A Guide to Adaptive Implementation for Reaching the Last Mile

Actionable Learnings from COVID-19 Vaccination Project

Project Concern International | Vihara Innovation Network

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Acknowledgements

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It is our hope that the learnings and recommendations presented in this Playbook are practically useful for practitioners looking to invest in and undertake programs around Adaptive Implementation.

NOTE TO THE READER

This Playbook is divided into 5 main sections - the introduction and 4 chapters. Clicking on the section name in the table of contents will take you to specific sections. Across the book, you will find QR codes. We encourage you to scan and/or click the adjacent thumbnails to access corresponding audiovisual and written excerpts to delve deeper into our learnings from RECOVER Bihar.

Foreword

In 2020, the COVID-19 pandemic entered our lives, and the world as we knew it, ceased to exist. The pandemic impacted everyone irrespective of age, gender, religion, social status, etc. and the whole world suffered as one. Countless lives were lost and many others were left critically ill. The impact was especially grievous for the marginalised population with limited accessibility of health services.

The State and the Central Government worked relentlessly on all fronts to introduce rapid measures for controlling and managing the spread of the disease. Still, the toll on social and economic infrastructure was very pronounced. COVID vaccination emerged as the most significant way to beat the pandemic. For this purpose, with campaigns such as '6 crore in 6 months', 'Ghar Ghar Dastak' and '9 to 9' session sites, the Government of Bihar, Department of Health achieved excellent results in COVID vaccination on mass scale. Towards the end of 2021, the priority was to focus on vulnerable populations living in hard-to-reach areas who were still untouched by the vaccination drive.

Through project RECOVER Bihar, PCI India supported the Government of Bihar in determining the last poorly vaccinated pockets, and in reaching the unreached population. This project was operational in 10 lowest coverage districts of Bihar, impacting more than 500 villages in the most bordering areas of the state. Under this project, the Government of Bihar and PCI worked in very close coordination, sharing common goals, and creating much larger impact. This effort was very timely and helped the health department functionaries in reaching the last mile of the COVID vaccination journey.

This 'Playbook' is a comprehensive document that combines all the learnings and achievements of the RECOVER Bihar project and details how to reach the left behind sections of the population. These learnings are especially useful as these can be adapted to other health programs focusing on betterment of vulnerable populations and have much wider applications.

**KESHVENDRA KUMAR
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Project Partners

Project Concern International (PCI) India team led the program design, developed context specific strategies, and deployed solutions across the project geographies. The Bihar State PCI team supervised the implementation across 10 project districts and supported the field teams in planning vaccine roll-out processes and addressing on ground challenges.

Vihara Innovation Network (VIN) led the needs and barriers assessment, iteratively prototyped and developed interventions and designed the suite of solutions deployed during the course of the program. The Vihara team ensured the solutions are human-centred, easy to comprehend and uptake, and are comprehensively tailored to the differential behavioural challenges. These solutions supported in streamlining service delivery mechanisms. The Vihara team also directed the process documentation, knowledge management and dissemination efforts for RECOVER Bihar.

Introduction

Setting context

ENHANCING VACCINE UPTAKE AMONG THE VULNERABLE, HARD-TO-REACH AND HESITANT

In 2020, the emergence of COVID-19 brought with it unprecedented challenges causing social and economic disruptions, especially impacting vulnerable populations. While the Government of India worked relentlessly to introduce rapid protocols for controlling and managing the spread of the disease, the overburdening of the health infrastructure was explicit.

The State of Bihar had low vaccination coverage at the onset of the pandemic. To address this, the State deployed campaigns such as '6 crore in 6 months' and '9 to 9' session sites to name a few. While these strategic initiatives successfully increased the vaccination uptake, a densely populated state with diverse socio-demographics and difficult geographical layout posed its own set of challenges in covering the last mile.

Spread across 10 districts of Bihar, RECOVER Bihar was a project conceived to support the State in vaccinating the lowest coverage rural areas and communities through seamless convergence between the supply and demand sides while ensuring equitable inclusion.

Along with vaccinating the willing and ambivalent groups, **the project's focus was to develop stakeholder specific solutions for special groups and vulnerable communities.** Our teams worked to break refusal, increase vaccine accessibility by reaching the unreached, promote a positive vaccination experience, and boost vaccine uptake by addressing multifaceted barriers.

During the pandemic, as cross-sectoral partnerships sought ways to address the crisis situation, the need for rapid response and recovery demanded an iterative, agile and community centric implementation model. Recognizing this exigency to consistently adapt program design and implementation strategies as per transient contextual realities such as varied user needs and constraints, changing vaccine mandates and evolving public sentiment towards the vaccine, the RECOVER Bihar team relied on the Adaptive Implementation approach. The social impact outcomes of the project speak to its value.

RECOVER Bihar

This Playbook is **a window into our processes, best practices and tools, developed under the purview of Adaptive Implementation (AI),** which are replicable and malleable in spirit.

10
Districts

50
Blocks

500
Villages

Arwal

Bhagalpur

Bhojpur

Jamui

Kaimur

Katihar

Madhepura

Nawada

Sitamarhi

West Champaran

Why Adaptive Implementation and what value does it bring?

Before we begin to decode what is **Adaptive Implementation (AI)**, ask yourself what makes a successful project? Is it meeting the set targets? Is it developing context specific strategies? Or is it placing value on how people experience services? A holistic health program needs to take a step forward from the conventional intervention approaches and take into account stakeholder specific determinants while evaluating impact. It also needs to adapt throughout the project lifespan while gauging time, cost and human resource constraints.
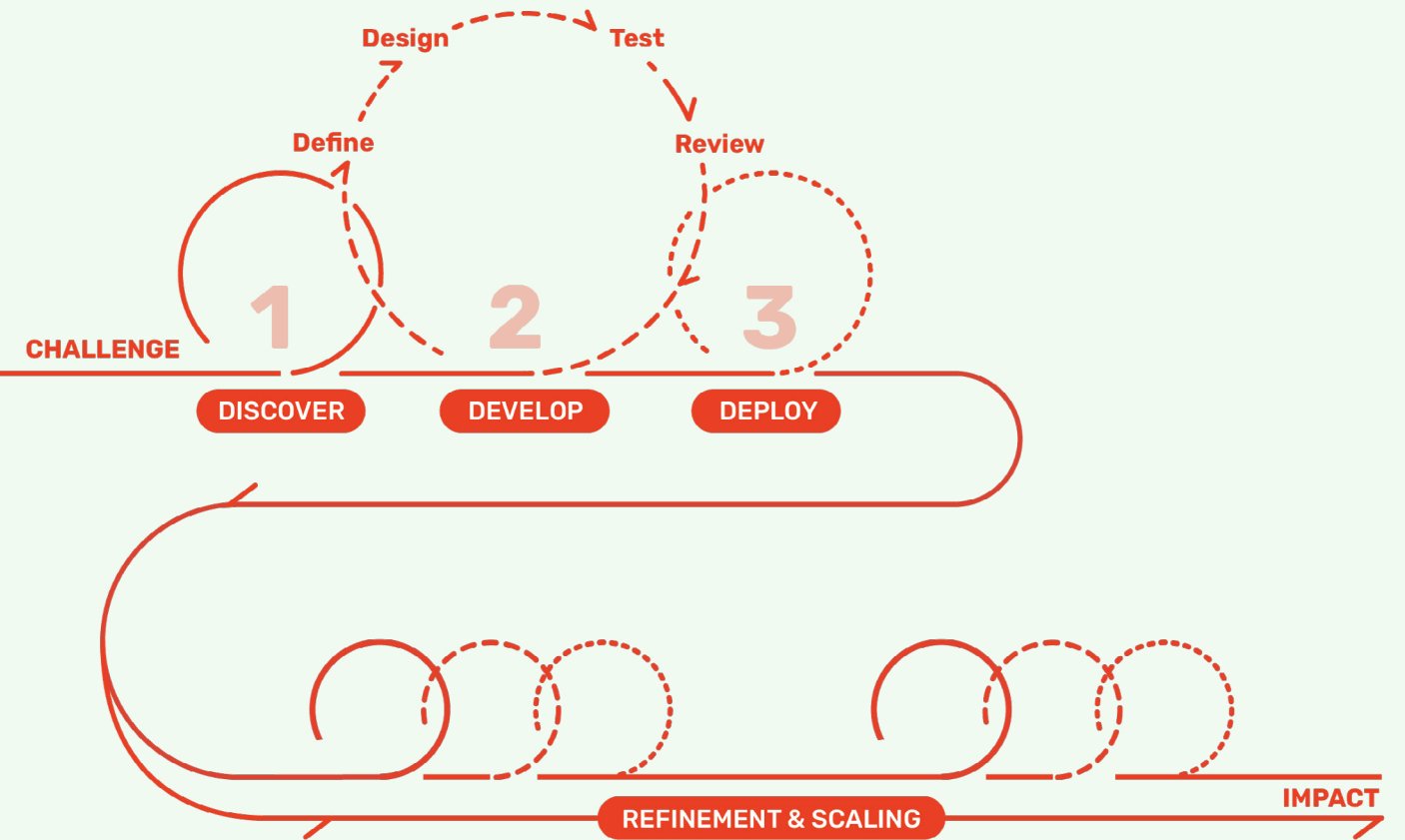
DISCOVER

Discovered the need for support in the COVID-19 service delivery.

DEVELOP

DEFINE

Conducted situational analysis to narrow down problem and opportunity areas on the supply and demand sides to deliver need-based interventions.

DESIGN

Built rapid prototypes based on identified gaps to create targeted strategies for increasing vaccination uptake and improving beneficiary experience via smooth service delivery.

TEST

Tested the prototypes with the rural cadres and beneficiaries; and made iterations as per feedback received.

REVIEW

Continuously monitored the efficacy and feasibility of solutions designed and rapid response to unforeseen challenges.

DEPLOY

Built staff capacities and deployed strategic solutions for effective implementation.

REFINEMENT & SCALING

Wide-scale implementation of tested and refined solutions facilitated systemic impact.
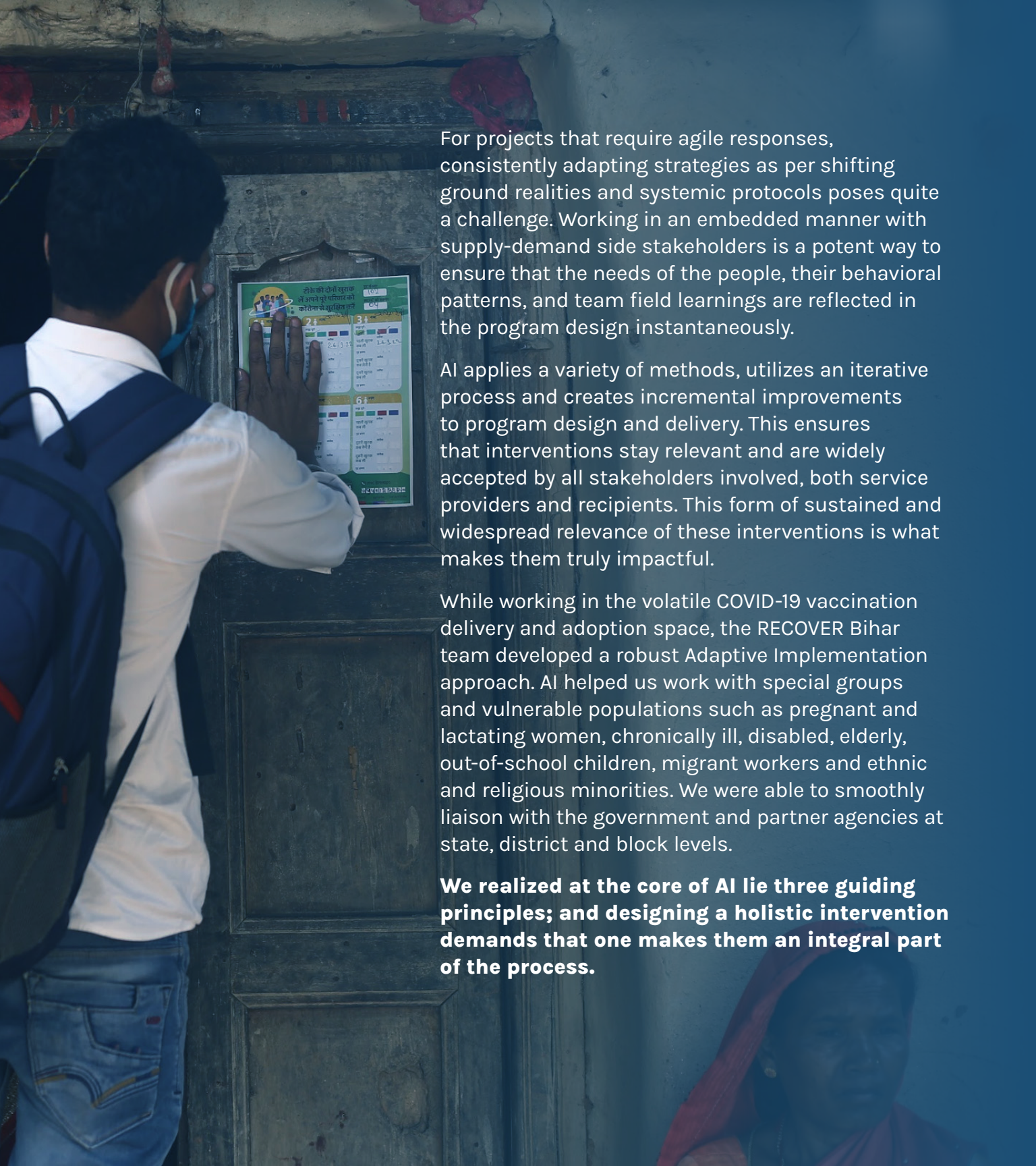
For projects that require agile responses, consistently adapting strategies as per shifting ground realities and systemic protocols poses quite a challenge. Working in an embedded manner with supply-demand side stakeholders is a potent way to ensure that the needs of the people, their behavioral patterns, and team field learnings are reflected in the program design instantaneously.

AI applies a variety of methods, utilizes an iterative process and creates incremental improvements to program design and delivery. This ensures that interventions stay relevant and are widely accepted by all stakeholders involved, both service providers and recipients. This form of sustained and widespread relevance of these interventions is what makes them truly impactful.

While working in the volatile COVID-19 vaccination delivery and adoption space, the RECOVER Bihar team developed a robust Adaptive Implementation approach. AI helped us work with special groups and vulnerable populations such as pregnant and lactating women, chronically ill, disabled, elderly, out-of-school children, migrant workers and ethnic and religious minorities. We were able to smoothly liaison with the government and partner agencies at state, district and block levels.

We realized at the core of AI lie three guiding principles; and designing a holistic intervention demands that one makes them an integral part of the process.

PLACING PEOPLE AT THE HEART OF THE PROCESS
Human-Centered Design

Human-centered Design (HCD) is a creative approach that places human perspective at the center of the problem-solving process. **HCD celebrates empathy and equity, and carries the belief that people closest to the challenge are the experts of their own lived experiences.** It encourages pan-disciplinary collaborations and helps design services and experiences that are tailored to the user's needs.

HCD nurtures inclusion, resonance and innovation. Working with vulnerable communities requires visibility into their decision-making drivers, challenges, and factors that influence relevant levers of change. Especially in a crisis situation where dearth of resources is prominent, it is all the more important to scrutinize how these limited resources are leveraged in a manner that facilitates maximum impact.

In most cases, 'vulnerable populations' is an umbrella term that includes a diverse range of individuals and communities. However, as equitable inclusion was a critical project goal, to target and address specific challenges faced by the stakeholders we were working with, we first needed to define differentiated vulnerabilities and perform a needs-based segmentation of the target population. The segmentation emergent from situational analysis and the recurrent field learnings helped us devise targeted solutions. This was at the foundation of strategy building in the RECOVER Bihar project. Looking at every stakeholder within their

When the people living the problem you are trying to tackle are actively involved in the solution building process, not only will you unearth rich insights but also co-create solutions that are holistic and more likely to be adopted successfully.

socio-economic and physiological contexts helped us address distinctive concerns and add value to their individual experiences.

Furthermore, there arose a need for service delivery mechanisms that suited specific needs of diverse populations. While the government stakeholders were striving to reach difficult geographies and break refusal among hesitant groups, the beneficiaries as stakeholders were dealing with trust deficit in the system, fear of vaccine side-effects, limited digital and healthcare access and multiple other barriers to vaccination.

The limited visibility into nuanced barriers resulted in the application of a blanket approach to engage with different groups facing different challenges, which proved to be ineffective. Therefore, devising tailored strategies for hard-to-reach communities, underrepresented populations, and special groups became a project priority for us.

This was a challenging goal to achieve. However, **applying HCD helped us bridge the supply-demand gap by including multi-stakeholder perspectives and understanding their unique barriers.** This encouraged positive behavioral shifts and reduced any friction various beneficiaries might face in their vaccination journey.

Value of Human-Centered Design in RECOVER Bihar

VIDEO

Collaborative Systems Thinking

Complex problems require the ability to approach them from multi-contextual, sometimes contrasting perspectives; and seek systemic solutions which have the potential to drive change at individual, community and societal levels.

Adopting tunnel vision can impede your ability to look at the holistic picture; and solutions born from such a narrow lens often cause newer, unexpected problems. Therefore, **effective problem-solving will always try to examine the interconnectedness between different components of a system instead of looking at individual pieces.**

When we began exploring the COVID-19 vaccination space for our project in rural Bihar, we looked at supply and demand side stakeholders, their relationships, power dynamics, their perception around the pandemic and vaccination, as well as the level of influence at the state and local levels. We further explored the existing health infrastructure and vaccine mechanisms, the impact of socio-economic variables on beneficiary decision-making, access to technology, occupational movements and the State regulations among the many additional moving parts.

In fact, systems thinking was at the heart of all our collaborations throughout the project life-cycle.
It is important to note that sometimes even in a collaborative team set-up with multiple stakeholders who are experts in their own field, it is quite likely they would assume the best way to improve a process or system is to focus on their individual parts.

Shifting mindset to 'Think Systemically' presents a macro perspective and helps tackle large complex problems that require multi-agency response, adding value to the micro-perspective that Human-Centered Design brings.

THE ABILITY TO LEARN-APPLY-REPEAT
Agility & Iterative Spirit

Innovation in public health is particularly challenging as the problems arise quickly and unpredictably, elevating the urgency to intervene rapidly and effectively. If the recent pandemic has taught us anything, it is that public health agility is key to resilient program design. **Placing the mindset of 'responding to change in real time over following plan' helps cater to the people better** while taking into account the constantly changing external variables.

This ability to proactively evolve and improve amidst the evolving COVID-19 circumstances helped us sustain, adapt and respond quickly and iteratively. At the beginning of the RECOVER Bihar project, our goal was to work with willing and ambivalent populations. However, cross-sectoral collaborations and clarity in our process protocols helped us pivot fluidly and extend our focus to hesitant populations where the support was most needed.

Such public health episodes require persistent firefighting while improving the quality and experience of services delivered. Rooting the program design in these three guiding principles, assists implementation to adjust and transform as per on-ground learnings and realities instantaneously.

About the Playbook

A Guide to Adaptive Implementation in Public Health: Actionable Learnings from COVID-19 vaccination project, is **a practical field guide for anyone looking to employ Adaptive Implementation (AI) in a health program.** This proposed approach can be adopted for designing health care interventions and experiences, bridging supply-demand service delivery gaps, strengthening collaborative problem-solving mechanisms, working in resource deficient settings, and tackling health emergencies that demand rapid responses, among other applications.

SKILLS & METHODS

WAYS OF THINKING

Applying ADAPTIVE IMPLEMENTATION

MINDSETS & ATTITUDES
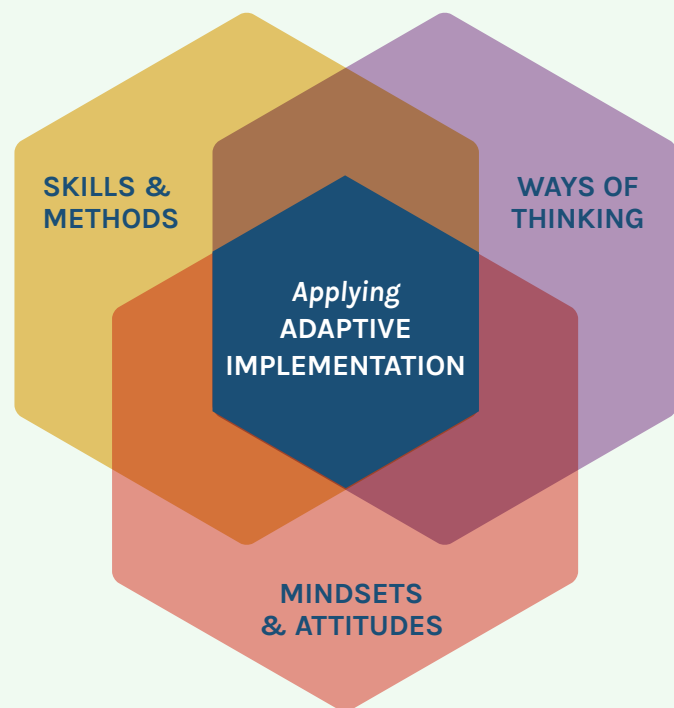
Developed by Vihara Innovation Network and Project Concern International India under the RECOVER Bihar Project, this guide aspires to introduce the Adaptive Implementation model to a diverse set of stakeholders in public health. It is, therefore, intended for, but not limited to, development professionals, public health practitioners, program implementation teams, designers, and government officials who are curious seekers of newer ways to undertake solution design, concurrent iteration and evaluation to yield better health and social impact outcomes.

The playbook offers suggestive cues on how to use AI through cross-disciplinary partnerships that lie at the cusp of Human-Centered Design, collaborative systems thinking, and agile, iterative prototyping and execution. **It proposes an embedded working model to swiftly direct service providers to existing gaps, and co-create solutions that acknowledge resource constraints without compromising results.** Furthermore, it offers suggestive tips around tailoring processes and strategies in real time as per changing priorities.

Overall, the playbook provides a step-by-step guide to the Adaptive Implementation approach based on the learnings from the RECOVER Bihar project and the value its application adds to program design. Throughout the playbook, the instructional segments are juxtaposed with references drawn from the project which will help the readers better understand the corresponding context and processes.

While this playbook proposes detailed steps to a fresh and progressing approach, you must view it as suggestive guidelines only, and not as a rigid set of rules. These are required to be adapted to suit the needs and priorities of various programs, along with your intended geographical context.

HOW MIGHT WE!

The playbook also recommends specific perspectives and practices under each chapter that one could leverage in order to effectively achieve a particular task under the proposed AI approach.

Mindsets & Attitudes

To set expectations from the process and achieve the intended outcome

- ☐ Open-Mindedness
- ☐ Flexibility to Learn & Unlearn
- ☐ Ability to Channel Empathy
- ☐ Adaptability
- ☐ Collaborative Mindset
- ☐ Creative Confidence
- ☐ Agility
- ☐ Embrace Ambiguity

Ways of Thinking

To effectively follow an iterative process under adaptive implementation when working in multi-stakeholder settings

- ☐ Systems Thinking
- ☐ Divergent Thinking
- ☐ Convergent Thinking
- ☐ Critical Thinking
- ☐ Quick Thinking
- ☐ Visual Thinking
- ☐ Imagination

Skills & Methods

To effectively learn, comprehend, and execute recommendations proposed in each section

- ☐ Listening & Observation
- ☐ Co-Creation
- ☐ Rapid Prototyping
- ☐ Data Analysis & Visualization
- ☐ Facilitation
- ☐ Feedback & Iteration
- ☐ Planning & Coordination Skills
- ☐ Effective Communication

Abbreviations

AI	Adaptive Implementation
ASHA	Accredited Social Health Activist
ANM	Auxiliary Nurse Midwife
AVD	Alternate Vaccine Delivery
BC	Block Coordinator
BHM	Block Health Manager
CD	Chronically Ill
CHO	Community Health Officer
DL	Disabled
DC	District Coordinator
EL	Elderly
FLW	Front Line Workers
FAQ	Frequently Asked Questions
GNM	General Nurse and Midwife
HCD	Human Centered Design
MIG	Migrant
MOIC	Medical Officer-In-Charge
MLE	Monitoring, Learning and Evaluation
PCI	Project Concern International
PW	Pregnant Women
PHC	Primary Health Center
QR Code	Quick Response Code
RCT	Randomized Controlled Trials
RECOVER Bihar	Rapidly Enhancing COVID-19 Vaccination through Efficient (Supply- Demand) Response in Rural Bihar
SHS	State Health Society
SIO	State Immunization Officer
VIN	Vihara Innovation Network
VMC	Village Mobilization Coordinator

Definitions

HUMAN CENTERED DESIGN (HCD) Human-centered Design is a creative approach to problem-solving that puts people at the center of the solution design process. It has three main phases: Immersion, where the practitioner delves deep into understanding the problem context and needs of the people closest to the challenge. Ideation, where the practitioner tries to make sense of the learnings, identify areas of opportunities for intervention, ideates, prototypes and tests possible solutions tailored to the needs of the people. Implementation, where the practitioner brings the tested solutions to life and scales them.

SITUATIONAL ANALYSIS Situational Analysis is a process which applies a collection of methodologies to identify and define the problem areas, opportunities and environmental barriers to guide project planning and priority setting. It is a great method to understand the nature and scope of a problem from the lenses of service providers and service recipients.

SYSTEMS THINKING Systems Thinking is an approach to problem-solving that helps a practitioner analyze complex problems in a multi-contextual way. It encourages looking at the different systemic constituents as a 'whole' and tries to identify interconnections and patterns of interaction between constituent elements. By understanding systemic gaps and interlinkages, the practitioner can develop more holistic, impactful and sustainable solutions.

PROTOTYPING Prototyping is an experimental process where the teams convert their product and service ideas into a tangible form. The prototype building starts with a simple low cost and low fidelity version which keeps upgrading and refining based on user testing and feedback.

ITERATION Iteration refers to repeatedly testing the developed prototypes, whether products or services, with the users to gather feedback on how to improve their experience engaging with the said prototype. With each feedback cycle, the user feedback is integrated into the prototype design, thus constantly improving its quality and usability. It takes many iterations to design a product or service that optimally balances user needs, ease of production and deployment and effectiveness of outcomes.

SHADOWING Shadowing is an observation technique where the subject accompanies the participant/s and observes them in real-life situations to learn how the services are being delivered and received, highlighting the areas of friction and opportunities.

Definitions

CONTEXTUAL INQUIRY Contextual Inquiry is an immersive research methodology that allows the researcher to observe people in their natural context and ask them questions to fill in the gaps in the observation. The researcher observes the participant/s and shares the gathered insights, consistently communicates with the participant to better understand what they are doing and why. This method can provide insightful data around areas of improvement in the design and delivery of products and services.

STAKEHOLDER MAP A stakeholder map is a visual plotting of all stakeholders that influence or are influenced by a project intervention area. It can be used to identify connections between stakeholders, to discover how they align with each other and what their relationships are. Mapping stakeholders helps manage their expectations and also alerts one of any potential internal conflicts that may arise.

SEGMENTATION Population segmentation is a method of analysis that helps practitioners break down large populations into smaller groups based on similar traits such as demographic, geographic, behavioral or psychographic. The logic of the segmentation depends on the project goals and objectives.

PSYCHOGRAPHIC SEGMENTATION Psychographic segmentation is a type of segmentation that divides and groups users based on their psychological characteristics including but not limited to conscious and subconscious needs, values, motivations, pain points, social status, beliefs, attitudes, and personality traits.

SERVICE DESIGN Service Design refers to the process of improving the existing services or creating a new one. An effective service design model will always take into account all the moving parts: the needs of service users, the necessary touchpoints and interactions between service providers and recipients, and consistent improvement in quality of processes and the user experience.

RANDOMIZED CONTROLLED TRIAL (RCT) A Randomized Controlled Trial is a form of experiment used to evaluate impact of one or many forms of interventions. It cross-randomizes participants into a control or an experimental group. The control group does not receive the intervention that is being provided to the experimental group. For example, under RECOVER Bihar, an RCT was conducted to test the effectiveness of different strategies, including incentivization, to increase the vaccination uptake among randomly selected and grouped participants.

PROJECT SPECIFIC
Definitions

VIHARA TEAM The team from Vihara Innovation Network (VIN) conducted the needs and barriers assessment under the RECOVER Bihar project, supported the rapid development of intervention strategies and prototypes, and iterated deployed solutions. The Vihara team also led process documentation efforts and developed a variety of Knowledge Management outputs.

PCI INDIA TEAM The team from Project Concern International (PCI) India led the program design, developed context specific strategies, and deployed solutions across the project geographies. The Bihar State PCI team supervised the implementation across 10 project districts and supported the field teams in planning vaccine roll-out processes and addressing on-ground challenges.

VILLAGE MOBILIZATION COORDINATOR (VMC) A VMC is a representative from the village recruited under the RECOVER Bihar project to work in an embedded way with the communities in the village. The VMC conducted all the project on-ground work at the village level, from identifying due beneficiaries via line listing, mobilizing the village residents, offering targeted counseling to the hesitant special groups and assisting the Block and District Coordinators with organizing vaccination session sites and door-to-door vaccination.

SUPPLY-SIDE STAKEHOLDERS Supply-side stakeholders are those who deliver a service and manage all its operational components. For the RECOVER Bihar project, the supply side stakeholders were actors involved in protocol development, vaccine procurement and delivery, planning and organizing vaccine sessions, and delivering healthcare services.

DEMAND-SIDE STAKEHOLDERS Demand side stakeholders are those with and for whom services are designed and delivered. For the RECOVER Bihar project, the demand side stakeholders were all the residents of the project villages, including special groups, vulnerable and hard-to-reach populations.

SPECIAL GROUPS The Special Groups categorization under the project consisted of Pregnant Women (PW), Lactating Mothers (LM), Chronically Ill (CI), Elderly (EL), and Persons with Disability (DA).

HARD-TO-REACH The hard-to-reach populations under the project are defined as beneficiaries who are situated in difficult geographies (hilly areas, riverbanks, border areas, Naxal sensitive areas) with limited connectivity and access to road infrastructure, healthcare services and digital technology. Although, populations who were hard to track, for example migrants, were also referred to as hard-to-reach.

Designing teams for cross-disciplinary collaborations

1

Setting the foundation for an embedded culture of working

As we stepped into the volatile and transient space of COVID-19 vaccination delivery and adoption, our cross-disciplinary teams had to figure out a collaborative way of working that complemented each other's strengths. **The embedded partnership between PCI India (experts in program strategy, design and implementation) and the Vihara team (experts in HCD application and strategy design) made for a united front, facilitating a continuous exchange of knowledge.**

At the onset of the project, a convening between all teams, key government stakeholders and development partners was organized to foster a spirit of collaboration. It helped the group arrive at a shared vision for the project, gain clarity around roles, responsibilities, and respective domain expertise.

This forum was also used as an opportunity to introduce teams to the values of empathy and people-centered development, which form the core of effective problem-solving. Furthermore, basic project hygiene protocols around continuous communication between teams were established to perpetuate a culture of cross-sharing of ideas, learnings, and challenges at regular intervals. Teams co-worked on several occasions, both in office and on field, actively liaising with the government. As a result, **throughout the project lifespan, we could offer regular feedback to each other, encouraging improvement in service delivery**, resolving issues in a more timely manner, and successfully adapting to evolving priorities with little room for error.

Establishing collaborative mindset for team building and sustenance

Recruiting the right set of people in your teams is important for the success of your program. Candidates who not only have prior experience in the subject area, but also a collaborative and agile mindset are critical for successful adaptive implementation. This chapter highlights the value of a cross-disciplinary team design and how these aforementioned mindsets can be built into the teams. It also provides guidance on how to create an embedded culture of working, which is a catalyst to rapid response delivery throughout the project life-cycle.

1 ASSEMBLING AN EFFECTIVE TEAM FOR AI

Do a quick preliminary needs assessment for human resources to gauge the needs of your program. Based on this, formulate relevant team structure and composition, and be prepared to make adaptations if and when necessary. **Staffing your team should be preceded by a recce of the context the project will be deployed in,** the communities targeted and the stakeholders you would have to work with. Consider some of the following ways to build effective teams:

1.1   **Ensuring community representation in your team**

It is advisable to have the communities you want to work with, represented in your teams. **They are members who are 'insiders' and will add great value to your effort by providing a nuanced direction for inquiry and intervention.** They also act as liaisons between the project team and their community stakeholders. Such representatives already have a strong trust established with the community, therefore, building rapport and encouraging participation becomes relatively easy. Additionally, as these members are from the same community, they have better visibility into the challenges and needs of the people and the ability to approach work with empathy.

Imparting AI specific mindsets and attitudes

Effectively applying the three guiding principles of AI requires team members to be flexible, open-minded, receptive to failures, and able to adopt a people-centered lens in their work. While it is ideal to hire candidates who inherently possess these qualities, realistically, it may not be possible. Hence, **seek candidates who have a proactive attitude towards learning despite their experienced background and top-notch subject expertise.** This will make it easier to coach them to imbibe requisite mindsets and attitudes.

Value of Community Representatives or VMCs in Implementation

VIDEO

In RECOVER Bihar, we observed that certain population segments had low trust on Front-Line Workers (FLWs). As a result, representatives from different communities across all project villages were recruited as Village Mobilization Coordinators (VMCs). **A VMC acted as a link between the community and the larger implementation team, which proved to be a successful model to ensure acceptance and trust building.** Furthermore, their connection with JEEViKA families smoothened the on-ground implementation roll-out. The above photo is a glimpse of the Madhepura team interviewing candidates for the VMC position with the support of the local Anganwadi Sevika.

Team Composition Under RECOVER Bihar

◉ FIELD (DISTRICT & BLOCK)	● STRATEGY FORMULATION & IMPLEMENTATION (STATE)	◎ DESIGN STRATEGY & KNOWLEDGE MANAGEMENT
Liaison and coordination with governance and health officials at district and block level	Gap analysis and strategy building	Needs and barriers assessment
Line list and due list preparation as per special population groups	Program design and field team supervision	Rapid development of intervention strategies, service flow design and iterative prototyping
Microplanning and organizing vaccination sessions	Approvals and authorizations	Monitoring solutions deployed and feedback integration
Beneficiary mobilization and vaccination certificate distribution	Protocol development and communication	Knowledge management and process documentation
	Implementation and scaling-up of interventions	
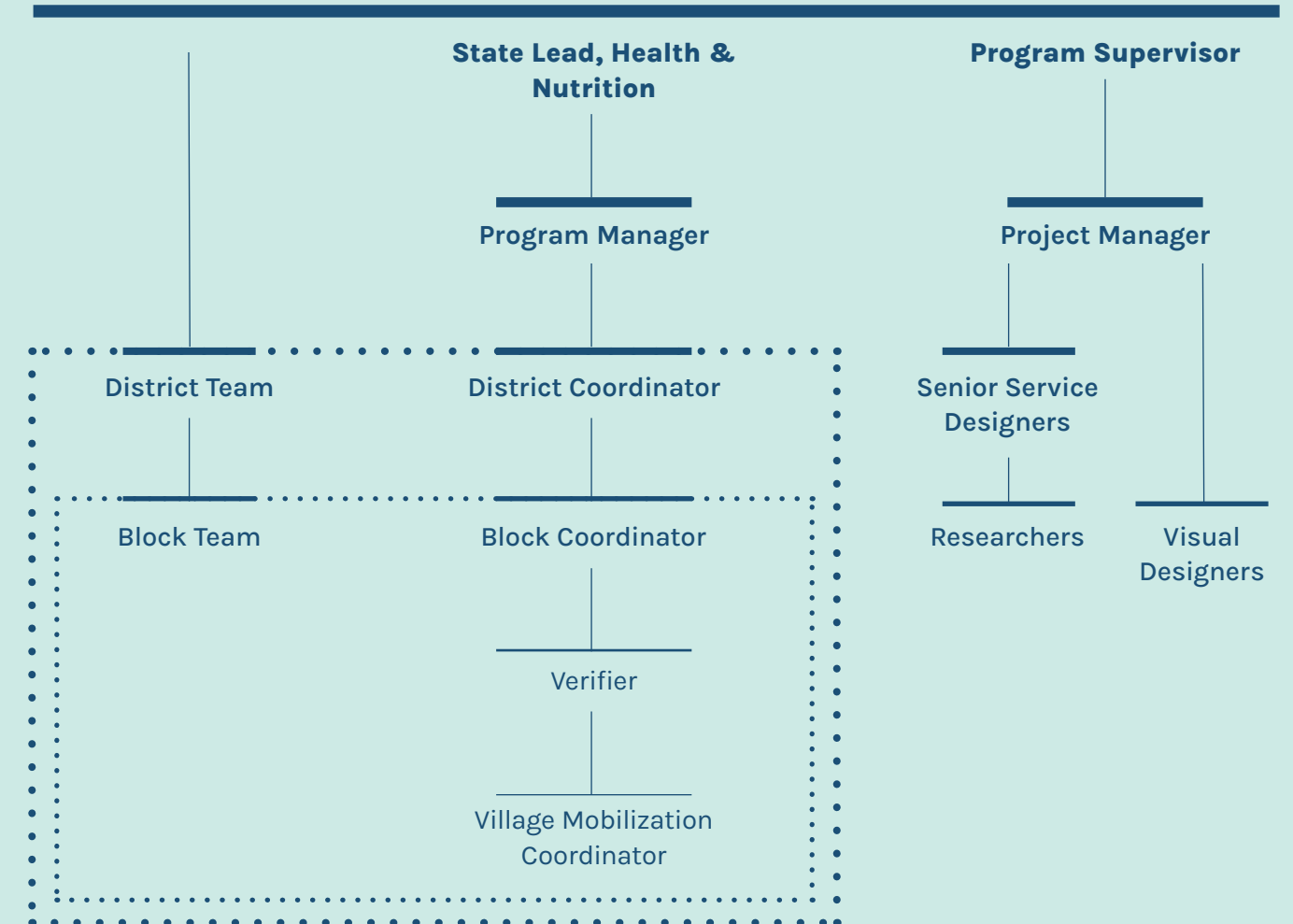
The diagram shows the role of the project teams from PCI India and Vihara that worked in an embedded partnership to increase COVID-19 vaccination uptake. Additionally, the recruitments were done keeping in mind individual's past engagements and drive to work on the project. The District and Block teams comprised experienced professionals with immunization background who were familiar with the geographies; this hastened the initial field implementation. The Vihara team consisted of experienced service designers and quantitative researchers who had expertise in data collection and application of Human-Centered Design for large scale public health projects.

2 IMPARTING VALUE-BASED CAPACITY BUILDING

Health programs often see beneficiaries as mere 'targets' to be achieved, rather than 'active stakeholders' with agency capable of making their own decisions and leveraging lived experiences to drive the program and service design process. The conventional modus operandi for capacity building doesn't do much to change that, as the focus remains on developing technical competencies.

However, **up-skilling workshops can be a great platform to embed empathy forward and people-centric principles into the fabric of the program.** People-centered approach includes listening to the users (their needs, priorities, values, challenges, aspirations), acknowledging their opinions, and co-creating solution pathways in partnership with beneficiaries to produce mutually intended health outcomes.

Below are a few guidelines you can keep in mind while planning orientation and capacity building sessions:

2.1 Echo core program values

AI thrives on the principles of Human-Centered Design and the ability to perform agile iterations. Therefore, relaying core values with suggestive approaches and tools to practice them such as **listening first, taking consent, being mindful of the socio-cultural cues, uplifts the quality of the program design.** It prepares the team to adapt as per the insights from the people you intend to serve.

2.2 Plan activities that heighten sense of ownership

Aligning the core program values with individual and team motivations fosters a sense of ownership. Activities that encourage teams to share their motivations to be a part of the program unites teams under a common purpose. Amidst the daunting situations at play during the course of the project, aligning commonalities in purpose will keep a check on personal biases and attrition rates.

बिहार सरकार
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नोवल कोरोना वायरस (COVID-19)
टीकाकरण सत्र स्थल
जिला स्वास्थ्य समिति, प0 चम्पारण

Trainings for VMCs were organized at every block across all 10 districts to foster an empathetic approach in their practice.

Value Based Capacity Building of VMCs

VIDEO

3 CRAFTING EMBEDDED PARTNERSHIPS

Holistic and sustainable interventions require multi-sectoral collaborations. Establishing a cross-disciplinary and embedded culture of working ensures different project partners are actively involved in and appraised of each other's operations, processes and progress. This enables coherence between teams, achieves mutual buy-in on pressing issues in a prompt and cost-effective way, reducing the turnaround time.

Whether you are a government official, program manager or a development practitioner, keep the following tenets in mind to craft cohesive partnerships and maintain basic team hygiene:

3.1 Build a shared vision

3.1a **Create a conducive space to have an open dialogue** around partnership roles and responsibilities, exchange ideas and knowledge, and set joint expectations to build a shared vision for your project. You might consider organizing a workshop at the launch of the project for all the teams to have clarity and collective understanding on the aforementioned aspects.

3.1b **Recenter everyone's efforts towards the project vision** by delivering refresher sessions. Weekly team meetings or monthly convening can be an effective medium to remind the teams of the project goals and core values.

A three-day workshop was organized by the PCI India team with the Vihara team to on-board the project District and Block coordinators. The Executive Director, SHS Bihar, and the State Immunization Officer shared the areas where support was needed. The workshop's goal was to bring teams together, invigorate their passion, direct their priorities, and build a strong foundation for collaborative learning and problem-solving. With technical training on vaccine supply chain, special population identification and micro plan management; the participants were also introduced to value-based learnings around prioritizing listening, empathy building and adopting a client-centric outlook.

3.2 **Cultivate a culture of mutual respect and understanding**

3.2a **Work side-by-side (either in office and/or field) with your partners** by planning co-working days for brainstorming, strategizing, troubleshooting, and executing tasks together.

3.2b **Acknowledge the value each partner and team** brings by organizing sessions that reflect mutual value-add, verbally appreciating their efforts/support at regular occasions, and advocating for them in front of other stakeholders.

3.3 **Devise systematic communication protocols**

3.3a **Set a cyclical rhythm of communication and coordination** to share updates and streamline knowledge sharing processes.

3.3b **Establish transparency in conversations between partners** around each other's struggles and concerns, and strive to collaboratively find solutions. Being vulnerable, open, and giving visibility into such hurdles proactively reduces conflicts and aids the resolution of issues in a time sensitive manner.

The Vihara team worked out of the PCI India office at regular intervals to work in an embedded manner. This brought all the actors involved up-to-speed and made exposing gaps in our processes easier to locate and tackle.

Working closely with the State helped us understand supply side challenges and identify 10 districts of Bihar with the least COVID-19 vaccination coverage. Identification markers included lowest coverage dose 1, dose 2, and combined, based on triangulation of CoWin data, Maha survey data, and administrative records. Geographies were also selected based on whether they are border areas, access compromised areas, riverine areas, Naxal sensitive areas, etc. Furthermore, the support of the PHC officials, Jeevika District Project Coordination Unit and the District Immunization team, helped the field teams lock select 50 blocks and 757 villages with the least vaccination coverage for the program intervention. As a result, we were able to narrow down the scope and target areas of our project in an accelerated manner, saving a lot of time amidst a crisis situation. Our teams continued to collaboratively work with the State throughout the project life-cycle.

Methodology of Geography Selection

VIDEO

4 PRIORITIZING TEAM WELLBEING FOR GREATER PRODUCTIVITY

The fast-paced nature of health implementation programs, when coupled with work in harsh geographical conditions and hard-to-reach areas, often heightens stress among teams, resulting in high attrition rates and substandard performance. Sometimes, adapting to rapidly changing protocols during disease outbreaks requires teams to be on their toes and achieve set targets under an enormous amount of pressure.

So, how does one ensure psychosocial wellbeing and retention of team members in such demanding programs?

Regular convening organized under RECOVER Bihar to encourage cross-learning and collaborative strategy building between District and Block Coordinators from all 10 districts.

4.1 Organize collaborative problem-solving sessions

Set a rhythm for your teams to connect and collaboratively firefight and disseminate best practices. This will offer your teams an avenue to build on each other's ideas, reducing the time bound pressures of addressing the challenge at hand from scratch.

4.2 Encourage a culture of check-ins

Provide your teams with opportunities for regular individual and group check-ins to share their immediate concerns, personal priorities, state of mind and mutual expectations. This helps avoid intra-group tensions, and increases the individual sense of belonging to the team and the project.

4.3 Acknowledge extraordinary efforts and self-driven initiatives

Celebrate small victories with teams and recognize individual efforts. Field teams, especially, are the link between the program planning leadership and the communities you are working with. Therefore, **making your team members feel valued by offering social or monetary incentives is critical** to nurture their commitment to the project.

Teams celebrating small wins over a meal after a long, strenuous day on field.

Felicitation of rural cadres such as VMCs, ASHA workers and GNMs for their exceptional efforts and undeterred commitment as a way to boost their morale and acknowledge their work.

Mindsets & Attitudes

- ■ **Open-Mindedness**
- ■ **Flexibility to Learn & Unlearn**
- ■ **Ability to Channel Empathy**
- ❑ Adaptability
- ■ **Collaborative Mindset**
- ❑ Creative Confidence
- ❑ Agility
- ■ **Embrace Ambiguity**

Ways of Thinking

- ■ **Systems Thinking**
- ■ **Divergent Thinking**
- ■ **Convergent Thinking**
- ■ **Critical Thinking**
- ❑ Quick Thinking
- ❑ Visual Thinking
- ❑ Imagination

Skills & Methods

- ■ **Listening & Observation**
- ❑ Co-Creation
- ❑ Rapid Prototyping
- ❑ Data Analysis & Visualization
- ■ **Facilitation**
- ❑ Feedback & Iteration
- ■ **Planning & Coordination Skills**
- ■ **Effective Communication**

KEY TAKEAWAYS

1

Needs-driven recruitment and staffing should be preceded by recce of the context where the project will be implemented.

For example: Recruiting community representatives helps establish a trusted link with the community and acts as a reliable point of contact, especially in hard-to-reach areas.

2

Value-based capacity building is critical to instill human-centered approach and empathy forward thinking in teams, especially when working with vulnerable communities, special groups and ethnic and religious minorities.

For example: Organizing regular training sessions to ensure teams align with program core values such as listening first, client consent and being mindful of the social and cultural cues.

3

Embedded partnerships with partners and systemic stakeholders is a model approach to accomplish common goals, and create systemic and sustainable impact.

For example: Developing protocols for the nature and frequency of communication, knowledge sharing and brainstorming to address similar challenges for agile intervention design and iterations.

4

Dynamic and demanding health programs often encounter high attrition rates. Providing safe spaces for team and individual check-ins and making team members feel valued is integral for employee retention and long term health of your program.

For example: Offering social and monetary incentives and work recognition to build a sense of ownership within the program team.

"This effort is very timely, and is akin to harvesting seasons; after the main harvesting of grain is done, the leftover grains are picked up one grain at a time, taking considerable skill and effort."

MR. SANJAY KUMAR SINGH
Executive Director, State Health Society

Understanding the context: People and Problems

2

Chapter **TWO**

Diving deep into stakeholder sentiments and systemic challenges

Our teams began work with an open mindset, ready to listen and learn from the supply-demand side stakeholders who were at the heart of the vaccine delivery and adoption problem. Multiple interactions with Bihar State, district and block level government officials, especially during the inception of the project, provided us with much-needed visibility into the systemic challenges and macro-level barriers to increase vaccination uptake.

While PCI India led the engagements with the State, the Vihara team used Human-Centered Design (HCD) to unearth community sentiments. With supply-side actors we probed into the areas like vaccine supply, procurement and delivery, role clarity and coordination, response training and preparedness, and vaccination site processes. For demand-side actors,

we explored their trusted sources, risk susceptibility to pandemic, attitude towards vaccines, level of awareness, and accessibility to healthcare. Such engagements provided the program design the holistic lens it needed. **The situational analysis helped define vulnerability driven segmentation for rapid strategy building, which ensured equitable inclusion. Furthermore, breaking down the beneficiary vaccination journey shed light on the service touch-points where support was most needed.** The rich insights that emerged helped identify the areas to intervene and set us in the right direction in a time-efficient manner.

Situational analysis and stakeholder engagement

To design dynamic and responsive health care programs, it is crucial to understand the social, cultural and historical context of the people involved. Applying HCD to situational analysis helps the practitioner delve deeper into the stakeholder sentiments while providing visibility into macro and micro issues pertaining to the problem being addressed. Using immersive methods and empathy forward techniques helps unearth unmet needs that make the solutions more relevant to the people, thus increasing the possibility of them being adopted.

This chapter highlights our approach to human-centered situation analysis, and the value it adds to ensure equitable inclusion becomes a part of your process throughout the project lifespan.

1 UNDERSTANDING THE LANDSCAPE AND STUDYING RELEVANT TRENDS

Before engaging with stakeholders and venturing into on-ground situational analysis, learning the nature and scope of the problem is key. In an AI project, when agility holds great value, such contextual visibility helps set course for effective program design. Consider the following to study the landscape of and trends within your area of intervention:

1.1 **Begin with contextual secondary research**

Secondary research is an avenue to better understand the implementation landscape. This could be in terms of people, their cultural and geographical context, ongoing programs and interventions, and academic discourse relevant to the domain of implementation. This kind of preparation sets a strong foundation for the team to conduct comprehensive situational analysis and comes handy while project planning and priority setting.

Visualize the inferences

To synthesize the secondary research data points, it is recommended that you use a visual medium and collaborative tools such as Miro, Mural or Google Jamboard. This can increase the possibilities for making cross connections and recognizing patterns. Try to categorize data as per:

⊙ Successes, failures and challenges.

⊙ Preliminary gaps and potential opportunity areas.

⊙ Early hypotheses on potential interventions and solutions to validate.

This establishes a solid base for defining areas of inquiry, adding depth to the primary research.

Get ahead with parking 'Areas of Inquiry'

Having a systematic set of areas to probe directs the practitioner towards who to engage with and how. The set of probe questions are semi-structured in nature, and allow the stakeholders to express their views in their own terms. These probe areas need to be refined with new knowledge during the course of the project. Taking such an iterative approach to areas of inquiry encourages learning amidst the changing nature of the problem.

AREAS OF INQUIRY

SUPPLY SIDE

VACCINE IMPLEMENTATION

Pre-Vaccination   During Vaccination   Post Vaccination

DEMAND SIDE

Perception around COVID and COVID vaccination

What is the current population perception around vaccinations?

How does the rural population feel about the pandemic currently after the effects of second wave have subsided?

What measures has the government instituted to provide easy access to the disabled and elderly with limited movement?

Is there a protocol currently in place to check co-morbidities among potential vaccine beneficiaries before the vaccination process.

What is the nature of counselling offered to help the beneficiary with vaccine readiness?

Vaccination facilities and preparedness (Processes - Contextual Inquiry)

Are the covid vaccination centres easily accessible to everyone?

How is the center to population ratio?

Are there enough number of centers to offer easy access and vaccine coverage to the local rural population?

Are there any innovative strategies employed to make vaccination more accessible to the disabled and elderly. For example, in Chennai, 2-4 vehicles for transportation dedicated to differently abled.

Is there a selection criteria in terms of whom to offer counselling?

Vaccination Procurement and Distribution

Currently, how does vaccination procurement and distribution take place in Bihar?

What are some of the logistical challenges?

Are there any on-ground issues currently regarding the supply of vaccines?

Are potential beneficiaries with no dose intake exhibiting preference towards a certain vaccine?

Any vaccine wastage cases on ground since May 2021?

Activity to conduct: Whoever is officer in charge - quick session in terms of journey mapping process - what is process streamlining that happens. (Survey maps for supply stakeholders might help

How efficient is the vaccine availability tracking between centres. For example, if a center has extra vaccine vials and other within the block has a shortage - is there a way to know that

What is the micro planning that happens- block level

Aversion and access to technology

Does majority of the participant population in our selected rural geographical location have access to smart phones?

Which are the most used communication applications by those who have access to smart phones?

How familiar and comfortable are the study participants with Cowin registration?

Jeevika or other mobilizers will register them on COWin app

What are other modes of registration for those averse to technology in rural Bihar?

Staff Capacity Building for covid vaccine implementation and responsiveness

What kind of training is available to the field staff and the front-line workers who are critical COVID vaccination messengers?

Are there any gaps in the current training process in terms of the content and delivery medium

Awareness and Access to Information

What are the sources of knowledge and information for the rural population of Bihar? Those with internet access and those without access to internet

What are sources of information for pregnant and lactating women

What is the awareness level among the locals with regards to the location of government run vaccination centres?

What are some of the sources for miscommunication and false information sharing?

Source of trusted channel
Who do people think is a trusted source for information (doctors/tele-care)

Role of community groups are playing for information sharing and which medium

Who are the community influencers - online - offline?

Do study participants know that the vaccination is free?

On-field vaccination and staff experiences

What are some of the challenges that currently are surfacing on-site vaccination process?

Could you describe any specific incident WRT a challenging situation?

What are some of the the pain points of the on-site staff?

Follow Up, counselling and after-care

What are current offline methods to report AEFI (Adverse event following immunisation)

What kind of resources can play a role in tracking AEFI for us? eg. Jeevika Follow-up tracking - quality of care

Sharing of best practices for COVID staff

Are there any avenues for front-line workers or covid warriors to share best practices or evolving challenges?

Are there support forums in place for front line workers to share their on-field frustrations?

Stakeholder Recruitment and analysis

Who are the state, block and local level stakeholders working within the vaccination supply chain we should speak with?

In the areas that we are likely to cover, what is the most common occupation and average educational level?

In a village set-up likely are influential and powerful community members?

On a daily basis, how many people approach front line workers for vaccination registration?

What specific insights could they offer?

Teachers, Panchayat members, youth leaders, religious community influencers, caste influencers. - How to leverage them. Wherein there is a greater traction of online communities- youth influencers

Incentivize

Perception around COVID and COVID vaccination

What is the current population perception around vaccinations?

How does the rural population feel about the pandemic currently after the effects of second wave have subsided?

Aversion and access to technology

Does majority of the participant population in our selected rural geographical location have access to smart phones?

Which are the most used communication applications by those who have access to smart phones?

How familiar and comfortable are the study participants with Cowin registration?

Beneficiary Decision making and Motivations

What is the biggest motivator for men between the age group of 18-40, 40-65, 65+ to take the vaccination?

What is the biggest motivator for women between the age group of 18-40, 40-65 and 65+ to take vaccination?

Are there any avenues for front-line workers or covid warriors to share best practices or evolving challenges?

What are some of the challenges those willing to take vaccinations are currently facing?

Do study participants still follow covid protocols of safe distancing, or do they indulge in community gatherings?

What are locally popular sources of entertainment that people prefer in their spare time?

Could be around timing of the vaccination, lack of enough information, migration for daily wage workers, I-cards

Congruent points / spaces easy to access

COVID vaccine specific IEC material and Campaigns

What are some of the campaigns that have garnered attention and interest?

What form of messaging and IEC materials are being circulated for awareness generation?

What kind of messaging is in circulation to promote the safety of vaccines? What are the mediums used?

What are locally popular sources of entertainment that people prefer in their spare time?

Visual Board on Miro for initial set of 'Areas of Inquiry' parked for RECOVER Bihar. This process shed light on the vaccination delivery and adoption gaps on the supply-demand side, as well as directed us to map our stakeholders. Some of the broader areas to probe were: beneficiary perception around COVID-19 and vaccination; beneficiary access to information and trusted sources; vaccine procurement, delivery and wastage; access to and familiarity with vaccine facilities; response preparedness and service delivery; supply side clarity of roles and communication protocols; beneficiary access and aversion to technology; and data entry & tracking.

2 ENCOURAGING STAKEHOLDER INCLUSIVITY VIA PSYCHOGRAPHIC SEGMENTATION

Program design should embrace diverse stakeholder perspectives when defining a problem. **Representation of diverse voices at the decision-making table is a great start toward co-creating equitable, agile and inclusive solutions.** It is also an opportunity for practitioners to consider psychographic segmentation to avoid missing out on what matters to the people most when working a challenge.

Psychographic segmentation divides and groups users based on their psychological characteristics including but not limited to conscious and subconscious needs, values, motivations, pain points, social status, beliefs, attitudes, and personality traits. Here's how to introduce iterative psychographic segmentation into program design:

2.1

How to ensure representation of diverse stakeholders?

Taking into account the interest of all stakeholders is critical to design holistic health interventions that have the potential to create optimum impact. Find below how you can ensure all stakeholder perspectives are considered:

2.1a **Map your stakeholders visually** → A stakeholder map is a visual plotting of all stakeholders that influence or are influenced by your project intervention area. It can be used to identify connections between stakeholders, to discover how they align with each other and what their relationships are. Mapping stakeholders helps manage their expectations and also alerts one of any potential internal conflicts that may arise.

2.1b **Segment the population as per their needs** ↙ Break down the population into segments based on structural and behavioral commonalities instead of the usual demographic segmentation. This categorization of populations into subgroups enables better assessment of each group's needs, wants and health priorities, thus paving the way for integrated healthcare service models and targeted strategies.
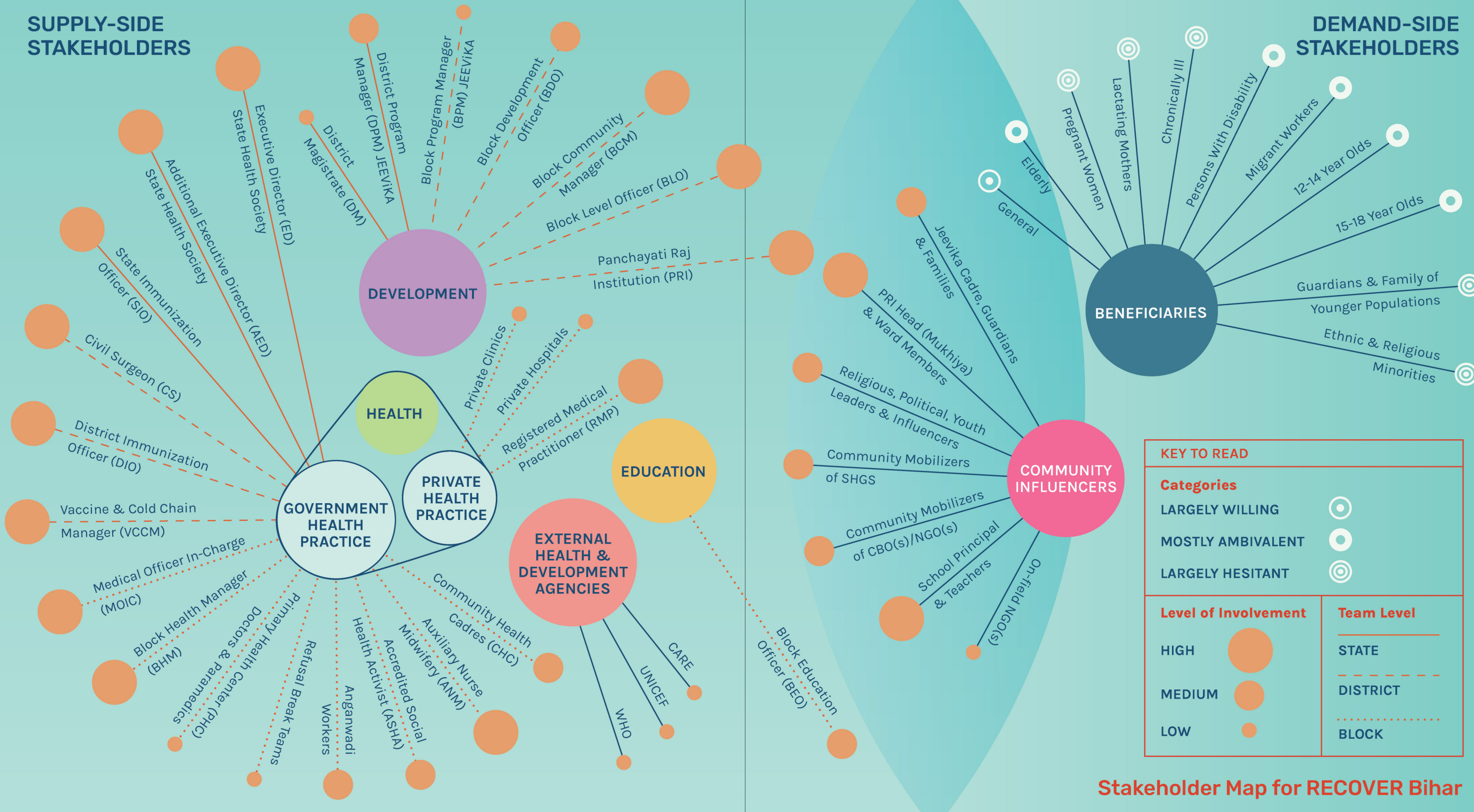
Stakeholder Map for RECOVER Bihar

Engage with all actors involved

Interactions with people who deliver a service as well as those who receive it is critical to gain a multi-contextual understanding of a complex problem. Such engagements across the stakeholder spectrum decrease project risks by reducing scope of failure. Human-Centered Design offers a number of research methodologies that unearth the deepest stakeholder sentiments, making them active participants with a sense of ownership and control in the design process. **Whichever method you choose, comfort and consent of participants should be a core priority.**

Once you have visually mapped your stakeholders and identified the population segments, consider the following ways to engage with stakeholders:

2.2a **Interactions with experts, practitioners and government officials** who have a deep footprint in your area of intervention, will have excellent insights into the systemic, macro level challenges. Especially, when pressed for time or dealing with sensitive and transient external variables, close collaboration at every step with these stakeholders is a prudent way to proceed.

A few things to keep in mind while engaging with supply side stakeholders:

⊙ First, determine which is the best methodology to engage with supply side actors depending on the kind of information needed. Whether it is semi- structured interviews, group discussions, or observing them doing their jobs in their context can help avail important data and information.

⊙ Make sure to inform the participant that their identity will be confidential and the privacy of the data will be maintained.

⊙ Maintain expectations, communicate intention and establish mutual understanding of what this engagement would mean for all.

⊙ Don't let the beneficiary bias influence your dialogue with the supply side actors. At the same time, be mindful of biases; they are important data points that can reveal how your beneficiary truly relates to the supply side. Remember that you are there to understand the challenges from the service providers' perspective. Look for gaps, but avoid countering their perspectives and receive information as it is.

To ensure a smooth take-off and give impetus to the vaccination work, our teams closely interacted with pundits in immunization, as well as the state, district and block level government officials. **Through group discussions, semi-structured interviews and continual dialogue with the State, we learned about ongoing efforts, resultant successes, and shortcomings where support was needed.** We heard their concerns, welcomed proposed solutions, and probed into their practicality and feasibility. All this information gave the project a head start by helping us narrow down the scope and the target populations.

2.2b **Interactions with beneficiaries** or people at the heart of a program design are necessary to gain an in-depth knowledge of their needs, motivations, goals, frustrations and decision making drivers. Engagement with the communities is a step towards acknowledging them as active participants in co-creating solutions that they deeply resonate with. This also levels the playing field and ensures that even the most vulnerable groups are heard and considered when defining a problem. If this is not done, you are at a risk of missing the whole picture.

A few things to keep in mind while engaging with beneficiaries:

- Look beyond the middle. Make sure you engage with stakeholders at the extreme ends. Even though they are smaller in number, they are the ones who might need the solutions you are designing the most.

- Always seek consent and offer clarity of purpose. Maintain transparent and authentic communication and avoid feeding false information. It can break the trust you have built and earned.

- Understand who are the decision makers and trusted sources - especially when working with cases that exhibit resistance to adopt a behavior.

- People are the experts of their own lived experiences. So, listen and let their perspectives drive your problem solving process.

Adopting an unbiased lens, we engaged with different populations across geographies to get a multi-dimensional view of the problem. We shadowed the Block Refusal Break teams to understand which counseling techniques worked and which didn't; interviewed beneficiaries and their families to deep dive into the decisioning journey and barriers around vaccination; conducted contextual inquiry to identify gaps in the on-site vaccination delivery process; and also organized focus group discussions to learn of shared needs and pain-points to further inform our segmentation.

3 **Translate research into practice**

Once you have gathered required data (using some of the methods mentioned above), synthesis tells you what to do with your findings. It involves visually mapping your data points and finding relationships between them. **Organize, interpret, discover connections and patterns and make sense of the data gathered.**

Consider using a data-driven lens to create rapid action plans for specific population segments. This can be done by using the captured data to design a tool, or a framework that can be applied to different context settings and segments.

Such a tool or framework can be used to facilitate the building of action plans facilitates building action plans for various population segments under your program, which can then be used to tailor strategies for newer segments. This will **enable you to be more intentional in your approach, as these action plans will outline critical factors** (including positive and negative deviances) that may impact your program outcomes, and accordingly provide you with an effective pathway for solutioning.

Framework to create action plan

ACCESS TO INFORMATION

Familial Networks	Community Social Networks	Authorities / Systemic Cues	Mass Media

INTENTION TO VACCINATE			TAKING ACTION TO VACCINATE		

INTENTION TO VACCINATE

TRUST in Information Sources	FEAR		
	Susceptibility to COVID-19	Fear of Side Effect	
TRUST in authorities and the state			

TAKING ACTION TO VACCINATE

ABILITY

AUTONOMY to take decisions	Tangible SUPPORT
	Mobilisation SUPPORT
AFFORDABILITY	Structural SUPPORT

UPTAKE OF VACCINATION

External motivations (Positive/Negative)

The interplay between the three tenets of trust, fear and ability defines the barriers to decision building and presents intervention opportunities in the uptake of vaccination.

Based on situation analysis, COM-B and Fogg behavioral models, the Vihara team built a framework to create rapid action plans for various population segments. It provided the teams with the lens to understand trusted channels of information for different groups, their intent and ability to get vaccinated, and external motivations within their socio-economic context. The framework aided our understanding of vaccine hesitancy by breaking down the decision-making process of beneficiaries.

Logic and Application of the Framework

PRESENTATION

Pregnant Women

Elderly

People with Disabilities

12-14 year Olds

Lactating Mothers

Chronically Ill

Migrant Workers

15-17 year Olds

Vaccination experiences of different groups

VIDEO

Population groups in focus under RECOVER Bihar

Mindsets & Attitudes

- ■ **Open-Mindedness**
- ■ **Flexibility to Learn & Unlearn**
- ■ **Ability to Channel Empathy**
- ☐ Adaptability
- ■ **Collaborative Mindset**
- ☐ Creative Confidence
- ☐ Agility
- ■ **Embrace Ambiguity**

Ways of Thinking

- ■ **Systems Thinking**
- ■ **Divergent Thinking**
- ■ **Convergent Thinking**
- ☐ Critical Thinking
- ☐ Quick Thinking
- ■ **Visual Thinking**
- ☐ Imagination

Skills & Methods

- ■ **Listening & Observation**
- ☐ Co-Creation
- ☐ Rapid Prototyping
- ■ **Data Analysis & Visualization**
- ■ **Facilitation**
- ☐ Feedback & Iteration
- ■ **Planning & Coordination Skills**
- ■ **Effective Communication**

KEY TAKEAWAYS

1

A preliminary understanding of the social, cultural and historical context of the supply-demand stakeholders and studying relevant trends is essential to gauge the nature and scope of the problem, and inform the areas of inquiry before undertaking on-ground situational analysis.

For example: Conducting secondary research prior to situational analysis and visually mapping areas of inquiry helps make cross connections, identify preliminary gaps, potential opportunities and provides empathy driven perspective, especially while engaging with marginalized and vulnerable communities.

2

Insights from all stakeholders are key when defining a complex problem. Visually mapping all supply-demand stakeholders, even those who are at the extreme ends and segmenting the population not just on the basis of demographics but also psychographic characteristics will ensure no one is left behind.

For example: It is important to keep in mind the gaps and opportunity areas emerging from varied perspectives on the table. This increases the relevancy of the prototype concepts and offers a multidimensional lens to the brainstorming process and first fidelity prototype designs.

3

While engaging with diverse stakeholders, draw from the lived experiences of the people. They are the experts when it comes to understanding the challenges at hand. So, listen and let their perspectives drive the problem solving process.

For example: Applying a data driven lens and translating rich insights gathered from the stakeholders into actionable strategies will increase the impact of your program outcomes.

3

Co-creating human-centered solutions

Rooting solution design in the needs of the supply-demand stakeholders

Taking cue from the secondary research and engagements with the stakeholders, our teams identified existing supply side gaps and challenges in the vaccination process and developed basic concepts for prototyping. **A couple of brainstorming sessions helped us co-create the first set of low fidelity prototypes.** As the Vihara team gathered rich insights from the field around the needs and pain points of supply-demand side stakeholders, the areas of intervention and support became prominent. Based on the primary research learnings and a nuanced understanding of a beneficiary's vaccination journey, refinements were made to the first level prototypes.

These prototypes were then tested with rural cadres and beneficiaries to ensure they were easy to use, locally relevant, and actually improved the vaccination experience, uptake and service delivery.

Rapid iterations were made after each feedback cycle which informed the high fidelity collaterals along with actionable empathy-forward strategies tailored as per the segments. Even after being deployed, our teams were able to detect emerging friction in the use of the solutions designed through close coordination and frequent field review visits. **This approach of testing before pilot and scaling helped us function in a cost-effective manner, and agile iterations ensured real time reflection** of learnings in the project implementation.

Design sprints and rapid prototyping processes

In the past few years, global efforts to expand healthcare access, improve quality of care and control costs have become more diligent. There is a rise in the number of people welcoming rapid and iterative healthcare innovations.

However, even today, the traditional community and government projects move straight to the pilot stage without testing an idea. This puts the project at risk as there is limited visibility around whether the idea will be accepted or rejected by people. Therefore, prototyping and testing ideas before the pilot and scaling stage helps gauge if something works or not before committing time, energy and resources to it.

Harnessing the value of design sprints helps navigate resource limitations and makes for an effective way to build and test solutions in a time and cost constrained manner. **It is a six-phase process.**

RAPID PROTOTYPING PROCESS

Understand the problem and discover opportunities to intervene

Define the opportunities you want to focus on

Diverge and brainstorm possible ways of solving a problem

Converge and filter ideas as per the defined goals of the program

Design simple, low-fidelity prototypes to be tested

Test and iterate prototypes, see what's effective

UNDERSTAND   **DEFINE**   **IDEATE**   **DECIDE**   **PROTOTYPE**   **VALIDATE**

1 HOW TO RUN IDEATION SESSIONS AT A SPRINT PACE?

The project design team should work closely with the project implementation team to ideate. This way the **knowledge shared by all the members on and off the field assists in building prototype concepts** that take into account the pain points of implementers as well as the communities at the heart of the problem.

Consider the following approaches to ensure an inclusive, inspired and collaborative brainstorming session:

1.1 Turn challenges into opportunities

Analyze the data based on research insights gathered from supply-demand side stakeholders and discover areas where you see an opportunity to intervene and create impact. Spend time investigating what is important to people. Center the brainstorming session around these opportunity areas.

1.2 Multidisciplinary participation in brainstorming

Ensure diverse participation in the brainstorming session; ideally team members with different areas of expertise and a few participants who are impacted by the problem.

1.3 Keep an open mind

For the initial brainstorming session, **create a space where all kinds of ideas find home** and participants feel comfortable sharing their thoughts. Build on each other's ideas and aim for quantity over quality.

1.4 Don't worry about being innovative

Often simple ideas can make a considerable difference. So, don't enter the brainstorming process only seeking innovation. **Sometimes a small improvement solves a pain point,** even though it might seem as if nothing has been done.

1.5 Filter the ideas

Once the brainstorming is done, **select ideas that seem feasible, easy to implement, scalable and offer clarity** as to which problem do they address.
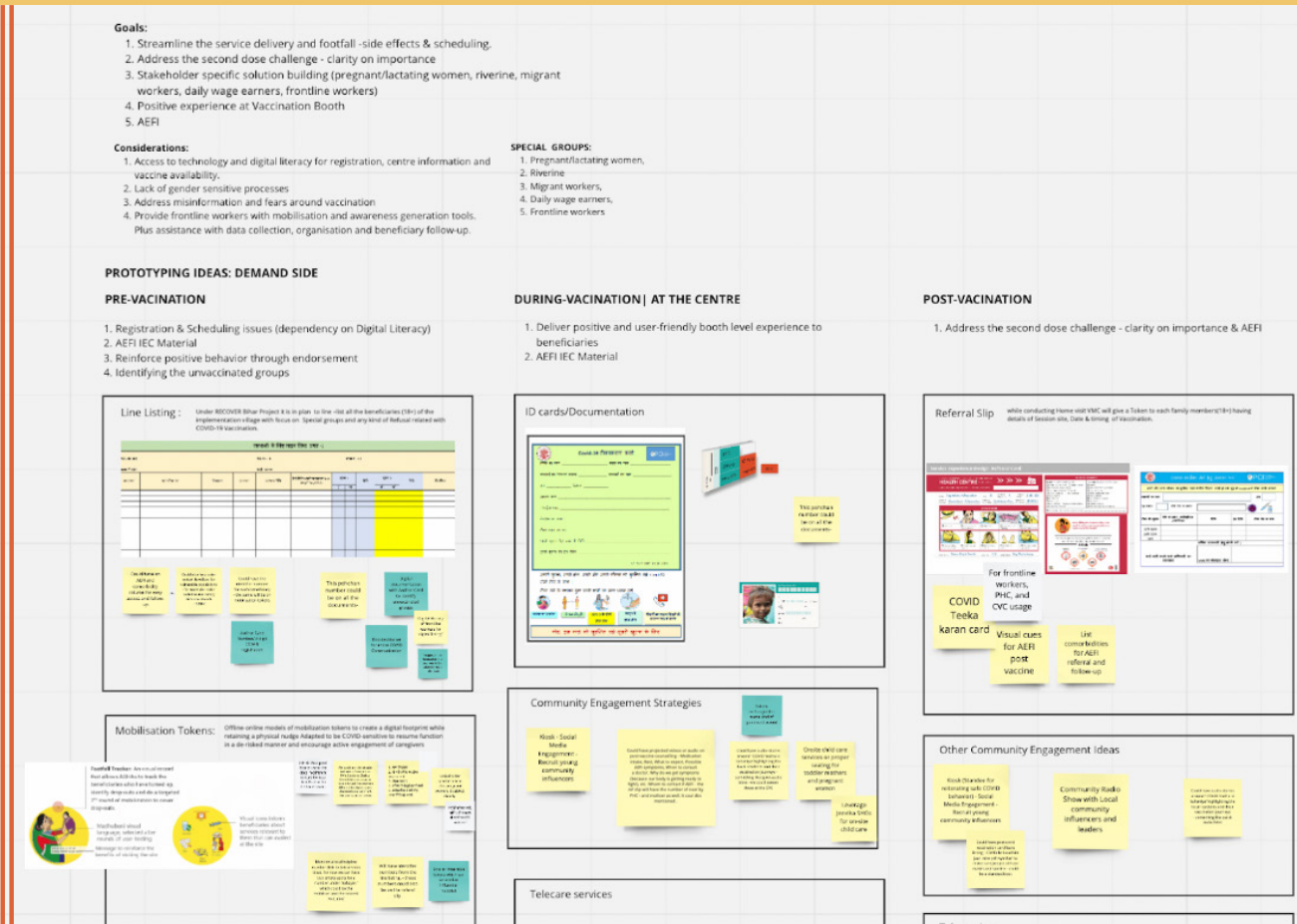
CONVERTING IDEAS INTO COST-EFFECTIVE TANGIBLE OUTCOMES

Prototyping turns great ideas into tangible concepts in a time-efficient manner. This is **especially helpful when working on projects catering to large populations, trying to address complex and transient problems.** Think of how the prototypes will be experienced across different touch-points and how the people you are designing for will interact with it.

Here are a few things to consider before you begin the rapid prototyping journey:

2.1 | **Have clarity on the objective**

Don't lose sight of the goals and gaps that the ideas are trying to address as you begin prototyping them. Although you might have identified multiple problem areas, prioritize the ones that you need to design interventions for, that are relevant to your program objectives. Keep in mind that this is not the final output.

2.2 | **Be conscious of time and resources**

Develop low-fidelity prototypes that the stakeholders can easily understand and quickly test. As and when iterations are made based on the feedback, the quality, design and experience of the prototype should be improved accordingly.

Goals:
1. Streamline the service delivery and footfall -side effects & scheduling.
2. Address the second dose challenge - clarity on importance
3. Stakeholder specific solution building (pregnant/lactating women, riverine, migrant workers, daily wage earners, frontline workers)
4. Positive experience at Vaccination Booth
5. AEFI

Considerations:
1. Access to technology and digital literacy for registration, centre information and vaccine availability.
2. Lack of gender sensitive processes
3. Address misinformation and fears around vaccination
4. Provide frontline workers with mobilisation and awareness generation tools. Plus assistance with data collection, organisation and beneficiary follow-up.

SPECIAL GROUPS:
1. Pregnant/lactating women,
2. Riverine
3. Migrant workers,
4. Daily wage earners,
5. Frontline workers

PROTOTYPING IDEAS: DEMAND SIDE

PRE-VACINATION
1. Registration & Scheduling issues (dependency on Digital Literacy)
2. AEFI IEC Material
3. Reinforce positive behavior through endorsement
4. Identifying the unvaccinated groups

DURING-VACINATION | AT THE CENTRE
1. Deliver positive and user-friendly booth level experience to beneficiaries
2. AEFI IEC Material

POST-VACINATION
1. Address the second dose challenge - clarity on importance & AEFI

Line Listing:

ID cards/Documentation

Referral Slip

Mobilisation Tokens:

Community Engagement Strategies

Other Community Engagement Ideas

Telecare services

Integrating the beneficiary pain points and inputs from PCI India team, the Vihara team developed initial service prototyping concepts. We prioritized ideas that not just catered to address the beneficiary challenges but were also considerate of challenges of the supply side. We wanted to design holistic solutions, hence we set up our goals, considerations and target special groups for the session. The emerging concepts and the initial demographic segmentation underwent iterations as per testing feedback and incoming field learnings. **The above is a photo of our collaborative exercise on Miro to brainstorm prototype ideas.**

Pay attention to what isn't working

Refer to other attempts at similar ideas or concepts that have been developed to address a similar or distinct challenge. Review what is and isn't working, so that your prototype is mindful of why a certain idea may not work. This will save you time and money.

A peek into our first level prototypes - simple, quick and cost-effective. We developed a series of service delivery concepts that encouraged vaccine positive behavior, addressed stakeholder specific misinformation, streamlined service delivery and footfall, and improved the vaccination experience. Above are low-fidelity prototypes of Mobilization Tokens, Vaccination Card, Home Stickers, and Mobile Stickers.

3 EMBRACING CONTINUAL INQUIRY, LEARNING AND SCALING

Testing concepts gives a heads up if the solutions developed will work when implemented or not, and whether it addresses the need-gaps discovered during situation analysis. Some things to keep in mind while designing a testing session are:

3.1 Define what to test

Have clarity on what aspects of the prototypes are to be tested, for example - concepts, value proposition, user experience, viability, ease to understand, contextual relevance, feasibility, etc.

3.2 Design how to test

List a set of questions to ask participants based on what it is that you need to find out. Keep an open mind, review the responses to the testing and note key improvement areas. Working closely with the government officials and field teams helps smoothen the logistical glitches, thus reducing the journey time between iterations and adapting the refined prototypes in service delivery.

3.3 Select your participants

Having inputs from the supply side stakeholders in the selection of participants for testing is essential. When the prototypes are **for improving service delivery, make sure the participants are those who will be the primary users** and who haven't participated in the initial problem framing process. Also, decide upon logistics such as time and place keeping in mind participants' comfort and convenience, especially when testing with women participants.

3.4 Deliver positive experience

The goal of testing should not be to validate your best ideas but to listen and improve the product or service as per the user feedback. Improving experiences and quality of services should be central to the prototyping process.

Collateral Development
PRESENTATION

To test our prototypes, we began with geography selection. Out of the 10 project districts, we selected Sitamarhi due to its representative population (Scheduled Castes, Other Backward Castes, Muslim Minority) and Madhepura due to extreme physical barriers, riverine and migrant populations. With the support of the block and district level government officials, the Vihara team conducted focus-group testing with participants from the Jeevika cadre across five non-intervention villages. These women were community mobilizers with high school education. This gave us clarity if a Village Mobilization Coordinator (VMC) with similar background and capabilities would be able to use the collaterals easily and effectively. **Our testing areas were conceptual clarity, content localization, usability, and impact scoping.**

A VMC pasting home sticker as a beneficiary provides requisite details.

Keep improving the prototype design with each feedback cycle. Even after you deploy high fidelity prototypes, regular monitoring by design teams and feedback from implementation teams will inform further edits and make this process of ideation, testing, reviewing and deploying solutions smooth and easy.

Prototype testing of collaterals with the Community Mobilizers from JEEViKA.

Beneficiary Journey Map

DECISION-MAKING PHASES

Contemplation	Action	Assurance
PRE-VACCINATION	DURING-VACCINATION	POST-VACCINATION

SHOULD I GET VACCINATED?

WHEN SHOULD I GET MY FIRST DOSE?

WHERE DO I GO TO GET THE VACCINE & HOW DO I PREPARE?

WHEN IS MY SECOND DOSE DUE?

WHAT IF SOMETHING HAPPENS AFTER I GET VACCINATED?
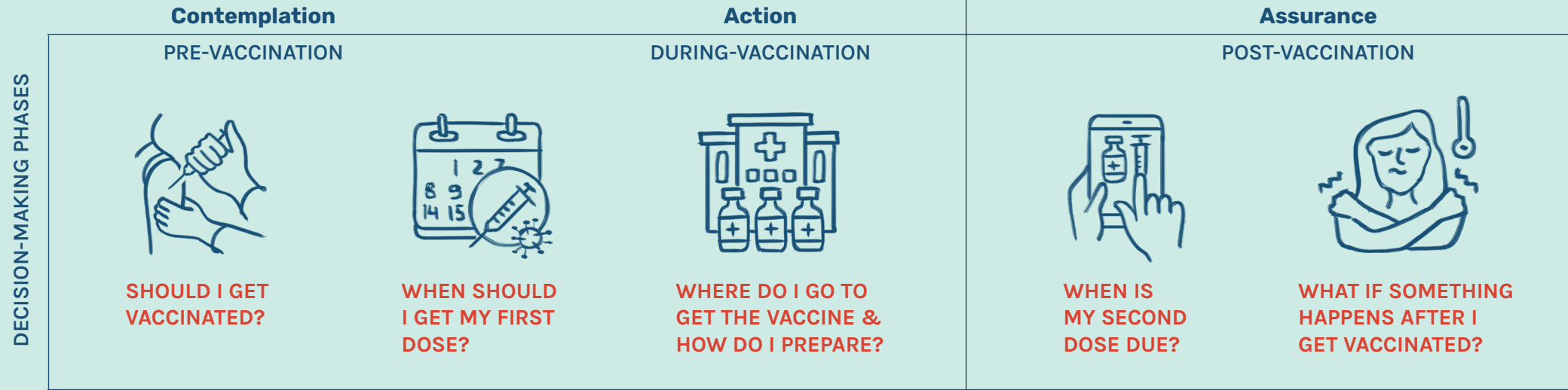
"I am in the last pregnancy term, can I get vaccinated now?"
Pregnant Woman

"I work outside the village and by the time I come back vaccine camp is over? Today I took leave to get vaccinated but there was no camp."
Day Wage Laborer

"I don't want to get my father vaccinated. I am leaving town for work in 3 days. There will be nobody to care for him."
Migrant Worker

SERVICE GAPS

MOBILIZATION →
Gap in awareness and trained personnel available for counselling

TRACKING & PREP ↙
Gap in identifying the right venue and day prep for vaccination

POST-VACCINE CARE ↘
Lack in process of post vaccine medical reassurance

SERVICE DESIGN FLOW

1. Line Listing
2. Home Stickers
3. Counseling Guide
4. Mobilization Tokens
5. Mobile Stickers
6. Follow-Ups

* Basis the gaps recognised from the vaccination journey, iterations were made to the first level prototypes.

1. Mobilizer creates a list to identify special groups, reasons for refusal and due beneficiaries.

2. Mobilizer pastes home sticker during line-listing door-to-door as a reminder of due dates, identify special groups, track 3 home visits. The home sticker also helps families to track their dates and offers easy access to PHC number to seek counseling and medical support.

3. Mobilizer uses the targeted counseling guide and the QR code to mobilise special groups - tried and tested strategies.

4. Mobilizer distributes stakeholder specific mobilization tokens a day before vaccination to address misinformation, inform about vaccination site, time and date details and vaccination process.

5. Post-vaccination the verifier pastes the mobile sticker on the back of the phone, specifically for migrant workers to keep a track of their vaccination type and second dose date.

6. Follow-up and check-ins around side-effects, certificate distribution and mobilization for second dose.

Targeted counseling guide

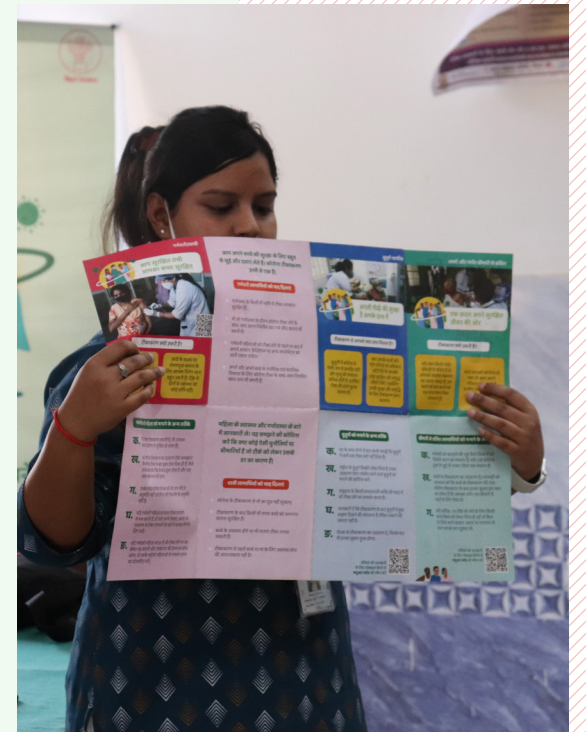Answers to **FAQs learned from the field testing** and easy to follow steps to get vaccinated

QR codes with video material from trusted sources to give more confidence to the individual
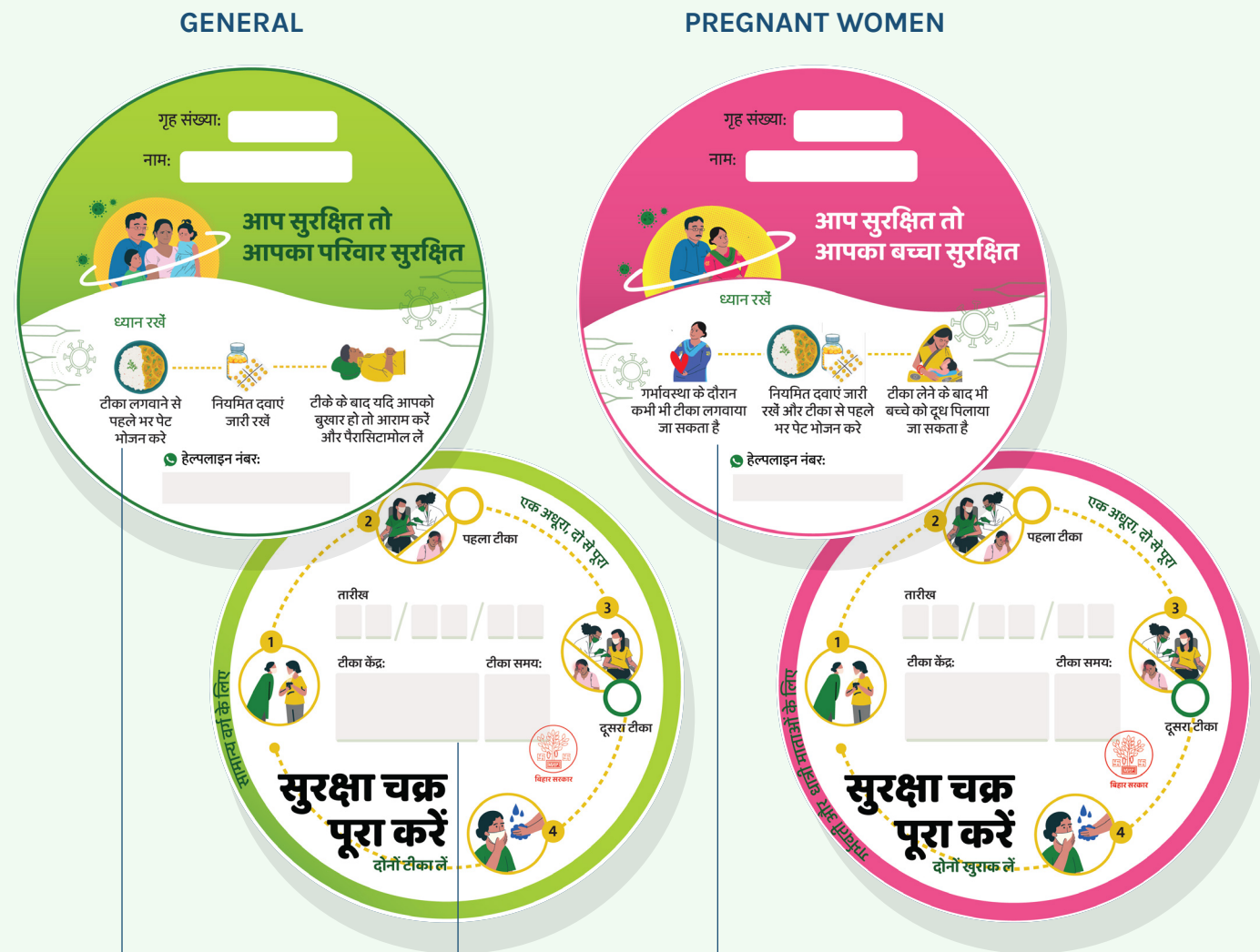
A lightweight, foldable leaflet for the mobilizers to carry around for uniform addressal of beneficiaries

Reinforcing positive counselling techniques by asking mobilizers to **first listen to beneficiaries doubts and concerns**

Counselling methods learnt and tested on field for various stakeholders following same colour scheme as other collaterals

Service Design Flow

VIDEO

Mobilization tokens

GENERAL

गृह संख्या:

नाम:

आप सुरक्षित तो आपका परिवार सुरक्षित

ध्यान रखें

टीका लगवाने से पहले भर पेट भोजन करें

नियमित दवाएं जारी रखें

टीके के बाद यदि आपको बुखार हो तो आराम करें और पैरासिटामोल लें

हेल्पलाइन नंबर:

एक अधूरा, दो से पूरा

पहला टीका

तारीख

टीका केंद्र: टीका समय:

दूसरा टीका

सुरक्षा चक्र पूरा करें

दोनों टीका लें

बिहार सरकार

PREGNANT WOMEN

गृह संख्या:

नाम:

आप सुरक्षित तो आपका बच्चा सुरक्षित

ध्यान रखें

गर्भावस्था के दौरान कभी भी टीका लगवाया जा सकता है

नियमित दवाएं जारी रखें और टीका से पहले भर पेट भोजन करें

टीका लेने के बाद भी बच्चे को दूध पिलाया जा सकता है

हेल्पलाइन नंबर:

एक अधूरा, दो से पूरा

पहला टीका

तारीख

टीका केंद्र: टीका समय:

दूसरा टीका

सुरक्षा चक्र पूरा करें

दोनों खुराक लें

बिहार सरकार

Physical reminders that help plan the date & time for the vaccine, overall aiding crowd control on the site

Building preparedness around vaccination uptake to avoid AEFI

Token for pregnant and lactating token **offers specific preparations tips and reassurance required**

Home and mobile stickers

At-home reminder for beneficiary and mobilizer

Introduce post-vaccination care in the process with **three follow-up visits** check-ins to reassure beneficiaries

Home number and color coding for easy stakeholder identification

Highlighted **emergency numbers**

Reminder about next dose due date and vaccine type for migrant groups

Mindsets & Attitudes

- Open-Mindedness
- Flexibility to Learn & Unlearn
- Ability to Channel Empathy
- Adaptability
- Collaborative Mindset
- Creative Confidence
- Agility
- Embrace Ambiguity

Ways of Thinking

- Systems Thinking
- Divergent Thinking
- Convergent Thinking
- Critical Thinking
- Quick Thinking
- Visual Thinking
- Imagination

Skills & Methods

- Listening & Observation
- Co-Creation
- Rapid Prototyping
- Data Analysis & Visualization
- Facilitation
- Feedback & Iteration
- Planning & Coordination Skills
- Effective Communication

KEY TAKEAWAYS

1

Rapid prototyping and testing is a successful approach to see whether something works or not before committing financial and human resources to it, especially when time is a constraint.

For example: Design sprint guides a practitioner through the rapid prototyping and testing process while taking into account user needs and feedback at every step of the solution building process. This helps increase the impact of the solutions/strategies implemented.

2

Multidisciplinary participation is the key to co-creating holistic solutions that are feasible, affordable and easy to implement, and that take into account the challenges and needs of both, supply and demand side stakeholders.

For example: It is important to keep in mind the gaps and opportunity areas emerging from varied perspectives on the table. This increases the relevancy of the prototype concepts and offers a multidimensional lens to the brainstorming process and first fidelity prototype designs.

3

Having clarity on what aspects of the prototypes to test and with whom is crucial. Developing a low fidelity prototype and introducing incremental improvements based on regular user feedback is a time and cost effective way that enhances the relevancy and impact of the solutions.

For example: Defining the prototype testing parameters such as user experience, content localization and relatability, concept clarity, value proposition, etc, helps gain focused feedback, thus, highlighting areas of pivot and improvement during the initial solution building phase.

Vaccination Roll Out in RECOVER Bihar

SUPPLY SIDE PROCESSES

Micro-plan Preparation
The Block Coordinator (BC) prepares a micro-plan for 3/4 villages with the PHC data operator. The plan has vaccination session dates, VMC and verifier names, no. of beneficiaries, requirement of vials & other logistics.

Injection Load Calculation
The Block Health Manager confirms ANM availability and assignment. After injection load calculation (200 beneficiaries per ANM), the plan is final and is sanctioned by the MOIC.

Vaccination Vial Collection
On the day of the vaccination, the Cold Chain Manager provides the number of vials as per the micro-plan sheet. If there are 75 due, vials for 85-90 beneficiaries will be provided.

AVD delivers Team & Vaccine
The BC, the PCI verifier, and the assigned ANM leverages the Alternate Vaccine Delivery (AVD) vehicle by PCI to deliver the vaccination team and vials safely to hard-to-reach and far off villages.

Strong communication, rapport building and coordination with the supply-demand side stakeholders was the crux of how we rolled out implementation. The teams had to be agile and think on their feet - if the beneficiaries didn't show up, the vaccine vials had to be diverted to avoid wastage; if the ANMs were not available, CHOs had to be requested; or if the session sites had issues, community influencers had to be leveraged to find an alternative. While our field teams consistently tackled such challenges, our processes attempted to draw convergence between the supply and demand side.

Certificate Distribution
In hard-to-reach areas where there is limited network and digital access, the certificates help the supply-side stakeholders immediately learn the beneficiaries status of vaccination.

Post-vaccination Care
In hard-to-reach areas with limited access to PHC, our field team supports by transporting ANM for vaccination administration and provides VMC with the local PHC rapid response numbers to disseminate.

Line Listing
The VMCs create line listing and identify the due population, along with their reason for not taking vaccination.

Draw Convergence between Supply & Demand

On-site Vaccination
Based on the micro-plan details and beneficiary availability, session sites are organized by the BC, verifiers, and VNM with the support of PHC and the PCI District Coordinator.

Door-to-Door Vaccination
After the camp, door-to-door vaccination is undertaken for those who cannot come to the session sites, like persons with disability, elderly, or women who don't feel comfortable stepping out of their homes.

Hyper-local Camps
Set-up hyper local camps for areas where the houses are at a distance from each other. Also, a middle ground between door-to-door vaccination (to address ANM fatigue) and session sites (to address accessibility).

Certificates given post Vaccine administration
Vaccine certificates are distributed at the session site. If there is no electricity or in case of door-to-door vaccination, the certificates are distributed at the doorstep few days after.

Special Groups Identification
The VMCs create a due list of general and special group beneficiaries. The list helps identify high refusal and vulnerable groups like pregnant & lactating women, chronically ill, the disabled, elderly, and migrant workers.

Home Sticker Application
The VMCs and the verifiers go door to door pasting home stickers as per the due list. All follow-up visits are recorded on the sticker for tracking the progress with individual beneficiaries.

Targeted Counseling
Mobilising the community using the VMC Counseling Guide promoting empathy forward methods, leveraging trusted family members and community influencers.

Beneficiary Preparedness
Distribution of mobilisation tokens to acquaint the beneficiaries with session site details and also provide them preparedness tips to avoid AEFI.

Proof of Vaccination
The beneficiaries demand certificates as they require it for employment or even to show at the PHC as proof of vaccination.

Post-vaccination Reassurance
The VMC checks in with the vaccinated beneficiaries, prioritizing the chronically ill and the elderly. Those with mild symptoms are given paracetamol and the AEFI cases are connected to the nearest PHCs.

DEMAND SIDE PROCESSES

PRE VACCINATION

DURING VACCINATION

POST VACCINATION

Adapting implementation as per evolving priorities

4

Chapter FOUR

Practicing AI on-ground keeping the three guiding principles in mind

Once the intervention tools and strategies were deployed across all 10 project districts, our teams met with a whirlwind of challenges that demanded flexibility and an agile mindset. As the project progressed, the developed processes, designed tools, and deployed strategies had to be rapidly iterated and adapted as per shifting priorities.

The evolving nature of barriers, the changing vaccination protocols, and the continuous inflow of nuanced stakeholder-specific learnings guided our implementation pivots. Constant communication and spirit to collaborate between PCI India and the Vihara team set a cyclical rhythm of timely feedback reception and its integration into the program design, thus improving service delivery. Working in an integrated manner with the System gave us the opportunity

to acquaint the government actors with the value of our collaterals and targeted strategies. Furthermore, the data driven framework (mentioned in Chapter 2) that our teams had developed became a vital instrument to create and alter action plans quickly. Thus, applying the three guiding principles of Human Centered Design, Collaborative Systems Thinking and Agility and Iterative Execution, we were able to draft how AI can be successfully applied to public health programs. This chapter is an exemplar of that.

How we executed Adaptive Implementation (AI)?

In the previous chapters, we have established that the traditional implementation methodologies might not be the best way to approach a project that requires agile and iterative response delivery. Our AI approach stands apart because of the following core tenets:

- ◉ **Collaborative mindset and empathy**
- ◉ **Constant learning and unlearning**
- ◉ **Flexibility, and not being 'attached' to your solutions**
- ◉ **Open-mindedness and spontaneity to be able to think on your feet for alternative solutions**
- ◉ **Iterative and agile spirit for rapid adaptations**

As a result of the aforementioned tenets, our teams under RECOVER Bihar were able to successfully roll out strategies and adapt them to newer priorities and challenges throughout the project life-cycle. This chapter exhibits the execution of these tenets in a variety of ways for you to consider as basic hygiene points while practicing AI in your programs.

The RECOVER Bihar team commuting to Paterwa village in Bairiya block (West Champaran) located across the Gandak river towards the UP border to organize vaccination sessions.

1 CREATING IMPACT AT INDIVIDUAL AND SYSTEMS LEVEL

In the previous chapters, we have time and again reiterated the value of cross-disciplinary collaborations and how they boost the impact of any intervention. At every step of the vaccination effort, our field teams worked in an embedded manner with the government. As our processes became more resilient, the frequent and transparent communication with the supply side actors strengthened their trust in us and our work. The daily meetings with the block level officials became an avenue to share a blueprint of new mitigation strategies for vulnerable, hard-to-reach and high refusal populations; and the emergent positive outcomes justified the value of our practices. **This symbiotic dynamic made it possible for us to showcase the value of our work at the State level which was an opportunity to share our best practices, tools for systemic application and create a lasting impact.**

**Training the ASHA-ANM cadres**

VIDEO

One of the supply-side gaps we consistently encountered was limited capacities of the FLWs to address high inquiry stakeholder specific concerns. This gap in capacity building was mainly due to the overburdened health system and the difficulty in coping with the rapidly changing protocols. **As a step to strengthen the capacities of these rural health cadres, PCI India team organized training sessions for ASHA and ANM.** These trainings conducted in collaboration with the Primary Health Center (PHC) staff, were conducted across all 50 project blocks. Facilitated by the District and Block Coordinators, these trainings provided the participants with tools developed under RECOVER Bihar such as the counseling guides and FAQs which promoted empathy forward techniques, addressing all their mobilization related concerns. This also strengthened the relationship and and improved the communication between them and the field team, which yielded higher vaccination rates.

The Kharka village had one of the lowest COVID-19 vaccination coverage in the Runnisaidpur block of Sitamarhi. Therefore, the District Magistrate asked the Nodal Officer and the Medical Officer In Charge of the block to leverage one of the external agencies working on-ground. **As the PHC team had sound visibility into the RECOVER Bihar work, we were trusted with the task of increasing the vaccination uptake in Kharka.** Well versed with the developed protocols and strategies, our field teams first approached the village head and the 13 ward members. A separate vaccination team for each ward was created consisting of PHC provided ANMs and PCI recruited verifiers. These 13 formulated teams along with the 13 ward members went door-to-door in their respective wards and successfully achieved 100% vaccination coverage (dose - 1) throughout the Panchayat in one day.

Systemic Impact of RECOVER Bihar

CASE STORY
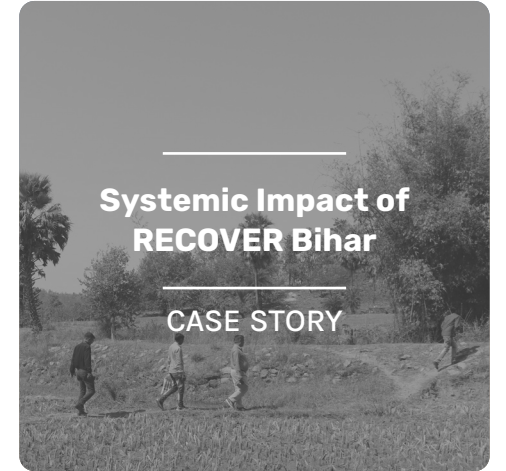
2 RAPID FEEDBACK COLLECTION, MEASUREMENT AND IMPROVEMENT

The concept of failiure, learning, and iteration based on user feedback for solution improvement is still in its nascent stage when it comes to health and development programs. However, **a key component of AI is a robust feedback mechanism for timely feedback generation and an MLE plan that evaluates program effectiveness and outcomes, as well as lived experience of beneficiaries.**

During the course of the project, Vihara team conducted field visits at regular intervals to monitor the usage of tools deployed and delve deeper into some of the team challenges across different districts. These were then immediately communicated to the PCI India team and ways to address the emergent problems were co-worked upon with both the teams working cohesively from PCI India's Patna office.

Following are some of the suggestions on how to collect, measure and improve upon the feedback at regular intervals:

2.1

Consider collecting feedback at regular intervals to gauge response of beneficiaries, gaps in service delivery, and emergent challenges, especially around operations and immediate team concerns.

2.2

Develop a robust Monitoring, Learning and Evaluation (MLE) plan that outlines indicators that not only look at aspects of acceptance, norm shifts, uptake of interventions, etc. but also measures against soft and experiential indicators such as service appeal, desirability, engagement, ease of navigation, satisfaction, coherence, trust, safety, sense of having control of one's decision, being heard and understood, etc. **Such rapidly generated empirical learnings will guide you in making necessary refinements to the solutions** to effectively attain your program goals.

In RECOVER Bihar, there were different ways in which program effectiveness and outcomes were being evaluated. **Success was not only measured against indicators like vaccine uptake, refusal breaks and such, but even beneficiary experience, consent, comfort, and such were considered.** Furthermore, the seamless communication and understanding between teams enabled concurrent assessments for quick improvements. For instance, when the Vihara team visited Jamui, they observed that the roll-out of various activities, including tool deployment was suboptimal, which impacted the beneficiary experience and the important service delivery touch-points. This was immediately communicated to the PCI India team, who quickly intervened and helped tweak strategies to mobilize and vaccinate beneficiaries in hard-to-reach areas of the district.

3 ADAPTING TO EVOLVING PRIORITIES AND EXTERNAL FACTORS

3.1

Often when working on the field, several unanticipated external factors such as communal riots, political protests, natural calamities and such may significantly disrupt the project flow. In such situations, the teams are required to be spontaneous and think on their feet. Some of the ways to adapt would be:

3.1a **Assess the current scenario and take appropriate measures to keep your teams safe.** Encourage your teams to avoid participating in any activities while at work, that may pose a threat to them and everyone around.

3.1b **Recruit team members from the community to work with.** These can be individuals who possess required skills or are open to learning them for the job; and are able to move around and carry forward your work.

3.1c **If the internet is down, rely on traditional modes of communication to connect with teams.** Use available resources (such as phone calls instead of emails to share updates, create a manual plan using pen-paper) to brainstorm mitigation strategies, and make necessary adjustments to your processes.

In the month of June, Bihar experienced political riots in opposition to the Agnipath scheme rolled out by the government. This led to a lot of commotion across districts, as a result of which the internet was banned for three days. In light of this, the DCs used alternative ways to organize vaccination sessions, while ensuring safety of all team members. Since most of the protests were limited to urban areas, it was comparatively safer to hold sessions in villages. However, teams were instructed to prioritize their own safety, along with that of the beneficiaries, by avoiding main roads where protests were taking place and using alternative routes to reach villages. In addition to this, teams were also advised to avoid working till late evenings; use personal conveyance (preferably bike) instead of AVD for commuting; and refrain from participating in discussions that may lead to arguments, jeopardizing everyone around.

On the other hand, it was challenging for teams to communicate with each other. They were unable to use mail or Whatsapp; access CoWIN portal to verify beneficiary details; or download vaccination certificates. However, teams acted with agility and altered strategies to this situation. For instance, the West Champaran team decided to vaccinate beneficiaries based on their first dose certificate or phone notification only, and update personal details on CoWIN later. The DC directed the block team to implement this strategy, while liaising with respective MOIC and BHM by sharing their plan and reassuring everyone's safety. As a result, the vaccination process continued despite the challenges the field teams were grappling with. Moreover, the presence of VMCs in the communities kept the block and district teams updated on the situation in villages and helped them plan session sites safely.

In addition to above unforeseeable factors, various external factors such as constantly changing government mandates around vaccination, latest scientific findings, access to digital technology and unverified information and such can also affect beneficiary decision making around vaccination uptake. In such situations, **the implementation teams need to build seamless channels of communication with and listen to the on-ground village level teams to be able to co-create relevant plans of action and communicate necessary updates with agility.**

To hasten the trust building process with rural communities and approach their concerns with empathy, our teams leveraged the support of community influencers (political, religious, youth, etc.) through the help of VMCs. This strategy was especially effective when the vaccination eligibility criteria were changing swiftly. For example, when the 12-14 year age group was declared eligible for vaccination, leveraging the school teachers proved to be of big help to counsel students and parents who feared that vaccines might harm their children. Similarly leveraging the support of a revered priest in Khangaon, Bhojpur, helped us counsel guardians of out-of-school children.

Leveraging teachers for vaccination at school

CASE STORY

4 ASSESSING BENEFICIARY MOTIVATIONS TO ENCOURAGE BEHAVIORAL CHANGE

As your program progresses, there may still be a set of beneficiaries that may be left out or reluctant to adopt your intervention. Often, risk perception among marginalized communities is low, along with suboptimal health-seeking behavior and competing priorities that take precedence over health. As a result, they may not see value in your intervention, as it may often be intangible in nature and/or have long-term effects. In such cases, assess the behavioral shifts needed and corresponding beneficiary aspirations, and test what strategies work best for the beneficiaries.

A Randomized Control Trial (RCT) was conducted in collaboration with Yale University under the RECOVER Bihar program to assess strategies for effective vaccination uptake. A total of 249 villages under RECOVER Bihar were selected as RCT villages, including 83 control villages. In 37 villages, coupons of Rs. 200 were distributed; in 18 villages, coupons of Rs. 150 per beneficiary and the ASHA Workers were given Rs. 50 per beneficiary mobilized as an incentive. In 18 of the villages dry fruits were distributed at the vaccination camps and in 57 villages in Arwal mask distribution was undertaken. For daily wage workers who had concerns around missing work and wages, these coupons provided a safety pillow, encouraging them to get vaccinated. Similarly, pregnant and lactating women from lower income households appreciated the grocery coupons and dry fruit distributions for their health and that of the child.

5 MAKING ACCESSIBILITY CENTRAL TO SERVICE DELIVERY

A holistic health program considers accessible service delivery as an integral indicator of its successful implementation. As mentioned in the previous chapters, **accounting for the needs of extreme populations in the program design is necessary, and that includes providing them easy access to your services, thus improving their experience and offering them avenues to exercise their right to basic healthcare.**

In RECOVER Bihar, making services accessible to special groups, vulnerable and hard-to-reach populations was one of our top priorities. We learned that some of the barriers of hard refusal cases among special groups and those situated in difficult geographies were limited access to relevant information, trust deficit in the mobilizer, inconvenience in the existing processes and limited access to vaccine and post vaccination care. Engaging with supply side stakeholders, we gauged what hadn't worked previously and why, and placed community frustrations at the center of designing positive vaccination experiences.

After the Ghar-Ghar Dastak campaign, it became difficult to mobilize beneficiaries to visit PHCs or local vaccination camps, as people became used to door-to-door vaccination. **The teams turned to the concept of hyper-local camps to address this behavioral shift. Hyper-local camps are small camps set up at the intersection of 4-5 houses. These camps encourage the nearby residents to get vaccinated within the vicinity of their house.** Such camps became a strategic midway, as it limited the door-to-door vaccinations to special groups, thus reducing the physical burden on ANMs at the same time ensuring that vaccines are accessible to all.

**Reaching
the hard-to-reach**

CASE STORY

While the State was doing an exceptional job to rapidly increase the vaccination uptake, support was needed to reach the unreached. Areas in Jamui, Kaimur, Bhojpur and most of the project districts have difficult geographies - hilly regions, forests, water bodies and broken roads. This made it difficult for the PHC officials to provide access to pre-vaccination counseling, vaccination administration and post-vaccination care. Our field teams worked in an embedded manner with the communities, and provided the local mobilizers with specific guides and tools to counsel hesitant village residents. Most importantly, **the teams made it a point listen to and learn from what the village residents were saying and used their inputs to problem solve.** For example, in the extremely hard-to-reach Bhaluburan village situated on the hilltop in Chainpur block of Kaimur, building trust with the community was difficult. So the team leveraged their driver's support to break the first barrier of communication. Basis interactions with the village residents the team learned that the only way to reach Bhaluburan was through a tractor. The team's open-minded approach and spontaneity resulted in Bhaluburan residents having the first COVID-19 vaccination camp in their village.

Mindsets & Attitudes

- ■ Open-Mindedness
- ■ Flexibility to Learn & Unlearn
- ■ Ability to Channel Empathy
- ■ Adaptability
- ■ Collaborative Mindset
- ❑ Creative Confidence
- ■ Agility
- ■ Embrace Ambiguity

Ways of Thinking

- ■ Systems Thinking
- ■ Divergent Thinking
- ❑ Convergent Thinking
- ■ Critical Thinking
- ■ Quick Thinking
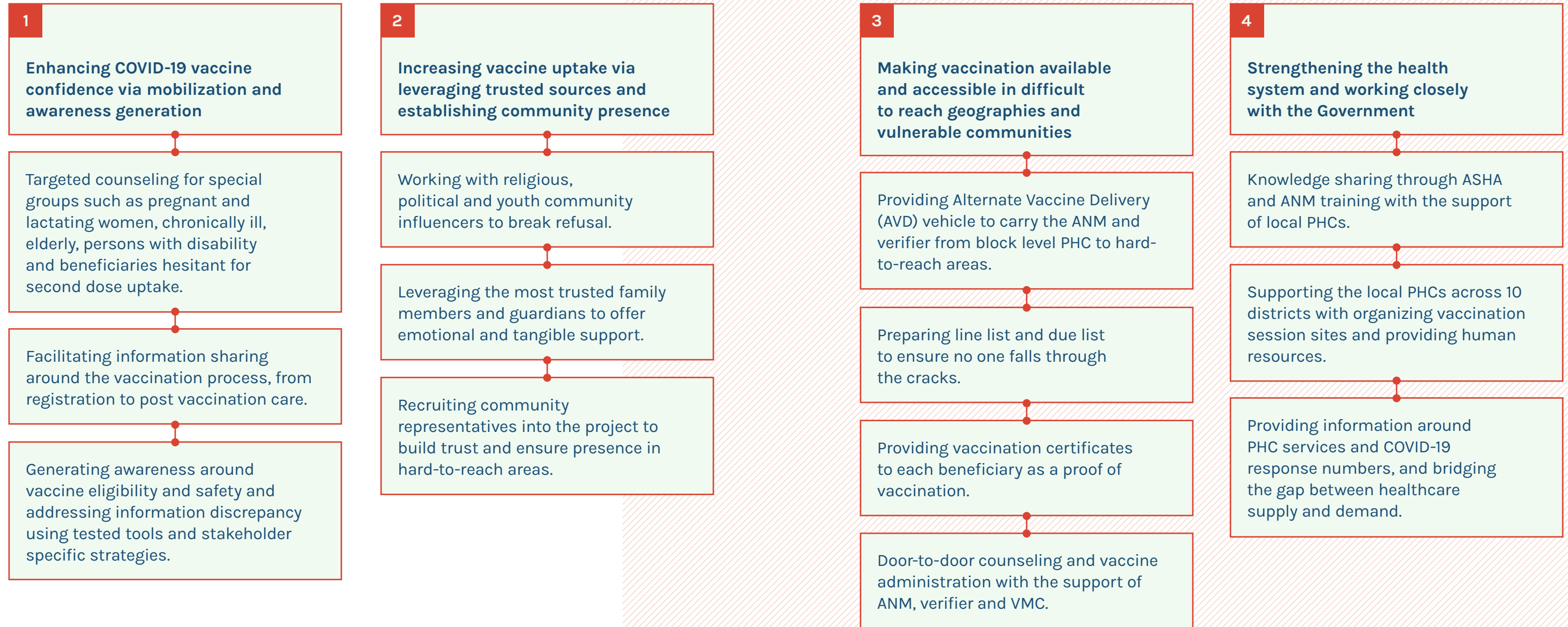- ❑ Visual Thinking
- ■ Imagination

Skills & Methods

- ■ Listening & Observation
- ❑ Co-Creation
- ❑ Rapid Prototyping
- ❑ Data Analysis & Visualization
- ■ Facilitation
- ■ Feedback & Iteration
- ■ Planning & Coordination Skills
- ■ Effective Communication

KEY STRATEGIES - RECOVER Bihar

The AI approach helped us cater to hard-to-reach, hesitant, vulnerable and marginalized populations.

1

Enhancing COVID-19 vaccine confidence via mobilization and awareness generation

Targeted counseling for special groups such as pregnant and lactating women, chronically ill, elderly, persons with disability and beneficiaries hesitant for second dose uptake.

Facilitating information sharing around the vaccination process, from registration to post vaccination care.

Generating awareness around vaccine eligibility and safety and addressing information discrepancy using tested tools and stakeholder specific strategies.

2

Increasing vaccine uptake via leveraging trusted sources and establishing community presence

Working with religious, political and youth community influencers to break refusal.

Leveraging the most trusted family members and guardians to offer emotional and tangible support.

Recruiting community representatives into the project to build trust and ensure presence in hard-to-reach areas.

3

Making vaccination available and accessible in difficult to reach geographies and vulnerable communities

Providing Alternate Vaccine Delivery (AVD) vehicle to carry the ANM and verifier from block level PHC to hard-to-reach areas.

Preparing line list and due list to ensure no one falls through the cracks.

Providing vaccination certificates to each beneficiary as a proof of vaccination.

Door-to-door counseling and vaccine administration with the support of ANM, verifier and VMC.

4

Strengthening the health system and working closely with the Government

Knowledge sharing through ASHA and ANM training with the support of local PHCs.

Supporting the local PHCs across 10 districts with organizing vaccination session sites and providing human resources.

Providing information around PHC services and COVID-19 response numbers, and bridging the gap between healthcare supply and demand.

Knowledge Management

in RECOVER Bihar

✦ District Profiles

Each district under RECOVER Bihar presented its own set of challenges and required distinctive and differentiated intervention approaches. Our 'District Profiles' series provides an overview of 10 different districts, highlighting the diverse communities served, the number of beneficiaries vaccinated, the varied block-wise barriers and group-specific strategies employed.
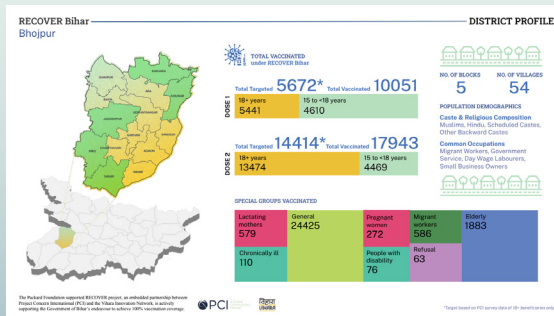
★ RECOVER Diaries

Up-close and detailed process documentation of how the team actually works on the field was important to identify the nuances that teams were adopting in their approaches depending on the contextual constraints. The 'RECOVER Diaries' zooms into the efforts and progress of the teams at the village level, highlighting their struggles via case stories providing glimpses of field teams ability to adapt and work in close collaboration with the system.

✴ Champion Stories

Embedded partnership with the communities was integral to adopt a people centered-lens to intervention implementation on the field, right from pre-vaccination counseling to post-vaccination care. In this endeavor, leveraging community members played a vital role in helping our teams build rapport and trust with the people. The 'Champion Stories' are audio visual accounts of some such influencers who offered their support without any form of incentive in return and helped our field teams towards reaching 100% vaccination coverage.

✴ Playbook

Such extensive and consistent documentation of the strategies, case stories and field findings paved the way for the 'Playbook'. We were able to capture our implementation process meticulously and parallely integrate the design and implementation side of things. This gave us the time and the opportunity to reflect on our many learnings. We kept embedding these learnings as a way to define our Adaptive Implementation approach.

"If the modus operandi, IEC Materials, and overall approach and strategy being used by RECOVER Bihar team is scaled to other areas, it will yield better (COVID-19 vaccination) results."

DR. VIDYA BHUSHAN PRASAD
District Immunization Officer, Arwal