

Identifying Barriers and Enablers in Coverage of Hepatitis B (Birth Dose) in Sirsi, Jaipur, Rajasthan

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Background

- Immunization is one of the more important and cost-effective medical interventions.
- It has helped keeping millions of people from deadly diseases over the course of lifetime.
- Missed immunization comes with a cost.
- In a country like India where a large cohort of the population belongs to minimal income groups, vaccination given at the right time can be potentially beneficial, since affording treatment is an actual financial catastrophe. (Unicef, 2022).



Immunization programme in India- UIP to Mission Indradhanush

- Government of India launched universal immunization program (UIP) in 1985, covering a cohort of twenty-seven million children in a year.
- Vaccine against twelve vaccine preventable diseases (VPD) are provided under UIP.
- However, despite the efforts, between 2009-2013, coverage was growing at a slow pace of 1% each year.
- In order to address slow growth in immunization coverage, Ministry of Health & Family Welfare (MoHFW) launched massive routine immunization (RI) intensification campaign with highest political commitment called Mission Indradhanush (MI) in December 2014 which aimed for 90% full immunization coverage (FIC).
- It targetted to cover all those children by 2020 who are either unvaccinated or are partially vaccinated against vaccine preventable diseases.



Phase 1

201 districts

Phase 2

352 districts- 6.7% growth in coverage after phase 1 & 2

Phase 3

216 districts

Phase 4

covered North-eastern states -
Arunachal Pradesh, Assam, Manipur,
Meghalaya, Mizoram, Nagaland, Sikkim
and Tripura from 7th February 2017

Phase 5

190 low performing districts-
18.5% increase (IMI-CES)

Coverage according
to NFHS rounds
(India, Rajasthan,
and Jaipur)

NFHS Round s (4)	India			Rajasthan			Jaipur		
	Rura l	Urba n	Tota l	Rura l	Urba n	Tota l	Rura l	Urba n	Tota l
Round 1 (92- 93)	30.9	50.7	35.4	-	-	-	-	-	-
Round 2 (98- 99)	36.6	60.5	42	13.8	29.3	17.3	-	-	-
Round 3 (2005- 06)	38.6	57.6	43.5	22.1	44.3	33.2	-	-	-
Round 4 (2015- 16)	61.3	63.8	62.6	53.3	60.9	54.8	-	-	58.2
Round 5 (2019- 21)	76.8	75.5	76.4	79.7	83.2	80.4	-	-	89.3

Program Design

1. Target audience and schedules- Who all, what timeline, types of sessions and their timings

2. Preparatory activities- 1. Orientation and capacity building, 2. political will (ministries convergence), 3. vaccine and supply chain management, 4. monitoring and evaluation, 5. Accountability framework

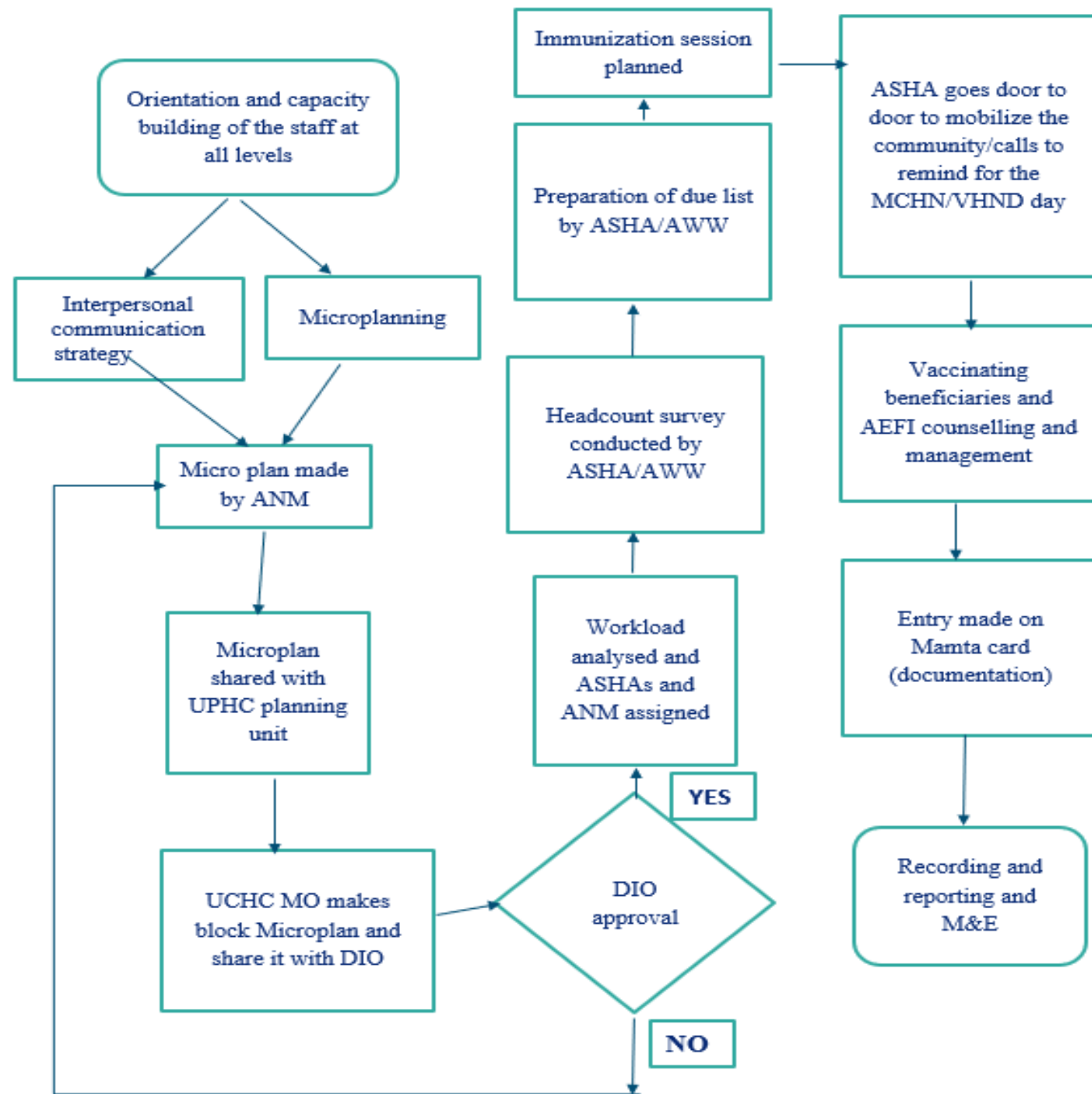
3. Planning- 1. Headcount survey, 2. Due list, and 3. Microplanning

4. Organizing- 1. Vaccine logistics and supply chain, 2. Communication, 3. mobilizing beneficiaries, 4. Vaccinating beneficiaries, 5. AEFI management and reporting, 6. Documentation and reporting

5. Recording and reporting -1. Through hardcopy/google sheet, 2. Through RCH portal

6. Monitoring and evaluation- 1. Readiness assessment checklist, monitoring operations, session monitoring and house to house monitoring

Service Delivery



Systems framework



Input

1. No of service providers- ANM (2 for 14 village) (trained/untrained for vaccination)
2. No. of service delivery points (14 anganwadi under CHC Sirsi)
3. Logistics and supply chain for vaccines
4. No. of cold chain units (1 ILR, 2 DF)
5. Equipments (vaccine carriers, icepacks, syringes, needles sterilizer)
6. Funding (political commitment from the CM of Rajasthan)
7. Distribution from sirsi to sub centres.
8. Mamta cards
9. IEC materials



Process

1. Preparing a due list of children/pregnant mothers (to be done by ASHA)
- 2.. Planning for immunization sessions (to be done by MO head and ANM).
3. Notifying beneficiaries according to the due list
3. Conducting immunization sessions (once a week in both subcentres and CHC).
4. Providing vaccines
5. Recording and reporting (to be done by ASHA at subcentre level and ANM at CHC)
6. Counselling about effects of vaccines and how to tackle them
7. Handling drugs for fever or rashes
8. Disposing according to BMW management



Output

High coverage rate - 90% (state and district wise desired output is not clear.)

Stakeholder mapping and analysis

Stakeholders	Interest	Influence	Key stakeholders
1. Healthcare providers- Medical officer	4	4	ü
1. ANMs and GNMs	4	4	ü
1. ASHAs	4	4	ü
1. AWWs	2	4	
1. District Immunization Officer	4	4	ü
1. Government of Rajasthan-Local leaders and MLAs	2	4	
1. Beneficiaries (infants and children, mothers, and families)	3	4	ü
1. Vans carrying vaccinations	1	4	
1. Local Voluntary organizations (VOs)	3	3	
1. Development organizations like UNDP, WHO, UNICEF, USAID,	4	4	ü
1. Non-health ministries (Panchayati raj, Ministry of Women and Child Development, etc.)	4	4	ü
1. Space lending agents (schools, anganwadis)	2	3	

High influence

**Government of Rajasthan Local MP MLAs,
space lending agents**

**Healthcare providers- medical officers,
nursing staff, ANMs and ASHAs, DIO,
Developmental organizations,
beneficiaries, non-health ministries**

Religious leaders, Van carrying vaccines,

**Government of India, Vaccine
manufacturing companies, AWW**

High interest

Statement of Problem

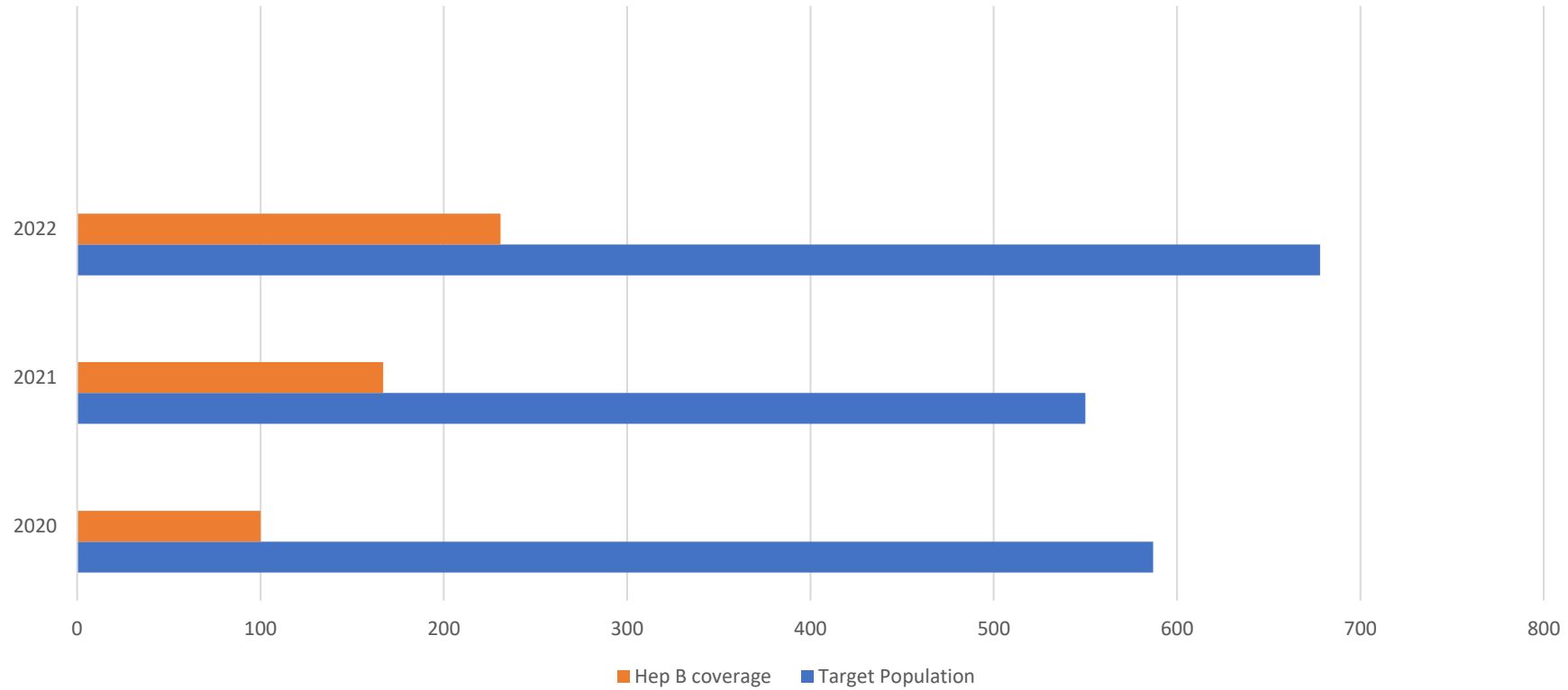
- In India, viral hepatitis is progressively being identified as a public health challenge, with Hepatitis B virus (HBV) infection a major public health burden (country average 4%).
- There are forty million HBV carriers in India (WHO)
- HBsAg Prevalence in India – 3-4.2% (WHO)
- HBsAg Prevalence in Rajasthan- 1.83% (Khullar S, et.,. Al, 2020).
- HBsAg Prevalence in Jaipur- 8% (Kanodia V, et. al, 2015).
- However, Hepatitis is very preventable through vaccination if given during early childhood. Hepatitis B (birth dose) as in intervention was piloted in India in 2002 and came in RI in 2012. (Vedamuthu J.).

Objective of the study

- In India, coverage for hepatitis B birth dose during 2015 and 2016 was 45 and 60 per cent respectively which is suboptimal. (National action plan for combating viral hepatitis in India)
- According to National Family and Health Survey (NFHS) Rajasthan 2019-21, results show that percentage of children aged 12-23 months who received hepatitis B (birth) dose at any time was 82.4%, against 90% coverage according to the roadmap, 2019..
- Hence, this capstone targets **to identify barriers and enablers in the coverage of birth dose of hepatitis B in Sirsi, Jaipur, Rajasthan.**



Findings



No. of children given Hep B vaccine (birth dose) out of target population in Sirsi, 2023

Challenges and corrective actions

Problem	Suggestive Action	Feasibility	Priority
1. Poor data quality	• Conduct regular review (at least monthly) • Partner with experts for audits- Double audits • Revise training of staff for data quality. Training must be planned in such a way that it has hurdles that cannot be cleared easily and require studying-training with major emphasis on data recording and consistency. • More frequent checking of manually entered data by supervisor or MO (checking RCH registers), • Adapting innovations that ensure data completeness such as Khushi baby	Difficult	
1. Lack of awareness about HepB vaccine among beneficiaries	• More frequent outreach awareness activities- nukkad natak, putting posters in non-health organizations, etc. • Counseling not only mothers but the family and educate them regarding Hepatitis B • Allocate more women from the community to conduct “baithaks” where women get together and talk about vaccination in local language • Putting more IEC posters	Swift	
1. Lack of supportive supervision	• Training of MO on public health leadership • Build a feedback mechanism (cross feedbacks from the staff)	Challenging	

Challenges and corrective actions

Problem	Suggestive Action	Feasibility	Priority
1. No provision of labor room in the facility	• Infrastructure building and hiring specialists (Gyanae, Obs, Paediatrician, etc)	Difficult	
2. Beneficiaries not sticking to one facility	• Promote institutional delivery and avoid discharging before vaccinating the child. (Increase stay time post-delivery) • Build a proper workflow protocol for vaccination and immunization-allocate facilities or ANMs to every beneficiary • In case of emergencies or when mothers are travelling, adopt other practices like encouraging other members of the family to bring the child for vaccination.	Challenging	

Best practices and suggestive actions to sustain them

Best practices	Supporting actions required to sustain best practices
1. Sufficient vaccine logistics	• Determining the need before time and timely procurement of vaccine logistics to avoid stock-outs with a buffer stock of at least a month, • Time-to-time checking VVM to understand the need for discarding and procurement, • Cross-examine the quality of not only vaccines but also syringes, and other logistics
2. Resilient and committed service providers (ASHAs and ANMs)	• Even workload distribution • Performance based incentivization scheme for ANMs • Regular training and capacity building to be done
3. Sustained funding and political will for program implementation	• Yearly budget allocation particularly for immunization, • Targeting transparency to make politics work, • Optimally utilizing allocated budget and resources
4. Free of charge services	• Optimal utilization of resources and funds and minimizing waste • Sufficient budget allocation for program implementation • Advocacy for the quality of free-of-charge services

Conclusion

- The report highlights the need for addressing these challenges to improve coverage of HepB vaccine and sustain the best practices for smooth implementation of program and getting desired outcome.
- However, due to the small sample size and limited information, this report is not representative of the true picture.

Recommendations



Regular monitoring and training and capacity building for the staff on data quality as well as of MO for public health leadership should be conducted.



Updating infrastructure and building the provision of institutional delivery.



Lack of awareness was noted in beneficiaries. Including a conversation regarding awareness during ANC services could be considered as it is the need of the hour.



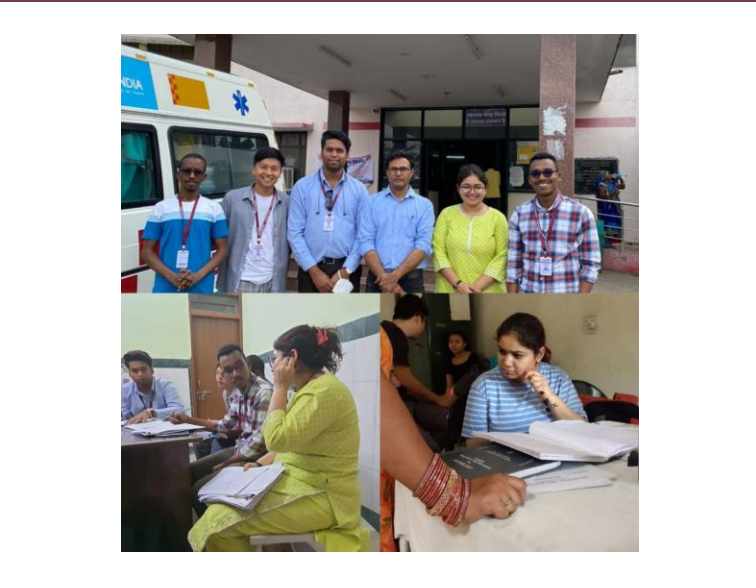
Innovative interventions can be considered to improve coverage, such as incentivization (rations, money, etc.), Khushi baby, and providing other health benefits, etc.

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Pictures from the field visit



CAPSTONE PROJECT	CAPSTONE PROJECT
With Beneficiaries (Patients) Visiting the Community Health Centre/ सामुदायिक स्वास्थ्य केंद्र में आने वाले लाभार्थियों (रोगीजों) के साथ साक्षात्कार	New With Beneficiaries (Patients) Visiting the Community Health Centre/ नया स्वास्थ्य केंद्र में आने वाले लाभार्थियों (रोगीजों) के साथ साक्षात्कार
CONSENT FORM/ सहमति पत्र	CONSENT FORM/ सहमति पत्र
<u>Mishra</u> I am <u>Bablu</u>, a student of IHMR University, Jaipur. This is a university currently enrolled as a Master of Public Health (Implementation Science) topic. My capstone project which is needed to be completed for the purpose of this interview is a part of my Capstone project which is needed to be completed for the purpose of this interview. I am going to ask you questions. Your participation in this interview is completely voluntary. You can decide to participate in the study. Your name and personal information will be kept confidential and will not be revealed to anyone else other than the person conducting the study. In case of any query, you may reach me at <u>9810259303</u>.	<u>Mishra</u> I am <u>Bablu</u>, a student of IHMR University, Jaipur. This is a university currently enrolled as a Master of Public Health (Implementation Science) topic. My capstone project which is needed to be completed for the purpose of this interview is a part of my Capstone project which is needed to be completed for the purpose of this interview. I am going to ask you questions. Your participation in this interview is completely voluntary. You can decide to participate in the study. Your name and personal information will be kept confidential and will not be revealed to anyone else other than the person conducting the study. In case of any query, you may reach me at <u>9810259303</u>.
<u>Mishra</u> मेरा नाम <u>Bablu</u> है, और मैं आईआईएमएचयू जयपुर का छात्र हूँ। मैं वर्तमान में मास्टर ऑफ़ पब्लिक हेल्थ (इम्प्लीमेंटेशन साइंस) विषय में अध्ययन कर रहा हूँ। मेरी शोध प्रकल्प जिसके पूर्ण होने की आवश्यकता है, वह मेरे शोध प्रकल्प का हिस्सा है। मैं आपको कुछ सवाल पूछना चाहता हूँ जो आपके स्वास्थ्य पर ध्यान देने वाले हैं। आपका भाग लेना पूरी तरह से अनिवार्य नहीं है। यदि आप भाग लेना चाहते हैं तो आपकी पहचान और अन्य व्यक्तिगत जानकारी को सुरक्षित रखा जाएगा और इस जानकारी को किसी भी अन्य व्यक्ति के साथ साझा नहीं किया जाएगा। यदि आपके पास कोई भी सवाल है तो आप मुझे <u>9810259303</u> पर कॉल कर सकते हैं।	<u>Mishra</u> मेरा नाम <u>Bablu</u> है, और मैं आईआईएमएचयू जयपुर का छात्र हूँ। मैं वर्तमान में मास्टर ऑफ़ पब्लिक हेल्थ (इम्प्लीमेंटेशन साइंस) विषय में अध्ययन कर रहा हूँ। मेरी शोध प्रकल्प जिसके पूर्ण होने की आवश्यकता है, वह मेरे शोध प्रकल्प का हिस्सा है। मैं आपको कुछ सवाल पूछना चाहता हूँ जो आपके स्वास्थ्य पर ध्यान देने वाले हैं। आपका भाग लेना पूरी तरह से अनिवार्य नहीं है। यदि आप भाग लेना चाहते हैं तो आपकी पहचान और अन्य व्यक्तिगत जानकारी को सुरक्षित रखा जाएगा और इस जानकारी को किसी भी अन्य व्यक्ति के साथ साझा नहीं किया जाएगा। यदि आपके पास कोई भी सवाल है तो आप मुझे <u>9810259303</u> पर कॉल कर सकते हैं।
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दिनांक: <u>31/3/25</u> Signature of participant/ प्रतिभागी के हस्ताक्षर: <u>[Signature]</u>	दिनांक: <u>31/3/25</u> Signature of participant/ प्रतिभागी के हस्ताक्षर: <u>[Signature]</u>



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THANK
YOU