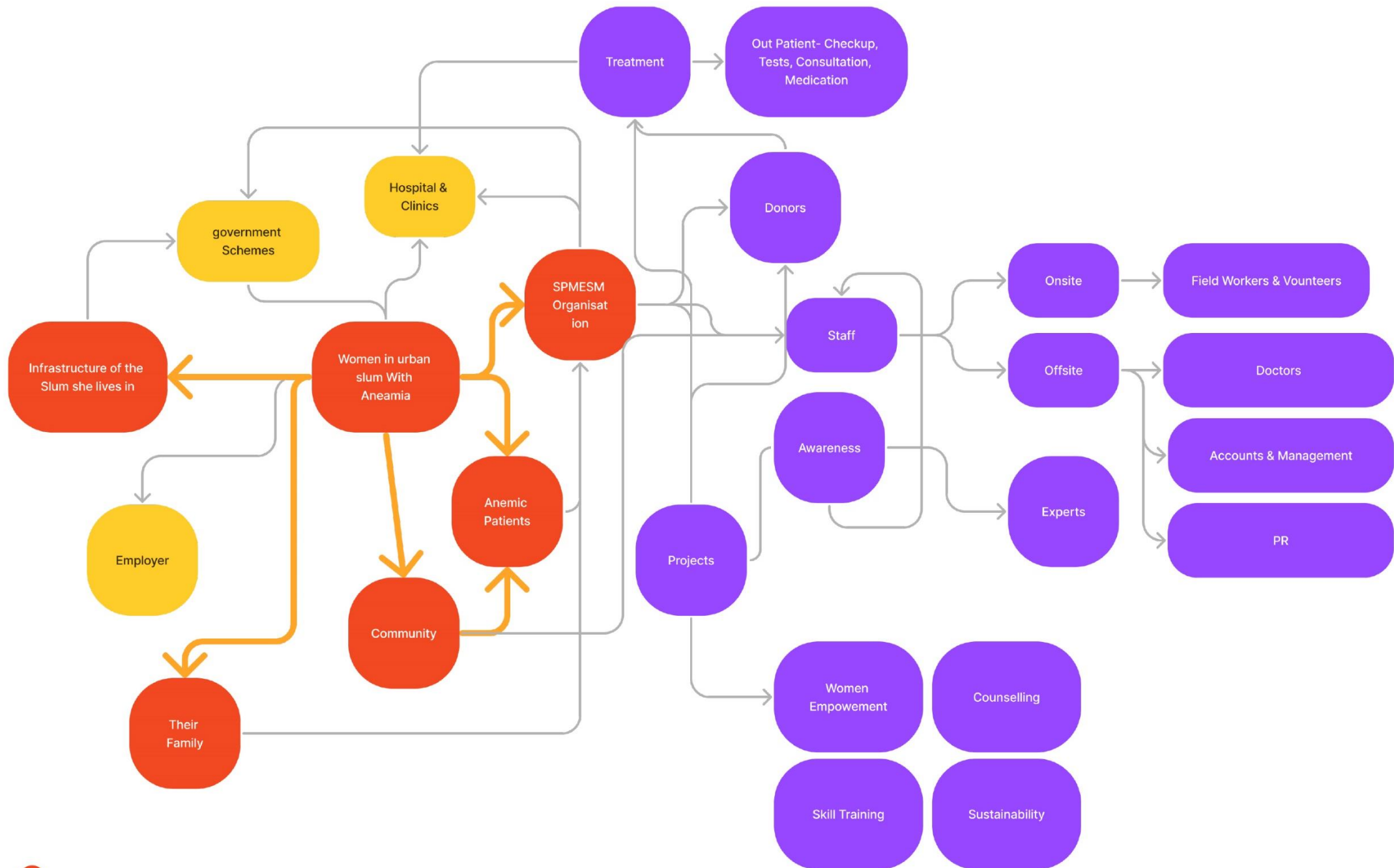


fig 12: Service Ecosystem

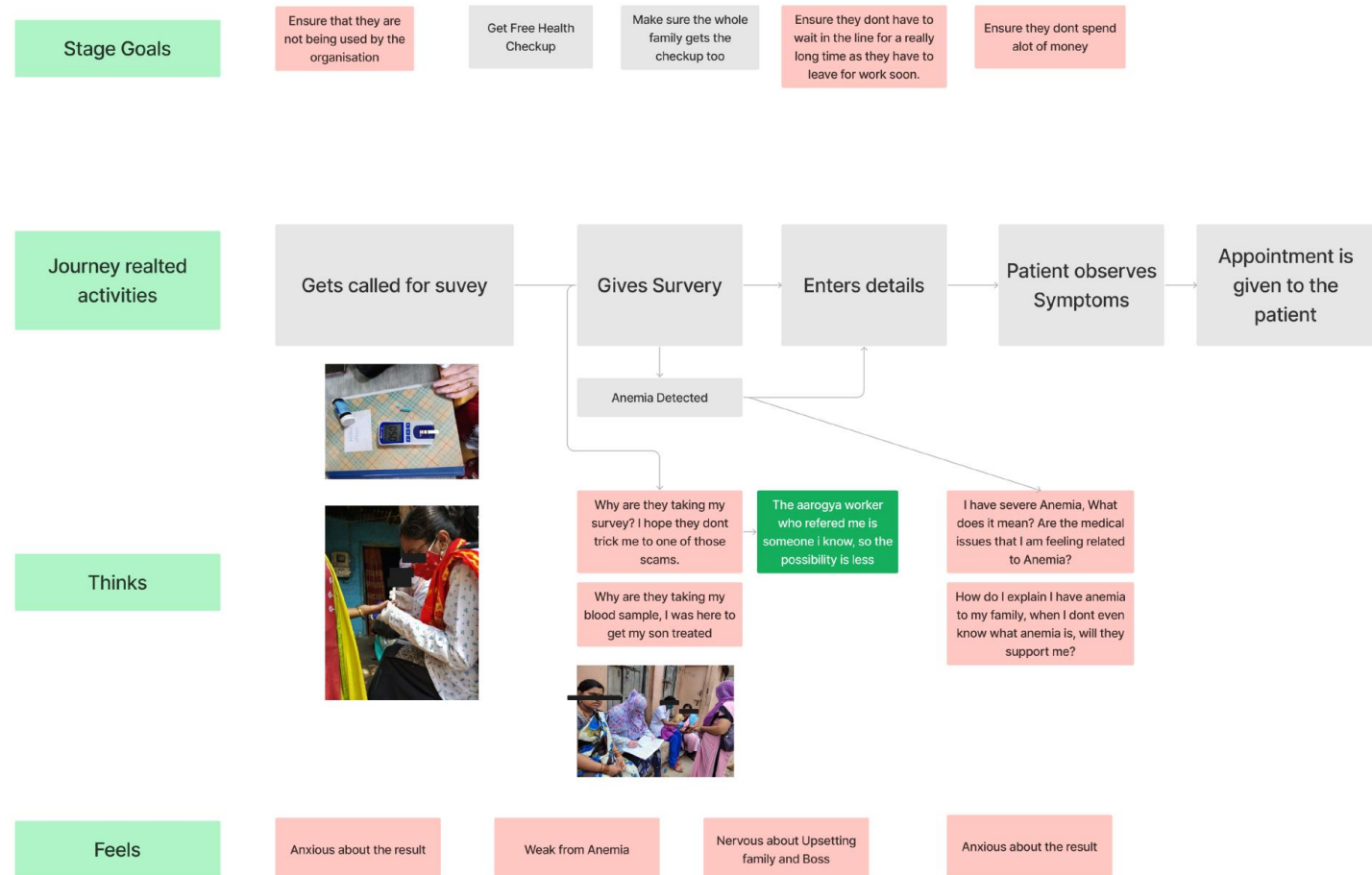
# 7. Customer Journey

Anemia is a condition that develops over a period of time. In order to treat and prevent anemia from coming back, the user has to adapt a healthy lifestyle. Hence, the routine of the user, with or without the interaction with the service provider was needed

## 7.1 Customer discovers that they have aneamia

In this stage, the customer gets to know that the symptoms they have been facing so far are because of anemia.

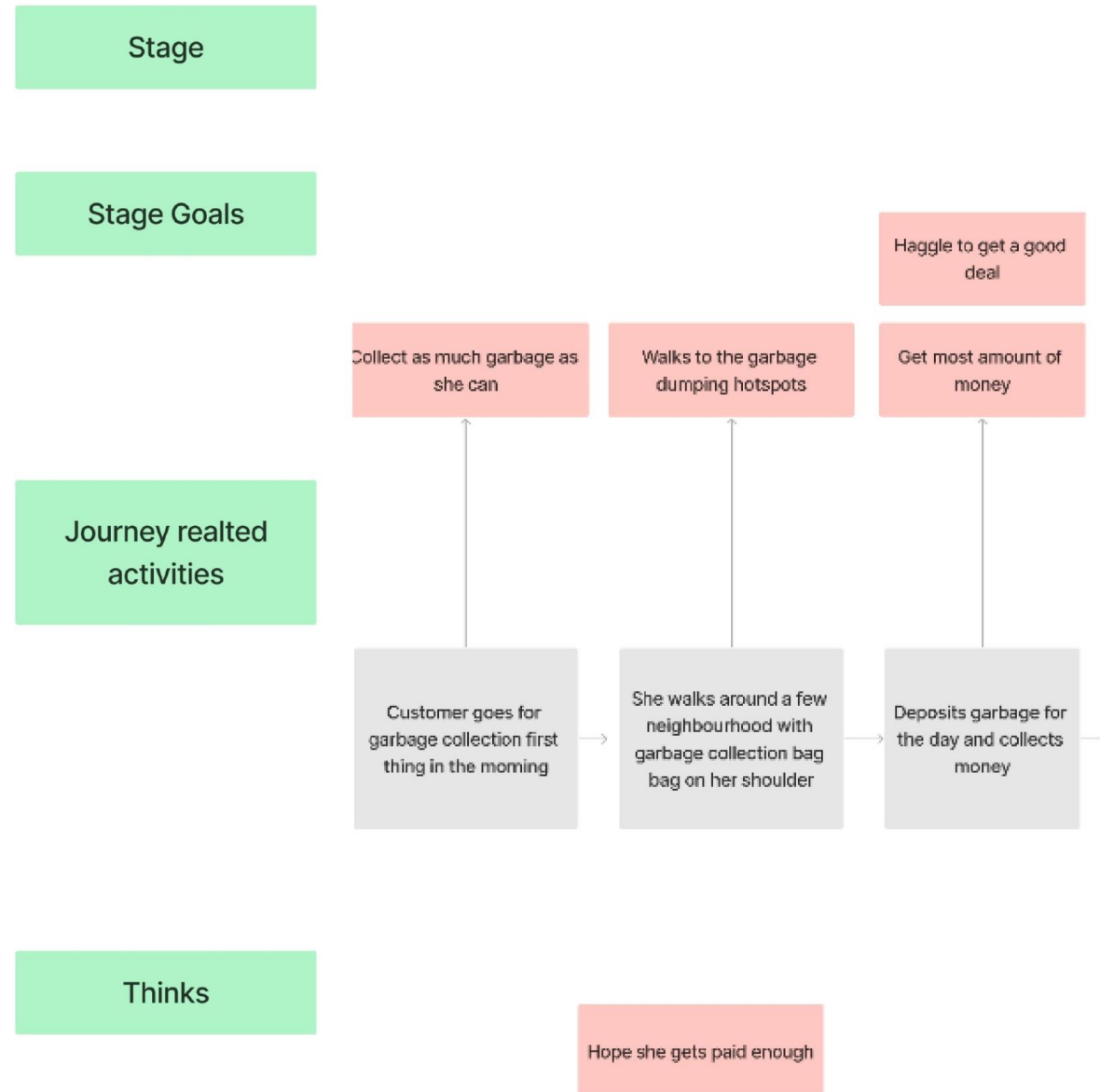
They feel anxious, nervous & weak. Since Raza does knows some volunteers, she feels okay in giving her details, but she is still skeptical about sharing them.





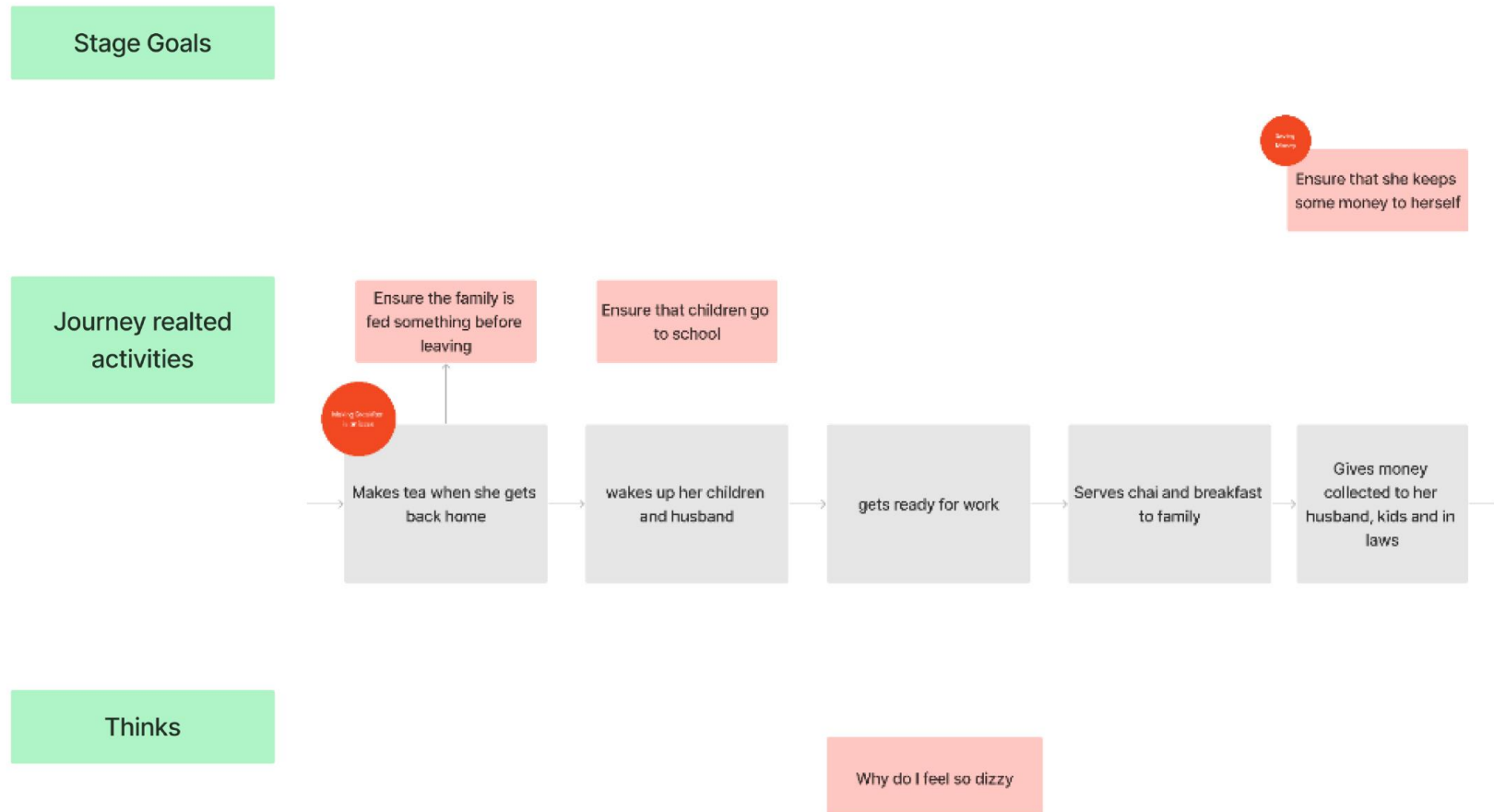
## 7.2 Customer has to go for her job early morning

- Customer has to go for her first job early morning
- She works 2 jobs to provide for her family
- She doesn't have time to eat anything
- Her job requires a lot of physically intensive work



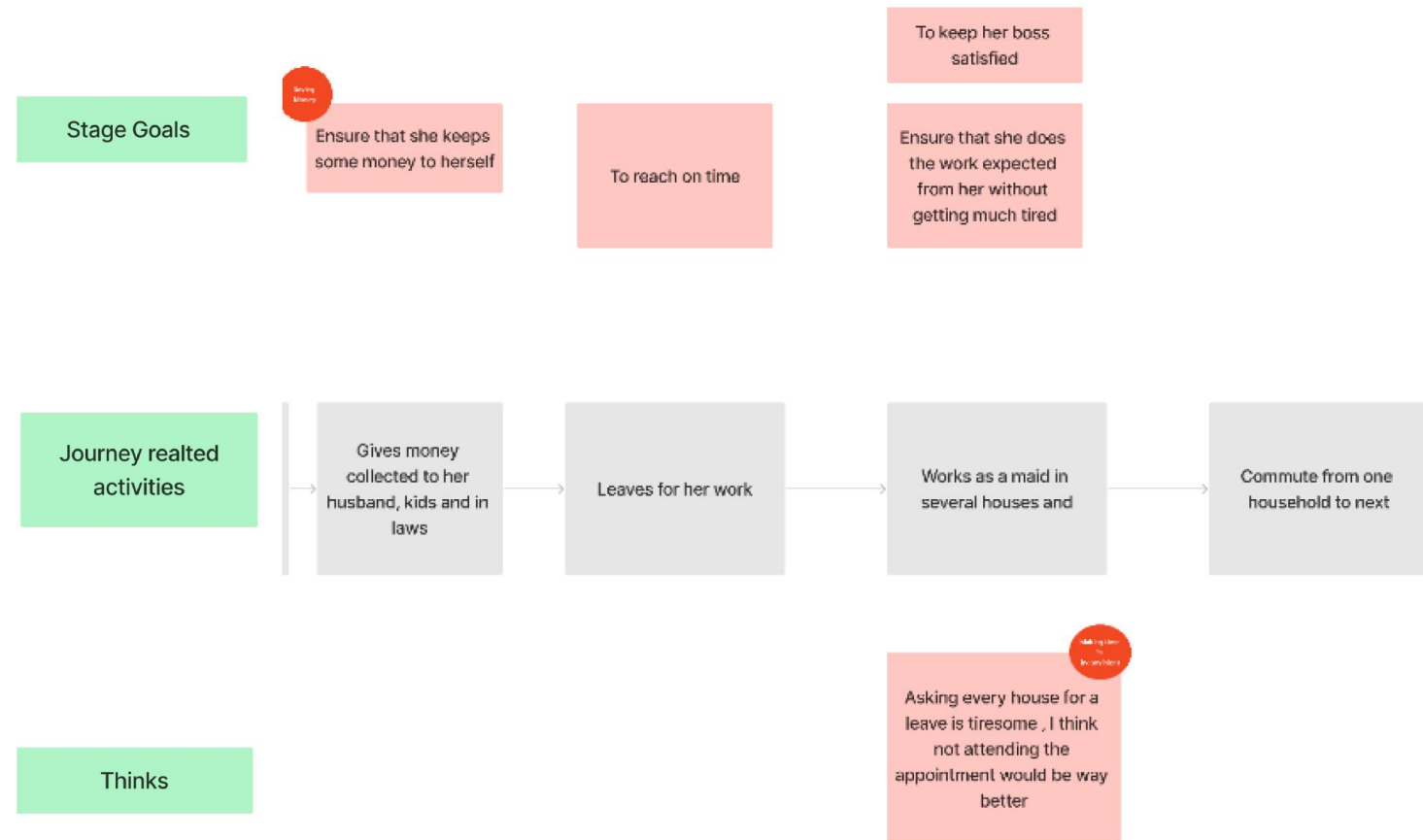
## 7.3 Customer's morning routine at home

- After coming from her first job, she has to fulfill her responsibilities as a mother, wife & daughter in law
- She isn't aware of the effect of healthy food for her and her family, so she has & serves Tea Biscuit for breakfast
- This is also because it is easily available, affordable & everyone is doing this.



## 7.4 Customer's afternoon routine

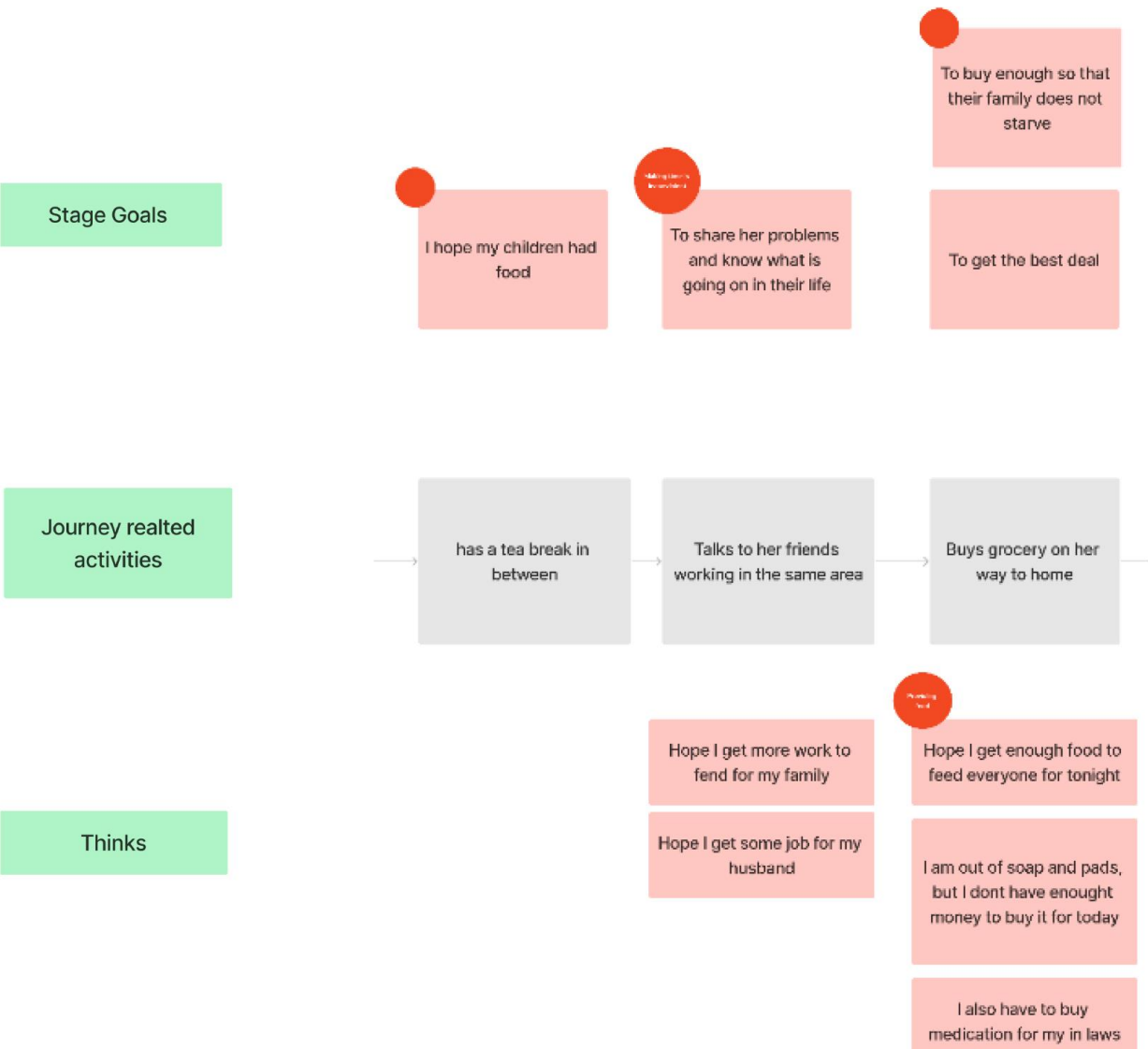
- She works as a maid in several houses & the houses are at a long distance
- In order to take a go for appointment, she has to ask for a leave for the whole day.
- She wants to ask for a leave, regarding her appointment from multiple employers





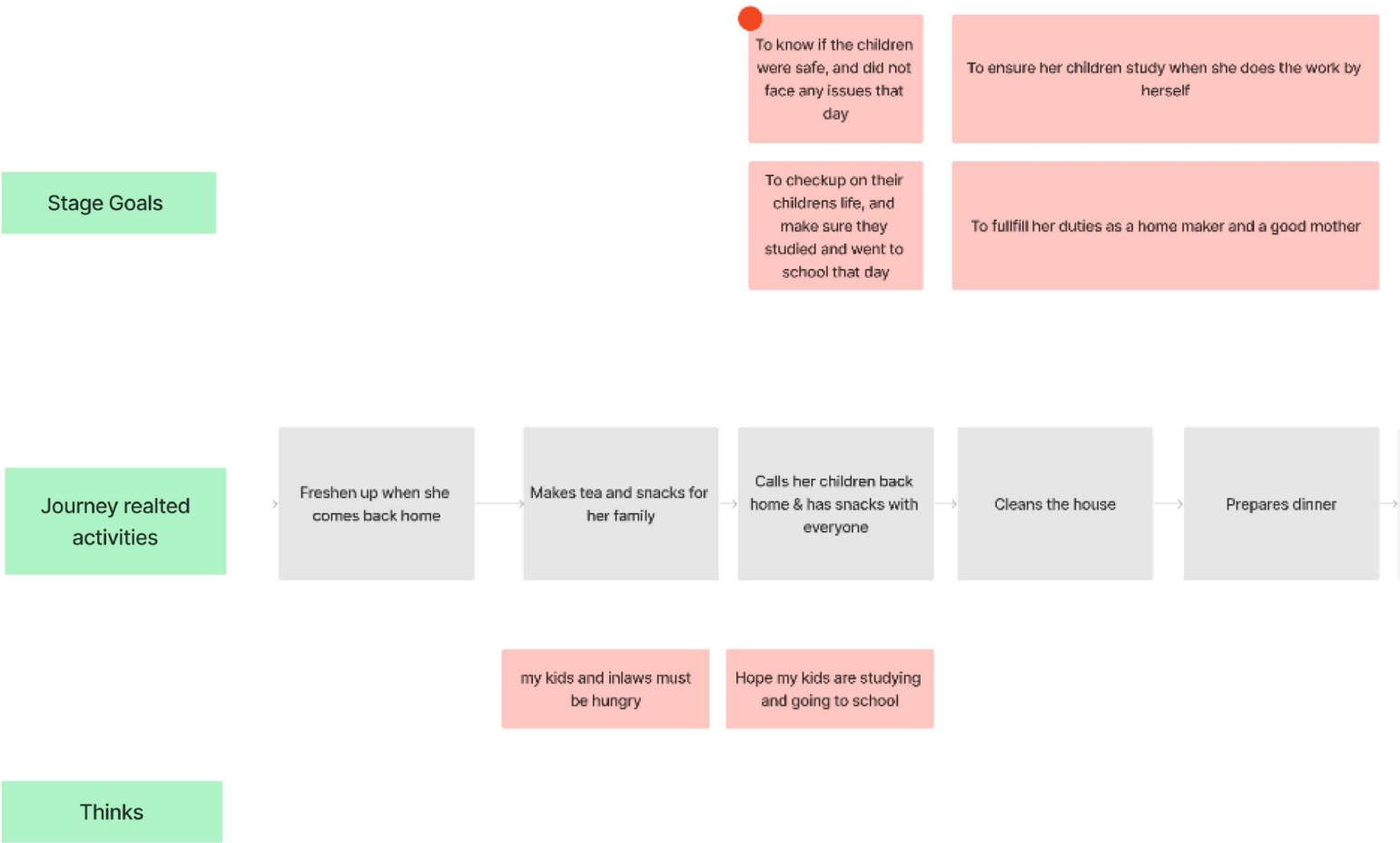
# 7.5 Customer's afternoon break

- She didnt have time or money to cook lunch, so she has tea and biscuits again.
- She had it with her friends from the same basti and work nearby.
- After she is done with work she goes back home and buys grocery for dinner. Dinner is the only time they have a decent meal.



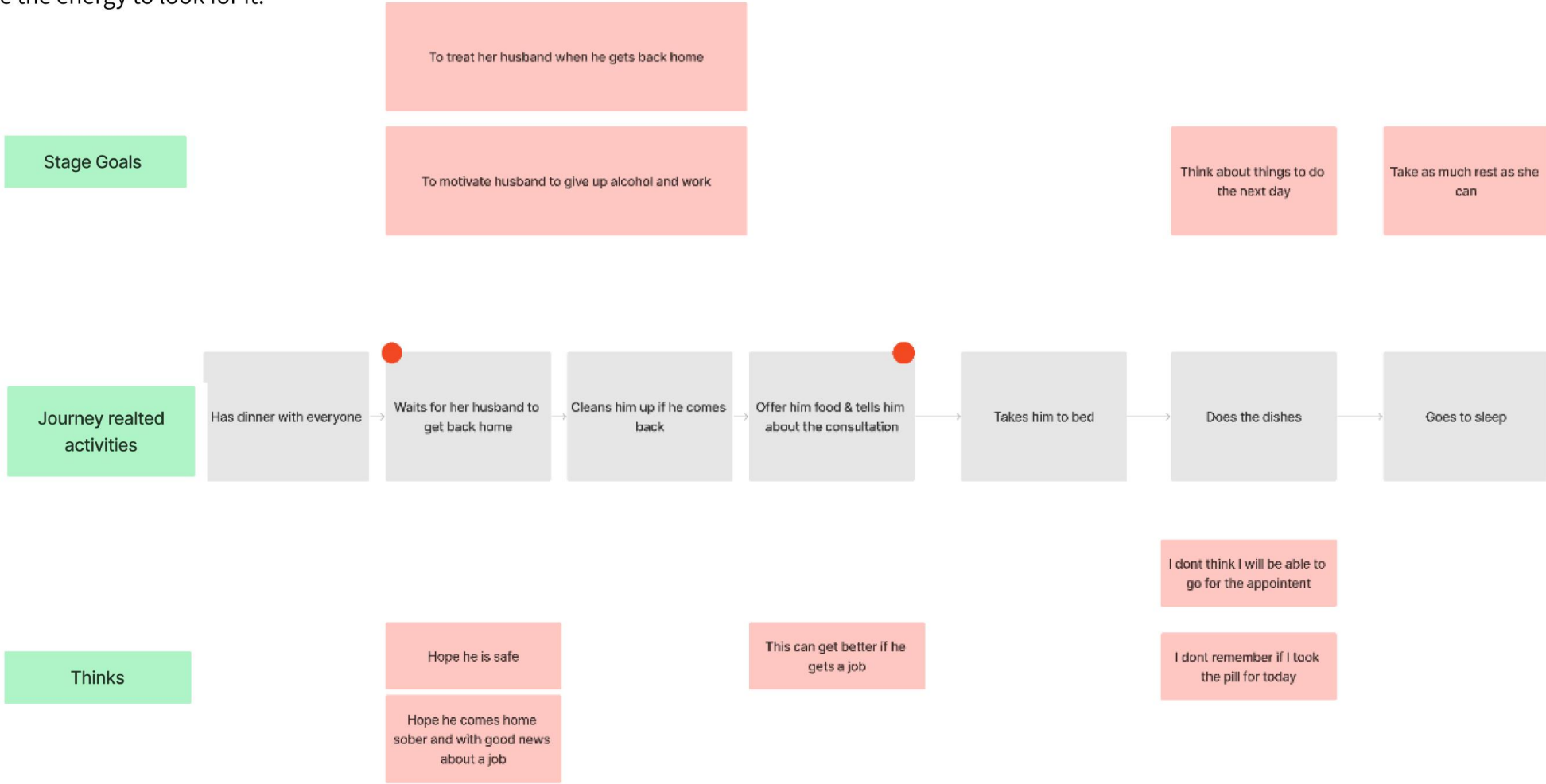
# 7.6 Customer’s evening routine- after work

- After coming home, she has to makeup for all the household responsibilities that she missed during the day.



# 7.7 Customer's night routine

- She feels extremely tired in this stage. she wants to eat more food but saves it for her husband.
- She also remembers she has to take medication, but its nowhere to be found. She doesnt have the energy to look for it.



# 8. Current Service Blueprint

Service Provider offered 3 major services offered under this program:

- Detection
- Treatment
- Behaviour Change

The aspects that were mapped out are customer flow, service goal, touchpoints, front stage actions, backstage actions & supporting actions

## 8.1 Detection

In this stage the customer realises that the symptoms that they have is because of aneamia. This is done by taking a doorstep survey of women in a part of the basti. They give their details & then the test is done. From SP's end, the field staff comes along with a doctor to take the survey.

Major Gaps: - Skepticism about giving details and blood

- Anxious about the process
- User does not have time

Customer discovers that they have aneamia							
Customer goes for the survey							
CUSTOMER FLOW	Cutomer meets a field worker at doorstep	They answer the questions of the aarogya worker	They give their blood sample	They get to kow their HB level is less	They are asked if they have symptoms of aneamia	They are told that they have aneamia	They fill in their details
SERVICE GOAL	Check how many females are anemaic in the area & at what stage			Making people realise they have aneamia			
	Documenting the details of patient			Providing them help			
Line of interaction							
FRONT STAGE ACTIONS	Field worker Note down the details of patient			Field worker Provides information bout aneamia	Consultation by doctor		
TOUCH POINTS	Nurse	Family	Doctor		Health centre		
Line of visibility							
BACK STAGE ACTIONS	Noting the details of patient						
Line of internal interaction							
SUPPORTING ACTIONS	Maintaining record	Keeping track of supply of medication	Getting Lab results				miro

fig 13: Current Service Blueprint: Detection of Aneamia



## 8.2 Treatment

In this stage the customer meets the doctor for consultation, they often go alone as their family member don't along with them don't really see it as a serious condition. There are other reasons for the lack of support: Not considering the patients as important part of the family, being occupied with other duties etc.

This service has 3 service Encounters:

- User Goes for the consultation to health centre
- User follow/ does not follow the treatment
- User Keeps track of the medicines they consume

Major Gaps Like in the 2nd and 3rd service encounter, because user has to make a behaviour change and perform this process by themselves. They lack support from their family, who can aid them in this scenario. There is a touchpoint- The aarogya voluteer who act more like a reminder & support. But there was still a gap which is why some patients did not take their medication. Major reason is that user did not take the intiative to not do it.

When it comes to keeping track, users are asked by the service provider 2-3 times a week about them taking the medication or eating healthy. But the users lie because of several underlying reasons. It becomes important to understand the underlying behaviour cause in order to address this gap.

Treatment													
Going for doctors consultation								Following the Treatment				Keeping Track of Medicines	
CUSTOMER FLOW	Leaving the house	Goes to the health center	Waits for their turn at the health center waiting room	Attends consultation with doctor	Gets medication and tests	Pays consultation fee	Leaves	User goes to house	User doesnt know if it is affordable to cook a healthy meal	User does not eats a healthy meal	User forgets to take her medicines	User answer call of volunteer	User tells that they arent taking medication
SERVICE GOAL	Provide the right consultation			Provide the right medication					User eats healthy food	User has a good portion of meal	User takes medicines	User takes medicines	User has a good portion of meal
	Spread awareness			Keeping a record of the patient								User eats healthy food	
Line of interaction													
FRONT STAGE ACTIONS	Note down the details of patient				Consultation by doctor							Aarogy volunteer calls user	
TOUCH POINTS	Nurse	Family	Doctor		Health centre							Aarogya Worker	Users Family Medicines
Line of visibility													
BACK STAGE ACTIONS	Noting the details of patient											Informs Project Manager	
Line of internal interaction													
SUPPORTING ACTIONS	Maintaining record	Keeping track of supply of medication	Getting Lab results						Getting medication from vendors			Record details & send to the Main office	

## 8.3 Behaviour Change

### 8.3.1 Group Consultations

Group Consultations involve having a consultation with an expert along with fellow users from the same neighbourhood or with a family members. It involves 2 service encounters- Inviting / convincing them to come & making them realise the importance of the patient & taking care of her through this journey of treatment & prevention of anaemia.

Consultation - Behaviour Change							
Convincing families to come for counselling sessions					Family attends counselling sessions		
CUSTOMER FLOW	Volunteer comes to the house for test	Has conversation with family	Tells patient about importance of counselling	Asks them to come for Counselling	User visits the heath center with ther family	Meet with the doctor	Attends session but it is not impactful
SERVICE GOAL	Ensuring she is taking her medication			Ensuring her family members attend	Ensuring they come for the session	Hoping to bring a change in their behaviour towards the user	
	Ensuring she is following her diet				Making them more emathetic towards her		
	Ensuring she is gets the right support				Showing them that it is possible to make time & money to take care of her		
Line of interaction							
FRONT STAGE ACTIONS	Meeting the User at home				Doctor & staff meet with the user & their family to talk at the health center		
	Showing the household items & nutrition value						
TOUCH POINTS	Aarogya volunteer	Family	House of User		Aarogya volunteer	Family	
Line of visibility							
BACK STAGE ACTIONS	Gives weekly report to Project manager				Gives weekly report to Project manager		
	Tracking and Documentation of patient record		Noting the issues of user		Tracking and Documentation of patient record		Noting the issues of user
Line of internal interaction							
SUPPORTING ACTIONS	Gathering funding for medication		Redirecting patient to a better life		Gathering funding for medication		Redirecting patient to a better life
	Contacting donors				Contacting donors		miro

### 8.3.2 Healthy Eating workshops

The purpose of these workshops is to induce a behaviour change in the user. They speak with a nutritionist to understand the importance of healthy eating. They are also told about the iron & vitamin rich ingredients, that are easily available & relatable for them. Post that is a demonstration of cooking a meal that is easy, relatable & affordable and is rich with iron & vitamins.

The gap arises because users sometimes don't attend the session & it is difficult for them to recall the way these dishes are prepared. So they end up not preparing them. They also don't take notes, or refer to the recordings. These workshops either occur in the homes of one of the familiar user or at the health center. They are invited through the field worker.

Healthy Cooking Workshop - Behaviour Change																
Learning at workshop								Learning at Fellow User's Home								
CUSTOMER FLOW	User visits a health center for Workshop with her friends & fellow anemic patients	They meet a dietician expert	They tell you about the importance of healthy diet in anemia	Suggest methods for using iron rich ingredients that you can use at home & are affordable	Goes back to her house after workshop is over			Customer Comes to the neighbours house to attend the session	She sits with her neighbours on the floor seating & catchup with the daily life. They discuss about today's session aswell		Greets the Field workers & Nutritionist		Watches the demo		Leaves	
SERVICE GOAL	To provide a comfortable house in the neighbourhood to conduct the session			To ensure that the patients understand the learnings of the session and get motivated to prepare the recipies				To provide a comfortable house in the neighbourhood to conduct the session			To ensure that the patients understand the learnings of the session and get motivated to prepare the recipies		To evaluate the rate of success			
	To ensure all the patients in the neighbourhood join			To ensure that the patients arent hesitant to cook				To ensure all the patients in the neighbourhood join			To ensure that the patients arent hesitant to cook					
	To get all the ingredients			To encourage participation				To get all the ingredients			To encourage participation					
	To give a context of the neighbourhood to the patients			To evaluate the rate of success				To give a context of the neighbourhood to the patients								
Line of interaction																
FRONT STAGE ACTIONS	Giving the demo of recipes							Giving the demo of recipes		Meeting the User at home						
	Showing the household items & nutrition value							Showing the household items & nutrition value								
TOUCH POINTS	Field worker	Nutritionist	Health Centre	Fellow Patients/ Customers	Ingredients & Utensils	Cooked dish	Banners & Posters	Field worker	Nutritionist	Patients House	Fellow Patients/ Customers	Ingredients & Utensils		Cooked dish		Banners & Posters
Line of visibility																
BACK STAGE ACTIONS	Gives weekly report to Project manager	Gathering & transferring the ingredients						Gathering & transferring the ingredients								
	Tracking and Documentation of patient record		Noting the issues of user													
Line of internal interaction																
SUPPORTING ACTIONS	Inviting a nutritionist		Getting ingredients from the vendor	Taking permissions				Getting ingredients from the vendor	Taking permissions							miro

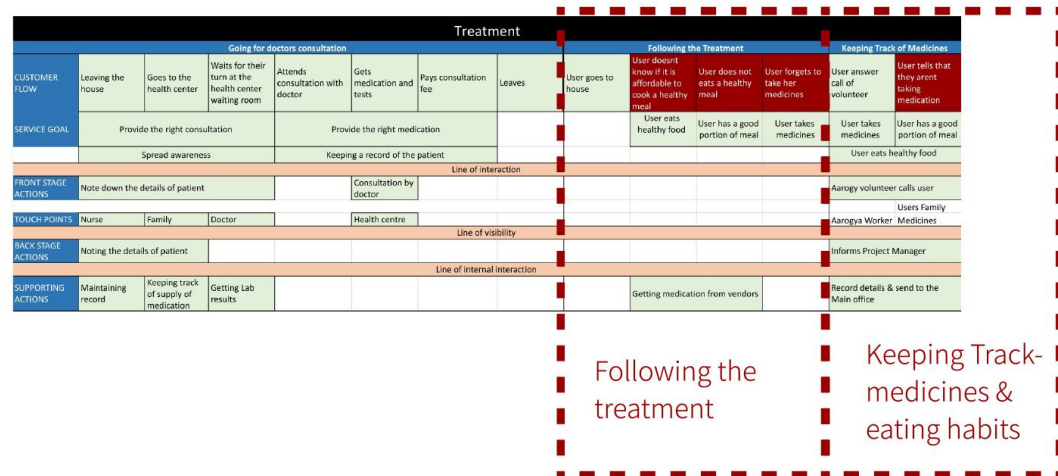
miro



# 9. Finding Gaps

Service provider offers 3 services- Detection , Treatment & Preventative care. Since most of the parts are about changing user's behaviour through different measures. It was important to make a customer lifetime trajectory. There were several CJM that had gaps. The gaps were repetitive in some instances. The Existing Service Blueprint, was used to detail our the service operations & touch points based on the activities. It also helped in understanding the

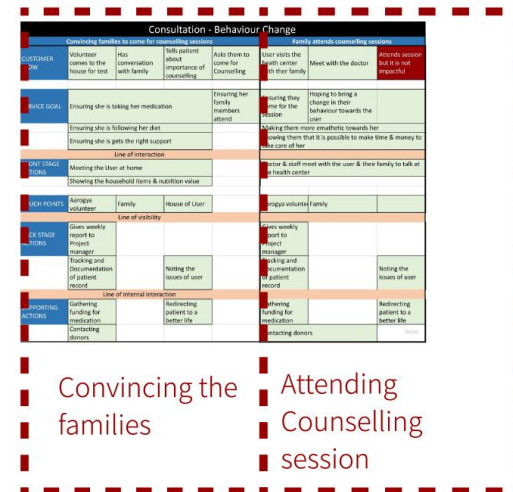
## 9.1 Treatment



the reasons as to why this activity was taking place, & what can be leveraged. Based on the gaps identified, & the service encounters where the gaps lied were identified.

Another aspect of selection was the scope of the project. The focus is after the user knows that she has aneemia through the survey.

## 9.2 Consultation & Workshop



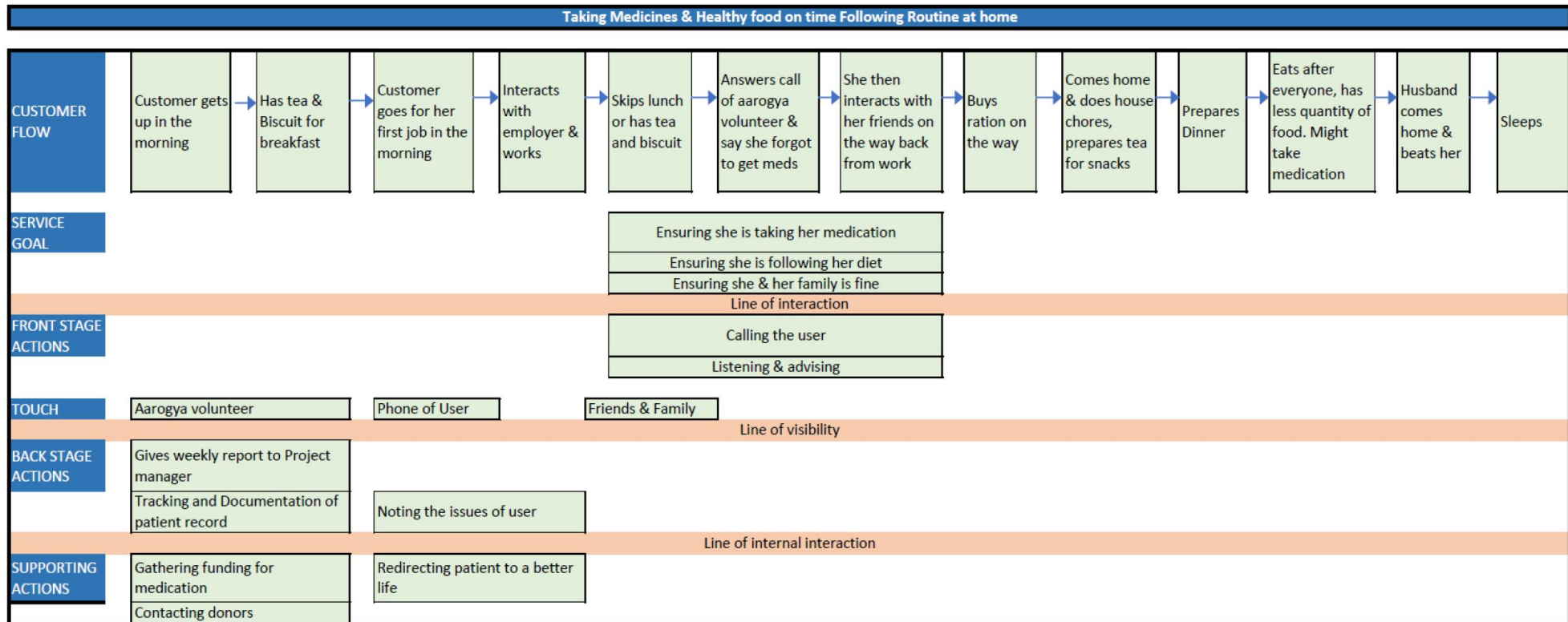


The gaps were further mapped out to understand them in detail

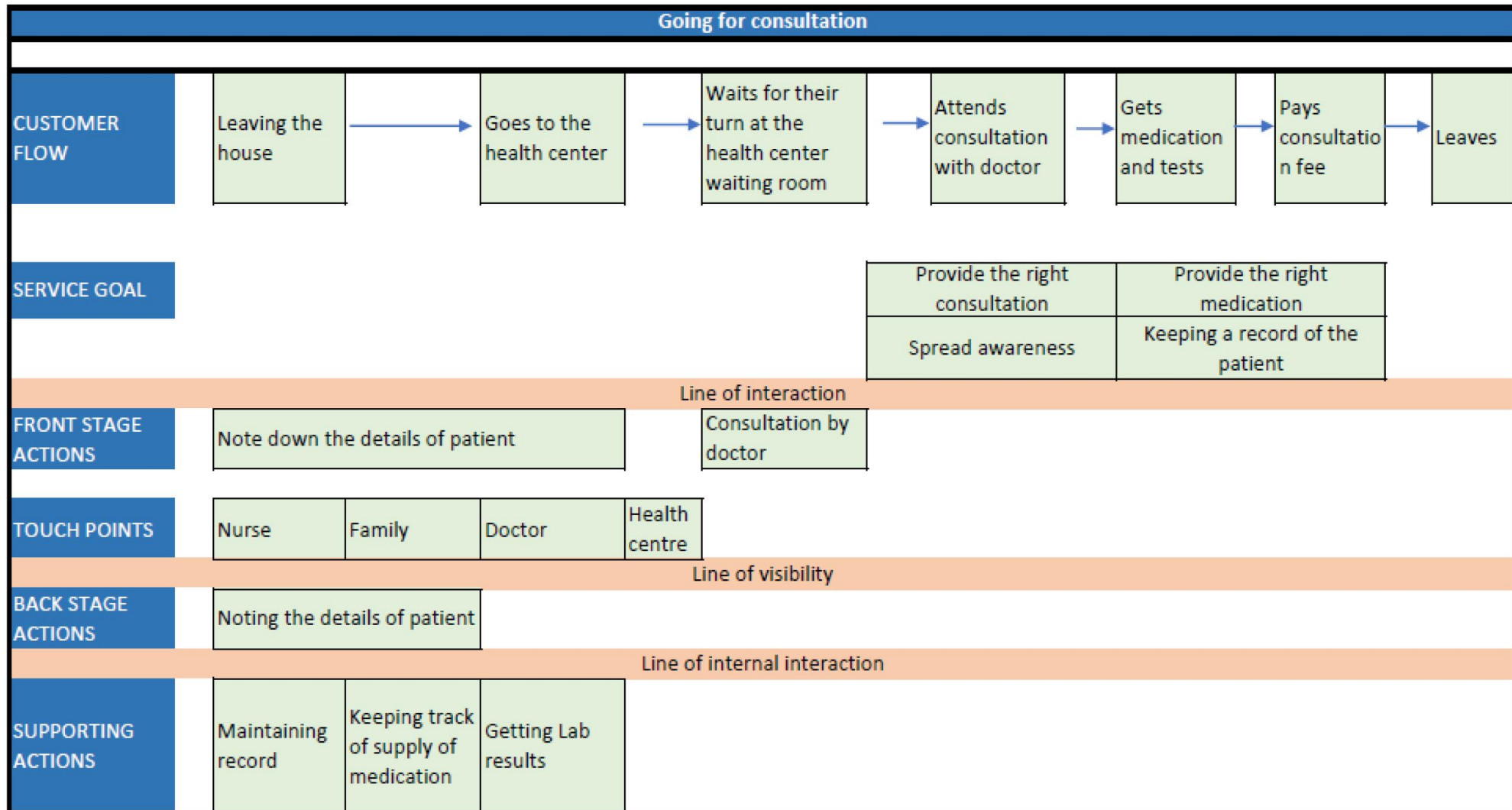
## 9.3 Treatment

Service encounters are interaction points between the service provider and the customer. A service is the culmination of several service encounters.

### a. Taking Medicines & Healthy food on time

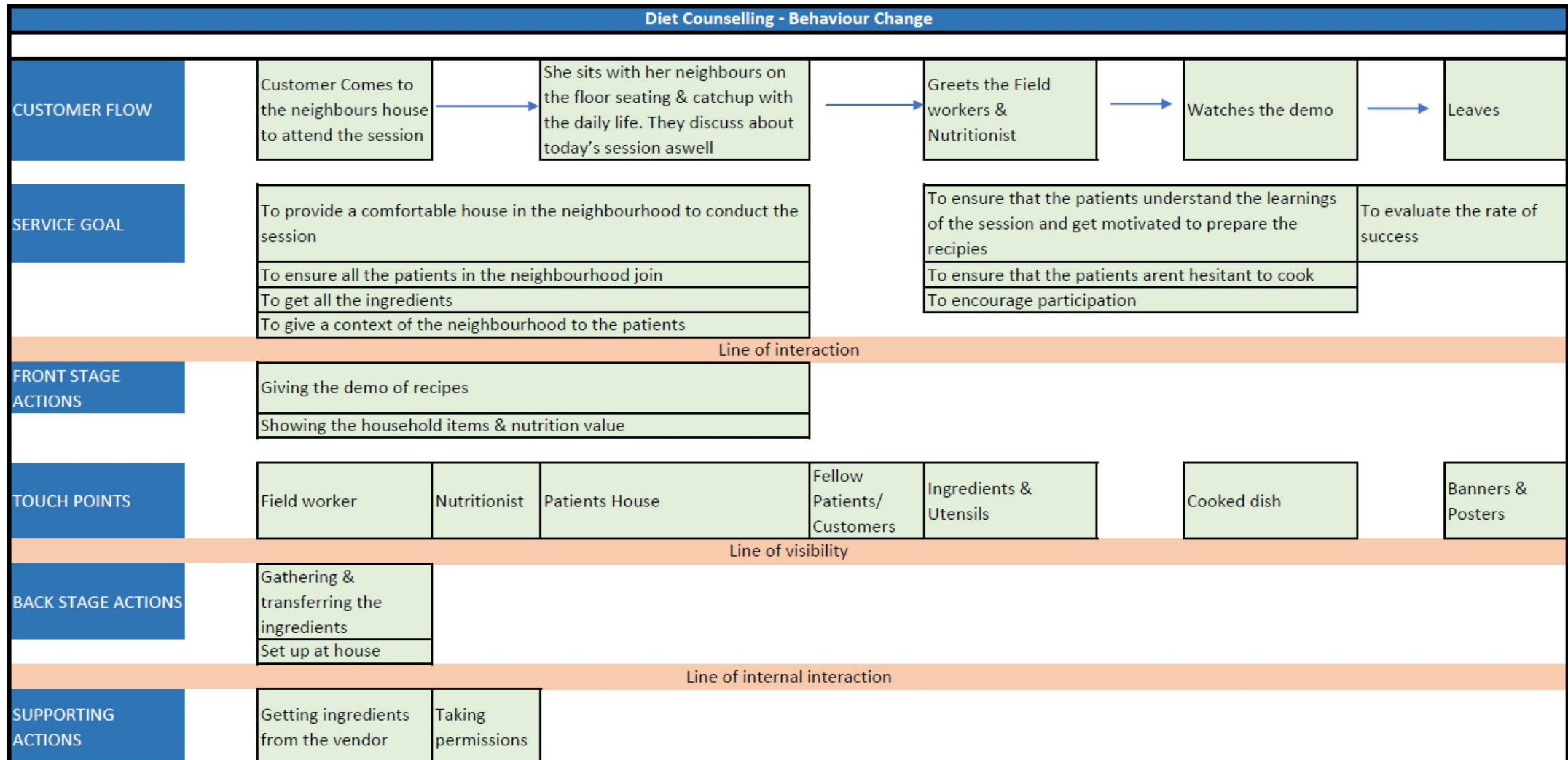


## b. Going for consultation

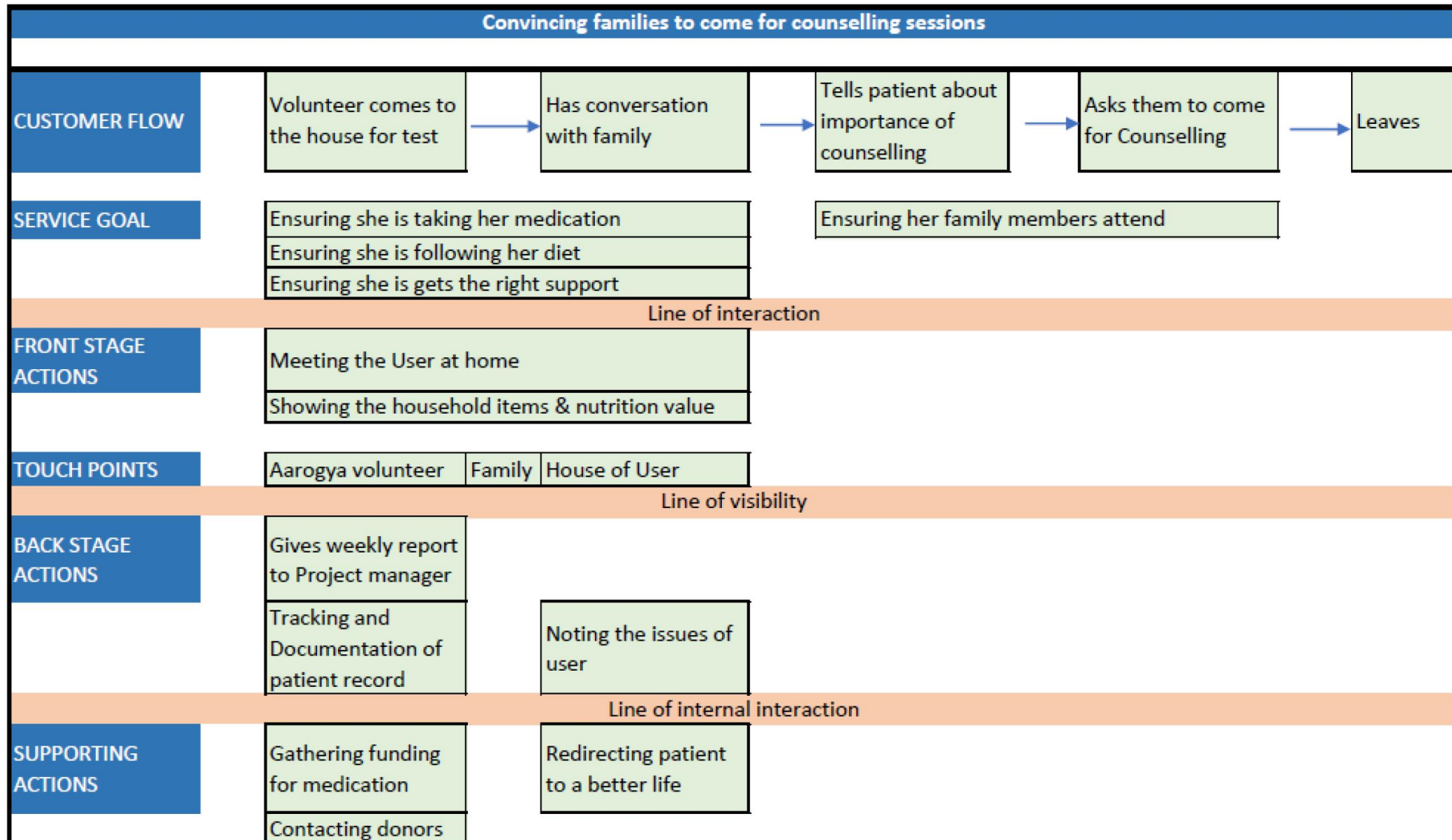


## 9.4 Behaviour Change

### a. Diet Counselling- Behaviour change

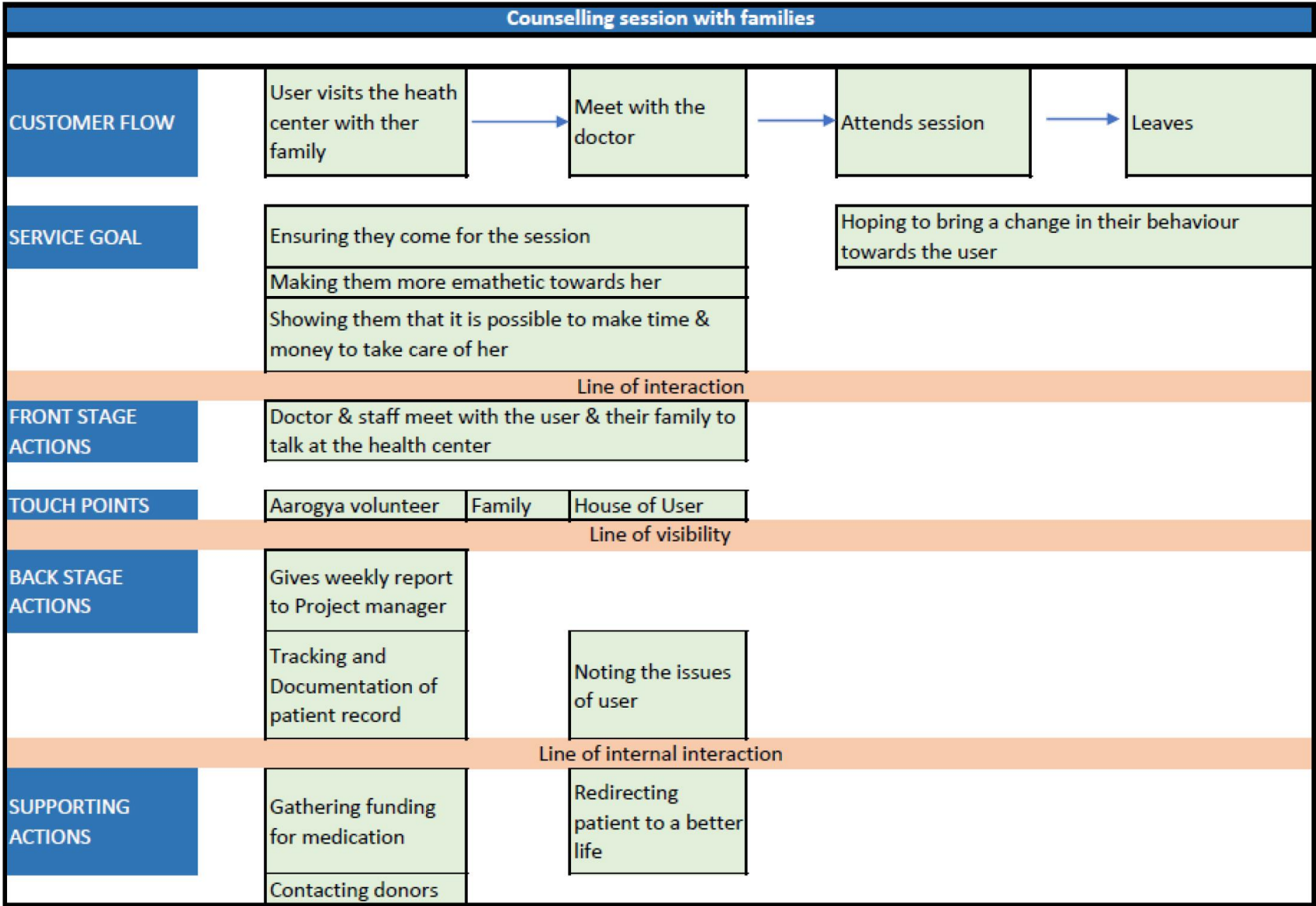


## b. Convincing Family to come for counselling



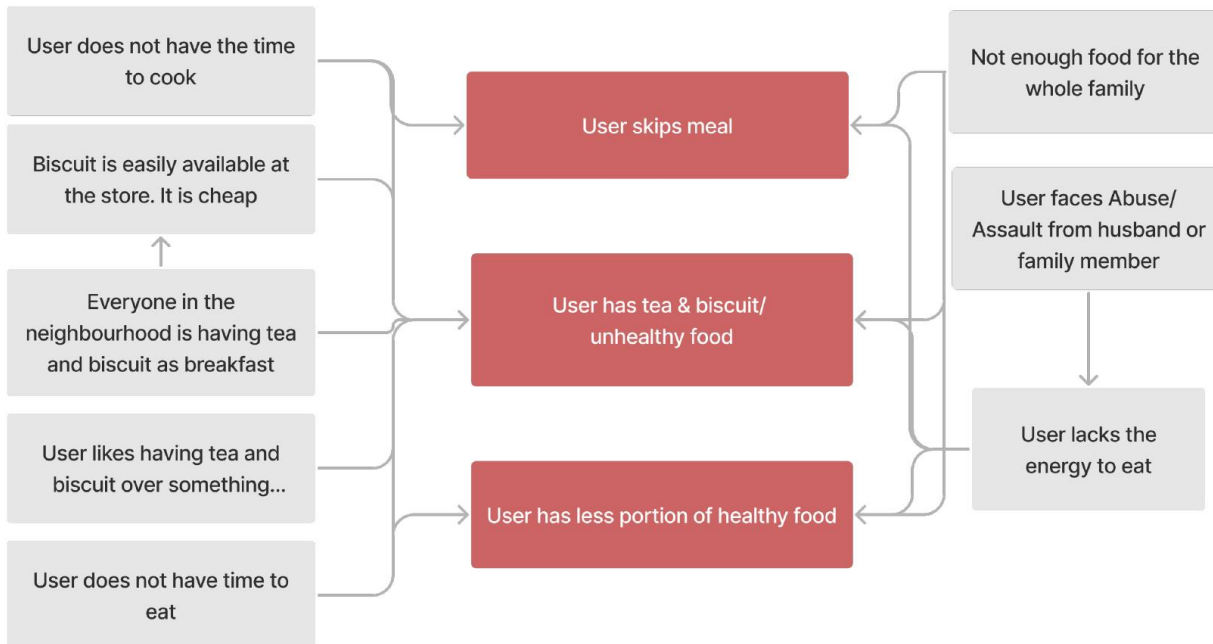


### c. Counselling with Families

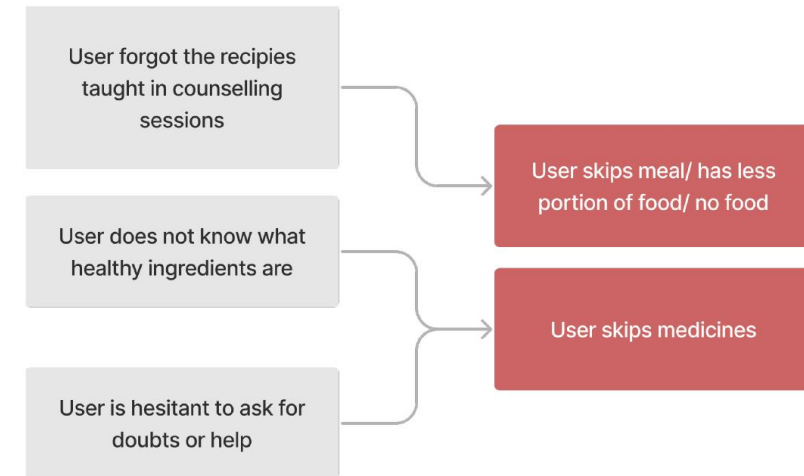


# 10. Identifying Gaps

Gap A



Gap B



Taking Medicines & Healthy food on time Following Routine at home

Going for consultation

## Gap C

Users family does not support, encourage & remind her

User lacks motivation

User relies on her family for money

User skips meal/ has less portion of food/ no food

User skips medicines

Does respond to follow up.  
They do not go for consultation & counselling

## Diet Counselling - Behaviour Change

Convincing families to come for counselling sessions

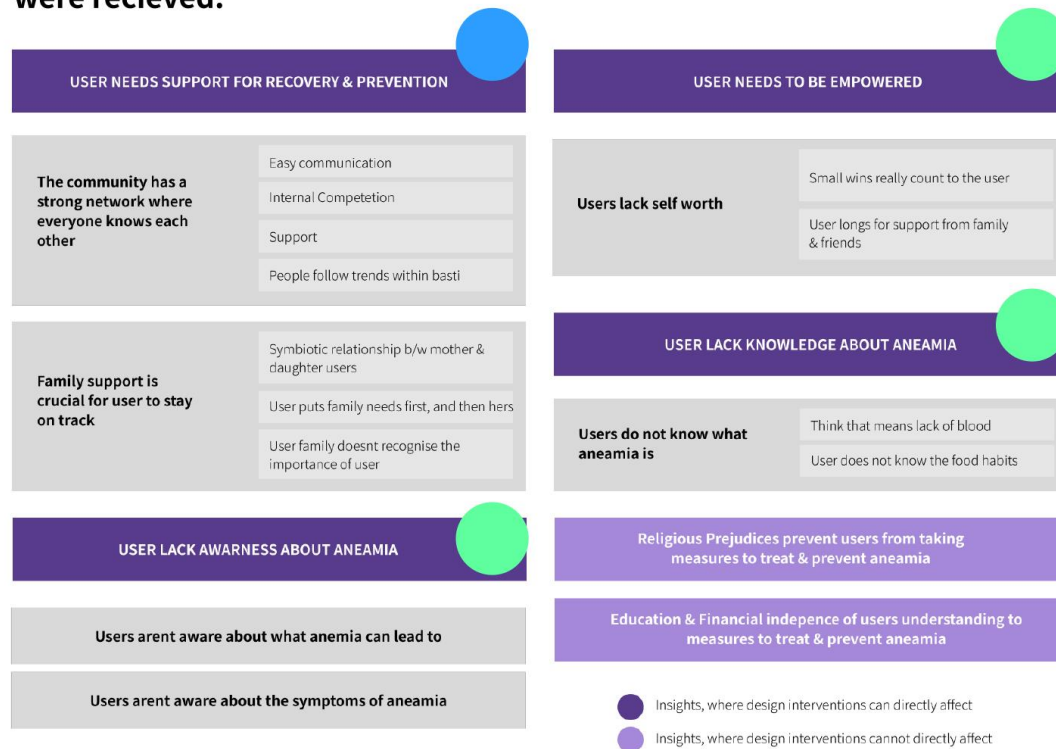
Counselling session with families

# 11. Ideation

Pattern language for service design was used in the ideation process. Based on customer need, & gaps that were identified brainstorming was done to innovatively translate into solutions for 2 arenas:

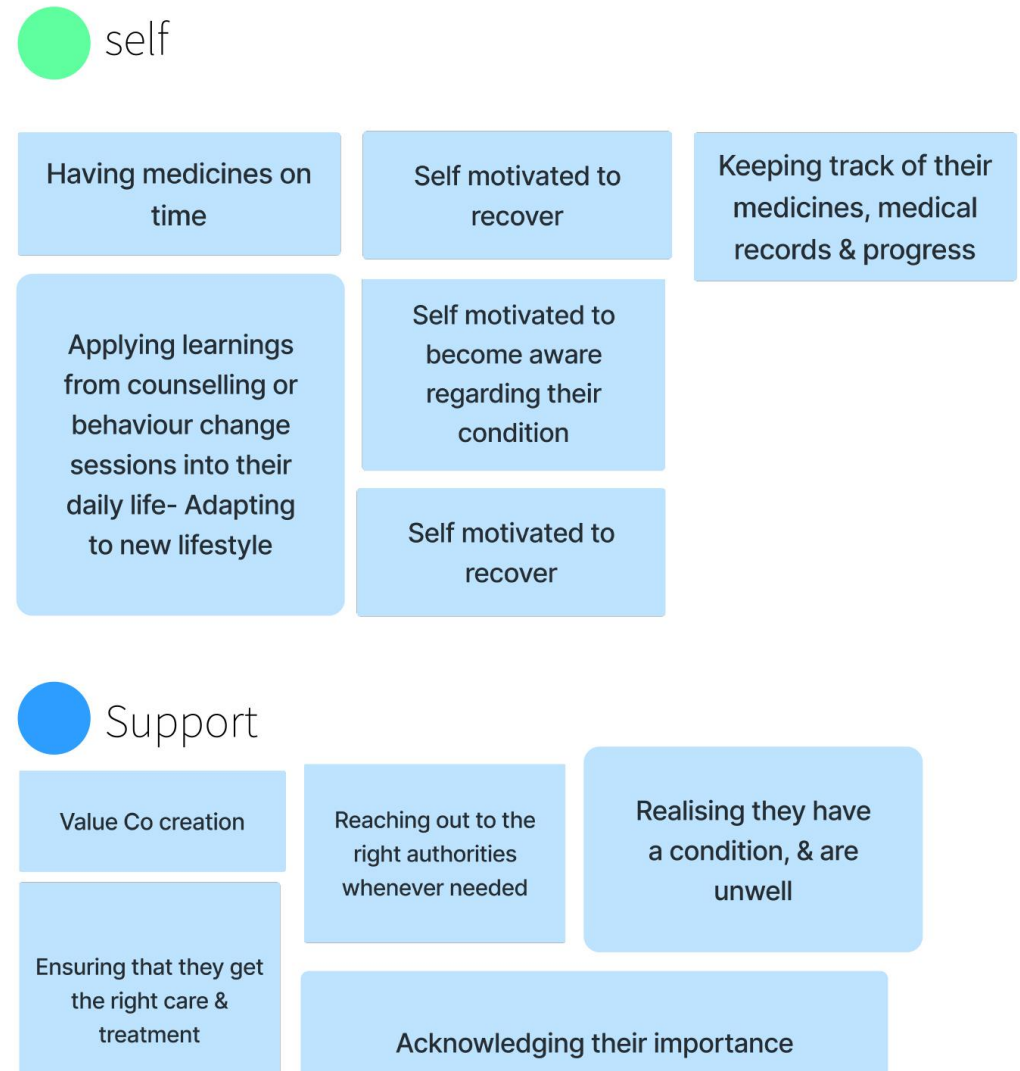
- **Self- Eating healthy, taking medication & keeping track of medication**
- **Support- Family Counselling, Co creation of value.**

**These were further categorised based on broad categories of insights that were recieved.**



● self  
 ● support

Service encounters that were picked based on this were identified with gaps and possible arenas for improvement and solutions were suggested accordingly.





# 12. Final Solution

Based on the gaps identified, insights , persona & service encounters, the ideations were narrowed down

The criteria for selecting /shortlisting an idea was

## Detection → Treatment → Counselling → Diet Workshop

Customer discovers that they have anaemia				
Customer goes for the survey				
CUSTOMER FLOW	Customer meets a field worker at doorstep	They answer the questions of the anaemia survey	They get to know their Hb level is less	They are asked if they have symptoms of anaemia
SERVICE GOAL	Check how many females are anaemic in the area & at what stage	Documenting the details of patient	Making people realise they have anaemia	Providing them help
FRONT STAGE ACTIONS	Field worker note down the details of patient	Field worker provides information about anaemia	Consultation by doctor	
TOUCH POINTS	Nurse	Family	Doctor	Health centre
BACK STAGE ACTIONS	Noting the details of patient			
SUPPORTING ACTIONS	Maintaining record	Keeping track of supply of medication	Getting Lab results	

Treatment				
CUSTOMER FLOW	Getting the right consultation	Getting the right medication	Getting the right support	Getting the right follow-up
SERVICE GOAL	Provide the right consultation	Provide the right medication	Provide the right support	Provide the right follow-up
FRONT STAGE ACTIONS	Field worker provides information about anaemia	Field worker provides information about anaemia	Field worker provides information about anaemia	Field worker provides information about anaemia
TOUCH POINTS	Nurse	Family	Doctor	Health centre
BACK STAGE ACTIONS	Noting the details of patient			
SUPPORTING ACTIONS	Maintaining record	Keeping track of supply of medication	Getting Lab results	

Treatment				
CUSTOMER FLOW	Getting the right consultation	Getting the right medication	Getting the right support	Getting the right follow-up
SERVICE GOAL	Provide the right consultation	Provide the right medication	Provide the right support	Provide the right follow-up
FRONT STAGE ACTIONS	Field worker provides information about anaemia	Field worker provides information about anaemia	Field worker provides information about anaemia	Field worker provides information about anaemia
TOUCH POINTS	Nurse	Family	Doctor	Health centre
BACK STAGE ACTIONS	Noting the details of patient			
SUPPORTING ACTIONS	Maintaining record	Keeping track of supply of medication	Getting Lab results	

Healthy Cooking Workshop - Behaviour Change				
CUSTOMER FLOW	Getting the right consultation	Getting the right medication	Getting the right support	Getting the right follow-up
SERVICE GOAL	Provide the right consultation	Provide the right medication	Provide the right support	Provide the right follow-up
FRONT STAGE ACTIONS	Field worker provides information about anaemia	Field worker provides information about anaemia	Field worker provides information about anaemia	Field worker provides information about anaemia
TOUCH POINTS	Nurse	Family	Doctor	Health centre
BACK STAGE ACTIONS	Noting the details of patient			
SUPPORTING ACTIONS	Maintaining record	Keeping track of supply of medication	Getting Lab results	

Touchpoint -Healthy food delivery service

Touchpoint -Health Tracker

Touchpoint - Community Radio

Touchpoint - Hall of fame

Touchpoint- Experiential Video

Touchpoint- Interactive video

USER NEEDS TO BE EMPOWERED

USER NEEDS SUPPORT FOR RECOVERY & PREVENTION

USER NEEDS SUPPORT FOR RECOVERY & PREVENTION

USER LACK KNOWLEDGE ABOUT ANEAMIA

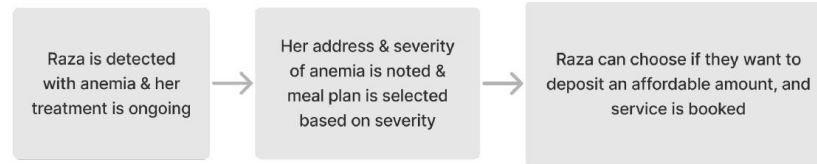
USER NEEDS SUPPORT FOR RECOVERY & PREVENTION

USER LACK KNOWLEDGE ABOUT ANEAMIA

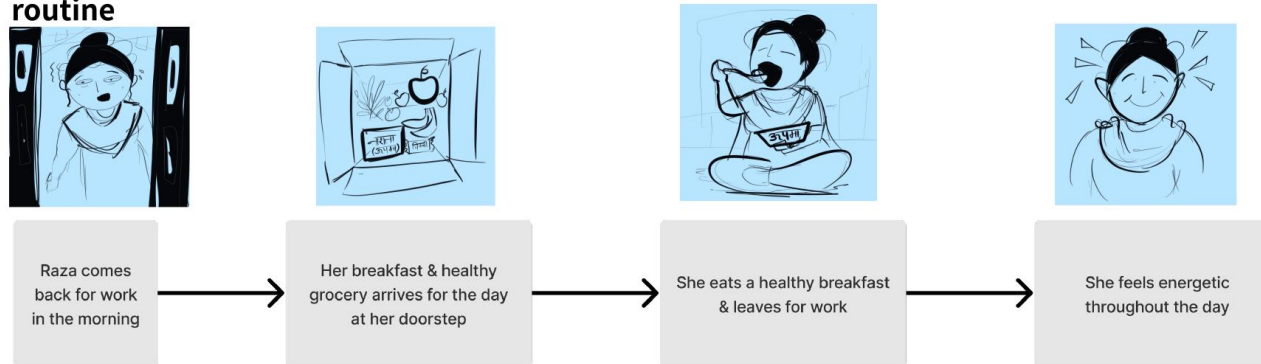
USER LACK AWARENESS ABOUT ANEAMIA

# Service Encounter- Following The treatment

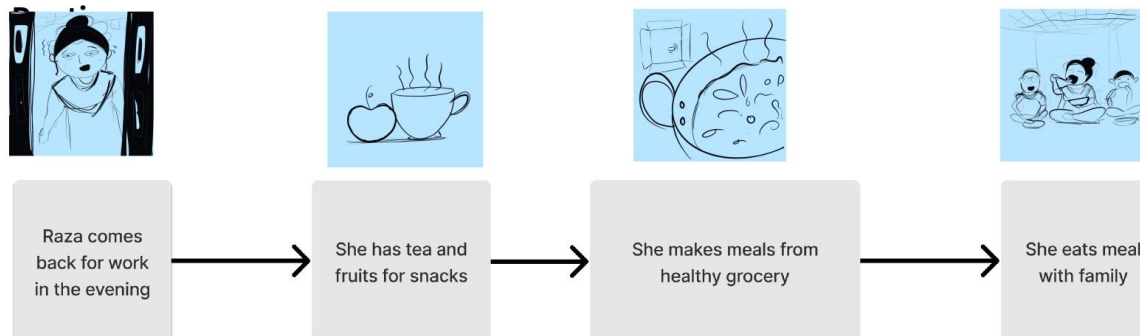
## Service Encounter: Discovery of aneamia











## Service Encounter: Morning routine



## Service Encounter: Evening



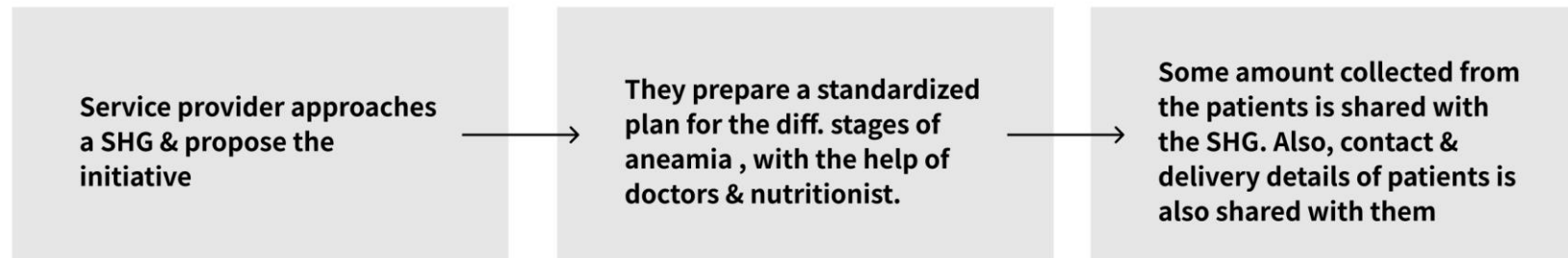
CUSTOMER FLOW
SERVICE GOAL
FRONT STAGE ACTIONS
TOUCH POINTS
BACK STAGE ACTIONS
SUPPORTING ACTIONS

Treatment							
Following the Treatment							
							
User Comes back from work in the morning	Collects Meal basket that is delivered to her at her doorstep	Eats the healthy Breakfast & leaves for work	She comes back in the evening	She has tea along with iron & vitamin rich food	She makes healthy meal from grocery that is delivered	She counts portion from the plate recieved through Organisation	She eats the right portion of meal with her family
User eats healthy food	User has a good portion of meal	User is able to develop a visual memory of heathy meal & ingredients	Healthy food is delivered to the user at their convinience	Refers to recipie on the Diet & Health Tracker chart to cook the meal			
Line of interaction							
Delivery Person Delivers meal to the user							
Grocery & Meal Box	Self Help Group	Delivery Person	Iron Utensils to cook	Diet & Health Tracker Chart		User's House-Kitchen	
Line of visibility							
Line of internal interaction							
Healthy food is collected from SHG			Healthy food is Collected by the delivery person				

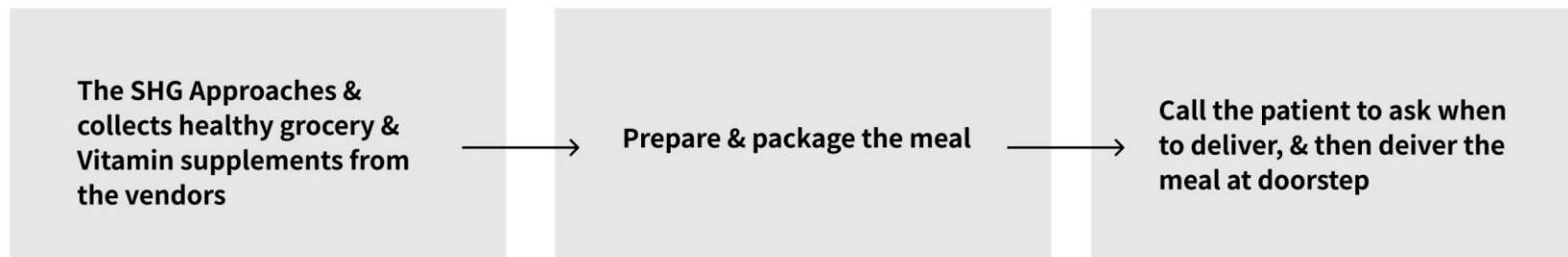
# Doorstep delivery of meals as a service

## Backstage Action

### Planning



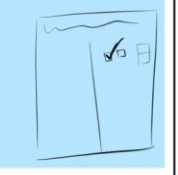


### Preperation & Delivery





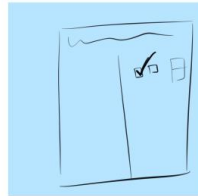
# Proposed Service Encounter

Keeping Track of Medicines				
				
User is reminded that she hasnt had medicines from track chart	She pulls medicines from the track chart & takes it	She marks tick in front of the day	User answers a call from aarogya volunteer	She tells that she is taking the medication
User takes medicines regularly				
Aarogy volunteer calls user	User fills information in track chart			
Aarogya Worker	Track Chart	Medicines		
Informs Project Manager				
Record details & send to the Main office				

# Touchpoint - Health tracker

- Keeping track of medicine intake
- Viewing the progress by their own eyes
- Recalling the healthy recipies & ingredients from counselling sessions
- Transparent interaction between field worker & user

## Service Encounter: Night Routine- Taking pill & keeping track



After meal, Raza is reminded that she hasnt had medicines from the track chart

She takes the medicine from the chart

She marks a tick in front of the day

## माझे सवय ट्रॅकर

नाव \_\_\_\_\_  
वय \_\_\_\_\_  
उंची \_\_\_\_\_ वजन \_\_\_\_\_

### पौष्टिक पाककृती



पालक पनीर \_\_\_\_\_ ☐ ☐ ☐ ☐ ☐

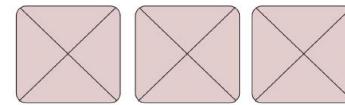
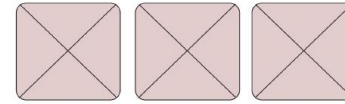
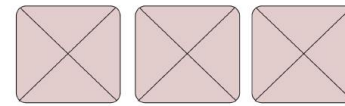


मुगाच्या डाळीची खिचडी \_\_\_\_\_ ☐ ☐ ☐ ☐ ☐



मुगाच्या डाळीची खिचडी \_\_\_\_\_ ☐ ☐ ☐ ☐ ☐

### पौष्टिक साहित्य



व्हिडिओ पहा



### आठवडा १

एच बी पातळी \_\_\_\_\_ औषध देणे ☐ ☐ ☐

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### आठवडा २

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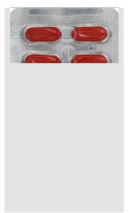
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### आठवडा ३

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### आठवडा ४

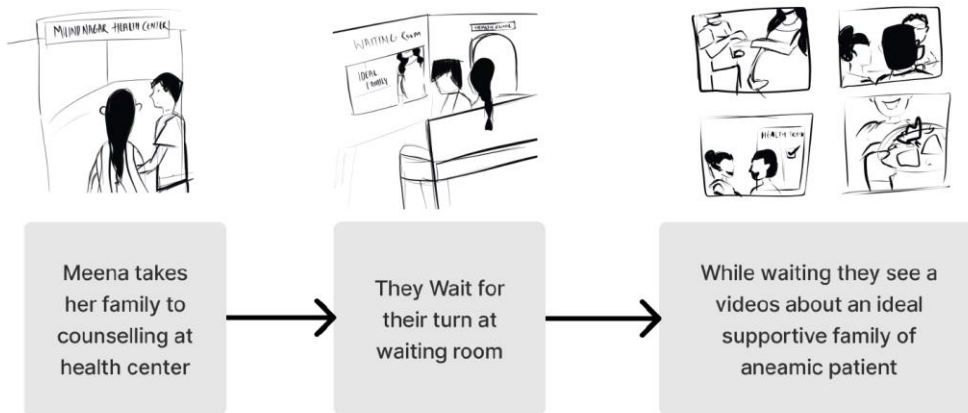
एच बी पातळी \_\_\_\_\_ औषध देणे ☐ ☐ ☐

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# Service Encounter- Counselling

## Service Encounter: Attending session of family Counselling- waiting



### Touchpoint : Waiting Room

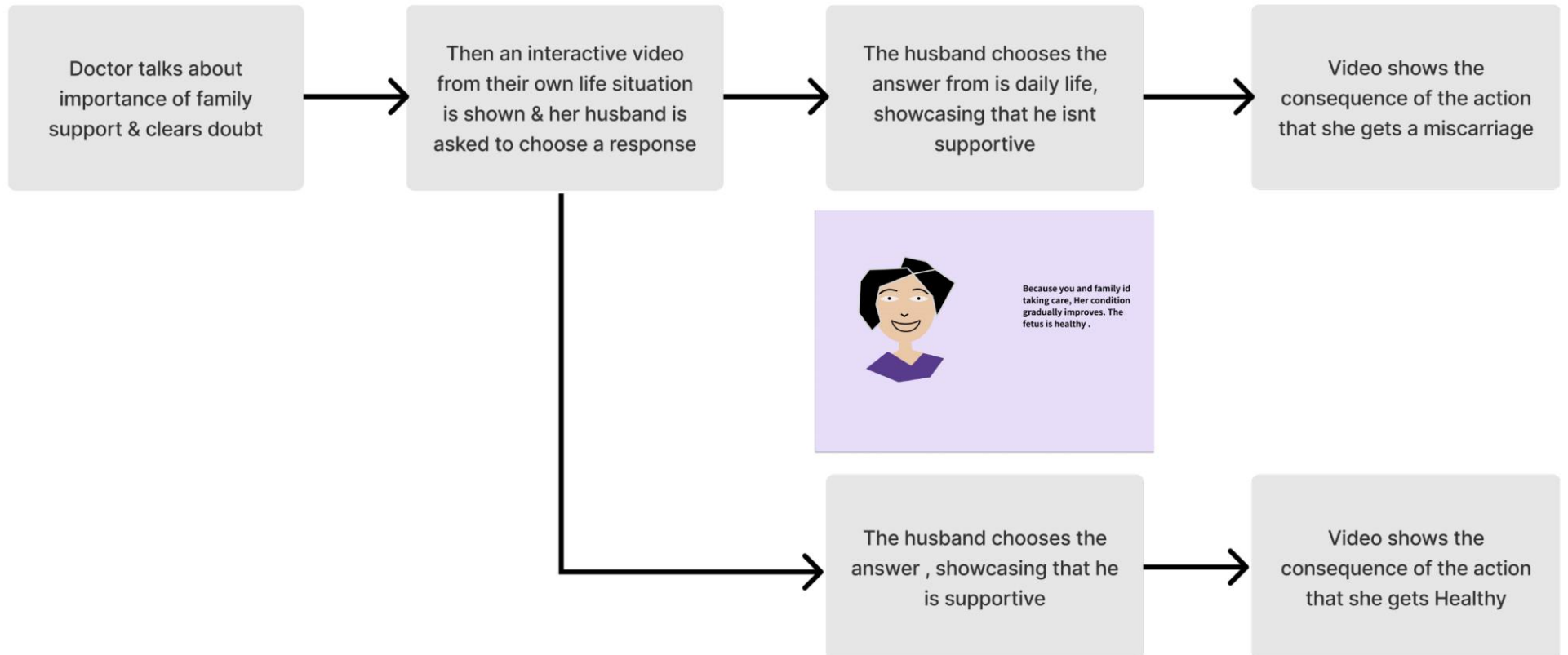
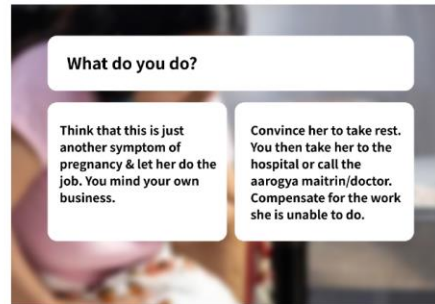
### Touchpoint : Hall of fame

- Highlighting the users who have recovered from anemia
- People share their success stories
- Highlighting the family members who have supported the patient through their journey

### Touchpoint : Experiential videos

- Playing on TV screens in waiting areas, will be a series of videos of what an ideal/ supportive family member should be like for an anemic patient.

# Service Encounter- Counselling



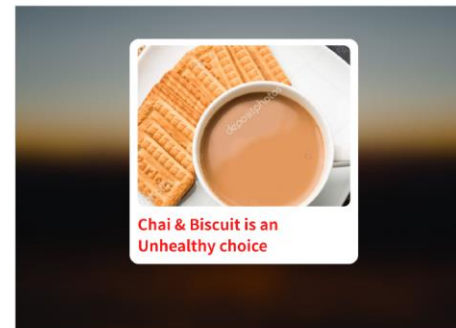
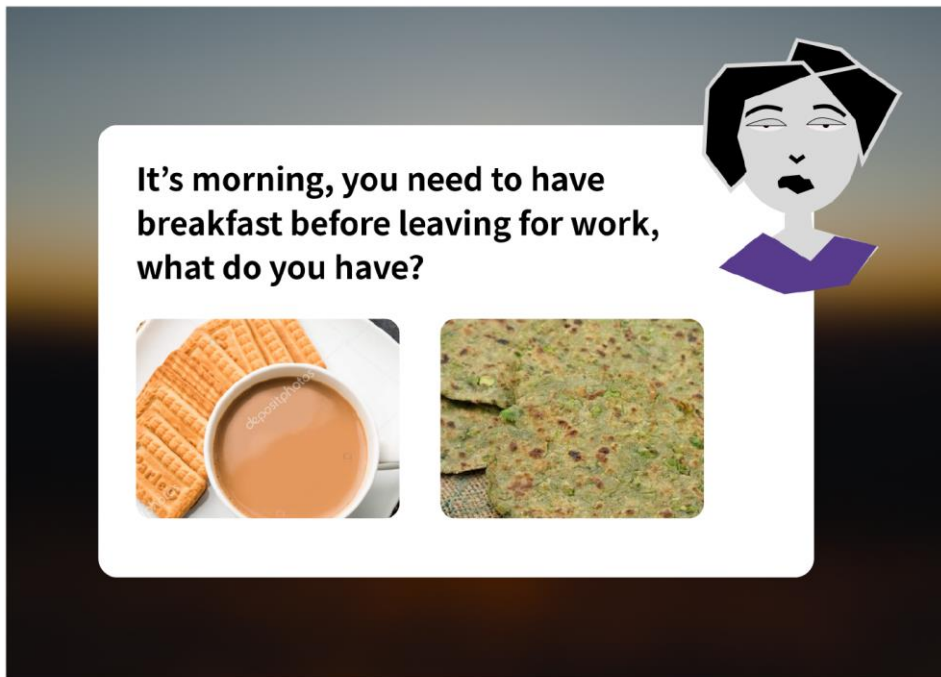


# Touchpoint- Interactive video

- Multiple scenarios for patient to enhance their learning
- User is made aware about the repercussions of not adapting a healthy lifestyle and treatment
- Impact of her absence on the family
- Access through Tablet, Touch screen, Desktop.

Audio Narration

Marathi



# Touchpoint - Community Radio

- The Service Provider has a new radio network called “Radio Deogiri (91.2 FM)” which is aimed at “behavioural change” in the community
- Women who recovered from anemia can be called for a talk as “role models” in the station and can share their experiences. The community members can also interact with them & ask their doubts

# Touchpoint - Hall of Fame at Health Center



# Proposed Value Proposition- Health tracker

$$\text{Value Proposition} = \frac{\text{Benefits (Functional + Emotional + Social)}}{\text{Costs (Monetary + Time + Effort + Psychic + Social)}}$$

## Benefits (Functional + Emotional + Social)

### Emotional

- Creates a sense of extra care and effort from the service providers side
- Creates a sense of positive fear that medicines has to be taken
- The family members feel that the medical condition is and can be fatal

### Functional

- Proper record keeping of medicine intake
- Reminder of the type of meal the patient has to take
- Acts as a reminder for the patient
- Easy for the organization to track the patient
- Eases the process of medicine intake as the patient does not have to remember which pill to take and when

### Social

- Increases the awareness amongst the people of the community
- Inspires the patient and their family members become more organised
- Can act as the medium for encouragement within the community, boosting the inter and intra gender equality and respect
- Can act as an encouragement for the future generation to follow a healthy diet and prevent anaemia

## Costs (Monetary + Time + Effort + Psychic + Social)

### Monetary

- This step will need some investment that might be in the form of a willing donation
- The patients might also have to pay a very nominal charge

### Effort

- The patient or their family members will have to put an extra effort to check the boxes
- If the patient is away from home on work then she has to remember to check the boxes before day end
- The chart needs to be placed in a place which is easily and frequently visible

### Psychic

- Developing the intention and desire to take the pills and a proper diet on a timely and regular basis
- An intention and desire to eradicate anaemia

### Social

- Social cost such as mutual encouragement and an effort to do so might be needed
- People as a community has to realise that anaemia is a serious issue

### Time

- To develop a healthy habit will take some time
- Investing time to prepare meal as per the chart might take time
- Family members must realize and allow the time for the patient to recover

The importance and value of this design direction might not be evident in every aspect straight away, but, with time it will be effective and will fetch fruitful results and outcomes. It will help the patients to look towards anaemia in an organized and timely manner and eradicate it.



# Proposed Value Proposition- Interactive Videos

$$\text{Value Proposition} = \frac{\text{Benefits (Functional + Emotional + Social)}}{\text{Costs (Monetary + Time + Effort + Psychic + Social)}}$$

## Benefits (Functional + Emotional + Social)

### Emotional

- Creates a sense of responsibility amongst family members
- Creates a sense that the working females are a vital part of the family
- Creates a sense of care and support amongst family members

### Functional

- Teaches how the anaemic patients needs to be supported and taken care
- Teaches about the process of treatment
- Teaches about the causes and effects of anaemia and how it can be fatal if not treated on time.

### Social

- It can become a source of united and undividable social effort to eradicate anaemia
- It can become the point of knowledge for the entire community

## Costs (Monetary + Time + Effort + Psychic + Social)

### Monetary

- Money needs to be invested for the installation and maintainance of the display units
- Money needs to be invested for the installation, safety and maintainance of the display units inside the community

### Effort

- Effort to watch and learn and not feel shy
- Effort and desire to co-learn along with the patient

### Psychic

- Developing the intention and desire to follow a life style as shown in the videos
- Developing the intention and desire to physically and emotionally support the patient as shown in the videos
- Developing the intention and desire to permanently remove anaemia

### Social

- Learning can be passed on to members of the community via discussion

### Time

- Patients have to manage time to go to the clinic in their busy schedule
- Family members and patients need time to understand the need for this approach and the instructions that are given here

The importance and value of this design direction might not be evident in every aspect straight away, but, with time it will be effective and will fetch fruitful results and outcomes. It will help the patients to look towards anaemia in an organized and timely manner and eradicate it.

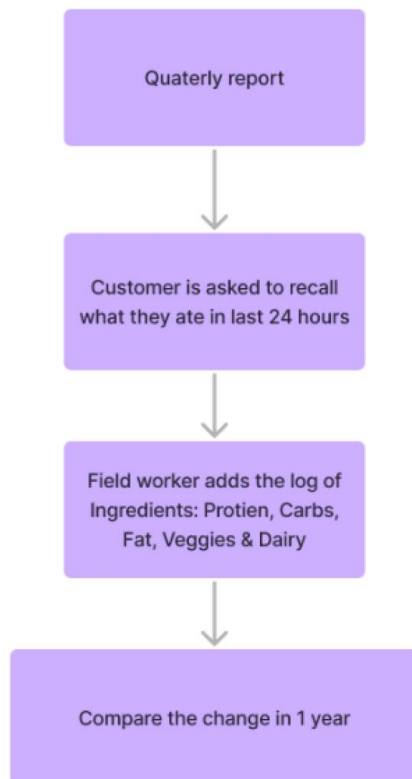


# Evaluation

Multiple ways to evaluate were identified. Given the time only expert evaluation was conducted. The feedback was as follows:

- Implementing a health tracker can be a practical and beneficial move, considering its potential for maintaining and enhancing health.
- The idea of meal delivery, though vital, may face challenges regarding financial support.

- Interactive videos might be worth exploring, but don't dismiss other alternatives. Ensure that any attempt at using interactive videos is backed by sound research.
- What strategies are in place to harness the power and support of the community?



- **Defining values > Questionnaire> Interview with the users**
- Tracking the number of months / weeks till the user continues to keep up the habit
- Can the user recall & make dishes that are more balanced and wholesome. Are they habitual to it now?
- Behaviour of the family member towards the user
- Asking Difficulties that the users were facing?
- Accessing the values associated

$$\text{Value Proposition} = \frac{\text{Benefits (Functional + Emotional + Social)}}{\text{Costs (Monetary + Time + Effort + Psychic + Social)}}$$

# Learnings & Reflections

Working on this project was an illuminating and humbling journey. It underscored the fact that addressing health issues like anemia in underprivileged women requires comprehensive strategies, not just limited to medical interventions, but also addressing root causes such as poverty, education, and gender inequality. Collaborating with an organization serving as the service provider enriched the project with their expert insights. Through the project, I identified gaps in my comprehension and application of service design concepts, including value co-creation, service ecosystem, and touchpoints. My understanding of operational concepts like the 'lifetime trajectory' model was limited; a more thorough mapping of how patients' actions lead to a sustained lifestyle change was needed. In hindsight, a clearer understanding of value co-creation especially could have been better exploited. Recognizing the need for clarity in operational concepts like lifetime trajectory and touchpoints was significant. Better planning, improved time management, and stakeholder coordination emerged as key lessons. Clear communication, particularly around service blueprints and identified gaps, proved to be crucial. Regular feedback and keeping track of work from the beginning became evident necessities. I realized that an iterative approach involving users and service providers would have enhanced the outcome. I learned the richness brought by cross-disciplinary collaboration. More in-person visits would have also boosted the project's effectiveness.

Reliable data is crucial for informed decision-making. I discovered the importance of harnessing data from diverse sources like patient experiences, medical records, and service utilization, all contributing to the development of effective strategies. Even if some proposed solutions were not immediately implementable, each one became a learning opportunity. They taught me the value of adaptability, iteration, and continuous refinement in my work. What might initially appear as failures, turned into stepping stones towards improvement.

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