



Building resilient infrastructure for public healthcare in a post-COVID world

MAY 2022

Dalberg

Supported by
BILL & MELINDA
GATES foundation

Hello!

This is an **aspirational learning document** in the form of actionable principles which are substantiated by insights and examples from our work on building COVID-19 vaccine confidence and increasing uptake of state led telehealth platforms during the peak of COVID-19 crisis.

We hope this learning document encourages constructive discussions and can assist organisations to build resilience in order to deliver a better healthcare experience for a wide variety of state and non-state interventions.



Contents

01 Executive Summary

02 Design Principles

for building resilient public healthcare infrastructure

03 Human Infrastructure Principles

04 Physical Infrastructure Principles

05 Technological Infrastructure Principles

01 Executive Summary

1 Executive Summary

The COVID-19 crisis has exacerbated the inequities in accessing healthcare services by community members. Some of the key issues include inadequate health infrastructure, lack of capacity building avenues for frontline healthcare workers, need for mechanisms to standardize and track quality of services, wide-spread misinformation and lack of trusted channels for awareness, limited two-way communications with the community, among others. These challenges are further magnified for the most vulnerable and difficult-to-reach groups, such as elderly, pregnant & lactating women, daily wage labourers, landless farmers, religious & caste minorities, etc., surfacing the opportunities for improvement around equitable design of healthcare services in a post-COVID world.

To tackle some of these issues, the government of India undertook multiple systemic interventions ranging from Ayushman Bharat to linking its healthcare delivery to its unique citizenship ID, organising vaccine camps at scale, door to door vaccine delivery, sending medicines through postal service, promoting the uptake of telemedicine, campaigns to raise awareness and dispel myths, among others.

However, many of these interventions didn't achieve the full impact they intended to create and were received with varying levels of caution from the communities. There was an underlying need for *'building trust'* within the community for them to adopt these interventions.

With support from Bill & Melinda Gates foundation, Dalberg supported Government of Bihar stakeholders and other partners (PCI, FAT, CARE, etc.) on two topics:

1. Building COVID-19 vaccine confidence & increasing vaccine uptake

"If something happens to me after taking the COVID vaccination, there should be sufficient preparations for my treatment from the government."

2. Building a demand-led strategy for the uptake of e-Sanjeevani platform

"I prefer to go to a doctor I am familiar with or have heard of for a face to face consultation rather than consult a doctor I do not know over the e-Sanjeevani OPD app."

Through the course of our work, we have been able to distill learnings in the form of 'design principles' that can be applied to any engagement that aims to build resilience for healthcare services in a post-COVID world. These design principles are actionable and substantiated by examples and user quotes from our work. They have been divided **across 3 pillars of healthcare services - human, physical and technology infrastructure.**

In this document, we share distilled learnings from our work in Bihar over the last 8 months. Our hope is that this document can assist **organisations to help deliver a better healthcare experience for a wide variety of state and non-state interventions.**

02 Design Principles

for building resilient public healthcare infrastructure

2 Building resilience in public healthcare services in a post-COVID world requires looking interventions across human, physical and technology infrastructure



Human Infrastructure

Interventions to ensure demand and supply side actors are equipped, motivated and incentivised to adopt and promote health services



Physical Infrastructure

Interventions to ensure that the health centers and camps are accessible, functional, and well-equipped for healthcare service provision as well as have SoPs to guide their functioning



Technology Infrastructure

Interventions to ensure digital healthcare systems are designed to allow for their effective uptake and use by both demand and supply side actors and are leveraged across the value chain of healthcare services



03 Design Principles for Human Infrastructure Development

3 Human Infrastructure

Interventions to ensure demand and supply side actors are equipped, motivated and incentivised to adopt and promote health services

Community Engagement

Devise hyperlocal solutions that are targeted towards distinctive behavioral and demographic segments.

a

Ensure that mass communication content is understandable, accessible and appealing to vulnerable and hard-to-reach communities.

b

Build supply-side credibility by leveraging trusted networks and channels to raise awareness on the use cases and benefits of new health services.

c

Continually update and communicate verified health information to flatten the infodemic curve.

d

Design behavioral nudges to reinforce sustainable health behaviors among community members.

e

Influencer Engagement

Invest in building capacity, aligning incentive structures and policies to effectively engage frontline health-workers in behavior change.

f

Supplement efforts of frontline health-workers by engaging other trusted influencers within the community for outreach.

g

a

Devise hyperlocal solutions that are targeted towards distinctive behavioral and demographic segments

Geographic and demographic characteristics are as a major variable to consider while performing segmentation. Behavioral norms, beliefs and habits are found to be highly correlated to geography.

Our work on improving vaccine confidence and uptake in Bihar demonstrated these differences. For example, it revealed that in heavily industrialized districts, hesitancy was especially strong among men who were primary income earners' and feared that vaccine would compromise their ability to earn. This was different from districts with high rates of migration, where pregnant and lactating women, often relied on their mothers- in law for health information and ended up receiving outdated inputs on vaccine related risks, heightening hesitancy.

We recommend achieving hyperlocal segmentation through a mixed data approach- including social listening through internet search patterns/ common databases, supplemented by short-surveys with end users and in-depth interviews to fill data gaps. Additional parameters can also be telling - for e.g., parameters such as level of existing vaccination, ratio of health workers to citizens, etc. were important for our vaccine work. While doing segmentation, the focus on directional insights over mathematical precision is important to ensure efficient output.

“My mother-in-law told me not to take the vaccine if I didn't have corona. She thinks there will be some complications because I am breastfeeding and that something will happen to the baby.”

- HOUSEWIFE, WEST CHAMPARAN



THEORY IN PRACTISE

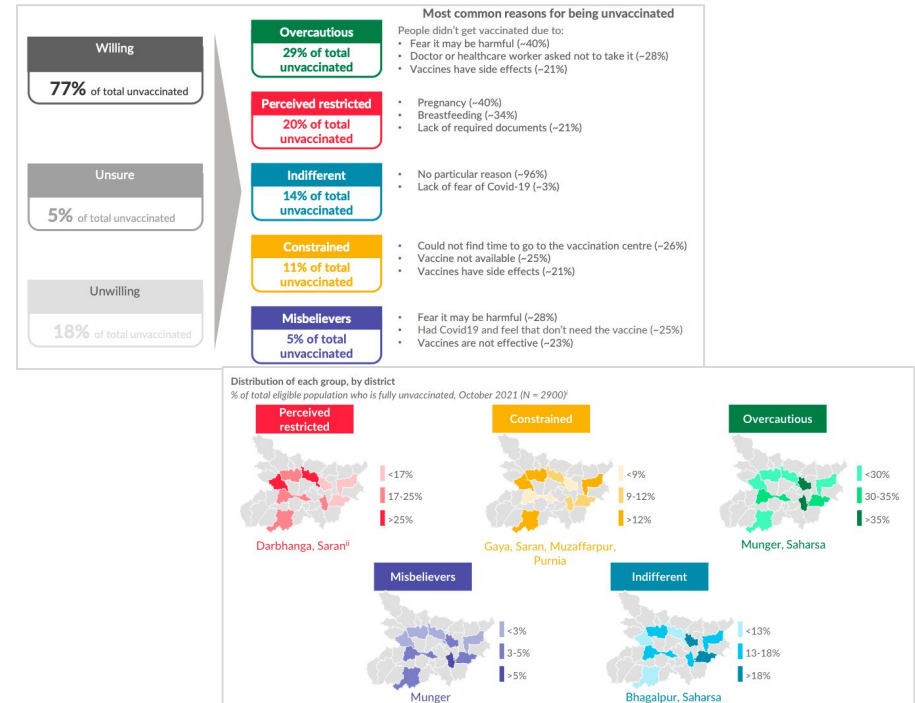
The Uses and Gratification Theory (Blumler and Katz, 1974) or confirmation bias suggests that audience members actively pursue content/ stimuli that satisfy their unique needs. They tend to avoid media that do not agree with their values, attitudes, or contextual apparatus. Our approach on segmentation, focused on identifying the information that people were seeking out and developing communication messaging that corresponded to this.

a

Devise hyperlocal solutions that are targeted towards distinctive behavioral and demographic segments

Case in Point

- While in-depth hyperlocal segmentation on the onset may be difficult, it is an effective technique for understanding key targets for an intervention or segments which show resistance in adopting health services and behaviors. Some key parameters that can form a basis for segmentation include geography, gender, health status (such as pregnancies, comorbidities), etc
- For our work on building vaccine confidence and increasing vaccine uptake in Bihar, we identified key factors underlying vaccination behaviors for various demographic segments starting out by narrowing down on districts with the lowest vaccination rates. .
- We developed & periodically refined 20+ micro-segments with psychographic overlay through 500 Human-centred Design sessions, large scale survey data analysis, CoWin data analysis, digital sentiment analysis, for targeted solution development tagged at a district level and across zero, first, second and booster dose challenges.



b

Ensure that mass comm. content is understandable, accessible and appealing to vulnerable and hard-to-reach communities

Vulnerable or marginalized segments of the communities, characterized by either level of education, gender, religion, caste, income level or a combination of all these factors, are often left behind in both the communication and healthcare service delivery.

Some segments that are often left behind include women, elderly, people from socio-economic backward classes, etc. Including locations that are accessible to these segments and using inclusive imagery that project gender and ethnic representation without stereotypes could play an important role in making mass communication effective for these segments.

It is also important to ensure that mass communication techniques rely less on literacy and focus on increasing engagement, which can be achieved through favoring video over text, or helplines over pre-recording.

Additionally, it is important to ensure that tailored mass communication collaterals appeal at an individual level (such as personal fears) but also at a family level (such as how an intervention links to broader familial welfare), or to the community at large (such as to eradicate social stigmas around certain health behaviors).

“Everyone is saying my breast milk will dry up and I will get weak if I get vaccinated.”

- HOUSEWIFE, WEST CHAMPARAN



THEORY IN PRACTISE

The Knowledge Gap Theory (Tichenor et al., 1970) states that people belonging to certain segments do not respond to general mass media communication as effectively as others. Lower levels of socioeconomic status, literacy, less relevant contacts or lower representation in mass media content are cited as responsible factors. Theorists suggest representative messaging for marginalized groups as a solution which responds to our approach.

b

Ensure that mass comm. content is understandable, accessible and appealing to vulnerable and hard-to-reach communities

Case in Point

- During our work on building vaccine confidence and increasing vaccine uptake in Bihar, we developed collaterals (posters, pamphlets etc.) to promote vaccine uptake among pregnant and lactating women (PLWs), wherein we included images of pregnant women to ensure relatability.
- The messaging around these collaterals relied on behavioral design principles that focused on using relatable imagery and trusted messengers- including mother in laws of PLW who play an instrumental role in making decisions around vaccination for them.



C Build supply-side credibility by leveraging trusted networks and channels to raise awareness on use cases and benefits of new health services

One of the issues that hampers the uptake of new health behaviors/ products/ services etc. is the lack of trust that community members have on the product/ service itself as well as on the service providers, including the government and health authorities.

Hence, the push for healthcare services from health authorities alone is not sufficient and requires an added push by trusted channels such as media, newspapers, and even human carriers like community level frontline health workers and non-traditional community influencers. For example, in our work to improve vaccine uptake, we used hyperlocal testimonials from people in one's village as a way of advocating for the vaccine.

Additionally, it is important to ensure that supply side actors engage with the community in a non-discriminatory and empathetic manner, to ensure that they feel comfortable. For example, while developing SoPs for health and wellness centers, we proposed that healthcare workers be trained on soft skills around community engagement, including aspects like how to communicate technical concepts to patients, etc.

“The community is generally skeptical towards new services, but if trusted sources like us carry out awareness generation and provide assurance, they will be willing to try the services out.”

- COMMUNITY INFLUENCER, PATNA



THEORY IN PRACTISE

Fiske's Warmth and Competency Framework (Fiske et al, 2002) explains the end-user's lack of trust on novel services. The model states that people first assess a stranger's intent to harm/help them (warmth dimension) and then judge their capacity to act on that perceived intention (competence dimension). Local health providers and non-traditional influencers can assure people of the positive intent of newer services such as teleconsultation (warmth), and can inform users about the credentials of service providers/ provide positive testimonials to supplement and increase belief in their competency (competency).

c Build supply-side credibility by leveraging trusted networks and channels to raise awareness on use cases and benefits of new health services

Case in Point

- During our work on e-Sanjeevani OPD promotion we learnt that patients feel uncomfortable with online consultations due to unfamiliarity with doctors on the platform.
- Hence, to solve for this we suggested that frontline healthcare workers and non-traditional community influencers be deployed at health and wellness centers for building trust of the community in the quality of service and the qualification of doctors providing consultations over the app.

“We do not trust online health services because there is little familiarity with the doctor. We need to take second opinions from known doctors on the kind of medicine being prescribed. Thus we prefer going to local health centers”

- Community member, Bihar



d

Continually update and communicate verified health information to flatten the infodemic curve

COVID has been a case study on how health behavior change requires continuous information dissemination and not at one or certain points in time' dissemination alone.

One of the biggest causes of informational gap among community members is the irregular/ incomplete information flow from service providers. For example, during our vaccine confidence building work in Bihar, we found that users were often unaware about the changing dynamics around vaccine availability, accessibility, affordability and benefits.

Hence, dynamic information about newly launched health mandates as well as treatment systems needs to reach the public through popular and automated mediums such as WhatsApp bots or IVRS systems, alongside in-person events such as village baithaks, health center events, etc, which must continuously inform public on new updates to existing services.

This information flow is especially crucial for vulnerable segments like pregnant and lactating women, the elderly, etc. who might be hesitant towards adoption of new services because of their unique socio-economic characteristics.

“I don't know when my next vaccination [2nd dose] is scheduled and where do I have to go to get it done.”

- COMMUNITY MEMBER, PATNA

d

Continually update and communicate verified health information to flatten the infodemic curve

Case in Point

- To promote vaccine uptake in Bihar, we used hyper-local user testimonials to drive vaccine confidence among adolescents and circulated them regularly through social media to dispel previously existing fears/ myths around adolescent vaccination.
- Similarly, at a community level, we proposed a WhatsApp bot (such as 'Vaccine Mitra') be setup to send regular updates to the community about upcoming covid vaccine camps in the locality, etc.

नीतीश कुमार
मुख्यमंत्री, बिहार

बेटा बीमार था तो फोन पर डॉक्टर से बात करा दी, नहीं तो दिन भर के काम से छुट्टी लेनी पड़ती 1500 डॉक्टर वो भी फोन पर और मुफ्त ई संजीवनी ऐप आपके अपने मोबाइल पर

डॉक्टर के पास जाने का झंझट नहीं

स्वास्थ्य विभाग
सोमवार से शनिवार सुबह 9 से शाम 4 बजे तक सेवा उपलब्ध
अधिक जानकारी के लिए हेल्पलाइन नंबर 104 पर संपर्क करें

एप डाउनलोड करें

eSanjeevaniOPD
स्वास्थ्य बिहार

e

Design behavioral nudges to reinforce sustainable health behaviors among community members

Covid has also brought to light the need for building sustainable health seeking behaviors within communities, in addition to pushing for shorter term health responses to crisis.

Currently, there is more emphasis laid by the government and health authorities on driving behavior change for short term crisis management (e.g., promoting covid vaccination uptake, promoting use of face masks, etc.) rather than on longer term sustainable habit building (e.g., promotion of preventative health seeking habits through regular check-ups and health monitoring).

However, long term sustainable habits can often help avert health crisis situations, apart from reducing health risk at an individual level. For example, hand washing habits, use of toilets for defecation, etc., can help prevent the spread illnesses like stomach ache which are quite common across rural Bihar.

Hence, incorporation of regular nudges and reminders to improve adoption of health behavior in the everyday routine is crucial, and can be done through engagement of health workers for follow-ups, distribution of interactive tools such as follow-up schedules among patients/ end users so they can track their own behavior, etc.

“The e-Sanjeevani OPD service can help save time taken to travel to the clinic. My son can help me use this on the phone [to keep up with my health checks].”

- COMMUNITY MEMBER, BEGUSARAI



THEORY IN PRACTISE

The Nudge theory (Thaler and Sunstein, 2008) inspires this recommendation. It proposes 'cues to action' as a way to influence the behavior and decision-making of groups or individuals. These cues to action act like the stimuli needed to trigger the required decision-making process/ health action, while bringing a positive reinforcement such as pleasure, increased self-efficacy/ agency with regards to the behaviour, sense of belongingness, etc.

e

Design behavioral nudges to reinforce sustainable health behaviors among community members

Case in Point

- In order to motivate community members to get the second dose of vaccine, we proposed the distribution of interactive calendar based self-trackers to empower the partially vaccinated to measure the 4 / 12 week timeframe between the 1st and 2nd doses etc.
- We also designed a sticker template in the form of reminder for the next vaccine dose due date.

Vaccine Card + Tracker to follow second dose due dates

FRONT

Congratulation on getting your first dose

Remember that you need to take your second dose to stay safer! Please refer to the below mentioned dates for your 2nd dose.

Beneficiary Name: *Pranjal Kumar Yadav*
 Age: *30* Gender: *Male*
 Date of 1st Dose: *10 December 2021*
 Time of 1st Dose: *2:30 pm*
 Location of 1st Dose: *Trimurti Hospital*
 Vaccine name: *Covishield*

DATE FOR YOUR 2nd DOSE

From: *4 February 2022*

To: *1 April 2022*

For any further information or help, call 104

BACK

Keep track of the timing for your 2nd dose

Date of 1st Dose: *10/12/21*

WEEK 1	WEEK 2	WEEK 3	WEEK 4
WEEK 5	WEEK 6	WEEK 7	WEEK 8
WEEK 9	WEEK 10	WEEK 11	WEEK 12
WEEK 13 <i>From 4/2/22</i>	WEEK 14	WEEK 15	WEEK 16 <i>To 1/4/22</i>

Normal side-effects you can expect after dose:

- Mild fever
- Weakness
- Body pain

What you can do to take care:

- Drink lots of water
- Get at least 7 to 8 hours of sleep
- Eat well balanced diet
- Apply a clean, cool, and wet cloth (or some ice) over the arm after the vaccination to reduce the pain.

For any further information or help, call 104

STICKER

Sample of filled Vaccine card with tracker

Note: The *Blue Text* is what the Healthcare worker writes after giving the first dose of vaccine

f

Invest in building capacity, incentive structures and policies to effectively engage frontline health-workers in leading behavior change

Frontline healthcare workers, while acting as key health influencer due to their position as locals and designated healthcare workers, sometimes lack the knowledge, motivation and enabling environment to drive behavior change.

Healthcare influencers like ASHAs, ANMs, are trusted by the community but face several constraints that prevent them from engaging effectively with new health services, including staffing incapacity, time constraints, lack of incentive structures, lack of proper training, etc.

Hence, it is important to redefine the workload of these influencers and prioritize them for activities where other influencer groups (like Vikas Mitras) cannot have the same influence as them. While this would require excessive investment from the government and their partners in the short run, this intervention can solve for a systemic issue facing the rural healthcare system and make it more resilient.

When engaging these influencers on activities, a focus on and investment in capacity building and development of job aids, division of incentive structures (including social incentives, promoting use of services among healthcare workers so they themselves see the value and promote the app among community members, etc.), and restructuring of policy levers (e.g., highlighting the scope of their engagement) is needed to enable their effective involvement.

“We have been mandated to use e-Sanjeevani in the health sub-center two days a week. However, we are so occupied with vaccination drives that we barely sit at the health centers nowadays.”

- ANM, PATNA



THEORY IN PRACTISE

The KSME framework, inspired by theories of behaviour change focuses on a comprehensive approach to engaging work staff into new behaviour/ system. There are 3 determinants of such behaviour change: **self-efficacy** – a judgment of one’s ability to perform a behavior, **outcome expectations** – a judgment of the likely consequences a behavior will produce, and **reinforcements** – that increase/ decrease the likelihood a behavior will continue. We focus on the first and third bucket here through emphasis on capacity building and incentivization

f

Invest in building capacity, incentive structures and policies to effectively engage frontline health-workers in leading behavior change

Case in Point

- During our work on promoting e-Sanjeevani OPD uptake in Bihar, recognizing that ASHAs, ANMs, etc. are already overburdened, we devised activities across the value chain to guide their engagement on OPD promotion, keeping in mind their daily routine, so as to not add to their existing work burden
- To help them undertake promotional work well, we also helped develop content for training guidelines/ FAQs as job aids to support them.

	Awareness and relevance	Access	Onboarding / First use	Engagement	Grievance redressal
ANMs	<ul style="list-style-type: none"> • Sensitize ASHAs about e-Sanjeevani OPD at the weekly meetings • Share information about OPD app with patients at the HWCs 	<ul style="list-style-type: none"> • Ensure reliable internet connection at the HWCs • Ensure ASHAs have access to job aids and guidelines to support engagement 	<ul style="list-style-type: none"> • Assist community members in downloading app while at the HWC for treatment • Assist patients with initial registration on the app 	<ul style="list-style-type: none"> • Facilitate consultations via e-Sanjeevani assisted model • Support patients with initial direct consultations via the e-Sanjeevani OPD model • Issue medicine prescribed through e-Sanjeevani OPD at the HWC 	<ul style="list-style-type: none"> • Receive feedback from ASHAs & patients about app challenges • Report unresolved app challenges to service providers and partners using the relevant grievance redressal guidelines
ASHAs	<ul style="list-style-type: none"> • Share information about OPD app with community members • Share job aids with community members 	<ul style="list-style-type: none"> • Translate the app for community members who need assistance • Share app demo videos with community members 	<ul style="list-style-type: none"> • Help organize and participate in community events to raise awareness on e-Sanjeevani OPD • Assist community members in downloading app 	<ul style="list-style-type: none"> • Support patients with initial direct consultations on e-Sanjeevani OPD during door to door visits 	<ul style="list-style-type: none"> • Assist community members in resolving app challenges using the appropriate redressal channels and guidelines
JEEVIKA CWs	<ul style="list-style-type: none"> • Share information about OPD app with women in the SHG meetings • Share job aids with women in the SHGs 	<ul style="list-style-type: none"> • Translate the app for community members who need assistance • Share app demos with SHG members 	<ul style="list-style-type: none"> • Assist women in the SHGs in downloading and installing app • Assist SHG members with initial registration on app 	N/A	N/A

g

Supplement efforts of frontline health-workers by engaging other trusted influencers within the community for outreach

Frontline health-workers engage extensively with people through health centers, routine immunization camps, vaccine drives, etc, but there are limitations to how much they can engage on individual health initiatives given time constraints and the quantum of activities they already need to undertake.

To reduce the load on health workers and prevent compromise on service quality, some of these activities can be reallocated to non-traditional community based influencers.

Influencers with similar backgrounds and lifestyle, who frequently engage with community members and have strong interpersonal rapport/ command respect among them are likely to be most effective. For example, Vikas Mitras, who belong to the Mahadalit community, are likely to influence the Mahadalit segment better than influencers from outside the community. These influencers can especially play a key role in building trust of community in new health services and promote their uptake.

However, their engagement needs to be supplemented with capacity building, onboarding through mandates, division of incentive structures focused on social recognition, etc. so they can effectively take part in and are motivated to drive health outcomes in their locales.

“If community based influencers are able to support us with awareness generation, demonstrating first-time use, grievance redressal, etc., then it will help offload some of our work burden.”

- ANM, PATNA



THEORY IN PRACTISE

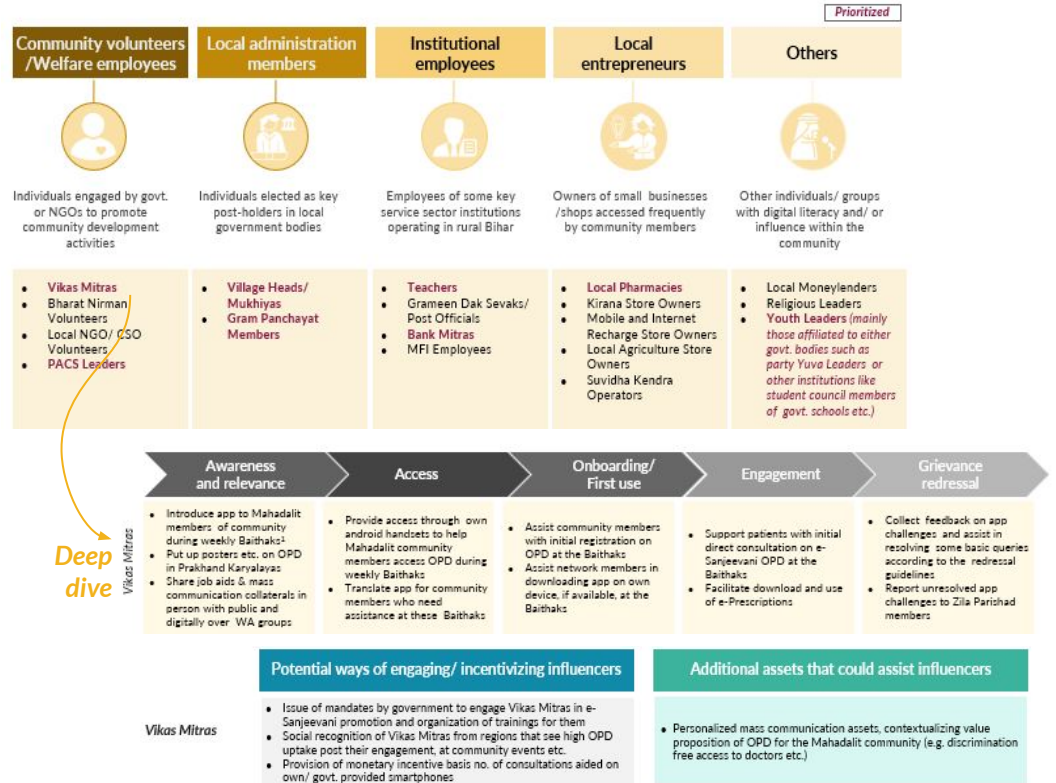
The Two-Step Flow theory (Katz & Lazarsfeld, 1944) suggests that mass communication messages or information do not move directly from the sender to the end-receiver. Instead, a small group of people, i.e, the gatekeepers, screen information/ ideas, reshape them, and control their transmission to the masses. These gatekeepers are often the most trusted members of the community and act as role-models to shape behaviours. Thus, tapping into these gatekeepers or influencers is a key resource for bringing community level behavioral change.



Supplement efforts of frontline health-workers by engaging other trusted influencers within the community for outreach

Case in Point

- For our work on promoting e-Sanjeevani OPD in Bihar, we identified 8 non-traditional influencer groups that can play a role in supplementing efforts of healthcare workers based on their willingness and ability to promote OPD. We proposed their engagement in promoting the platform, through activities at health and wellness centers, baithaks, local events, etc.
- The prioritized influencers were engaged to target different community segments - e.g., teachers for students and parents, Vikas Mitras for Mahadalit community members.
- To promote effective engagement, we identified activities they could easily undertake basis their daily routine, in addition to creating an onboarding and incentives plan for them.



“For our program on non-communicable diseases, we trained community volunteers to conduct health screening of people to identify symptoms that patients might be exhibiting. These volunteers have been trained to refer people to physical centers in case of more severe symptoms and promote e-Sanjeevani OPD model for those who may be exhibiting milder symptoms.”

- Government official, Tamil Nadu



04 Design Principles for
Physical Infrastructure
Development

4 Physical Infrastructure

Interventions to ensure that the health centers and camps are accessible, functional, and well-equipped for healthcare service provision as well as have SoPs to guide their functioning

State of health centers and camps

Make health services convenient, accessible & equitable, especially for vulnerable groups and health workers, by re-engineering physical centers and pushing digital service delivery.

a

Push for longer or varied availability of health professionals in physical centers/ camps and digital health platforms to accommodate restrictive schedules.

b

Ensure availability of functioning digital infrastructure to complement daily activities at physical centers/ camps through robust monitoring mechanisms.

c

Process flows at health centers and camps

Expand the scope of health centers and camps to undertake awareness creation and grievance redressal.

d

Introduce digital processes at health centers and camps and build them into SoPs to complement physical health service delivery.

e

Improve and digitize monitoring & feedback systems at health centers and camps to ensure accountability, efficiency and revision of SoPs.

f

Identify existing on-ground infrastructure that can be leveraged for medicine delivery to patients at the place of consultation with minimum lead time.

g

Take a patient-centric lens to modify SoPs to solve for trust issues and patient frustrations with current services (*at a facility level*).

h

a

Make health services convenient, accessible & equitable, especially for vulnerable groups and health workers, by re-engineering physical centers and pushing digital service delivery

Individuals who want to avail health services may face mobility constraints and general barriers to services at physical centers/camps due to their unique social, economic and cultural identities, levels of physical ability etc.

In order to ensure effective delivery

of services within the community, there is a need to modify the physical healthcare setups for some key segment such as pregnant and lactating mothers, the elderly, persons with sensory disabilities, etc. *For example, having chairs in the waiting area for elderly people, who often suffer from joint pains.*

“Digital services like online consultations from home will be very helpful for those who cannot travel to health centers due to any reason like, mobility constraints.”

- ANM, BIHAR

Simultaneously, these centers should be designed

to make the service delivery process convenient for patients, by ensuring token counters are not ill-placed, medicines can be collected close to the consultation area, etc. Alongside, ensuring basic amenities such as clean drinking water, clean washrooms with sanitation facilities, proper ventilation and lighting, etc. are available at the centers is important for ANMs and ASHAs, who travel large distances to get to the facilities.

For undertaking such

re-engineering, there is a need to develop an exhaustive list of interventions that can make the service experience seamless for patients, including vulnerable groups, as well as supply side actors and incorporating them in SoPs for these set-ups.

In addition to such reengineering of

physical setups, there is a need for engaging digital health delivery systems to reach segments who might find it difficult to travel to physical centers and camps. Some key segments who could benefit from this include persons with locomotor disabilities, people with chronic diseases who need regular check-up, etc. *For example, the use of e-Sanjeevani OPD app for follow ups can help reduce the need for housebound patients to visit health centers.*

a

Make health services convenient, accessible & equitable, especially for vulnerable groups and health workers, by re-engineering physical centers and pushing digital service delivery

Case in Point

- **During our work on building vaccine confidence, and telemedicine promotion,** we saw that one of the barriers faced by pregnant and lactating women in visiting health centers and camps was the lack of a private area for breastfeeding their child, resulting in many women opting out of visiting these setups.
- **To solve for this, we recommended that the health centers and camps** develop a separate curtained private area for lactating mothers to breastfeed their offspring while waiting to see the healthcare worker.

“The queues at vaccine camps are very long, and there are no private spaces for me to feed my baby during the waiting time. I can not delay feeding, so I avoid going to these vaccine camps.”

- ANM, BIHAR



b

Push for longer or varied availability of health professionals in physical centers/ camps and digital health platforms to accommodate restrictive schedules

Consultations with community members revealed that routines and personal obligations meant that there are different optimal time windows for different sets of people looking to access health services.

Clashing routines and differing preferences can make it difficult to get a good turnout of people when health camps/ events are limited to certain fixed times. For example, we learnt that men who are out for work find it easier to accommodate health services on weekends, while housewives seek services during weekdays, once they have taken care of household chores and children are at school.

Moreover, the limited physical availability of doctors (who only sit at centers/ camps during morning hours), and ANMs (who are only available at HWCs few days a week) at centers/ camps adds to the problem, reducing broader accessibility to services.

While a push from the supply side is needed to ensure longer availability of doctors in the centers and camps, this may be difficult to implement in some setting without extensive revision of roles and responsibilities. Hence, digital health services can be a more longer-term solution in such settings to ensure that people have the freedom to get health services as per their schedules and preferences.

“People left after waiting for 1-2 hours at the vaccination center because they had to go to work.”

- ANM, BIHAR

b Push for longer or varied availability of health professionals in physical centers/ camps and digital health platforms to accommodate restrictive schedules

Case in Point

- An insight from our work on improving vaccine confidence in Bihar was that inconvenient camp timings resulted in people not getting vaccinated. For this, we proposed the revision of timings for vaccine camps to ensure that some of them remain open in the late evenings or early mornings based on feedback.
- Similarly, from our telemedicine work we found out that doctors at some health centers are available only during the first half at the centers, restricting consultation hour, for which we proposed the use of e-Sanjeevani OPD app, which is available 6 days a week from 9AM-4PM, as a solution.

“The health centres operate only during the initial hours of the day - till afternoon - when I am out for work. Post that the doctors are not available. My wife also finds it difficult to leave household work and visit health centers for consultation/ vaccination etc. during these limited hours.”

- COMMUNITY MEMBER, BIHAR



Revising booth / camp timings

Organizing camps that are open in the late evenings or early mornings, when individuals working outside the home are able to attend.

Competing household priorities

Inconvenient timings (during the day only) or long waiting times can prevent some from attending vaccination drives.

C

Ensure availability of functioning digital infrastructure to complement daily activities at physical centers/ camps through robust monitoring mechanisms

Despite a recent push in digitization of health services, the infrastructure/ digital equipment required to leverage these services and bring them to action is missing.

While government mandates exist, the on-ground reality is different with limited centers/ HCWs receiving equipment such as tablets to undertake digitized processes. Where available, sometimes the equipment is not functional, consequentially making it difficult to integrate phygital processes in day-to-day routines of centers.

Hence, there is a need to ensure that mandates translate into on-ground distribution/ installation of infrastructure such as tablets, wi-fi etc. at centers/ camps/ with HCWs by developing robust systems to monitor implementation of these mandates, so that existing digital activities (and new digital activities that can be plugged into physical processes) can be executed.

Parallely, there is also a need for devising a feedback/ tech support mechanism for quick replacement of infrastructure at these centers in case it becomes non-functional.

“We try to use the e-Sanjeevani platform in the health sub-centers, but the internet connection is so poor that there are frequent drop-offs. As a result, we end up sending patients back and asking them to come again after few days.”

- ANM, BIHAR

c

Ensure availability of functioning digital infrastructure to complement daily activities at physical centers/ camps through robust monitoring mechanisms

Case in Point

- **Health workers reported that shaky internet at health centers acts** as a major barrier for smooth e-Sanjeevani assisted model experience, resulting in demotivation among health workers to use teleconsultation platforms, and suboptimal experience for the patients - disincentivizing them to explore similar services personally.
- **Hence, while developing revised SoPs for health and wellness** centers, we recommended the installation of wi-fi modems at these centers.



Action plan for intervention

Technological/ Infrastructural improvements:

- **Provide tablets and personal log-in details** to e-Sanjeevani.in platform to at least 1 HCW in each village (prioritizing those villages where ANMs lack access to a smartphone)¹
- **Ensure network connectivity/ wi-fi availability** in the centres such that HCWs can access the platform and connect with the doctor without drop-offs and OPD promotional activities can be undertaken at the centres easily (or provide a data recharge allowance to HCWs for using own data)

d

Expand the scope of health centers and camps to undertake awareness creation and grievance redressal

Health centers and camps are currently underutilized, with various opportunities to leverage them for undertaking additional interventions across the healthcare value chain.

While health centers and camps are primary avenues for providing health services to community members through healthcare workers, there are several other activities that can be undertaken at these locations, including awareness creation (for e.g., through wall paintings, collateral rebranding of collaterals), feedback collection (e.g., through feedback boxes), etc.

Parallely, information asymmetry, especially on health oriented matters within the community (e.g. about new health services available timings of these services, etc.) and the lack of a proper grievance redressal mechanisms are key gaps that need to be filled in the health value chain.

Hence, these health centers can be leveraged to fill in these existing gaps in the value chain. However, it must be ensured that the processes for incorporating these aspects at health centers are designed in a way that limit the involvement of healthcare workers who are already overworked (and may not have the ability to communicate grievances to key decision makers or solve them for patients). This can be done by leveraging centralized digital platforms a like 104 helpline for grievance redressal, etc.

“We would be happy to visit health sub-centers and conduct joint awareness generation sessions with health workers there on positive health behaviours, newer health services available etc.”

- NON-TRADITIONAL INFLUENCER, BIHAR

d

Expand the scope of health centers and camps to undertake awareness creation and grievance redressal

Case in Point

- **In the revised SoPs we drafted for health centers to make effective** use of these spaces, we recommended that non-traditional influencers, organize events for e-Sanjeevani OPD promotion there, while playing an active role in promoting the platform in waiting areas when patients are waiting to see the ANMs etc.
- **Besides this, we recommended that collaterals such as prescription pads, etc, at these centers be rebranded with health messaging/ e-Sanjeevani branding for passive awareness creation** and walls of centers be painted to delivery health oriented messaging.



e

Introduce digital processes at health centers and camps and build them into SoPs to complement physical health service delivery

Digital services, infrastructure and platforms are being increasingly developed and introduced to complement physical health delivery, including at the health centers and camps (e.g. introduction of telemedicine platforms to complement physical consultations at HWCs) but implementation has been lower than expected.

This is in part driven by the fact that current SoPs at these centers and camps do not effectively account for these digital infrastructures and processes in them, resulting in their inefficient adoption. For example, while ANMs in Bihar have been mandated to use the e-Sanjeevani.in platform for teleconsultation, this mandate has not translated into standardized SoPs which define in what cases the platform should be preferred over physical consultation, etc.

Hence, there is a need to ensure that revised SoPs at these centers and camps can be mapped to the digital innovations and be designed in a way that they can be effectively implemented by HCWs and other key actors in the system.

At the same time, a deliberate effort should be made to digitize processes at health centers/ camps to assist the physical process flow across the value chain, as digitized processes usually bring efficiency to process flows. For example, digital registration of patients can help create a database of patient phone no's which can be used for awareness creation through dissemination of digital collaterals.

“We have been asked to use the e-Sanjeevani.in platform to help patients connect to a doctor in case a doctor is not physically present at the Kendriya.”

- STAFF NURSE, UTTAR PRADESH

e

Introduce digital processes at health centers and camps and build them into SoPs to complement physical health service delivery

Case in Point

- **To make the current process flows at health and wellness centers** more efficient, we suggested that the current dual registration process (*one carried out on a on register and one over the e-Sanjeevani.in platform*) for patients getting assisted consultation over the e-Sanjeevani.in platform be replaced with a single step digital registration process.
- **This digital record can then also be shared with supervisors of ANMs** for record keeping and monitoring purposes.



Improvements in user interface:

- **Replace dual registration** (physical + digital) in current process flow **with single-step digital patient registration** (*to reduce overall time per consultation*) and **inclusion of an additional step for taking consent of patients for OPD profile creation**

f

Improve and digitize monitoring and feedback systems at health centers and camps to ensure accountability, efficiency and revision of SoPs

Health centers and camps do not have strong monitoring and feedback mechanisms in place which results in inability of supply-side actors to identify, undertake or suggest improvements to the functioning of these centers and camps.

Currently, the monitoring of

activities at the health centers and camps is largely manual, requiring health workers to maintain and submit written records of the activities they undertake on a day to day basis to their supervisors. This results in additional compliance load on them and the duplication of their efforts.

Hence, improving the MEL

mechanism, potentially through the introduction of digitized platforms, can help automate checks to gauge the implementation of SoPs as well as identify common loopholes in SoP adoption, forming a basis for their modification.

Additionally, putting in place

effective feedback mechanism is essential to allow healthcare workers and other actors to suggest improvements to the working of health centers, a mechanism which is currently missing on-ground. This may not be feasible for outdoor camps and other health initiatives in the short run, however piloting digitized MEL mechanisms activities at established centers may give insights on how to extend these to camps, etc. in the long run.

“We have to carry out patient registration twice - once on a physical register and then again on the e-Sanjeevani teleconsultation platform. The initial registration on the physical register is a record for our supervisor so they can monitor our work and results in the duplication of our efforts.”

- ANM, PATNA

f

Improve and digitize monitoring and feedback systems at health centers and camps to ensure accountability, efficiency and revision of SoPs

Case in Point

- **While interacting with ANMs and conducting observations** of health and wellness centers in Bihar, we realized that there are limited avenues for health workers to provide inputs/ feedback on the functioning of the health and wellness centers, with them mostly relaying their grievances to supervisors.
- **Additionally, we heard from ANMs** that current reporting mechanisms require them to maintain a physical record of the activities they undertake, which sometimes results in the duplication of their efforts (see quote on previous slide).

“We do face challenges while performing our roles, including in operating technology. However, we can only communicate our challenges to our supervisor who then take it forward to authorities. There is no direct feedback or grievance redressal platform”

- ANM, BIHAR



g

Identify existing on-ground infrastructure that can be leveraged for medicine delivery to patients at the place of consultation with minimum lead time

For patients, the ability to close the health consultation loop at a single place and in a short period of time is essential.

One of the key constraints in the closure of the health loop for patients is the unavailability of medicines (and other health products) at the point of consultation (e.g. unavailability of simple drugs with ANMs at HWCs, lack of a mechanism for home delivery of medicines when people opt for home based teleconsultation services).

This results in people prioritizing avenues with guarantee of medicinal stock 'at the point of consultation, opting to visit private doctors and local quacks, overlooking avenues like telemedicine, which rely on the public health system..

Hence, there is a need to identify infrastructure and actors on-ground that can be engaged to ensure the availability and accessibility of medicines across public health platforms. For example, alternate vaccine delivery (AVD) carriers, who deliver vaccines at VHSND centers, can also be leveraged for delivering medicines to patients living in the vicinity of VHSND centers.

“There are already delivery agents such as alternate vaccine delivery carriers on-ground who can be leveraged for medicine delivery. We just need to devise a means to engage them effectively.”

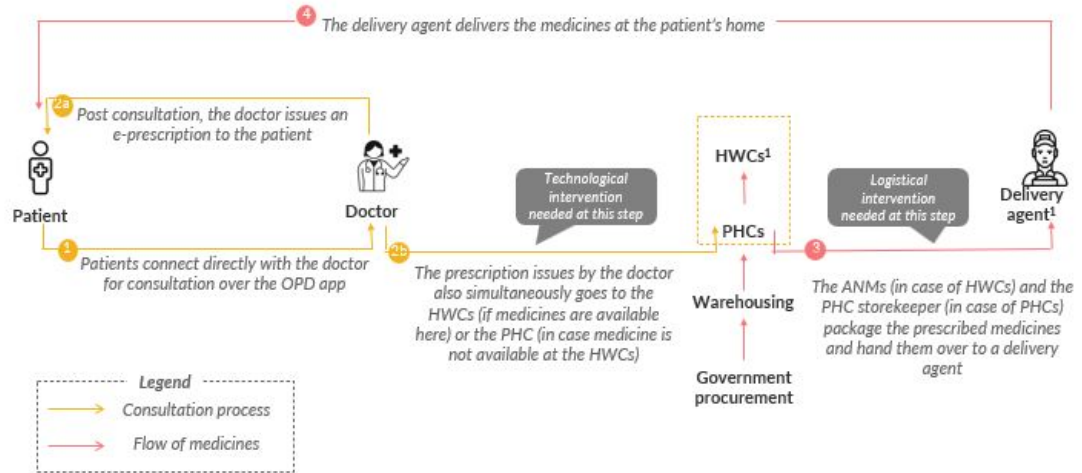
- TEAM MEMBER, CARE

g

Identify existing on-ground infrastructure that can be leveraged for medicine delivery to patients at the place of consultation with minimum lead time

Case in Point

- Recognizing the desire of patients to receive medicines** etc. at the place of consultation, we laid out a process flow that aims to leverage existing on-ground delivery agents, such as AVD carriers, that can deliver medicines to patients using the e-Sanjeevani OPD app to ensure that consultations can end in a full closed loop system.



h

Take a patient-centric lens to modify SoPs to solve for trust issues and patient frustrations with current services

The SoPs for health centers and camps seem to take a limited view of the behavioral aspects that constrain uptake of health services by patients.

Some of the key behavioral aspects that need to be actively addressed are lack of trust among community members (especially towards new health services, unfamiliar healthcare providers such as doctors on the teleconsultation platform) and frustrations with the current working of health centers and camps (e.g. long waiting time at centers, inability to understand the technical terms used by doctors, etc.).

Hence, there is a need to focus on these aspects when designing the SoPs and developing interventions that can help solve these constraints. For example, the lack of trust in services can be curbed by conducting promotional events involving trusted community members at health and wellness centers while patients are waiting to see the ANMs. Similarly, frustrations around lack of understanding of technical terms can be curbed by training doctors etc. on soft skills including ways to communicate concepts to patients who might not be educated, etc.

However, this patient centric lens needs to be adopted at a facility-by-facility level, considering the needs of the community that each center/ camp caters to, with a 'one size fits all' approach unlikely to work here.

“The waiting for getting connected to a doctor on the e-Sanjeevani platform at health and wellness centers can sometimes be frustrating for patients.”

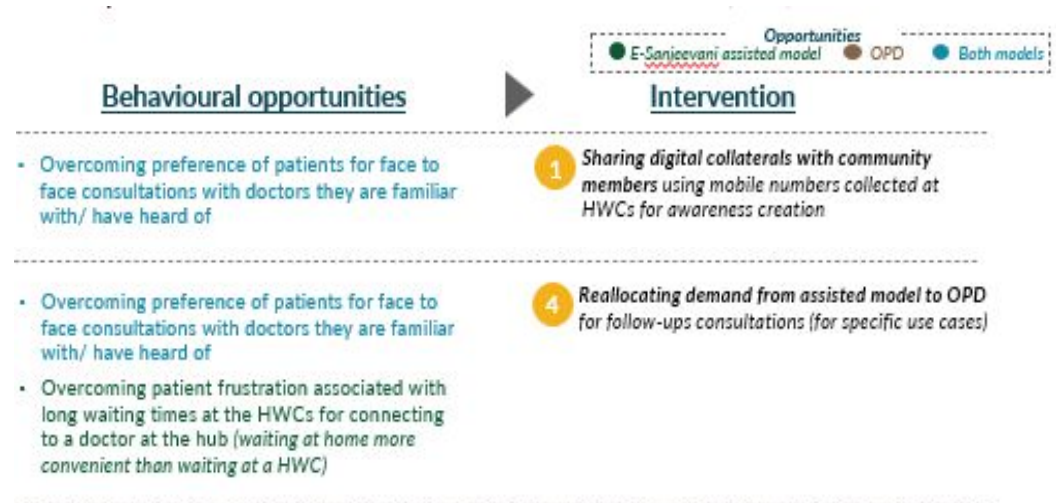
- ANM, PATNA

h

Introduce digital processes at health centers and camps and build them into SoPs to complement physical health service delivery

Case in Point

- **While developing SoPs for health and wellness centers** in Bihar, focused on promoting the uptake of the e-Sanjeevani assisted and OPD models, we took a patient centric lens to understand the current behavioral barriers and opportunities to promote uptake and devised implementable interventions to solve for them.
- **For example, our proposed interventions** around sharing digital collaterals with patients and promoting the e-Sanjeevani OPD app for follow-up consultations were targeted at building trust of the community in new services and reducing waiting time at the centers respectively.



A woman in a teal sari is shown in profile, holding a black mobile phone. The phone's screen displays a green and white interface. In the background, other people are visible, some also using mobile phones, suggesting a community or public setting. The overall scene is brightly lit with warm tones.

05 Design Principles for Technological Infrastructure Development

5 Technology Infrastructure

Interventions to ensure digital healthcare systems are designed to allow for their effective uptake and use by both demand and supply side actors and are leveraged across the value chain of healthcare services

User experience



Design interfaces by taking early community feedback, focusing on building trust in the service and allowing for easy understanding, navigation & use of platform by beneficiaries. **a**

Ensure interfaces are designed for users to quickly avail tele-health services with minimum lead time, while devising ways of reaching those who may not be digitally savvy. **b**

Enable active decision-making across the platform in order to ensure that end-users have ownership and feel in control of their health related choices. **c**

Integrate backend databases of tech platforms to create a unique user ID/ profiles that can be accessed across health service channels. **d**

Ensure continuous evolution of interface by integrating feedback/ grievance redressal. **e**

Use cases for healthcare delivery



Adopt technology to assist capacity building of supply side actors and awareness creation among community members. **f**

Reallocate services like healthcare follow ups, reminders for health services and behaviors to digital platforms. **g**

Leverage technology for collecting feedback and strengthening grievance redressal process for demand and supply side actors. **h**

a

Design interfaces by taking early community feedback, focusing on building trust in the service and allowing for easy understanding, navigation & use of platform by beneficiaries

Ensuring low lead time and/ or communication of accurate waiting time when delivering health services over a tech platform is crucial for users.

When designing tech interfaces, it is beneficial to conduct primary research (e.g., through HCDs, focus group discussions, short surveys, etc.) and run prototypes of platforms with target beneficiaries to get their feedback on what features and functionalities would be most beneficial for them to adopt a service.

Additionally, the supply-side push to move people towards adopting these platforms should be backed by interfaces designed to allow for trust building. This can be done in multiple ways including by ensuring the security and privacy of the data collected from patients, highlighting qualification of doctors that patients engage with, etc.

Moreover, the interface should be designed in a way that ensures that end-users are able to easily use the platform with minimum assistance. This can be ensured by incorporating local language options on the platform, limiting the use of jargon and ensuring that the interface and options/ content on it is descriptive enough to help individuals navigate the interface on their own or with help from the FAQ section, etc.

“The e-Sanjeevani OPD app requires patients to specify the kind of doctor they want to consult. How will an illiterate person do this?”

- ASHA WORKER, PATNA

a

Design interfaces by taking early community feedback, focusing on building trust in the service and allowing for easy understanding, navigation & use of platform by beneficiaries

Case in Point

- As part of the engagement to promote e-Sanjeevani OPD adoption in Bihar, we undertook a UI/ UX audit of the app and recommended some interface changes like making the app available in local language, avoiding the use of jargon etc., to allow end users to easily navigate and use the platform.

← Patient Registration/Generate Token - Check OPD

TIMINGS

स्वस्थ भारत

State*: Bihar

General OPD Speciality OPD

OPD* Defence National..

Verify Mobile for Selected State >

UX Recommendations

- 1 Avoid use of jargon such as General OPD and Speciality OPD, instead use terms like "General consultation" and "Specialist consultation."
- 2 Remove unnecessary steps from initial registration, e.g. selecting General vs Special OPD, and reserve those steps for when needed. E.g. when patient logs in to connect to a doctor, they can choose the type of doctor.

b

Ensure interfaces are designed for users to quickly avail tele-health services with minimum lead time, while devising ways of reaching those who may not be digitally savvy

Ensuring low lead time and/ or communication of accurate waiting time when delivering health services over a tech platform is crucial for users.

This ensures that patients are able to make decisions that are best suited to the urgency of their health needs. Additionally, the availability of quick, on demand health services over digital platforms can act as an incentive to push people towards adopting digital services over physical, in-person services. For example, if a person can consult a doctor over the e-Sanjeevani OPD app from home with minimum waiting time, then they may be incentivized to use the platform over travelling to physical centers where the waiting time could be higher.

In parallel, it is important that tech platforms are designed to allow for quick rectification of tech failures (e.g. incorporating buttons to allow for resending of OTP etc.) and are developed accounting for the structural digital barriers in India like low internet speed etc. (e.g. through making services available using USSD given the limited smartphone penetration across the country, etc.)

“The waiting time for connecting to a doctor on the e-Sanjeevani assisted platform varies - sometimes the connection is established within 5 minutes and at times it can take 30 minutes.”

- OBSERVER (HEALTH SUB-CENTRE BIHAR)

b Ensure interfaces are designed for diverse user segments to quickly avail tele-health services with minimum lead time

Case in Point

- Given the low smartphone penetration across Bihar, one of our key recommendations to solve for this structural barrier in e-Sanjeevani OPD adoption was the use of USSD for processes such as registration etc.
- This would allow people with basic phones to also register for (and use) the service.



C

Enable active decision-making across the platform in order to ensure that end-users have ownership and feel in control of their health related choices

People like to be in control of key inputs related to the health services they avail such as choosing the doctor to meet, having the flexibility to conduct follow ups with the same doctor etc, some of which directly reinforce their trust in the service.

When designing tech interfaces, it is important to build in options that allow people to make some key decisions that increase their agency and improve their experience of the service.

These platforms could also incorporate built-in prompts and automations in the backend to guide a user to make these decisions, especially for those users who may not always be familiar with these types of processes/ might lack the ability to make these decisions for themselves.

However, there is a need to balance this option to choose with automated decision making or tracking mechanisms to counter any discriminatory practices, etc. (e.g., doctors refusing to consult with a patient due to their socio-economic status, etc.).

"I would like to have the ability to select a specialized doctor on the e-Sanjeevani.in platform for a patient who has a specialized ailment."

- ANM, PATNA

C

Enable active decision-making across the platform in order to ensure that end-users have ownership and feel in control of their health related choices

Case in Point

- Recognizing the discomfort patients might face when engaging with unfamiliar doctors and/ or the preference of patients to follow up with the same doctor, we suggested that the e-Sanjeevani OPD app be modified to allow patients to choose the doctor they want to consult.

The screenshot shows the 'Consultation Room' interface for 'Defence National OPD (Open for All)'. It displays 'Doctors Online: 7, In consultation: 7'. A patient profile for 'BR6' is shown with a 'Queue Number' of 7 and a '00 : 53 sec' timer. There are radio buttons for 'General' and 'Specialist' (with a '3' annotation). A 'Select Doctor' button with a dropdown arrow is highlighted with a '4' annotation. Below this are input fields for 'Enter temperature: _____' and 'Enter pulse: _____' (with a '7' annotation). At the bottom, there is a 'Patient Details' section for 'Sangeeta Sharma' (31 years, Female, 9912718519, MASAUHLI, PATNA) and an 'Upload Health Records' button.

UX Recommendations

4

Provide details and credentials of the Doctor the patient selects, and also provide patient with option to select the same doctor in follow up consultations to build trust and familiarity.

d

Integrate backend databases of tech platforms to create a unique user ID/ profiles that can be accessed across health service channels

Linking healthcare databases can allow for one-time profile creation which can simplify the process for patients who would be able to use the same profile across multiple platforms, saving their time and efforts.

For patients to adopt digital platforms, it is essential that trust building be accompanied by simplification of processes required to avail a service wherever possible. Creation of a backend common database with user profiles, with their consent, can help with this, reducing the need for repeated registration across platforms.

Furthermore, if these databases can be strengthened to allow for storage of digital health records etc. of patients, taking into account the privacy and data security needs and patient consent, healthcare workers/ platforms will also be able to get a more holistic view of patient health history, helping improve quality of services delivered.

This creation of a backend database consisting of patient profiles and secure health information will also help integrate different public and private tech facilities, strengthening the healthcare ecosystem as a whole.

“If you ask people if their data collected at health and wellness centers can be used for their e-Sanjeevani OPD profile creation, the educated ones at least will see value and give consent easily.”

- ANM, PATNA

d

Integrate backend databases of tech platforms to create a unique user ID/ profiles that can be accessed across health service channels

Case in Point

- To promote the adoption of e-Sanjeevani OPD across Bihar, one of our recommendations was to integrate the backend databases for the e-Sanjeevani assisted and OPD models.
- Through this, when a patient gets consultation via the assisted model, the data collected for that can be used for their automated OPD profile creation (if they consent to it).

6

Integrating databases of both the models for better data creation, tracking and use, including for automated OPD profile creation for patients post consent

Action plan for intervention

- Upgrade the e-Sanjeevani platform to *This is already being done by CDAC*
 - Allow for the creation of a backend database for patients registered for teleconsultation, which is integrated across both the e-Sanjeevani models
 - Allow for auto-creation of OPD patient profile post consent is given by the patient to HCW and recorded at the time of registration (*see point below*)
- Take consent from patients for automatic OPD profile creation when they are being registered for teleconsultation under the assisted model by HCWs at HWCs
 - *Step to be undertaken by concerned HCW; in case on-field medical consultation is being conducted, consent for OPD profile creation can be taken in the field itself!*
- Share/ provide access to record of patients catered to by a single ANM/ CHO on a given day to their supervisor, for record-keeping and monitoring purposes

Enablers of implementation

- Informing CDAC about the potential up-gradations needed on the e-Sanjeevani platform to allow for common database creation across both models (*already being done by CDAC*), auto OPD profile creation and generation of HCW records daily
- Issue of government mandates to HCWs for taking consent of patient for OPD profile creation at the time of registration
- Creation of job aids and organization of training sessions to assist HCWs in removing the hesitancy of patients towards sharing personal details and recording details on the platform
- Provision of access to the backend database of patients catered to by an ANM/ CHO to their supervisors and their training on how to access these records

e

Ensure continuous evolution of interface by integrating feedback/ grievance redressal

Tech interfaces and aligned services should continuously evolve based on feedback and common grievances of end-users.

While focussing on the core service aspect of digital health platforms is key, incorporation of post-service features such as feedback and grievance redressal mechanisms can play a role in elevating trust of people in such platforms as well as improve user experience as a whole.

Hence, when designing platforms, it is crucial to incorporate feedback and grievance redressal mechanisms which can help in the continuous assessment and revision of platforms and the services provided therein.

e

Ensure continuous evolution of interface by integrating feedback/grievance redressal

Case in Point

- As part of our UI/ UX audit of the e-Sanjeevani OPD app, we recommended that the platform integrate some post consultation services including a feedback loop to allow patients to evaluate the quality of service provided by doctors, etc.
- We also recommended a **grievance redressal mechanism** to allow patients to provide feedback on the functioning of the platform and report any technical difficulties in availing services.



Post-consultation services

2. Rating doctor and service

- Provide option to rate a doctor after consultation and leave feedback.
- Make ratings & reviews public to everyone accessing the app
- Create a leaderboard visible to doctors to instill a sense of social pride & healthy competition

3. Grievance Redressal

- Provide a feedback mechanism for people to submit any technical challenges with the app on ad-hoc basis, e.g, via a WhatsApp support bot
- Equip healthcare workers at VHSND centres to provide support and retrieve patient medical records on the eSanjeevani OPD app

f

Adopt technology to assist capacity building of supply side actors and awareness creation among community members

Covid highlighted how digital information dissemination to both demand and supply side actors can help in providing real time updates and for ensuring information flow to even the remotest of areas in situation where physical channels become non-functional.

However, even in non-crisis situations, these platforms can play a key role in ensuring that correct, relevant, updated and useful information reaches the different health system stakeholders to guide their behavior, decisions, etc.

From a supply side perspective, digital platforms can be leveraged for capacity building of health care workers so they can create awareness and promote the use of digital health services among community members. This can be done through provision of digital job aids, community engagement guidelines, digital posters and videos, etc. to them, which they can then leverage when they go on-ground.

Similarly digital platforms can be used for awareness creation within the community, especially platforms like WhatsApp, Facebook, Instagram, etc, which see high level of engagement.

While developing these digital collaterals for stakeholders, it is important to use more audio-visual content in conjunction with textual content.

f

Adopt technology to assist capacity building of supply side actors and awareness creation among community members

Case in Point

- To promote uptake of e-Sanjeevani OPD in our telemedicine work, we adopted digital technology for awareness creation, focused on sharing video content with ANMS, ASHAs and the general public.
- The content also consisted of instructional videos on how to use e-Sanjeevani OPD, so community members would be able to engage on the platform.

ASHAs and ANMs Telemedicine intro video



Telemedicine introductory video



स्वास्थ्य विभाग



eSanjeevaniOPD
ई-संजीवनी ओपीडी



ई-संजीवनी एम्बेडेडिंग पर
गुणवत्ता को बढ़ाएँ और
सोफ्टवेयर को अपडेट करें।
सुदूर 9 मी से कम 4 मी से कम

अब स्मार्टफोन पर मिलेगी डॉक्टर से मुफ्त सलाह

- ▶ अब बिना देरी मिलेगी डॉक्टर से मुफ्त सलाह डाउनलोड करना है eSanjeevani OPD ऐप
- ▶ अब अस्पताल की भागदौड़ और लंबी लाइन से मिलेगा छुटकारा
- ▶ ऑडियो एवं वीडियो चिकित्सकीय सलाह की व्यवस्था है उपलब्ध
- ▶ शिशु का स्वास्थ्य होगा बेहतर, अब शिशु रोग विशेषज्ञ से मिलेगी सलाह

g

Reallocate services like healthcare follow ups, nudges for adoption of health services and behaviors to digital platforms

Healthcare workers are already overburdened, with limited time to devote to individual healthcare initiatives, an issue which can benefit from digitization of some processes and services which form a part of their routine.

Some core service oriented activities

that can be delegated to digital platforms include follow up consultations, generation of digital prescriptions, etc. For example, people with skin allergies who visit health centers for consultations can be asked to conduct follow ups periodically with doctors over the e-Sanjevani OPD app instead of visiting physical centers, especially if the medication seems to be working well.

Similarly, the development of

sustainable health practices among community members requires constant nudging, a role that digital platforms like automated SMS, WhatsApp messages, etc. can play. For example, some use cases here could include automating reminders to patients for getting their 2nd Covid vaccine dose, to nudge parents to fill in the calendar distributed to note down the nutrition intake of their offspring, etc.

Reallocate services like healthcare follow ups, nudges for adoption of health services and behaviors to digital platforms

Case in Point

- **As part of our work on telehealth promotion**, recognizing barriers in the physical set ups like long waiting time at health and wellness centers, we recommended that health care workers promote the use of e-Sanjeevani OPD platform for follow-ups.
- **We particularly recommended online follow-ups** for chronic non-communicable diseases such as diabetes, hypertension etc. that require regular consultations as well as non-chronic illnesses like skin diseases where people might be self-driven to follow up with a health practitioner. Alongside the actual follow-up, we also recommended sending digitized reminders to patients to help reduce the workload on ANMs/ ASHAs who currently undertake manual follow-ups.

Action plan for intervention

- **Promote OPD among patients for follow up consultations** at the end of the physical/ assisted teleconsultation, when HCWs hand over the medication/ prescription to the patient

These follow-ups over OPD should be promoted for serious chronic non-communicable diseases like diabetes, BP, etc. as well as for more specialized illnesses which require follow-ups for potentially a limited time period such as skin allergies, joint pains, etc.

- **Share digital reminders** (calls/ text messages/ WhatsApp etc.) with patients for follow-ups (in addition to the follow up schedules mentioned on the prescriptions, as highlighted in intervention 2) while promoting use of OPD for the same

This can be digitized by CDAC in a way where the doctor lists down the follow-up schedule on the e-Sanjeevani platform, which automates sending of reminder messages to patients close to follow-up dates

h

Leverage technology for collecting feedback and strengthening grievance redressal process for demand and supply side actors

Feedback and grievance redressal mechanisms, which are key gaps in the healthcare value chain, should be digitized, especially when services themselves are provided digitally.

This is extremely crucial if you want to build the appetite for community to adopt digital health services in the long run because if patients do not feel like they can influence the service quality or have an avenue to get their queries resolved, they are unlikely to use the platform again.

Additionally, given the existing burden on health care workers and their limited agency to push for on-ground change, there is a need for developing centralized, patient linked feedback and grievance redressal platforms, wherein authorities who are responsible for legislating policies, creating services, etc. can get live inputs from the ground. Such centralization requires use of digital platforms for it to be economically feasible.

Similarly for ANMs, doctors, etc., centralized platforms where they can provide feedback on digital platforms, functioning of health centers, their experience on ground, etc. should be devised.

h

Ensure interfaces are designed for diverse user segments to quickly avail tele-health services with minimum lead time

Case in Point

- CARE India has developed an app for ANMs to share their feedback. The uptake of this app should be promoted, including through interventions like ensuring it's presence of tablets distributed to ANMs.
- Similarly, helplines, such as the 104 helpline set up by Piramal foundation, can be leveraged for grievance redressal.





Thank you

Building resilient infrastructure for public healthcare in a post-COVID world

MAY 2022

Dalberg

Supported by
BILL & MELINDA
GATES foundation