Design Project: Prabuddh Gram
Rural Healthcare: Bhiura Village, UP

Rural India, Healthcare, Human Behavior, Infrastructure

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In collaboration with Office of Principal Scientific Advisor to GOI, Invest India Office and Bharat Forge Ltd.

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GANDHINAGAR

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Introduction

This project has been carried out in collaboration with the Office of Principal Scientific Advisor to Government of India, Invest India Office and Bharat Forge Ltd.

PRABUDDH GRAM YOJNA :

An integrated village development scheme, envisaged to be implemented through an inter-ministerial collaborative framework. Leading academic and research institutions are chosen to support ministries in planning and implementation of this initiative. The National Institute of Design is one of these privileged research institutions, and the students of Strategic Design Management pursuing Masters at National Institute of Design have been involved in the study of Rural Healthcare in the context of Prabuddh Gram.

The scheme would benefit the villages in many ways. Under the project the village will be built as a model village, with an emphasis on basic facilities, cleanliness and digitization.

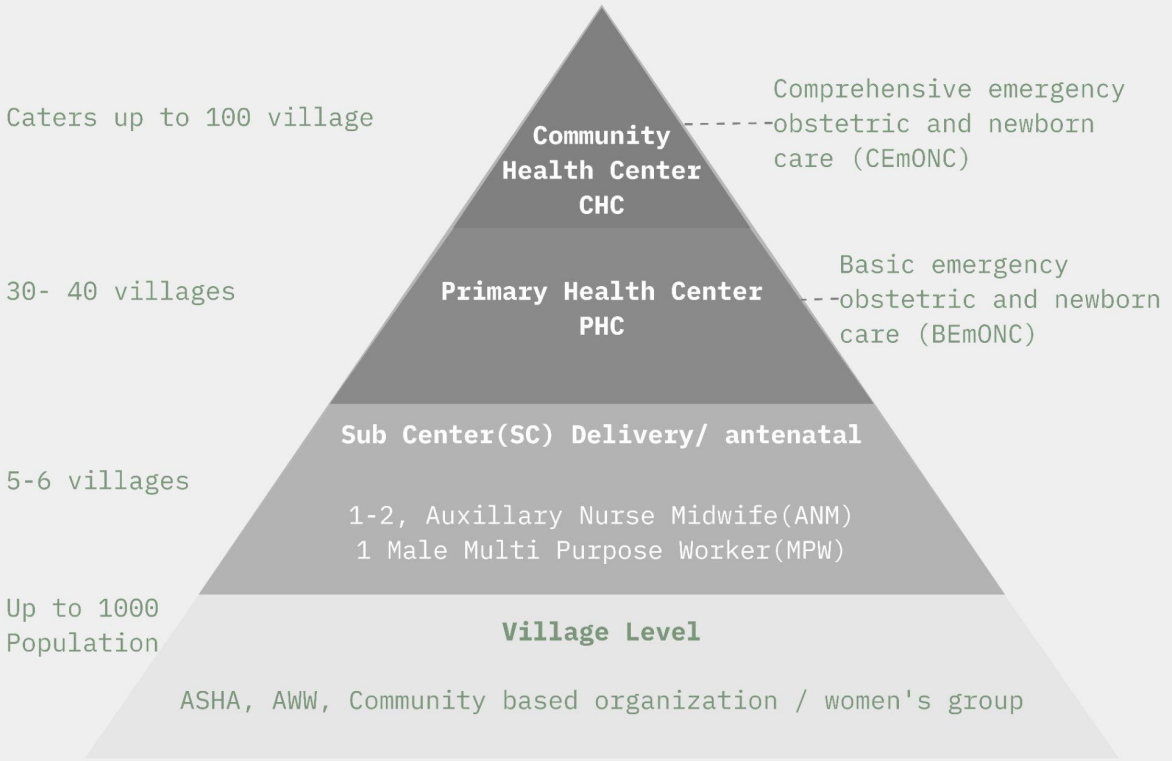
This scheme covers 9 thematic areas, which are

Road planning	smart transport system	Village architecture
Waste management	Healthcare	Sustainable water and energy utilization
Education	Agriculture	Local art/craft and culture

Bhiura Village, Atraulia Block, Azamgarh District

Bhiura is one among the 5 selected villages where the scheme would be initially implemented and tested, which also served as a field of research for this report. Bhiura is a peri-urban village, located on the Gorakhpur link expressway (under construction) - starting from Purvanchal expressway near Azamgarh and ending at city bypass of Gorakhpur, with a population of over 900 people and literacy rate of 59 %.

This project and research findings centrally focuses on Healthcare since It is the central pillar of the rural society and economy hence it is needed to be understood at behavioral level to get deep insights which helps to establish a robust and empathetic healthcare system.



Sub Centre

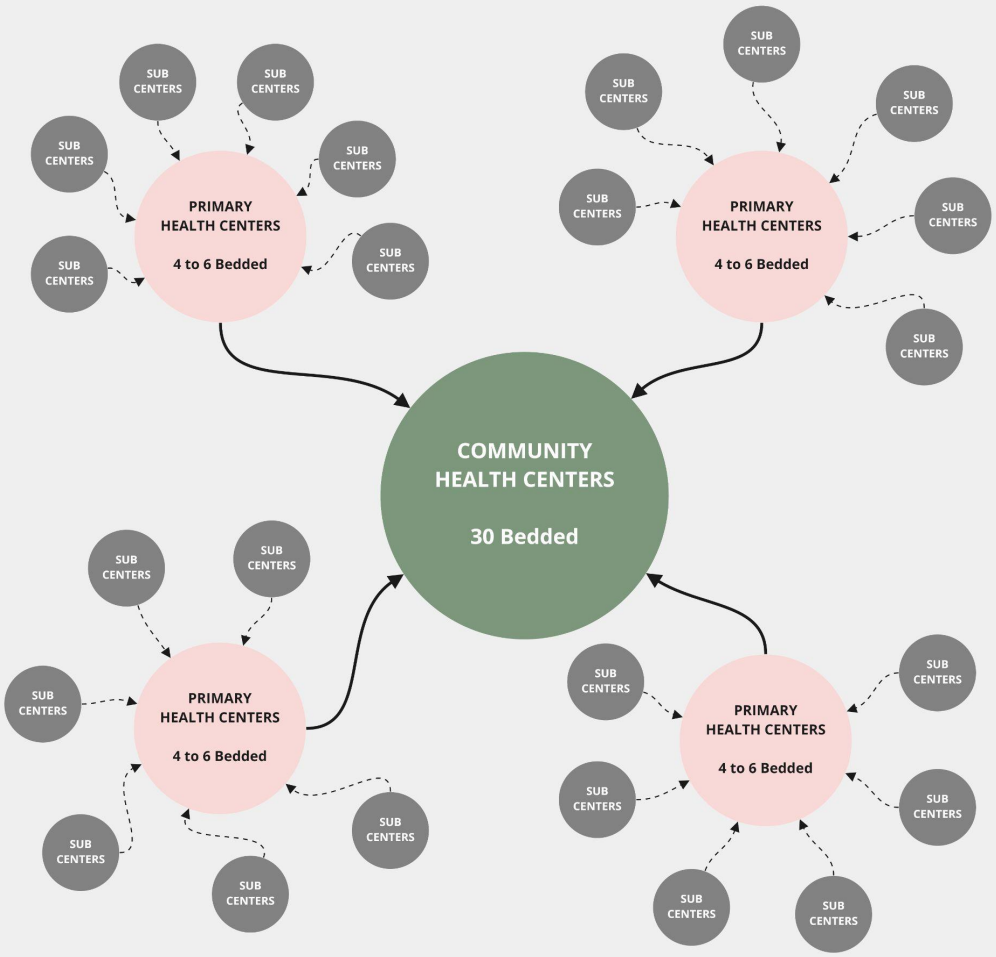
Primary point of contact, easy to access, Manned with 1 Auxiliary Nurse Midwifery and 1 Multi Purpose Health Worker (M/ F)

Public Health Centre

Referral Unit for 6 Sub Centers, 4-6 Bedded, Manned with 1 Medical Officer and 14 Subordinate Paramedical Staff

Community Health Centre

Referral Unit for 4 PHCs, up to 30 Beds and Specialized Services



India is having limelight at the global front not only in terms of its exploding population but its health scenario also. Even after India's Independence, its population is still brewing under the scourge of a degraded health system. There are nearly 716 million rural people who are constantly battling for basic healthcare services in their habitat. This condition has been aggravated by worsening living conditions of rural habitats. The unsafe and unhygienic conditions of households, drinking water, living areas promotes expansion of several diseases in rural areas. The majority of rural deaths are caused by communicable, parasitic and respiratory diseases which are somewhere linked with an unsanitary environment. About 2.3 million episodes and over 1000 malaria deaths occur every year in India. An estimated 45 million population are carriers of microfilaria, 19 million of which are active cases and 500 million people are at risk of developing filaria. In addition, even agriculture related injuries like mechanical accidents, pesticides poisoning, snake and insect bites are adding to the existing rural health problems. This scenario is worsened through existing malpractices going on in rural health care. The archaic beliefs of tribals that any disease may be cured by magic, have dominated over the minds of the rural tribal population of India. Due to this kind of notion, the rural areas are under the influence of various superstitions which ultimately leads to blockade in the advancement of modern pathology there. One of the significant agents for the downfall of rural health care is inadequate human resources in the health system. The primary level health institutions like Primary Health Centres (PHC), Sub-Centre (SC) and Community Health Centres (CHC) are facing a huge problem of absenteeism of health professionals. The underutilization of human and material resources at all these levels leads to ineffective functioning of the rural health system. Therefore, it is imperative that there may be provision for up gradation of existing rural health systems based on analysis of respective shortcomings.

Research Methodology

The study was conducted at Bhiura village for 3 days. This study employed multiple research tools on the basis of requirement and to aid the researcher in digging deeper into the underlying causes/problems. The tools used were Observational Method, Semi-Structured Interviews, Group Discussion, Observe Think & Wonder and Artifact Analysis.

1. Observational Method

To gather more reliable insights by capturing instances/ data on what participants do as opposed to what they say they do.

Researchers observe participant's ongoing behavior in a natural situation.

The researcher will have varying levels of participation in the study. Sometimes the researcher will indulge themselves into the environment, and otherwise, the researcher will not intervene in the setting and observe from a distance.

Subtypes explored were Controlled Observation, Naturalistic Observation, Participant Observation.

Semi-Structured Interviews

This method opted to draw out more specific inferences by asking repeated follow up questions.Leading with open-ended questions which are questions that can't be answered with a simple "yes" or "no."

The researcher does not strictly follow a formalized list of questions. Instead, ask open-ended questions, allowing for a discussion with the interviewee.

Group Discussion

It is a systematic exchange of information, views and opinions about a topic, problem, issue or situation among the members of a group who share some common objectives and social setting.

Based on the answers, the interviewer asks follow-up questions to draw out more specific inferences.

To gain an in-depth understanding of social issues and to obtain data from a purposely selected group of individuals.

Sample size:: 18 Males and 15 Females.

Age group between 30 to 60.

Observe Think & Wonder

Kids were asked to sketch on topic "what you perceive about Cleanliness and Hygiene" within a given time frame of 1 hours and were probed individually on the basis of what they have sketched.

Youths of the village were asked to click photographs of and selfies at places where they believe Cleanliness and Hygiene is missing and share those images by forming a WhatsApp group within a time frame of 1 hour. These pictures were visually confirmed through personal visits.

A critical-viewing strategy to help us in analysis of visual media captured as part of research.

Slowing down the thinking process and deep observation with continued probing before drawing conclusions.

The Observe-Think-Wonder strategy is an artful thinking routine from Harvard's Project Zero. The purpose of this routine is to allow students time to thoughtfully consider not only what they're observing, but also what those observations mean.

Artifact Analysis

A process to better understand how prescribed medicine is being used by its users and the culture in which it typically exists.

It also serves as an opportunity for us to systematically generate insights and inspiration for future product/service designs.

In order to make the study more effective and efficient other studies performed in support were as follows,

Secondary Research

The research started with studying the information already available in secondary sources like newspaper articles, ground reports, official documents, etc. to understand the current scenario of rural healthcare.

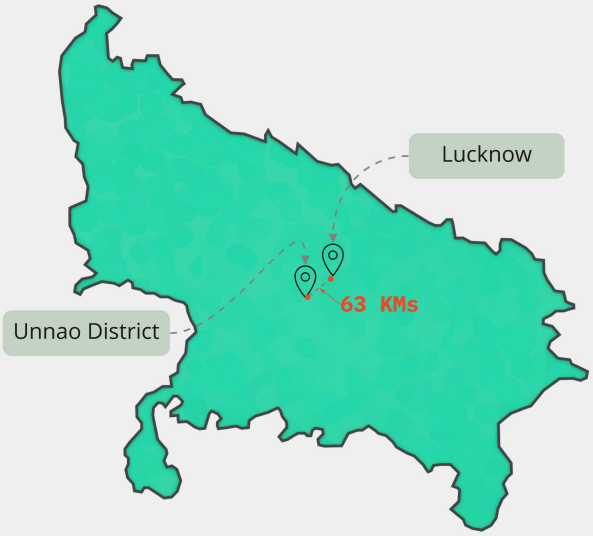
Pilot Study

A few assumptions and hypotheses were drawn according to this secondary research. A pilot study was then conducted in a nearby village to check if these assumptions were right or wrong and to further understand the ground reality in rural areas.

Tools used for study were Observation Method and Semi-Structured Interviews.

Observations and Findings

1. Pilot Study: Samadja Village, Asoha Block, Unnao District, Uttar Pradesh



- Population Size: 1500 +
- Total No. of Houses: 317
- Total Literacy rate 56.8% Approx.
- Sub-Center (Inactive)
- Nearest CHC 1.8 KM

For the pilot study, Samadha Village was selected based on the above-listed criteria. Visiting a nearby village to test the initial hypothesis and get a better understanding of the overall context was our main agenda. 2 students, based in Lucknow were able to visit Samadha for 1 Day.

The key observations were categorized under the following headers-

1. Awareness
2. Healthcare System
3. Economy
4. Environment

Awareness:

- People in Samadha Village were heavily misinformed about Covid-19 disease and Vaccination. People believe there is a difference between Urban area Covid vaccines and Rural area Covid vaccines.
- Villagers consider posters and banners as an ineffective and age-old way of awareness and communication, instead, TV, social media, and newspapers are considered to be a better source of information.
- Villagers expressed reluctance to take medicines that were given during health campaigns.
- Medical Officer confirmed, "ORS is never seen as a treatment, instead, saline drips are preferred, only then it qualifies as a medical treatment to them"

Healthcare System:




- Government medical staff expressed their reluctance towards working in a rural setup.
- Both the Sub Center and CHC were not maintained well. Damages on the wall, algae, dampness, and discarded equipment were clearly visible. Very few patients were seen at CHC.
- ASHA workers were considered for maternity and child care only so mostly get ignored for any case apart from maternity and child care.
- The Sub-Center in the village was supposed to cater to 6 Villages including Samadha VIllage. For the past 10 years, it was functioning only for the Vaccination of Mothers and Kids by the ANM.

Economy:

- Villagers gave first preference to over-the-counter medicines for any health-related problem rather than consulting a doctor.
- CHC was 1.8Km away from the village, still, people rushed to private facilities during nighttime emergencies which were more than 5Km away from the village.
- Trust in Government provided Healthcare facilities were missing, during nighttime, people were willing to spend extra 500- 1000 rupees to get treatment in a private facility.
- Almost 50% of the total villagers were employed before the Covid-19 pandemic (as per Gram Pradhan's Office).

Environment:

- Drainage channels were present at some parts of the village and grey water was being directed towards ponds. There was no proper drainage system present during the pilot study, however, new drainage channels and the concrete road were under construction.
- Accumulation of garbage all around the village. There was no proper garbage collection system in the village. Water bodies were getting polluted with plastic waste.
- Most of the toilets were built in front of their homes and were left abandoned or used as storage rooms. Open defecation still prevails in this village.

2. Pilot Study: Samadja Village, Asoha Block, Unnao District, Uttar Pradesh

- Population: 900+
- Total Households 200+
- Literacy: 59%
- Sub Center: NA
- Atrauliya CHC: 2KM

To know more about the context of the Prabuddh Gram village: Bhiura, an on-ground study was conducted. It is a peri-urban village, located on the Gorakhpur link expressway- starting from the Poorvanchal expressway near Azamgarh and ending at the city bypass of Gorakhpur. Two students from NID stayed near the village for 3 Days to conduct an Observational Study of the Village, Community Health Center and nearby market areas where chemist/ pharmacists were located. Personal Interviews and Group Discussions with Kids, Young Adults and Elders were conducted to get deeper insights regarding their general awareness, health belief, approach towards illnesses and diseases, preventive measures and general outlook towards the village environment.

Bhiura village does not have any State funded Health care service physical touch points i.e. a Sub- Center. ASHA worker is presently handling all health related activities like spreading awareness, advising new mothers, family planning consultation, kids inoculation, calling ambulance and supporting ANM. At grassroot level, ASHA workers are the only touchpoint from the Rural Healthcare service to be connected with everyone in the village. ANM, AWW were also actively involved in their respective services related to health and nutrition.

Medical workers and Doctors at CHC were also interviewed and observed in their uncontrolled natural working conditions to get more insights towards their behavior towards patients, fellow medical staff, other staff members, equipment and infrastructure. CHC infrastructure was closely observed in terms of facilities provided to both patients and medical staff members, spatial arrangements, maintenance, flow of services and ambience. One of the students also acted as a self participatory patient to generate more insights in the Rural Healthcare system. Management of patients and processes during Covid-19 vaccination day was also observed to identify gaps in the service and get a better understanding of the patient's journey.

The findings and observations are broadly categorised in following two headers-

- Observations at CHC
- Observations at Bhiura Village

Observations at CHC

Community Health Center at Atraulia Block is a 30 Bedded hospital equipped with services like maternity care and delivery, pediatric care, general physician and OPD. Telemedicine facility was in place but it was non functioning. Few services like Dental checkups, eye-care and X-ray services were also not in place due to lack of equipment, space, doctors and skilled technicians. Apart from infrastructure, there was a visible lack of management leading to confusion and chaos in the hospital.

Following are the observations in two broader areas at CHC

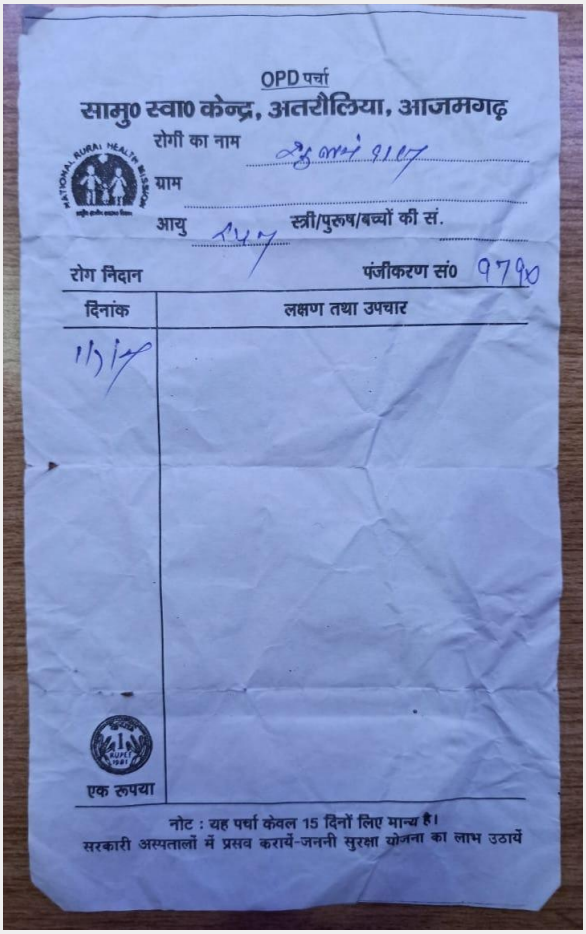
1. **Hospital Infrastructure**

   The hospital infrastructure was visibly old and degraded. It is more than 30 years old and constructed based on the now outdated Architectural Layout. The layout was confusing and visible modifications were seen based on requirements which were creating further problems and confusion. Broken window glass, exposed electrical wirings, lack of proper signages and direction provider were missing. Outdated furniture and non working equipment at CHC. There was no proper waiting area present inside the hospital which was prompting patients to barge into the doctor's cabin to ask about the medical staff availability or enquire about a certain room.

The pharmacy at CHC is a small space of 6FT X 6FT approx where patients receive subsidised/ free medicines provided by the State Government. A patient after consultation with the doctor gets the prescribed medicine written on the prescription along with a small piece of paper on which the medicine name and patient's prescription no. is written. This small piece of paper is then given to the Pharmacist for the prescribed medicine disbursal and manual recording. The pharmacist then hands over the medicine to the patient without any packaging/ carrying pouch. There was no proper storage available in the pharmacy for temperature sensitive medicines limiting the stocking option for medicines at CHC.

The Pediatric and Maternity care doctor has to take OPD sessions out in the corridor due to lack of ventilation which is blocking passage for other fellow patients . The outpatient session was happening at the first floor where a patient has to reach via stairs or through an inclined ramp. The delivery, maternity & child care room was also located on the first floor.

The hospital also lacked spaces like AV rooms, meeting rooms for big meetings with ASHA workers/ ANMs for prep, digital data collection and recording, locker and changing rooms for staff coming from distant cities. Few staff members and patients also had to bring their kids with them and were unable to care/ breastfeed them at CHC. Kids were seen playing around in the hospital with a potential threat of being contracted with communicable diseases and also causing disturbance for other patients and medical staff during work.


OPD पर्चा

सामु0 स्वा0 केन्द्र, अतरौलिया, आजमगढ़

रोगी का नाम

ग्राम

आयु स्त्री/पुरुष/बच्चों की सं.

रोग निदान पंजीकरण सं0 9790

दिनांक	लक्षण तथा उपचार
11/1/17	

एक रूपया

नोट : यह पर्चा केवल 15 दिनों लिए मान्य है।
सरकारी अस्पतालों में प्रसव करायें-जननी सुरक्षा योजना का लाभ उठायें

Patients get low quality prescriptions (mostly one time usage of material) from government facilities for one rupee cost. These prescriptions are used for OPD sessions and the data is not recorded properly. Patients tend to lose it or it gets it destroyed/ damaged due to excessive folding or sweating.

Combined with poor unhygienic infrastructure and lack of services, subconsciously make them feel it's designed with a bare-minimum mentality and lose their trust in the service.

2. Management

The CHC, upon entering, presented itself as an ill-managed hospital with medical waste lying in front of it, stagnated water nearby, and staff quarters in a deteriorating state. A stretcher was placed near the toilet blocking the way for patients/ attendants, with a visible bloodstain on it. There was no space to keep the stretcher for quick emergency usage. No proper sterilization/sanitization and temperature check were happening while entering the hospital nor there was anyone to guide patients to follow COVID appropriate behavior.

Staff Quarter

Medical waste, Damaged Ambulance

The Medical officer is stacked with numerous responsibilities apart from his duty as a Doctor. These responsibilities include guiding patients towards the right department/ personnel, counselling, monitoring, deployment of Health Schemes, Covid appropriate behavior, temperature checks/ sanitization, medicine dispensing, feedback and grievances etc. He is also responsible for directing other Medical Staff members under his direct chain of command i.e. Doctors, Nurses, Wardboys, ANMs, ASHA and Sanitization workers.

The amount of daily responsibilities of a Medical Officer requires juggling between both desk work and field work is enormous and it hampers their decision making ability at work. During the on field visit, doctors were becoming impatient as soon as patients started barging inside their cabins due to confusion/ enquiry. Patients expressed that they don't know whom to approach and where to find a certain doctor(when advised by someone) since many of the patients are illiterate and cannot read names painted above the doors. There was no staff/ reception counter to cater such needs of patients which creates distrust over the service when doctors/ medical staff use harsh tones and ask them to wait. Studies have proven that a person becomes more anxious if the waiting period is prolonged and no feedback is given.

Stagnant Water *collected near hospital entrance.*

Bloodstain *on stretcher*

It was also observed that some doctors saw multiple patients during consultation due to chaos and no crowd management. Patients felt uncomfortable speaking in front of other patients during the consultation session.

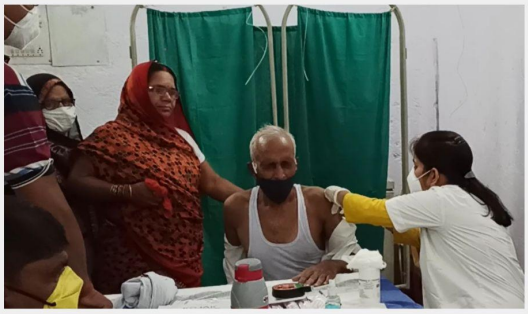
Doctors, nurses and other medical staff were not in their uniforms. They were hard to distinguish between patients adding up to more confusion for the first time visitor. Staff nurse kids were seen playing inside the hospital.

Covid-19 Vaccination:

CHCs are one of the few institutional public vaccination centers in Rural areas in India. Vaccines are distributed for free procured by the state government. During the initial days of Covid Vaccination, people were hesitant due to fear and misinformation in both Urban and Rural areas.




During our visit, as explained by the Medical officer and ASHA workers at CHC, there is a rising demand of Covid-19 Vaccines in rural areas partly due to the perception of scarcity and mandatory requirement for out-state travel. The vaccination process at CHC was chaotic and heavily mismanaged which created problems for both staff and patients. The process of registration of a person for the first time vaccination is different than for the person coming for the second dose, this creates a basic heuristic error and people often get confused over the steps to be followed and information which needs to be shared with the staff at the registration desk.



Due to lack of staff and not proper guidelines/ tools, covid appropriate behavior was not maintained and quarrels happened between patients. A person has to stand in a queue for more than an hour to reach the registration desk, where he/ she eventually finds out that some information is not correct or missing or the person is unable to recall the information etc. This leads to line jumping as the wait time has increased for the patients standing behind.

At CHC, both Covidshield and Covaxin were administered to patients in the same room where there was no demarcation of which nurse was administering which vaccine. People were enquiring with the nurse which led to frustration and anxiousness in both people and the nurse.

Observations at Bhiura Village

Since they don't have a sub center, they carryout immunization process at a nearby spacious

1. **Impact of ASHA & ANM:**

   ASHA workers in Bhiura are known by everyone for Maternity and Child care, which is one of several key responsibilities such as spreading awareness, manual data recording, distribution of common medicines, identification of malnourished kids, leading water and sanitation tasks/ construction of toilets etc. ASHA is a huge success for family planning and first time mothers. All the recent deliveries in the past 5 years were 100% healthy institutional deliveries. This has created unshakable trust over ASHA regarding maternity emergency cases. She is the only way of communication for the state healthcare system with each and every family in the village, acting as a touchpoint and a person to reach during emergencies.

   There are some challenges associated with ASHA acting as a communication channel, men and women perceive information shared by ASHA differently due to different perceptions towards general health and gender bias. Women and girls find it very easy to approach ASHA Men on the other hand, they do not believe ASHA can help them with their problems/ diseases and sought for quick over-the-counter medications. They do not trust State medical services apart from maternity and child care and common issues like cold/ seasonal flu. Since there's no institutional touchpoint of State Medical facilities, men shy away from consulting ASHA/ ANM at their residence/ informal places.

2. **General Awareness & Health Belief**

Sanitation & Hygiene:

People having lower perceived severity do not seek First Aid help during an accident/ emergency which is a metaphorical indicator of Health Seeking Behavior in general. Less value is associated with preventive measures/ techniques as they're unable to justify the cost/ effort factor associated with it. These preventive measures are positioned with a factor of fear to gain more impact. People tend to associate preventive measures with fear and they tend to reject them as having fear in a social scenario is a display of cowardice for them.

Uttar Pradesh promoted these toilets as a protector of dignity and targeted women in this cause. New toilets under Swachh Bharat Mission (Grameen) were named/ branded as "Izzat Ghar" and ASHA workers were deployed to educate the masses. They were given the task to educate people to build toilets and her general image to people might have led them to believe it's a benefit reserved for women and kids. There is a perception gap formed due to the Gender associated roles of ASHA workers and the men in the village. Since men don't want to involve women in Construction related discussions, ASHA workers being a woman are unable to connect in terms of advice related to septic tanks. Most of the households having toilets built under Swachh Bharat Scheme have no pipe water connection leading to carrying of a bucket full of water for every use. People subconsciously flush the excess water in the toilet even though they don't need to, but as the water in the bucket is perceived as dirty or unhygienic for some other use by them. Since during open defecation, a plastic bottle/ lota is enough for the wash, people feel they are using excessive water in toilets leading to fast filling of septic tanks and making them loss-averse hence avoid using it and openly defecate.

Waste Disposal:

Bhiura does not have any proper waste disposal system and drainage system in place. People tend to dispose of their waste in fields or ponds making it a perfect breeding ground for communicable diseases. During interviews and group discussion, both kids and adults were aware of waste segregation and usage of dustbins, but there was an Attitude- Behaviour Gap on ground. The data collected from Kids drawing session and Youth Photography session shows that Kids are well learnt about the shape and size of a dustbin, but when asked if they had one at their home, none of them had one. The perception towards dustbins failed to transcend beyond the confines of pages since they were never taught alternatives of "Use- Me, colour coded dustbins". Youth of the village were well informed in some areas due to their exposure on social media. This exposure was also misdirecting them towards believing their indegenous practices such hai Straw collection for thatch roofs, partitions, cow dung manure/ cake making etc. as waste products and dirty jobs. Adults on the other hand believe Waste management is a government responsibility and they are not responsible for the state of their village.

Drinking Water:

The ground water table in bhiura is very high at 2 metre - 10 meter below ground level and hence available in abundance. Almost every household has a hand pump (India Mark 1) of their own and those who can afford have their own motorized bore water supply. The villagers at Bhiura are quite accustomed to drinking water directly from the hand pump without any filtration, which is backed by their notion of water which tastes good and looks clean and clear is safe to drink, moreover they do not store any drinking water since it is available in abundance. This practice of drinking water directly is leading to many problems such as water borne diseases and water stagnation. Since open defecation is still practiced and due to the higher water table there is a huge possibility of water contamination, leading to risk of water borne diseases. Water stagnation is again linked to their drinking habits, since the opening of India mark 1 hand pump is bigger and their practice of drinking water directly, causes wastage of excessive water which results in stagnation and thus becomes a disease breeding ground.

3. Health Seeking Behavior

Covid-19:

No one in the village was wearing masks but few of them were observed wearing one in the market, hospital etc as they feel Covid-19 has not entered into their village as the environment is natural and pure.. People feel loss averse while wearing a mask and perceive them as an obstacle between freedom and social image inside the village and people around them find it odd to wear masks following a normative Conformity Behavior. The masks they get in the market, hospitals have a hard time blending with their attire and becomes highlighted. Many women tend to cover their face with saree as it blends in the social context of the village and somehow acts as a preventive measure.

Kids were heavily influenced by their parents and heavily misinformed about the pandemic. During interviews, few of them said they don't believe Coronavirus exists and it's all a myth. One of the respondents said, Covid-19 arrived in India in 2015 and in 2018, it started attacking into their village but now everything is normal. As there is no proper communication channel for Kids through which the Government can communicate with them directly. Villagers also were less hesitant towards Covid-19 vaccines and during interviews and group discussions, they displayed a positive response upon getting vaccinated. ASHA notified that more than 40% of the villagers have taken at least 1 Dose of covid vaccine. Although CHC was unable to give detailed information regarding Fully Vaccinated individuals due to lack of data sorting based on village and cross checking them with manual entries.

First Aid:

In the village, people do not use proper First Aid due to lack of resources and awareness. They tend to keep cuts/ wounds and animal bites in the open as they believe it will heal faster if it's dry. Tetanus injections are far cry as there's no sub center in the village. People having lower perceived severity do not seek First Aid help during an accident/ emergency which is a metaphorical indicator of Health Seeking Behavior in general. Less value is associated with preventive measures/ techniques as they're unable to justify the cost/ effort factor associated with it. These preventive measures are positioned with a factor of fear to gain more impac but people in the village tend to reject them as having fear in a social scenario is a display of cowardice for them.

Prescription and Medicines:

In the village, when asked to show their medicines and prescriptions, none of the 30 Household surveyed were keeping any Government funded hospital's prescription or medicines with them. They trust on private medical facilities and opt for them. Upon further probing, it was found that people tend to believe since Government facilities are free and usually in deteriorating condition, the medical facilities are not trustworthy. One of the residents showed us a prescription without any name, details of the doctor printed on it, and a simple piece of paper with medicines written on it.

Secondary Research Key Points:

The country's rural areas house 895 million people or 66 percent of India's population. However, nearly 60 percent of hospitals, 80 percent of doctors, and 75 percent of medical facilities, are located in urban areas [2]. According to a study published in the Indian Journal of Public Health, in September 2017, it will need 2.07 million more doctors by 2030, if the entire country wants to achieve a 1:1,000 ratio (as per WHO) 60% PHCs in India have only one doctor while about 5% have none. Uttar Pradesh emerged the worst performers, with less than five per cent PHCs following the norms.

Attitudes towards healthcare

- Lack of commitment to the healthcare process and awareness towards health investment. Rural people don't understand that right investments towards health can give high returns.
- Tendency to see something big, tangible as treatment for diseases. Like believing that only I.V. Drips can cure their diseases.
- Vaccine Preventable Diseases is practically free of cost, but it is placed in a less priority zone until it's too late. Taking a day off from work for healthcare is a day worth of economic loss.
- Males make quick decisions on health compared to women.

Trust Factor:

- Covid 19 vaccine hesitancy in rural areas.
- Rural people trust alternative unauthorised healthcare providers more than official healthcare providers.
- People deny, stigmatize Covid-19 Positivity and are ignorant towards prevention & medication.
- See tangible as treatment for diseases.
- Infrastructure plays a major role towards trust building.

Health and hygiene

- Lack of Healthy lifestyle/ condition. Labor intensive work in harsh conditions.
- Lack of a balanced diet. Low availability and Management of nutritious food.

Accessibility of resources

- Unavailability of functioning healthcare centers in few rural areas.
- Rural families lack healthcare facilities in close proximity which might act as a barrier towards seeking healthcare facilities, hence making them travel long distances to get proper healthcare treatment.

Healthcare workers

- Health workers lack rural/cultural sensitivity: Lack of connection and empathy between healthcare professionals and rural people.
- Healthcare providers are hesitant to work in rural areas. Eg: Safety and security concerns of medical professionals.
- Low Doctors to Patient Ratio.(India is 1:1456 against the WHO recommendation of 1:1000) 1:19962 in UP.

Awareness and perception

- Lack of healthcare education.
- No proper channel or a generalised channel to convey healthcare information. Hence, information flows through unorganized channels in Rural areas.
- Lack of information and awareness about Covid-19
- Word of mouth, Key tool for misinformation spreading.

Others

- Healthcare decisions in rural areas are highly influenced. Eg: society, politics, myths, perceptions etc.
- Misinformation from outside sources.
- Systems and Technology are not designed keeping the rural people in mind.

Insights

Health Belief

Insight 1

People place higher subjective value and associate a sense of ownership with medicines & prescriptions received from private healthcare since they had paid a premium for the treatment resulting in devaluing of prescription and medicines received from government healthcare facilities as they cost only 1 rupee.

Further Study

- Digital prescription as data recording
- Prescription as Health Seeking behavior mapping tool.

Opportunity Area

There is a need to instigate a sense of ownership and value addition towards government-provided prescriptions and medicines.

Insight 2

People in villages tend to leave small cuts/ wounds/ animal bites without any treatment since they lack First Aid materials and awareness. This can lead to severe complications.

People having lower perceived severity do not seek First Aid help during an accident/ emergency which is a metaphorical indicator of Health Seeking Behavior in general.

Opportunity Area

There is a need to establish the value of First Aid treatment and make people aware of susceptible illnesses caused by small injuries, animal bites, etc.

Insight 3

Awareness programs fail to produce the desired optimal behavior because they are not propagated through proper channels and target specific age, gender and community.

Communication materials are too ambiguous and don't communicate proper step-by-step prevention. Give them a sense of progress.

Further Study

- Research on communication channels in rural India.
- Research collaboration with dietitians and chefs to design recipes.

Opportunity Area

There is an opportunity to design communication strategies defined by its target audience and propagate through proper channels leaving no person/ kid behind.

Insight 4

Villagers collectively consider it to be safe to consume directly without filtration since ground water visually appears to be clean and clear and also tastes fine due to which, water borne diseases are highly inevitable. There's a Low perceived susceptibility towards General Health due to their belief of having strong immunity against diseases.

Further Study

- More data required on per day water consumption
- Research on groundwater contamination levels

Opportunity Area

There is a need to devise a solution in such a way that it could alter their excessive water usage behavior and practice safe drinking water.

Insight 5

People feel that toilets branded as Izzat Ghar (Dignity House) are made for women and kids which further humiliates men when they use it. Open defecation, in contrast, is seen as promoting purity and strength, particularly by men, who typically decide how money is spent in rural households and make decisions for building toilets.

Those who have toilets built at home do not use it often because of the fear of septic tank filling and cleaning effort/ cost associated with it.

Further Study

- More behavioral study on IZZAT GHAR branding.
- Village Architecture Research for contextual toilet positioning.

Opportunity Area

There is a need to ignite a sense of pride and purity by using toilets not only in women and kids but in men too.

Healthcare Service

Insight 6

Rural Healthcare service on ground does not function as per the given guidelines(2012) due to varying context of Rural areas in India, One size fits all model fails to create the desired impact and foster positive optimal behavior in both staff & patients.

Opportunity Area

There is a need to relook and revamp the whole Rural Healthcare Model after detailed service and design audit. Government healthcare providers should act as a leader in society.

- *People : Design Healthcare service with empathy towards staff, patients and contractual health/ sanitation workers.*
- *Props : Provide/ Upgrade infrastructure, materials and devices with state of the art technologies and ease of usage.*
- *Process : Design processes in such a way that is easy to interpret and navigate through by patients and staff.*

Insight 7

Due to no tangible Healthcare service touch points in the village tend to avoid consulting with ASHA/ ANM at their residence for Health related consultations because of social stigma and shyness. This results in infrequent visits to Healthcare facilities and people become more susceptible to illnesses.

Further Study

- Institutional touchpoints design guidelines
- Design Research on Rural Healthcare Service.

Opportunity Area

There is an opportunity to build an infrastructure which caters as a Sub Center-cum-Multi Utility Space, in order to externally trigger villagers to visit this place frequently. Gradually anchoring the need to seek Healthcare services via designed awareness programs.

Insight 8

First-time mothers when compared to experienced mothers tend to visit CHC more often for health checkups (Antenatal Checkups) as they perceive it as an explorative and recreational activity.

Further Study

- Types of activities they involve at home during pregnancy period.
- Impact assessment of their visit to Doctors and interaction with ASHA and ANM

Opportunity Area

There is a potential to tap into the Health Seeking Behavior of the mothers to spread more awareness and foster their trust and ownership towards state medical Healthcare facilities.

Insight 9

Medical staff tend to bring their kids to CHC/ workplace due to the absence of any caretaker at home. This can potentially expose kids to various communicable diseases and also disturbs other doctors and patients.

Further Study

- There is a need to study the societal acceptance of day care facilities.

Opportunity Area

There is a need for a facility which could assure staff mothers of their kids well being and enable them to render their work with full efficiency.

Insight 10

People tend to avoid spaces where they find it hard to navigate or create a mental map of the space. CHC is not navigation friendly due to lack of proper directional signage and staff who could guide which makes people anxious.

Further Study

- Study of Rural Hospital and its psychological impacts
- Functional Literacy and it's behavioral impacts.

Opportunity Area

There is a need to equip health centers with appropriate and easy to recognize signage boards which could ease and enhance the experience of visitors.

Insight 11

There is no denial of service to patients at CHC for not wearing a mask thus there was no motivation/reason for them to wear a mask, neither was the Mask dispensed at the government dispensary.

Opportunity Area

There is a need to devise a solution in order to make sure that the mask becomes a basic utility part of their life and external reminders are required and also How do we add value to the mask for its regular usage and proper disposal.

Solutions

1. New Improved Prescription Design

The new prescription design will simplify directions for pills consumption by simple coding where doctors have to fill it like an OMR sheet and patients can grasp the information. On the back side, a variable reward like fun games related to health, health awareness and information or healthy seasonal fruits- vegetable information etc. will be placed every month. All of this on good quality paper which enhances the sense of ownership.

The prescriptions will also mention the total amount which people availed at CHC for free, provided/ subsidised by the state government. This will remove the concept of cheap facilities from the mind of patients and instill a sense of achievement.

2. Healthcare Booklet

The people of Bhiura will be given a customised Healthcare Booklet composed of New Prescription Design(mentioned earlier) as pages with other Health related information. This booklet will act as a personal record device for both patients and doctors and they can quickly check the medical history of the patient at a glance. The Booklet can also consist visible incentive eg. After 10 consultations/ checkups, the patient will get some other benefits. Also this booklet will encourage people to get more checkups as the record is building up towards good health.

This booklet can also be used in private consultations where the doctor has to stamp/ sign the pages so that other doctors can check their past medications. This booklet will consist of Bar-Code scannable pages which can be used for data entry at CHC which will help in analysis and prediction of disease outbreaks in long run by recording each and every visit of the patient as a digital document which can be accessed pan India. This could be a collaborative effort between different health schemes and Prabuddh Gram: Bhiura could be the torch bearer in Uttar Pradesh.

3. Medical Pouch- cum- First-Aid

This medical kit will be provided to each household in Bhiura, which will act as a First-Aid kit too. The earlier mentioned booklet and prescriptions could be kept inside it and this vibrant coloured pouch will act as a trigger to Health Seeking. People can take this pouch to hospitals which will also help them carry their medicines proudly. Various NGOs/ CSRs can pitch in where NID will be providing support for production and deployment of these pouches to Bhiura.

The medical pouch will be exclusive to Prabuddh Gram for some time to make them feel valued in the Healthcare System and instill the feeling of pride with every trip to a doctor for checkups and consultation.

The pouch will be made from Khadi to boost the khadi sector and encourage people to explore more towards new directions of usage.

4. Nutrition Awareness-cum-Recipe Book

In one of our observations, we saw that women find it very easy to talk to ASHA workers and also discuss other topics such as food and recipes. Men also showed interest in talking about food and culture with us. Cashing on this insight, we believe that food can be an interesting bridge between health awareness and nutrition.

This booklet will be designed in collaboration with local people, chefs, nutritionists and designers to allow ASHA workers to impart knowledge regarding nutritious food while discussing new recipes with women. These women in return will try out and discuss these food recipes with their family, friends and neighbours leading to curiosity and awareness.

5. Awareness through monthly Comics/ Story books

This awareness material will be distributed to the kids in the form of comics, written in simple language and more pictorial representation. The comic book also comes with an inbuilt do it yourself (DIY) kit in order to make sure they don't just learn but also implement it practically hence imbibing a practice of making things on their own to solve day to day problems and empower kids with authentic information.

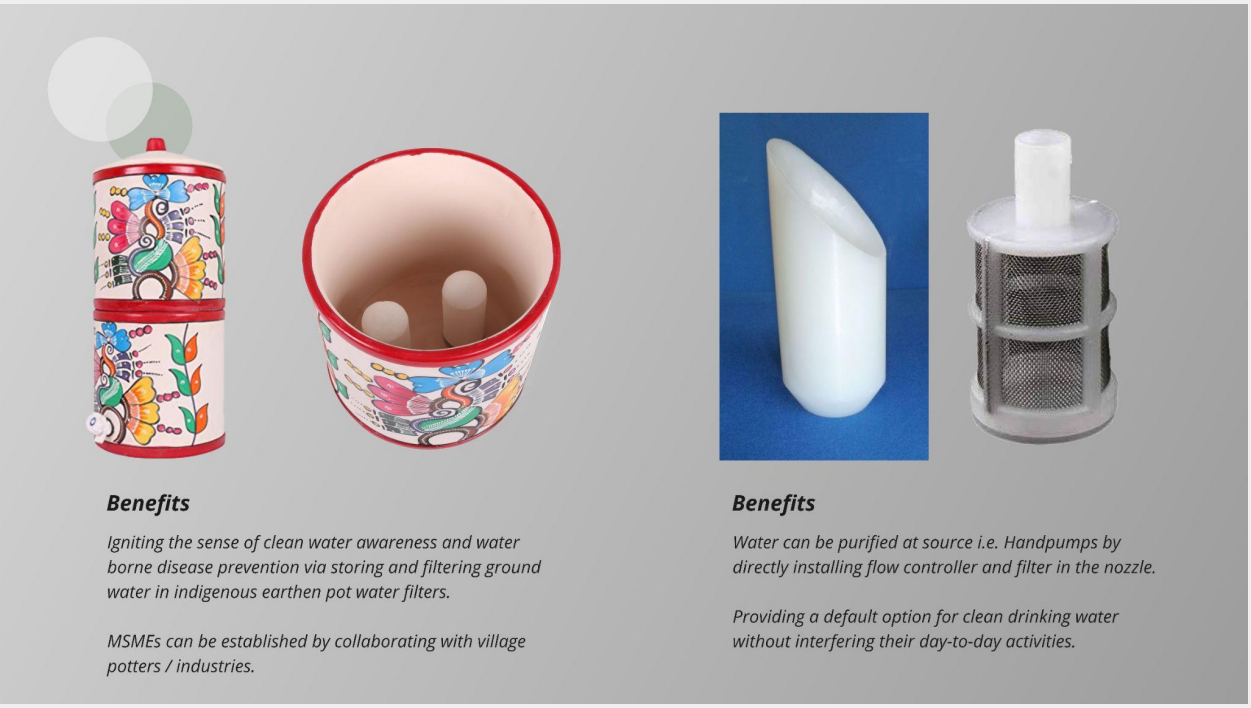
NGOs, Organizations, Institutes etc. can join hands in creation, publishing and distribution of these comics and kits to Bhiura village and map results. NID can take the lead in designing and publishing these comic books and also map results for incremental updates in the format. This can be done in both Rural and Urban areas and will act as a direct channel of communication of Government to reach kids directly.

6. Healthcare Cadets (HCC)

This is an initiative which will train/ guide kids to take charge in Health related issues in their village. By giving small executable steps which creates an impact in the village, Kids can become more confident in approaching bigger health challenges and make their friends and family more aware. Kids will be recognised and honoured with a badge for their good work and a chance to work at CHC as a volunteer.

Making the teenagers part of health care activity could eventually develop a consciousness towards health and they would start feeling themselves as a part of the healthcare system, moreover act as ambassador to better healthcare practices in their village.

7. Healthcare Cadets (HCC)

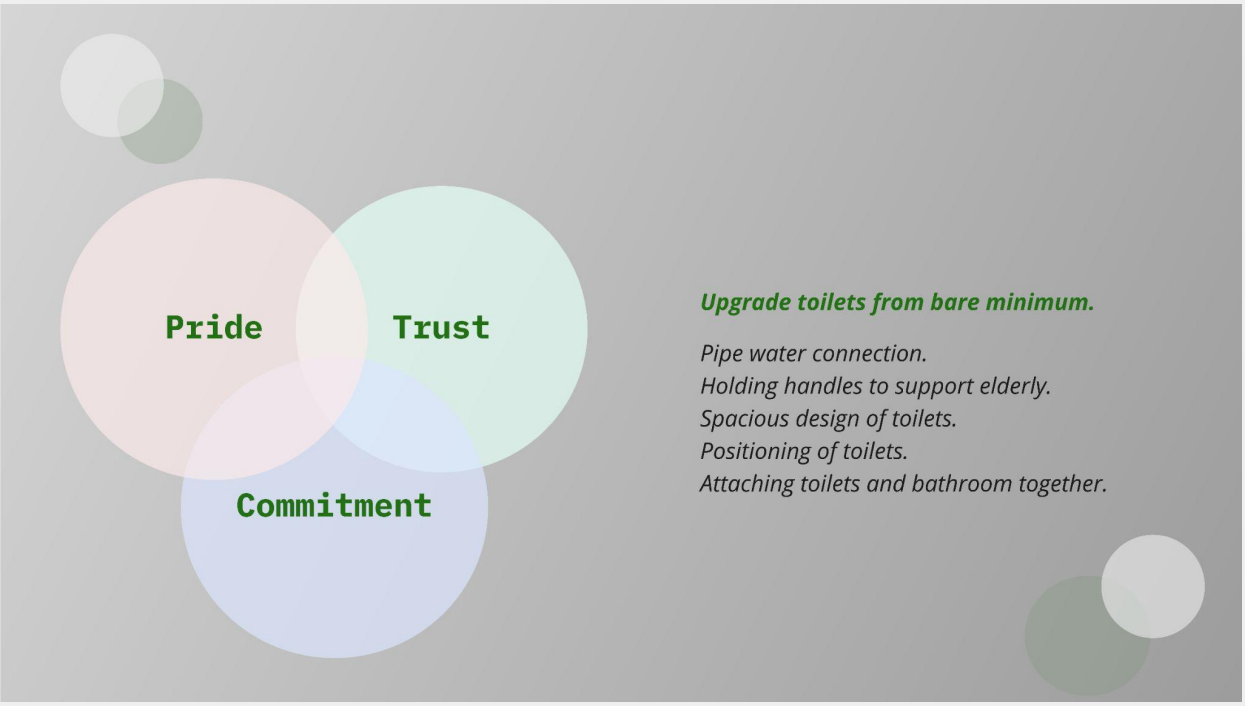


People use hand pumps as their primary source of water for drinking and other household usage. Since in Bihura the groundwater table is very close to the surface, untreated water from water collecting pits and ponds could easily mix up and cause mass level water borne diseases. Handpumps are a major threat in rural areas which needs to be resolved quickly.

In order to reduce water borne diseases and water wastage, we propose general disinfection of water via pipe water supply under "Har Ghar Nal Yojna" and while it happens we can treat water at an individual household level by the usage of water filters. One which could be directly attached to the hand pump along with a water flow regulator and the other is earthen pot water storage filters.

This needs to be done in two steps. First by spreading awareness about water contamination by practical demonstration and second by distribution of earthen pot filters. These filters can also be taken up by local potters under MSME schemes.

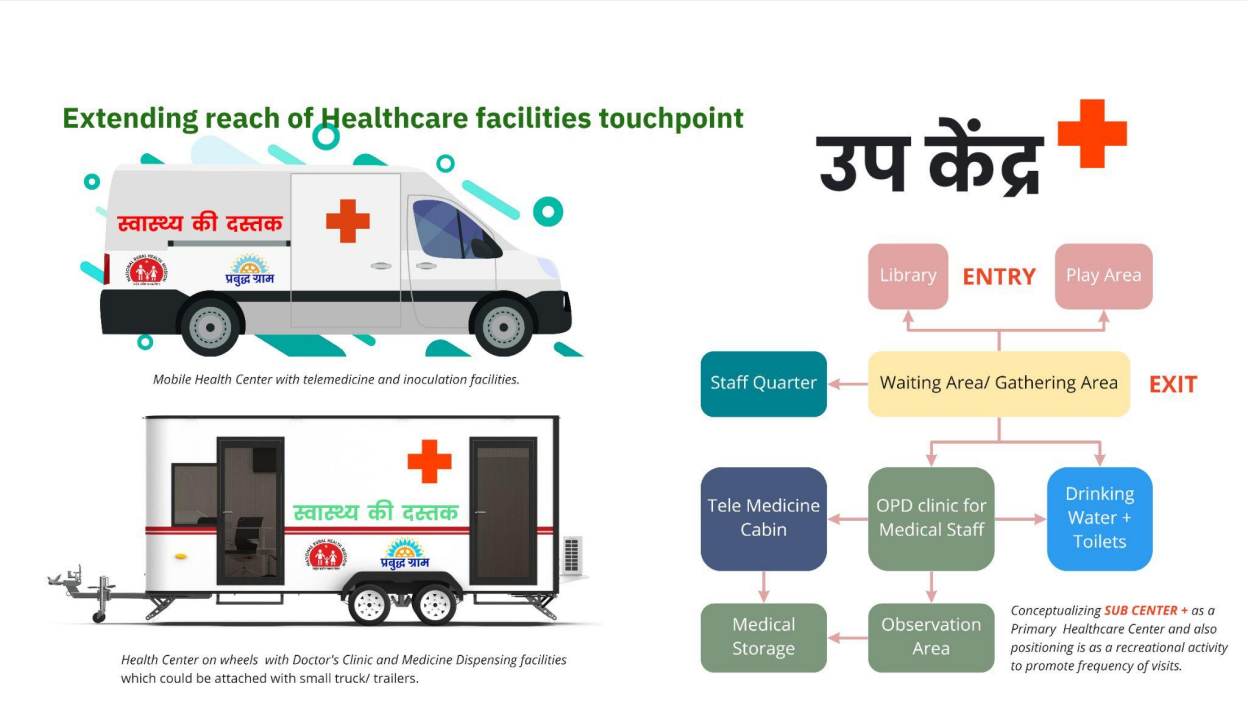
8. Shauchalaya V-2.0



The government funded toilets display the bare minimum effort and materials used to build them. Cleaning and maintenance is challenging for people due to it's design. The location of the toilets is also placed in front of their homes which doesn't inculcate the sense of pride and they feel disgusted. Also the lack of awareness of toilets built only for Women and Kids needs to be resolved by discussing with men in the village. A higher authority figure such as a doctor, politician can play an important role. People also fear the fast filling of septic tanks and are unaware of the various NGO schemes working towards cleaning toilets with pumps in a very clean way. This could be done by staging a few Septic Tank cleaning sessions in the village as a drill which will help them know whom to contact and when to contact.

We feel proud when we use products that reflect our distinctive identities. The branding of "Izzat Ghar" in Uttar Pradesh needs to be thoroughly researched and its impact on increment of male open defecation.

9. Sub-Center + (Healthcare on Wheels)

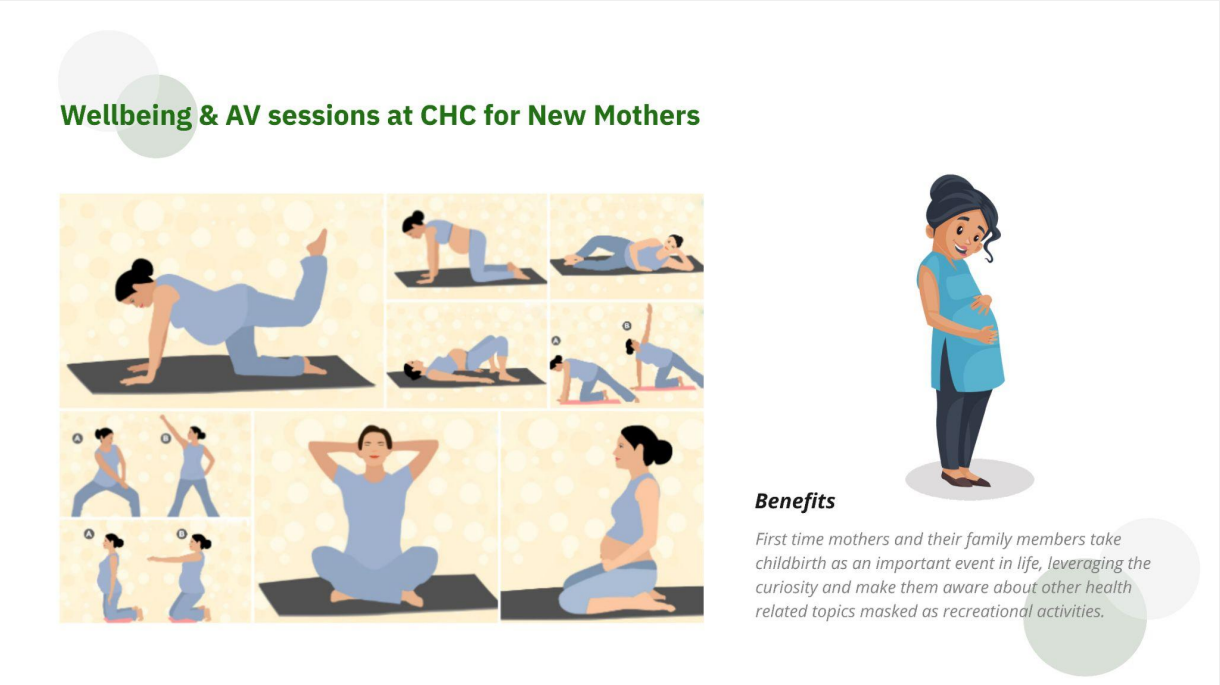


Sub-Center under National Rural Health Mission were designed to cater 6 villages at a time and may consist of a delivery room if the village is located in remote location of CHC is far away from the village. Bhiura and neighbouring villages do not have access to Sub-Centers of Primary Healthcare Center so they heavily rely on CHC which is 2KM away.

The proposal is to build a stand alone sub-center based on new architectural design and planned for future growth too. This new Sub-Center+ will consist of extra facilities such as staff quarters, tele-medicine, OPD, drinking water and recreational areas like library and indoor play area for kids. Healthcare Cadets can also use this as their base of operations and meetings.

Since constructing a Sub-Center is a long shot, a vehicle can be modified to cater a Doctor's clinic, telemedicine, medicine storage and also acts as a vaccination center.

10. Wellbeing sessions for New Mothers



In order to promote better health and regular health check ups during pregnancy, well being sessions could be conducted at the healthcare facilities also health supplements could be given at the same premise which would help in safer and healthy delivery of babies. It is also advised to provide awareness in audio visual formats which would help them prepare mentally.

11. Day Care facility

Day care facilities for staff and patients at CHC

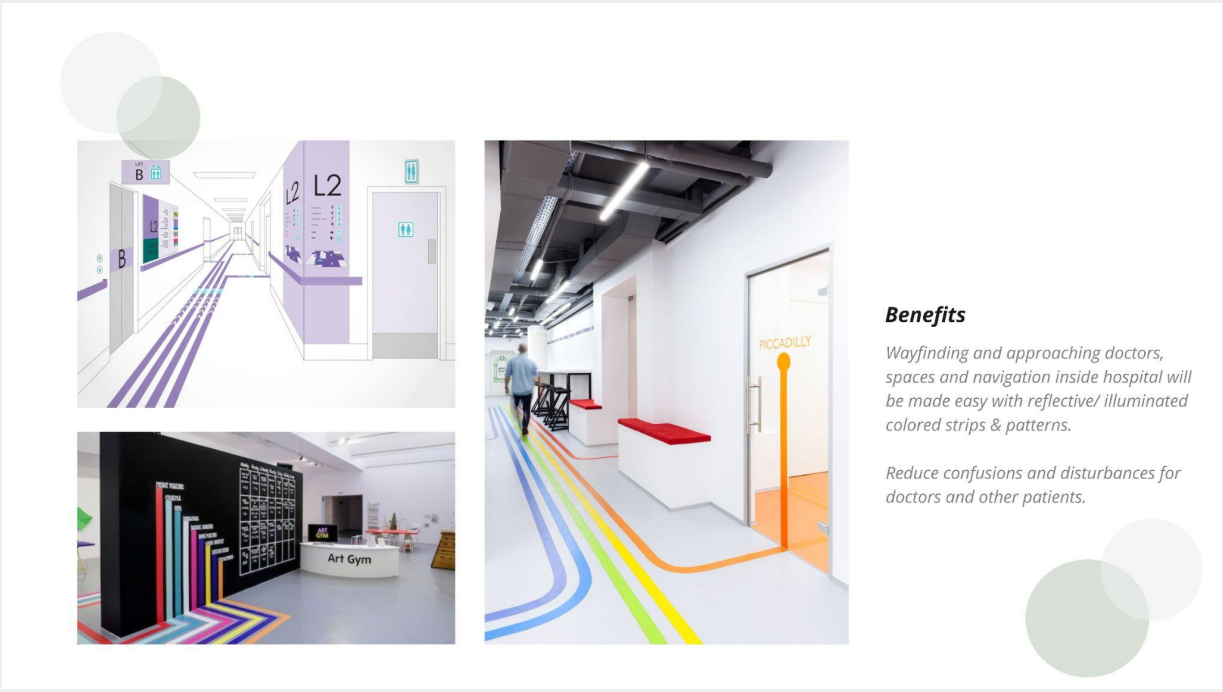
Benefits

Prevents children from disease prone areas.
Better utilization of children's time.
Extension of AWW service.
Reduced stress level in staff mothers regarding their kids.
Extended service to all working women's.

Many parents and medical staff members face a challenge to either leave their kids with their neighbours or take them along while visiting CHC. This creates disturbances and chaos for both staff and patients. For this a kids daycare center is proposed after carefully auditing the Architectural Layout of the CHC.

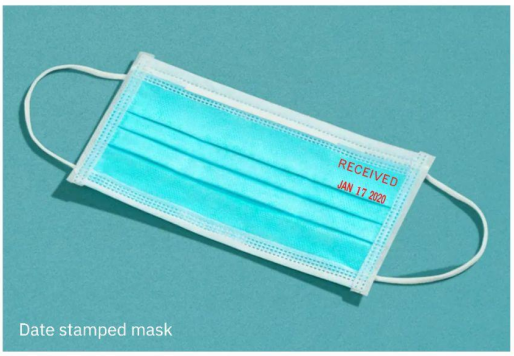
This could be in collaboration with NGOs, Anganwadi etc and can also incorporate breastfeeding rooms/ stations inside. This will also act as an extended service for working women to drop their kids and in return insure their frequency of visits at CHC.

12. New Improved Signage System



By using functional literacy, we can propose easy to interpret and follow signages for wayfinding and approaching doctors, spaces and navigation inside CHC. These will be color coded strips with very minimal and simple to understand graphics will be placed right at the entry point. Along with it, proper lighting is also required inside CHC for these colored strips to be effective. This will reduce confusions and disturbances for doctors and other patients.

13. Relooking at mask



Date stamped mask

Design a mask distribution scheme at CHC, PHC, SC, Pradhan office, where masks will be date stamped and upon return, get cashback or new masks. This will help in collection of masks and less environmental pollution. Also works as an incentive for people to realize the value of mask since they can return used masks.

Design a mask which goes by default with villager's normal attire.

It was observed that wearing a mask was considered as an additional task and something to be reminded of, hence they avoided or forgot to wear a mask. Furthermore it was observed that villagers were using veils and scarves, which could be doubled up as a mask with minor upgrades and hence being forgetful of the mask wouldn't be an issue since it would be part of their daily wear.

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