Using Behavioural Science & Human Centered Design to Boost COVID-19 Vaccination

Insights and Strategic Interventions

12th July, 2021
Executive Summary

- The study aims to use a behaviour science and human centred design approach to understand the barriers to uptake of COVID-19 vaccines, and use this fundamental understanding to design interventions to drive vaccine uptake in Punjab and Maharashtra. Our methodology involved remote in-depth interviews with stakeholders, and users with barriers to COVID-19 vaccination in rural and urban Nagpur, Bathinda and Faridkot.

- For most vaccinations in India, the decision is a default. However, taking the COVID vaccine which is new and unfamiliar and introduced within this uncertain, dynamic environment, is an active decision to be ‘made’ and therefore deliberated. The COVID pandemic is a dynamic context, in terms of the disease spread, government rules, and constant flux of new information, which influences the COVID risk perceptions and compliance or mitigation measures engaged in, especially vaccine uptake.

- The formal government communication around the vaccine has been perceived to be clinical, operational, generalised and not catering to individuals’ different needs. Therefore, individuals default to existing vaccine mental models and seek out information from informal news channels (i.e. social media) and others’ ‘lived experiences’, which has led to incorrect beliefs around the purpose of the vaccine (protection vs. prevention vs. treatment), misinformation and perceived high negative consequences of taking the vaccine.

- The vaccine decision is based on a feeling of risk and reward than an objective analysis. The trade-off considered is two fold, for taking the vaccine and for not taking the vaccine, as the vaccine is perceived as a deliberate action taken to disrupt the current ‘healthy’ state or status quo. The risks of taking the vaccine are high (due to the salient negative stories) with low to no reward and the rewards of inaction are high, with low risk therefore inaction is favoured. This is not an individual decision, rather influenced by family members, friends and employers.

- These decisions manifest as 4 types of barrier narratives around why they do not want to take the vaccine.
  - Vaccine is irrelevant: Perceive themselves to be at low risk of COVID, especially of severe illness as they feel they have high immunity and are healthy.
  - Vaccine is scary for me: Perceive high risk of COVID, and they anticipate several risks of worsening health condition from the vaccine.
  - Vaccine is a ‘costly’ alternative: Perceive mid to high risk of COVID but consider their current actions to be sufficient to manage it. They feel the vaccine will disrupt the sense of control and certainty they have managed to achieve.
  - Vaccine is a scam: Perceive low to no risk of COVID, they harbour distrust in the government, health system and pharmaceutical companies.

- The 4 strategic directions to drive vaccine uptake includes addressing information gaps, managing misinformation, enabling better trade-offs and encouraging advocacy and adherence. This study has identified 12 interventions in total and detailed one key intervention addressing each of the strategic directions.
## Intervention Summary

<table>
<thead>
<tr>
<th>Addressing information gaps</th>
<th>Managing myths &amp; misinformation</th>
<th>Enabling better trade-offs</th>
<th>Encouraging advocacy and adherence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Barrier Focused Communication Campaign</strong></td>
<td><strong>Localized Community Misinformation Management</strong></td>
<td><strong>Customized Communication Approach for Field Workers</strong></td>
<td><strong>Vaccine Experience - Behavioural Guidelines</strong></td>
</tr>
<tr>
<td>Reframe Uncertainty as an Opportunity to Act</td>
<td>Manage AEFI and Related Narratives Locally</td>
<td>Provide Incentives to Build Coping</td>
<td>Ensure Adherence by Roadmapping Next Steps</td>
</tr>
<tr>
<td>Create Positive Stories to Reduce the Dissonance</td>
<td></td>
<td>Create Cost for Inaction</td>
<td>Highlight Family Responsibilities for Complete Protection</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Build Second Shot Commitment Using Past Behaviour</td>
</tr>
</tbody>
</table>

**Detailed Interventions** | **Other Critical Interventions**
Detailed Interventions

Illustrative examples of artefacts, message framings as well as communication and service delivery changes along with principles and guidelines to be followed. This is to enable easy visualisation and uptake by relevant teams for creating implementable versions.
Barrier Focussed Communication Campaign

The communication on vaccines by the government has been limited to clinical and operational aspects which does not cater to individuals barriers. A shift in communication to address this has been illustrated in the form of posters. The framing and hierarchy of information represented needs to be leveraged for all other channels of communication as well.

Target Group
- Relevant for all eligible for vaccination

Channel
- Posters in frequented locations such as grocery shops, hoardings, wall paintings, newspaper ads, radio, social media, phone caller tunes, vaccination centres
Barrier Focussed Communication Campaign

As the communication has been clinical and operational, individuals do not see a clear benefit of taking the vaccine. The campaign vividly represents relevant benefits in a hierarchy which is meaningful to individuals.

- **Primary message, indicate an emotional benefit**
- **Secondary message, indicate medical benefit to avoid confusion with complete protection**
- **Tertiary message, guidance on continuing COVID Appropriate Behavior (CAB)**

Use realistic illustrations of people they can relate to, needs to be representative of urban/rural and the state.

Visually cue having been vaccinated through the left arm and icon of vaccine.

For Illustrative Purposes only.
Barrier Focussed Communication Campaign

The communication has been generalised (all 18+) and individuals question its benefit and appropriateness to themselves. The campaign uses customised benefits to counter specific barriers.

**Primary message, communicate benefit visually through relatable photos of individuals like them**

**Primary message, communicate a benefit specifically relevant to them**

**Tertiary message, communicate CAB to be continued**

**Secondary message, communicate medical benefit**

**For Illustrative Purposes only.**

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**Vaccine is a scam:**
Drive benefit of being able to focus on work, earning and studies without hitch

**Vaccine is scary:**
Counts fear of worsening health condition by driving benefit of more time with family

**Vaccine is not for those with comorbidities:**
Highlight benefit of vaccine especially to protect individuals with comorbidities

**Vaccine is a ‘costly’ alternative:**
Leverages identity of prime member of family and benefit of taking care of them
Barrier Focussed Communication Campaign

Side-effects after vaccination, a key barrier is addressed through communication of it being familiar, common and providing clear action to cope.

Primary message, drive familiarity around the occurrence of side-effects by likening it to child vaccination and highlighting its normalcy.

Secondary messaging, communicate clear action to manage side-effects.

Tertiary message, communicate CAB to be continued.

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Localized Community Misinformation Management

COVID vaccine has been developed and rolled out rather quickly and under a lot of people’s attention resulting in increased flow of information regarding the vaccine. While some of this information is relevant and correct, there are also emerging myths regarding vaccine in the communities.

Misinformation / myths spread in the communities and are likely to stick if they are only disregarded as untrue and untrustworthy. There is a need to systematically debunk it.

In the communities, these pieces of misinformation spread fast given the hot state of decision making. New myths and misinformation may originate and spread rapidly and need to be tracked by the people from the community so that these can be debunked in due time.

Target Group
Relevant for individuals with any of the 4 barrier narratives

Channel

Urban - Society leaders, religious community leaders, youth clubs, NGOs, medical shop owners, formal and informal doctors

Rural - Sarpanch, members of the panchayat, public school teachers and principals, local dispensaries, dawakhanas, formal and informal doctors, NGOs
Localized Community Misinformation Management

This intervention has been carefully designed to identify trusted people and channels in the community, leverage them to reduce spread of misinformation and debunk the existing ones.

The Identified trusted agents, state representative and a local medical expert would form a misinformation committee to debunk existing myth and track new myths to counter through the

**IDENTIFYING AND ACKNOWLEDGING THE TRUSTED PEOPLE IN COMMUNITIES**

Identify and acknowledge people in the specific communities who understand the relevance of COVID vaccine and are trusted by the community.

People trusted due to their

- Expertise - formal/informal doctors, medical shop owners, dawakhanas and local dispensaries
- Educational background - public school teachers and principals
- Social work - NGOs and youth clubs
- Religious influencers

**SYSTEMATICALLY DEBUNKING THE MISINFORMATION**

Myths are likely to continue to stick if we they are only tagged as questionable or from an untrustworthy source. Systematically debunk the misinformation by using a structure which involves:

- Leading with the fact
- Warning them about the myth
- Explaining the fallacy
- Reinforcing the fact before ending the conversation

**TRACING ANY NEW MISINFORMATION**

From the end users, identified trusted agents provide feedback and would actively share new prevalent myths and misinformation with the committee, which experts would provide relevant facts to help in debunking the same.

The new misinformation heard in a high frequency can be shared with the committee with following details:

- High frequency new vaccine myth/misinformation (as shared by the community)
- What could be the potential reason / source of this misinformation?
- How can we debunk the misinformation? (Ideas if any)
Localized Community Misinformation Management

Myths are likely to continue to stick if they are only tagged as questionable or from an untrustworthy source. With repeated instances of misinformation, it is important to debunk it with a systemic structure.

State the Fact:
Lead with a few words, by stating a relevant fact about the vaccine that helps in understanding what the vaccine is while we later state what it is not.

State and Debunk the Myth:
Repeat the myth only once and state it as false. Explain why the misinformation is usually considered to be correct in the first place and why it is now clear it is not the correct information.

Reinforcing facts
Restate the fact again, so the fact is the last thing people process.

The structure and example

**State the Fact**

कोविड की वैक्सीन के बारे में आपकी क्या राय है?

मैंने सुना है की टीका लगवाने से लोगों की मौत हो जाती है।

**State facts**

कोविड-१९ का टीका लेने पर गम्भीर कोविड और उसके कारण मृत्यु होने की संभावना कम होती है।

**Negate the myth and explain fallacy**

यह अफवाएँ हैं की लोग वैक्सीन की वजह से मर रहे हैं, वैक्सीन गम्भीर कोविड और उसके कारण मृत्यु की संभावना कम करती है।

अक्सर टीके के बाद हुई मृत्यु उसके कारण नहीं, किसी और वजह से होती है, उन्हें कोई तकलीफ होगी जिसके बारे में उन्हें पता नहीं होगा। ऐसा लगता है की टीका लेने के बाद हुई है तो उसी कारण हुई होगी, पर ज्यादातर ऐसा नहीं होता।

**Reinforce the fact**

क्या आपको पता है की हमारे गाँव में XX लोगों ने टीका लगवा लिया है, और एक दुम ३०क हैं। और पूरे देश में, XX लोगों ने टीका लगवाया है जिसमें से सिर्फ 0.009% की कुछ दिकर्ता का सामना करना पड़ा।
A list of myths and misinformation have been collated to provide examples of how the structure can be used and what are the facts that can be used to debunk the myths. This list will need to be updated based on any new misinformations tracked.

State the fact:
Lead with a few words, by stating a relevant fact about the vaccine that helps in understanding what the vaccine is while we later state what it is not.

State and debunk the myth:
Repeat the myth only once and state it as false. Explain why the misinformation is usually considered to be correct in the first place and why it is now clear it is not the correct information.

Reinforce the fact:
Restate the fact again, so the fact is the last thing people process.

<table>
<thead>
<tr>
<th>अगर वो कहें</th>
<th>तो आप कहें</th>
</tr>
</thead>
<tbody>
<tr>
<td>मैंने सुना है की टीका लगवाने से कोविड हो जाता है।</td>
<td><strong>FACT:</strong> कोविड का टीका हमारे शरीर की कोरोना वाइरस से लड़ने में मदद करते हैं। वैक्सीन हमारे शरीर को वाइरस से लड़ना सिखाती है।</td>
</tr>
<tr>
<td><strong>MYTH:</strong> यह अफ़वाएँ हैं की वैक्सीन से कोवड होता है। किसी भी वैक्सीन से आपको करोना नहीं हो सकता।</td>
<td><strong>FALLACY:</strong> टीका बनाने के लिए वाइरस की कमजोर जाती इस्तेमाल होती है। उसके शरीर में झालते हैं ताकि आपकी इम्यूनिटी वाइरस से लड़ना सीख जाए। इससे आपका शरीर बिना बीमार हुए, रोग से लड़ना सीख जाता है। कभी कभी इसकी वजह से हलचल बुख़ार आ जाता है, पर यह होना मामूली बात है और इससे पता चलता है की आपका शरीर वाइरस से लड़ने के लिए तयार हो रहा है।</td>
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</tbody>
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See detailed table in appendix
Customized Communication Approach for Field Workers

Provide a new communication approach to ASHAs or Community Health Workers to better utilize the existing one-on-one conversation channel to counter various vaccine barrier narratives through vivid and relatable stories, and address myths to drive a favourable risk reward tradeoff for vaccine uptake.

Target Group

Relevant for individuals with any of the 4 barrier narratives

Channel

- Videos shared through Whatsapp
- ‘Reference Sheet’ images shared through Whatsapp

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13
### Customized Communication Approach for Field Workers

The new approach can be conveyed through short engaging whatsapp videos. The video would involve an experienced ASHA worker talking through the new approach to aid conversation and an example conversation. This will be supplemented with ‘reference sheets’ shared on whatsapp or printed that can be easily referenced.

The aim of the interaction should move to understanding the barriers and myths held by the user, and based on their responses to use the specific barrier benefit or myth debunking.

<table>
<thead>
<tr>
<th>UNDERSTAND THEIR VACCINE BARRIERS AND MYTH</th>
<th>Rather than</th>
<th>Say</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting the conversation with why they should get vaccinated</td>
<td>Start with understanding what they actually think about the vaccine and what their barriers or myths are</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADDRESS THEIR SPECIFIC BARRIER AND MYTH</th>
<th>Rather than</th>
<th>Say</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giving an overall vaccine benefit</td>
<td>Provide a benefit of the vaccine and a need that is related to the specific barrier/reason they give</td>
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<tr>
<td>Giving only your own vaccination example</td>
<td>Tell them a vivid experience of another related relevant person, with a similar experience and why they took the vaccine</td>
<td></td>
</tr>
<tr>
<td>Shutting down the vaccine related myth</td>
<td>Start with the simple facts in a easy way and explaining the fallacy</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REINFORCE SPECIFIC VACCINE BENEFIT</th>
<th>Rather than</th>
<th>Say</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focussing on attitude change</td>
<td>Reinforce the specific vaccine benefit, use the number of people who have already taken the vaccine in the village/town/state to direct action for taking the vaccine</td>
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</table>

Acknowledge the role of ASHA in managing the pandemic, and introduce this approach to aid difficult conversations to drive vaccine uptake. As all conversations are different, this is a simple flow that can be customised to use in any conversation.
लेकिन आपको पता है ना की कोवड हो सकता है, और अपने घर के अन्य लोगों को देने का भी खतरा होता है। पीछे वाली गली में, एक आपकी उम्र का लड़का रहता है। बिलकुल आप ही की तरह वो भी अच्छा खान-पान रखता था और अपनी हम्मुदरादी का खास ख्याल रखता था। इकलौता जवान लड़का होने के कारण, उससे अक्सर घर का सामान लेने, दफ्तर का काम करने घर से बाहर जाना पड़ता था। कोविड का कितना खतरा है यह तो आप जानते ही हैं। उसको इसी तरह की काम से बाहर जाने के कारण, कोविड हो गया और घर वालों को भी उससे हो गया। घर में दादी और माँ को भी हुआ। उसे और दादी को अस्पताल भरती कराना पड़ा। अस्पताल में डॉक्टर ने बताया की आगर उन दोनों ने वैक्सीन ली होती तो कोविड से लड़ने की क्षमता उसमें बेहतर होती और शायद अस्पताल जाने के नौबत नहीं आती। अब तो डॉक्टर भी समझ देते हैं की आपकी उम्र के लोगों को भी वैक्सीन लगवा लेनी चाहिए ताकि वे खुद को और परिवार को सुरक्षित रख सकें।
**Customized Communication Approach for Field Workers**

**Acknowledge specific barriers**

**Convey specific vaccine benefit:**
Rather than giving an overall vaccine benefit, provide a benefit of the vaccine that is related to the specific barrier/reason they give.

**Give related experience of others:**
Rather than telling them that you have got vaccinated only, tell them a vivid experience of another related relevant person with a similar experience and why they took the vaccine.

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### Agar vo kahhe

- मेरा शरीर बिलकुल ठीक है तो क्या ज़रूरत है वैक्सीन की?

### To Apn kahhe

- लाभ: अपने परिवार को सुरक्षित रखने के लिए // क्या आपको पता है की आपको कोविड हो सकता है और आपसे आपके घरवालों और अन्य लोगों को हो सकता है?

### Anubhav: किसी ऐसे व्यक्ति का अनुभव बताएँ जिसे कोविड हुआ हो और उससे उनके परिवार बालों को भी हो गया हो, जो की वैक्सीन रोक सकती थी?

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See detailed table in appendix
Customized Communication Approach for Field Workers

For Myths, rather than shutting down the myth, move to providing easy fact narrative and debunk myths to drive a favourable risk reward tradeoff for vaccine uptake.

**State the fact:**
Rather than shutting down the myth, start with the related facts in a simple and easy way

**Negate the myth and explain fallacy:**
Explain the myth as false and explain the fallacy and narrative

**Reinforce the fact:**
Restate the fact again, so the fact is the last thing people process.
Address vaccine myths:
Rather than shutting down the myth, start with the related facts in a simple and easy way.

Debunk the myth:
Explain the myth as false and explain the fallacy.

Reinforce the fact:
Restate the fact again, so the fact is the last thing people process.
The first shot vaccine experience is crucial to ensure commitment for second shot and advocating to others in the family and larger community.

This intervention aims to add to the existing vaccination site guidelines from a behavioural perspective, to ensure a uniform positive experience, and counter barriers at the 3 stages of the vaccine process:

- Registration
- Vaccination
- Waiting Room

Target Group
Relevant for all at a vaccination centre

Channel
Vaccination drives/camps and vaccination centres

System dependencies
High variability in organizers and types of vaccine camps and centres
Vaccine Experience - Behavioural Guidelines

At registration, ensure that the user feels safe with no visible risk of COVID infection. Drive reassurance of the vaccine decision, and allow the user to feel in control through clearing doubts and questions.

**At Registration**

- **Make the users feel safe by reducing the chances of contracting COVID at the vaccination centre**

- **Drive social proof and reassurance that all medical experts are already vaccinated**

- **Reassure the user at a time when they are feel nervous**

- **Ensure the user feels in control of their experience**

- **The presence of a doctor drives reassurance and expertise, doctor can answer any health related questions**

- **Structural changes:**
  Create guidelines to ensure vaccination camp and centres have large spaces, well ventilated indoor spaces or large open spaces. Ensure social distancing and crowd management.

- **All vaccination staff, nurse, volunteers, and doctors should be provided with badges that say ‘I am COVID-19 Vaccinated’. This should be worn at all times.**

- **Communication changes:**
  First dose taker and vaccine staff:
  “Pehla dose? Sahi decision liya aapne, chinta mat kariye, acche se ho jayega. Aap ko bukhaar, khansi ya sardi toh nahi hai? Koi bhi problem ho toh aap mujhse ya kisi bhi nurse se puch sakte hain. Agar aapko koi vaccine related ya heath related doubts hai toh doctor se bhi puch sakte hain.”

- **Drive vaccine decision confidence for the user**

- **Ensure that the user does not have COVID symptoms or is feeling unwell**
Vaccine Experience - Behavioural Guidelines

In the vaccination room, the aim should be to drive decision confidence for the vaccine decision pre jab and post jab to celebrate vaccine action, drive commitment to the second shot and encourage advocacy.

At Vaccination Room

Structural changes:
Nurse to introduce the Family Protection Card to user

Communication changes:
Nurse hands over the card pre-vaccination:
“Ye COVID-19 Family Protection Card hai, vaccine lene par COVID ki vajah se hospital jane ki ya death hone ki sambhavna kam ho jati hai, agar COVID hua toh bhi aap bahut zyada bimar nahi honge.”

Nurse post vaccination:
“Dard na hua na? Bahut accha kiya vaccine lagw liya. Aap dusri dose _ se _ tareekh ke beech lagwa sake hain, main _ (starting date) likh rahi hoon.”


“Ab aap us room mein baithiye 30 min ke liye, wahan aage ke kuch din kya karna hai bataya jayega. Aap ko koi takleef ho ya koi sawal ho toh puch sake hain.”

Prime the user to remember the jab as not too painful and congratulate the user on action

Encourage advocacy and provide some starting points to help the user come up with a diverse list

Reaffirm the vaccine pre jab to ease tension

Reinforce the second shot date, explain the time period within which they can get the dose and anchor to the start date

Encourage the use of this book as an easy tool to tell others about vaccine benefit and facilitate the conversation

Ease the nervousness post vaccination by assuring the user that information will be provided
At Vaccination

Cue the association with the mother and child protection card for those who recall

Provide a realistic relatable photo of all adult members of a family

Primary message, highlight an emotionally salient vaccine benefit of family protection

Secondary message, indicate medical benefit to avoid confusion with complete protection

Drive attention and personalization by writing the users name

Drive recall for the vaccine brand to ensure adherence to second dose and time interval

Move from weeks framing to date to help the user have a specific target to remember and better visual the time

Drive a verbal and written commitment to the second dose of the vaccine

Drive advocacy and social commitment by getting a list of family recommendations in the hot state post vaccination

Highlight the importance and need for closure to take the second dose

Acknowledge the effort and congratulate the user for taking the first dose of the vaccine, highlight the ‘first dose certificate’ as the reward

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Vaccine Experience - Behavioural Guidelines

The back page of the Family Protection Card aims to drive expectation and build coping for side effects, provide necessary information on when to seek care and reinforce continuation of CAB post vaccination.

- Create expectation of some side effects, framed as ‘normal/common’
- Primary message, provide coping for the side effects
- Ensure medical care is sought for adverse events or COVID infection is treated
- Guidelines to follow to reduce the chance of unbearable side-effects
- Offset overconfidence and reinforce continuation of CAB post vaccination

Inside Pages

For Illustrative Purposes only.

For Illustrative Purposes only.
Vaccine Experience - Behavioural Guidelines

The information room should focus on reframing and reducing expectation discrepancy from side effects, build coping, providing critical information to manage potential adverse events, reinforce compliance and encouraging advocacy.

Structural changes:
Change the framing of the waiting room/observation room/recovery room to an ‘information room’ to cue information that will be given instead of need for observation or recovery after vaccination.

During the 30 minute waiting period, the nurse / community health worker / volunteer / ASHA can brief 10 people together referring to the Family Protection Card.

At Waiting room

Communication changes:

Bahut accha kiya aap sab ne vaccine lagwa liya. Jis tarah bacchon ko vaccine ke baad bukhaar aata tha, usi tarah is vaccine ko lene ko haath mein dard ya sujan, thand lagna, bukhar, thakan, sir dard, shareer dard, pet dard, utli ho sakta hai. Ghabrane ki koi baat nahi hai, iska matlab hai ki vaccine apna kaam kar rahi hai. Agar aisa ho toh aap paracetamol lijye aur kuch samay aaram kariye. ___ dawai na le. 2 se 3 din mein ye thik ho jayega.


Jaise aap ko pehle bataya, vaccine lene se gambhir covid aur covid ke karan hospital jane ya mrityu ki sambhavna kam ho jati hai. Fir bhi hum yehi chahte hain ki aap ko covid ho hi na, isliye, mask pehna, 2 gaj ki duri aur haath dhote rehna zaruri hai.

Reinforce the need to continue CAB to offset overconfidence post vaccine.

Using child vaccine mental models to explain vaccine side effect as common.
Reframe side effects to show that the vaccine is working.
Set expectations on duration of side-effects.
Offset the low to no risk of adverse events with the high reward of protection.

Structural changes:

Change the framing of the waiting room/observation room/recovery room to an ‘information room’ to cue information that will be given instead of need for observation or recovery after vaccination.

During the 30 minute waiting period, the nurse / community health worker / volunteer / ASHA can brief 10 people together referring to the Family Protection Card.

Indicate actions to avoid
Dispel myths and avoid adverse events and untreated COVID by request PHC post 4 days
Provide data to showcase 0-low chances of adverse events

As the group calls out names, social proof will ensure follow through and trigger other members.

Toh aap sab ne kiska kiska naam likhwaya? Aap vaccine dilwakar kiski covid se suraksha karna chahte hain?
Other Critical Interventions
Addressing information gaps

What we need to do

Reframe Uncertainty as an Opportunity to Act

Why:
Given the uncertainty of the pandemic, and the dynamic vaccine information from the state, people try and make sense through biased information channels and narratives.

How:
Drive transparency by providing an explanation that allows people to understand the reason for change in communication and establish “The more we know, the better we act”. 
What we need to do

Create Positive Stories to Reduce the Dissonance

Why:
The lived narratives of side effects and adverse events are strong in the community creating a deterrence to vaccination.

How:
Create a safe space for sharing vaccination stories post a vaccination camp reinforcing the norm to get vaccinated.

- Create an environment regulated by a trustworthy or neutral agent such as a doctor or church leader
- Schedule it within 2-3 days post vaccine
- Moderate the narrative with prompt questions to prime positive reflection rather than negative
Managing myths & misinformation

What we need to do

Manage AEFI and Related Narratives Locally

Why:
Vivid stories of adverse event following immunization (often uncorrelated) create barriers for vaccine uptake. While reporting of adverse events are handled at a national level, we need to also manage the narrative that is created and shared locally.

How:
Building a localised system to systematically manage the impact and perception of the (often uncorrelated) adverse event within the affected family and community. Manage framing of the reporting of the stories on the local news.

Building capacity within community leaders to manage and control communication of adverse events locally which could ensure that only genuine information is shared.

A set of guidelines can be created that could help them frame the communication along with dissemination ideas for this information.
What we need to do

Provide Incentives to Build Coping

**Why:**
There are high risks and high costs associated with taking the vaccine. An incentive might help offset this trade-off, and help build coping for the side-effects of the vaccine.

**How:**
Using incentives to build coping for the side effects, loss of time and wage. The incentives when provided to build coping will lead to a change in motivation, unlike incentives as rewards.
What we need to do

Create Cost for Inaction

Why:
There is high risk, and low to no reward for getting vaccinated, and high reward for not getting vaccinated. Therefore, not taking the vaccine is favoured. There is a need to offset the trade-off to drive vaccination.

How:
Increasing the cost of not getting vaccinated by making testing a routine task for work/travel, continuous need for providing a negative test result for those who are not vaccinated.

The vaccine can also be made goal congruent by a request made, in a non coercive manner, by someone who is trusted or perceived to have no vested interest.
What we need to do

Ensure Adherence by Roadmapping

Next Steps

Why:
In the dynamic COVID context and increased time between first and second shot, there are higher chances of individuals missing their second shot.

How:
Driving individuals to the second shot by laying out the steps to complete protection from first to the second shot. Providing shorter milestones to increase their involvement through the period.

Providing details of exact date and time of second shot through an artefact (card) with personalised details, given at the time of the first shot.
Encouraging advocacy and adherence

What we need to do

Highlight Family Responsibilities for Complete protection

Why:
The side effects and infection post first shot causes individuals to experience barriers to considering the second shot of the vaccine.

How:
Communicate the increased responsibility of family members to ensure complete protection and build capacity to manage negative sentiments.

Highlighting the role of family members to plan and execute the completion of two doses of vaccination and supporting them with strategies to manage the sentiments.
What we need to do

Build second shot commitment using past behaviour

Why:
People are aware of the two shots, however, given the side effects and chances of infection post first shot, individuals experience barriers to consider the second shot.

How:
Build commitment for the second shot by reminding intention from the first shot, establishing first shot as an unfinished task and building efficacy, given the familiarity from earlier experience.
Appendix - I

Localized Community Misinformation Management

Customized Communication Approach for Field Workers
# Customized Communication Approach for Field Workers

<table>
<thead>
<tr>
<th>अगर वो कहें</th>
<th>तो आप कहिए</th>
</tr>
</thead>
</table>
| में शरीर चित्रकृत दीवार है तो क्या ज्ञात है वैक्सीन की | लाभ: अपने परिवार को सुरक्षित रखने के लिए // क्या आपको पता है की आपको कोविड हो सकता है और आपसे आपके घरवालों और अन्य लोगों को हो सकता है से।
| में स्वस्थ और ज्ञान हूं और मेरी इम्युनिटी भी अच्छी है | लाभ: अपनी सुरक्षा के लिए // तो लें तो आपको पता है की इम्युनिटी काफी भरी है // गम्भीर कोविड से सुरक्षित है।
| मुझे पहले से ही अन्य बीमारियाँ हैं - जैसे की बीजी / शूरू / दिल की बीमारी। यदि वैक्सीन नहीं हो जा साबित, तब तुम्हारा खराब हो गया हो | लाभ: लें तो आपको पता है की तभी तकलीफ़ों के बचते आपको कोविड से ज्ञात है।
| आप मैंने वैक्सीन ली और बीमार हो गयी होती? मेरे घर का, और कोमाई का ध्यान कौन रखता? | आप अपने युक्तियाँ हैं और अपनी जिम्मेदारी निमा पाते हैं। // आप अपने यह सोचा है की इसी जिम्मेदारियाँ का साथ दी गई लागवाना तो और जल्दी हो जाता है।
| में पहले से ही ध्यान रख रही / रख रहूं कोविड से बचने के लिए, मुझे अच्छी इस की ज्ञात है नहीं, इसके बाद में बाद में सोचते | लाभ: समझदार लोग ही ऐसे अपनी जिम्मेदारी निमा पाते हैं। लेकिन आपने यह सोचा है की इसी जिम्मेदारियाँ का साथ दी गई लागवाना तो और जल्दी हो जाता है।
| मुझे कोविड था, कोविड के टेस्ट पर और वैक्सीन पर भरोसा ही नहीं है // कोविड की वैक्सीन सिर्फ एक चाल है पैसे बमान की // कोविड तो सिर्फ़ एक जन्म है | लाभ: बहुत लोग ऐसे सोचते हैं पर किसी ना किसी कारण वैक्सीन लगाने लगे हैं // जैसे की काम कोमाई और पढ़ते ने पापा जाने के लिए।

For Illustrative Purposes only.
### Customized Communication Approach for Field Workers

<table>
<thead>
<tr>
<th>मैंने क्या कहा?</th>
<th>तो आप कहिए?</th>
</tr>
</thead>
</table>
| मेरा शरीर विनियूकल ठीक है तो क्या जल्दते है वैक्सीन की | लगभग: अपने परिवार को सुरक्षित रखने के लिए // क्या आपको पता है कि आपको कोविड हो सकता है और आपसे आपके परिवार को भी हो सकता है?
| मेरी स्वस्थ और ज्यादा हूं और मेरी इम्यूनिटि भी अच्छी है | अनुमति: किसी ऐसे व्यक्ति का अनुभव बताएँ जिसे कोविड हुआ हो और उससे उसके परिवार को भी हो गया हो, जो के वैक्सीन रोक सकती थी |

### Localized Community Misinformation Management

| मुझे पहले से ही अन्य बीमारियाँ हैं - जैसे की कोई / सुग्री / दिल की बीमारी, मेरा शरीर यह वैक्सीन नहीं होल पाएगा, तब यदि वहाँ खाराब हो गई तो? | लगभग: लेकिन क्या आपको पता है इन्हीं तकलीफों के चलते आपको कोविड से ज्यादा खतरा है?
| अनुमति: किसी ऐसे व्यक्ति का अनुभव बताएँ जिसे ऐसी तकलीफें हैं और डॉक्टर ने बताया हो कि वैक्सीन लेना सुरक्षित है, वास्तव में उन लोगों के लिए ज्यादा खतरा है जिन्हें ऐसी तकलीफें हैं |

| अगर मैंने वैक्सीन ही और बीमार हो गई तो? मेरे पर का, और कमाई का ध्यान कौन रखेगा? | लगभग: समस्यादर्श लोग ही ऐसे अपनी जिम्मेदारी निभा पते हैं। लेकिन आपने यह सोचा की इतनी जिम्मेदारियों के साथ टिका मानना तो और जल्दी हो जाता है?
| अनुमति: एक PHC के डॉक्टर की कहानी बताएँ जिसने समझाया हो कि वैक्सीन से केवल ही लक्षण होते हैं जैसे की बच्चे को टीका देने पर होते हैं और यह आम बात है। पैसेंटरियल से इस साइड इफेक्ट का इलाज हो जाता है |

| नई पहले से ही ध्यान रख रही / रहा है कोविड से बचने के लिए, मुझे अभी इस की ज्ञान नहीं है, इसके बारे में बाद में सोचेगे | लगभग: समस्यादर्श लोग ही ऐसे अपनी जिम्मेदारी निभा पते हैं। लेकिन आपने यह सोचा की इतनी जिम्मेदारियों के साथ टिका मानना तो और जल्दी हो जाता है?
| अनुमति: किसी ऐसे इंसान का क्रिस्कस सुग्री जो मानता है की बच्चे को इसने कुछ नहीं कहा है इनके मुम्बामें, वैक्सीन एक छोटा सा कदम है कोविड के गम्भीर लक्षण से सुरक्षा के लिए |

### जो कोविड था, कोविड के टेस्ट पर और वैक्सीन पर मर्मता ही नहीं है // कोविड की वैक्सीन सिर्फ एक छाल है ऐसे कहने की // कोविड सी तो सिर्फ एक फूल है | लगभग: बुद्धि लोग ऐसे लोगों पर किसी निकट का वैक्सीन पता लेते हैं जैसे की काम कमाई और पढाई पर आपसी जाने के लिए
| अनुमति: किसी ऐसे इंसान के बारे में बताएँ जिसे कोविड की वैक्सीन लेना ताकि बाद में जाने के लिए कोविड पेस्ट न करना पड़े। |

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Appendix - II

Process and Insights
## Project Phases

|-----------------------------|-----------------------|-------------------------------------|-----------------------------------------------|------------------------------------------------|-----------------------------------------------|------------------------------------------------|-------------------------|-------------------------|----------------|


Research sample

Both testing and vaccination themes were explored with the entire sample.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Nagpur Urban</th>
<th>Nagpur Rural</th>
<th>Bathinda Urban</th>
<th>Bathinda Rural</th>
<th>Faridkot Urban</th>
<th>Faridkot Rural</th>
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</thead>
<tbody>
<tr>
<td>18-29</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>30-59</td>
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<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>60 and above</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

FLW: +3

FLW: +4
Rapid Testing
Sample

<table>
<thead>
<tr>
<th>Role/Barriers</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asha workers / CHWs</td>
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</tr>
<tr>
<td>Vaccination Staff</td>
<td>2</td>
</tr>
<tr>
<td>Informal Doctor</td>
<td>1</td>
</tr>
<tr>
<td>Panchayat / Local leaders</td>
<td>2</td>
</tr>
<tr>
<td>Liaison between the govt and community</td>
<td>4</td>
</tr>
<tr>
<td>Barriers to testing</td>
<td>6</td>
</tr>
<tr>
<td>Barriers to vaccine</td>
<td>4</td>
</tr>
<tr>
<td>Vaccinated once</td>
<td>2</td>
</tr>
</tbody>
</table>

- **Maharashtra**
- **Punjab**

Punjab: 40
The COVID pandemic is a dynamic context, in terms of the disease spread as well as government rules, and constant flux of new and sometimes contradictory information. The context influences the COVID risk perception, mitigation measures and trade-offs made.

Driven by government’s communication and individual’s own expectations, the vaccine discovery was expected to be a way to return to normal. However, this has not been true as seen in the second wave. Vaccine decision making is influenced by this context of COVID becoming ‘increasingly familiar’ and shortage of vaccines.

For most vaccinations in India, the decision is a default. However, taking the COVID vaccine which is new and unfamiliar and introduced within this uncertain, dynamic environment, is an active decision to be made.

"I know about the vaccine, it came out sometime back. It wasn’t useful though. Even after it has come, the virus has still increased. Those who are negative can also take the vaccine, not necessarily those who are positive. We who are NORMAL, can also take it."

Punjab, 18-29 years

"We’ll see if we feel the need in the future ... now nothing is left to happen ... there’s no reason ... they don’t give reason, all they say is everyone needs to take ... i feel we shouldn’t take, we have young children ... i feel very scared"

Maharashtra, 30-59 years
Government communication is limited

Perceived to be clinical, operational, generalised and not catering to individuals’ different needs leading to doubts and rationalisations for the vaccine decision.

The formal communication around the vaccine from the government has been limited to its release as a solution, number of vaccines, where it has been made and evolving criteria for eligibility.

As a result individuals are unable to make sense of what it means for them, why they need to take the vaccine, what the benefits and consequences (side-effects, adverse events) of it would be specifically for them, if they can take it given their existing conditions, and why it is being given only to certain ages. Individuals with existing comorbidities, pregnant, lactating or who have had COVID have doubts on whether or not it is safe for them to take the vaccine.

The lack of communication on why an individual should take the vaccine leaves enough room for them to rationalise and build narratives on why they should not take it.

While there is awareness of two vaccines, for most there is no recall of names or differing expectation between the two.

"It’s a good thing that they are providing injection, but they (government) are not saying anything about the injection or the plan, they should tell people how strong the injection is who should take it. Not everyone is fit enough, some have heart issues, some have asthma, what will happen to them, they should give more clarity ... all they say is everyone has to take it”

Maharashtra, 60+ years
Individuals seek out ways to close gaps in communication

This has led to incorrect beliefs around the purpose of the vaccine (protection vs. prevention vs. treatment), side-effects and potentially uncorrelated adverse events.

Mental models and expectation of COVID vaccine

In India, mental models around vaccine stem from child vaccination, where due to the high perceived vulnerability of children, the decision is more of a default, advised by the doctor and unquestioned. Adult vaccination is not well known leading to the **lack of adult vaccination mental models** to rely on to make the COVID vaccine decision.

The general lack of prevention mental models coupled with recent news of Remedesvir injections as treatment, fake Remedesvir, shortages of both vaccine and Remedesvir has led to confusion for some people - **perceiving vaccines as treatment rather than protection**.

Furthermore, those who understand the prevention aspect of the vaccine, assume full protection and are shocked by stories of people getting COVID post vaccination. These stories lead to discrepancy between expectation and reality, leading to an updation of expectation of vaccine.

“...and the only people taking the vaccine are the people who need it, which are the people that were positive..If I am COVID positive i have no issue with taking the vaccine..but if I am positive after I take the vaccine then what is the point of this vaccine...you tell me?”

Punjab, 30-59 years
Formal and informal media channels (media, whatsapp, facebook)

The high frequency, dynamic and inconsistent information received through media reporting and biased information channels like facebook feed and whatsapp forwards result in piecemeal approach of connecting various disparate pieces of information to make sense (eg. vaccine still under trials or not for individuals with comorbidities)

‘Credible’ stories from people around them

Reliance on ‘lived experiences’ of people around them to understand consequences of vaccination has led to exchange of emotionally salient and vivid stories of side effects lasting upto 8 days and (potentially uncorrelated) death. The disparate stories of side-effects and adverse events are being understood through evolved beliefs like vaccine is ‘powerful’, ‘suits some and not others’.

“Aisa koi agar aaju baju mein baat karte hain toh hum ghar se sun lete hain... covid ka injection yahan pe milta hai wahan pe milta hai, dava khane mein milta hai, 1000, 2000, 15000 ka ... unke paas mein paisa hai woh leke aa jate hain, humare paas mein nahi hai toh hum nahi le ... ye lene se bolte hain na ki bimari nahi hoti”

Maharashtra, 30-59

“I called someone in the city, he told me to not get the vaccine. He told me a story about other person who was vaccinated and then died of it. I don’t know if that’s true but that left an effect. One 18 year old boy got it, he was very fit and died as soon as he got vaccinated. One person who got the vaccine in my village couldn’t get up for 3-4 days, he fell really sick after it.”

Punjab, 18-29
Vaccine decision is not an individual medical decision

The decision is influenced by the beliefs of and implications on family and social circles making it more complex.

Other than individual's feeling of risk to self, **risk to family** is considered along with the **risk perceived by family members** on the vaccination decision. Eg. An individual may decide to not take the vaccine on account of their relevance as the breadwinner of the family or other members being unsure of it.

Vaccination for different members is spaced out or delayed as a mitigation measure for the anticipated side-effects.

Family members and relatives positive and negative experiences inform and change the decision.

**Colleagues and employers may positively influence** decision by establishing vaccine as necessary for employment, however the action may or may not be driven by positive intent or supported by family.

In communities with strong collective identities, the **community’s stance on COVID and vaccinations, and expected behaviours drives action** to avoid being judged.

"I would take the vaccine once my son and his wife recovers, they have COVID right now. The vaccine has serious side effects, all of us cannot be sick at the same time."

Maharashtra, 60+

"...half of my village will stand against me and fight with me if they get to know that I am vaccinated. They will ask me why did I..."

Punjab, 60+ years
Decision based on the feeling of risk and reward, not data driven

The risks and rewards considered are two fold, for taking the vaccine and for not taking the vaccine.

The decision is not being made keeping in mind data points, and actual costs and benefits of taking the vaccine.

The decision is based on the feeling of risk they have of facing negative consequences and expected rewards. Here again, the rewards are not medical benefits but a feeling.

One story of a dire effect (side-effects or adverse events) post vaccination of a relative can off-set all the positive data on the number of vaccination done with minor side effects. This feeling of risk is driven by how vividly these consequences can be perceived and the possibility of its occurrence, not probability.

This trade-off of risk and rewards is not taken in isolation, but also in relation to the the trade-off of not taking the vaccine. The vaccine is perceived as a deliberate action taken to disrupt the current ‘healthy’ state or status quo, it is an action that may incur pain or regret.

"My uncle took it, he had fever, his BP shot up, his feet and hand were hurting - dad wanted to take it but after he heard this bad feedback he decided not to take the vaccine...he said if his health is fine right now...if I take this and my health gets bad, then why should I take this"  
Maharashtra, 18-29 years

“I have heard whoever gets the vaccine falls sick ... it can also cause death in some cases. I don’t know anyone who has taken the vaccine but I have heard of people who were given the fake vaccine or some other shot and fell sick. The news is full of such cases”  
Punjab, 60+ years
Feelings of risk and reward of taking a vaccine

The risks on taking the vaccine are perceived to be greater than the rewards.

HIGH RISK
Unbearable side-effects (fever, pain, being bed-ridden) for a prolonged duration
Death
COVID infection at the vaccination centre

NO TO LOW REWARD
‘Some protection’, not prevention of COVID
Not an opportunity to return to normal (experienced in second wave)
No alleviation of economic burden (proven by the recent lockdowns)
Uncertain reward, only experienced if a person contracts COVID
Distant, effective after 6 to 14 weeks of 2 doses

“there is a lady whose mother took the vaccine, she's old, after taking the vaccine the fever didn't come down ... that's why they also feel scared and are not taking it ... medicines are on but her fever is not coming down ... now even i feel its better i have not taken it ... won't I feel scared, it's been 8 days and her fever hasn't come down, she's just sleeping...”

Maharashtra, 60+ years
Feelings of risk and reward of not taking the vaccine

The rewards for not taking the vaccine are perceived to be greater than the risks.

LOW RISK
Small potential of getting the COVID illness which has become more familiar and perceived severity of the illness is low, maybe a mild version that can be dealt with

HIGH REWARD
Continuing the current “healthy” state or their status quo
Avoidance of anticipated regret of vaccination resulting in grave consequences
Avoidance of COVID infection at the vaccination center

"People are falling sick even after getting the vaccine, then why should I take it at all, when I am absolutely fine, my body is healthy, then why should I take it”

Punjab, 18-29 years
Not taking the vaccine is favoured.
Multiple narratives exist to explain decision for not taking the vaccine

The decision of not taking the vaccine is arrived at based on how the COVID context is perceived, the norms around COVID vaccination and the feelings of risk and reward. These decisions manifest as 4 types of negative narratives around why they do not want to take the vaccine.

- **I am healthy and I don’t need the vaccine.**
- **I already have health issues, what if they get worse after the vaccine.**
- **I am fine now, I am keeping myself safe now, I can’t take a chance with the vaccine.**
- **I think vaccines are a scam so there is no reason for me to take it.**
"I don't need a vaccine. I am well. I am doing just fine, why should I take the vaccine. If I feel I need it, if I am not well, I will take it. I am fine like this. You tell me, I have been speaking to you since an hour, have I coughed even once, no right? So I know I am fine, I don't need this vaccine."

Punjab, 18 - 29 years

Vaccine is irrelevant

Perceive themselves to be at low risk of COVID, especially of severe illness. They feel the vaccine is irrelevant to them as they may be young, have high immunity and engage in healthy behaviours.

As they are healthy currently, there is an inherent reward to continue the status quo of not getting vaccinated.

Due to the perception of irrelevance, the consequences of the vaccine such as severe side-effects are seen as 'unnecessary harm for no real reason'. This helps rationalise their decision for not taking the vaccine to others.

They don't seek out COVID-19 vaccine information making them prone to gaps in understanding, leading to misinformation.

Their social circle consist of others like them or those who doubt the vaccine and in some cases, COVID as well.

Their action tendency is to avoid the vaccine, take it only if made mandatory.

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<table>
<thead>
<tr>
<th>Not taking the vaccine</th>
<th>Taking the vaccine</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High reward</strong> as they can continue their current healthy state</td>
<td><strong>No rewards</strong> in the immediate term from taking the vaccine as it is not aligned to getting life back to normal</td>
</tr>
<tr>
<td><strong>Low risk</strong> as they believe that they have a low chance for contracting COVID, and even if they do, can deal with the illness due to perception of lower severity of COVID and good health</td>
<td><strong>High risk</strong> of potential of side-effect post vaccination</td>
</tr>
</tbody>
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**High rewards**

**Low risks**
"Corona is scary, I don't know ... could take or could not take, some people tell me you have sugar, don't take it, you won’t get it, is it like that? because I have sugar, can I not get the vaccine? I should get it, right"

Maharashtra, 60+ years

They perceive themselves to be weak as they are old or/and have existing co-morbidities and are on medication.

Being told to take the same ‘powerful’ vaccine as other healthy individuals without being given any coping methods is viewed as their special conditions not being accounted for fully.

Risk is heightened through stories of others like them, having severe side-effects for a prolonged duration, described as fever, body ache for around a week or more, being bed ridden.

Their doubts and concerns are reinforced as they receive mixed information on the safety of the vaccines and severity of COVID for them.

Unable to make sense of the information, they prefer to not get vaccinated, to avoid regret of action.
"People shouldn't die because of vaccines ... I have told my husband, you don’t take and I’ll also not take... we’ll see if we feel the need in the future ... now nothing is left to happen ... there’s no reason ... they don’t give reason, all they say is everyone needs to take ... I feel we shouldn’t take, we have young children ... "

Maharashtra, 30-59 years

This narrative is seen among individuals who have a mild to high risk perception towards COVID. To manage the high risk, they are seen taking several precautionary measures.

They understand the vaccine would mean a less severe case of COVID but emphasize on the severe side-effects and chance of death.

While precautions increase their sense of control, the vaccine comes with high level of uncertainty of side effects and consequences on themselves, their ability to take care of their family, and employment. They allude to fear of contracting COVID at vaccination centre.

They want to avoid the anticipated regret of taking the vaccine decision, therefore their action tendency is to not take or delay the vaccine to the future.

Vaccine is ‘costly’ alternative

Perceive mid to high risk of COVID but consider their current actions to be sufficient to manage it. They view vaccines as a ‘costly’ alternative, as they see it as merely preventive, and feel the vaccine will disrupt the sense of control and certainty they have managed to achieve.

Not taking the vaccine

<table>
<thead>
<tr>
<th>High rewards</th>
<th>Low risk</th>
</tr>
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<tbody>
<tr>
<td>High reward of avoiding the uncertainty of potential negative consequences to self and family</td>
<td></td>
</tr>
<tr>
<td>Low risk of not taking the vaccine because they take other precautions</td>
<td></td>
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</table>

Taking the vaccine

<table>
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<tr>
<th>Low rewards</th>
<th>High risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low reward of partial protection from the disease as they already as they are already sufficiently compliant</td>
<td></td>
</tr>
<tr>
<td>High risk of experiencing severe side effects of the vaccine and potential death</td>
<td></td>
</tr>
<tr>
<td>High risk of the family not having anyone to take care of them</td>
<td></td>
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</table>
Vaccine is a scam

Perceive low risk of COVID, this category also consists of individuals who do not believe in the existence of the disease at all. They view the vaccine as untrustworthy as there is a significant amount of distrust in the government, health system and pharmaceutical companies.

This narrative is seen among individuals who either perceive COVID as a conspiracy or have internalized low risk of it while doubting the intention of the agent.

Since they question the safety and intent behind all aspects of the vaccine, production to distribution, they decide to not take it at all. They may also choose to not vaccinate dependents who fall under vulnerable groups.

They consume biased information about the vaccine that confirms their existing notions.

Most of them do not know others who have been vaccinated.

Their action tendency is to reject the vaccine.

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"People say the injection is to stop the future generations from being born, I am okay with getting vaccinated but the government has to guarantee that nothing is going to happen to me. If I get vaccinated, I’ll get fever, then they’ll say it’s COVID, then they’ll kill me and won’t even give my body back, the government has been doing this, I have heard of such cases"

Punjab, 60+ years

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</tr>
<tr>
<td>Low risk</td>
<td>High risk</td>
</tr>
<tr>
<td><strong>High reward</strong> of not taking the vaccine as they did not fall for the conspiracy</td>
<td></td>
</tr>
<tr>
<td><strong>Low risk</strong> of not taking the vaccine because there is low risk of COVID</td>
<td></td>
</tr>
<tr>
<td><strong>No reward</strong> of getting vaccinated because they are at low risk of COVID or do not believe in it</td>
<td></td>
</tr>
<tr>
<td><strong>High risk</strong> of being injected with foreign, unknown substance causing severe reactions</td>
<td></td>
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‘Mandated’ vaccine is a double edged sword

Intent of the agent and framing have a large impact on the vaccine uptake and vaccine consequences.

Vaccine uptake can be driven by mandated vaccination or driving a high cost for non-vaccination, but are impacted by perception of agents’ intent and sense of choice in the decision.

A high cost on non-vaccination that is framed from a non-neutral/low trust agent (like the govt) can be perceived as coercive and forced, where uptake is reluctantly taken, but there is high blame if vaccine side effects are experienced, greater negative stories that have a large impact on others behavior, and low intent for second dose as well, unless coerced.

On the other hand, when the cost of non-vaccination if framed from neutral agent (from work), is goal aligned and framed/perceived as a choice, high uptake is created more easily (might still involve low intent), along with lesser negative feelings.

“My mother was threatened and made to take it in the village, they said only if you take it will you get ration....out of this fear she got the injection, it’s been 5-6 days she's been getting fever, she went to the dava khana but it isn’t reducing, now what will we do. Village sarpanch/head must have told them. she’s shivering in fever with sore throat...mother had told her that the asha worker had been coming and asking to get the vaccine...

... (father in law) he decided for himself, we didn’t know he was going to ... when he took it and came then he told us ... if he goes to the store, he’ll get to eat, if he doesn’t where will he get money from, so he did it out of fear ... owner had said come only after taking the vaccine"

Maharashtra, 30-59 years
Perception of vaccine impacts testing trade off

Perception of the vaccine as treatment or full protection leads to lesser consideration of testing in risk moments.

Most people who think of the vaccine as a treatment or full protection, believe that they will not get corona after taking the vaccine and even if in contact with a corona positive person will not get tested.

For those who understand that the vaccine is not full protection or who have heard people get COVID post vaccine, believe at a stated level that COVID can be contracted post the vaccine and therefore testing is required - however vaccine action might also create a sense of overconfidence.

“... abhi kuch kuch logon se sunte hai, corona agar woh vaccine lene ke baad bhi, kuch kuch logon ko double se corona ho raha hai fir woh vaccine ka kya matlab ... woh samajh mein nahi aa raha ... abhi vaccine le rahe hain toh corona nahi hona chahiye .. ek maan ke chalte hai na, koi bhi cheez lete hain toh sudhar toh hona chahiye, abhi sudhar toh nahi ho raha hai ... abhi maine vaccine liya ho aur pata chal raha hai uske 10 din baad, 20 din baad mujhe corona ho gaya hai, yani kya? main kya sochunga, arre maine toh liya tha, kaise kya ho gaya mujhe toh pata hi nahi chala, ye vaccine useful hi nahi hai ... ye mere man mein vichaar aayega, shanka aayegi.”

Maharashtra, 60+ years
Within the second wave, vaccination was seen as a very risky and effortful process, where the centres are seen as "at-risk" spaces for contracting COVID infection due to the proximity to COVID patients (in hospitals), long lines, overcrowding and lack of social distancing measure followed.

Therefore, even for those considering vaccination, it is not a worthy risk, given the further uncertainty in access to the vaccine after the whole process is endured.

However, from those who are vaccinated, positive stories of easily accessible centres, relatively less crowded vaccination centres, fast onsite registration process, positive expectation discrepancy from low pain of the vaccine, and an overall positive experience, create a high chance for the second dose which also can be leveraged to recommend vaccination to others.

"My friend who died was sacred of getting the vaccine because her father in law got COVID after the first shot, he got infected at the vaccination center, it was the only place he went to, then her whole family eventually tested positive".

Maharashtra, 60+

"I went alone to get the vaccine, it was a clean center, everyone was wearing masks and gloves. They were maintaining social distancing also. If it got too crowded, they sent some people back and asked them to come later"

Maharashtra, 60+
Taking the second shot has dependencies

Being vaccinated with one dose does not imply lack of barriers towards the vaccine overall as well as the second shot.

Most individuals seem to understand that the vaccine involves 2 doses and state that they would get both. However, this stated decision being in the distant future is possibly biased by an expectation of best behaviour and the lack of barriers in the future.

Those who have got the first dose also had barrier narratives preventing action for the first dose which needed to be overcome.

Experience of getting the vaccine and the side-effects after have direct implications on the second shot, those with severe side-effects are wary of having to go through the same distress once again. This may be further exacerbated in case the first dose was less intended and more spontaneous.

The current context of high caseload and long gap between the doses increases the possibility of infection after first dose among self and others. This leads to dissonance for those expecting prevention from the vaccine and reduces the rewards of the second shot.

Negative family and social norms associated with COVID-19 and the vaccine act as barriers even if the first dose has been taken.

"People know it from the beginning that there are 2 shots, when I decided to take the vaccine, I knew there will be 2 shots....I haven’t heard of anyone who has decided not to take the second shot....maybe someone will feel that I am safe after 1st shot, then they might not take the 2nd one"

Maharashtra, 60+

"She was unwell for around 8 days, but she has bp issues so it could have been that or maybe something else, suited the body, did not suit the body, hands and legs were paining, that continued for 8 days. she was saying she won’t take the second dose"

Maharashtra, 60+
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