



Transforming Tribal Healthcare: The Effect of Telemedicine and Free Medications on Treatment Adherence and Recovery in Nashik, Maharashtra

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Executive Summary

Tribal communities in India, comprising 8.6% of the population, face persistent health inequities driven by geographic isolation, poverty, low literacy, and cultural barriers. In Maharashtra, where 9.35% of the population is tribal, these challenges are further exacerbated by dense forests, seasonal migration, landlessness, and poor infrastructure—resulting in severe gaps in healthcare access.

To address these issues, Intelhealth launched the *Nashik Arogya Sampada (NAS)* program in 2021 in Peth and Surgana blocks of Nashik district. The program used a health worker-to-doctor telemedicine model to improve access to primary care. However, despite increased access to teleconsultations, treatment adherence remained low—mainly because clients could not afford the prescribed medications due to poor socioeconomic conditions.

To fill this critical gap, Intelhealth introduced a free medication initiative in December 2023, supplementing existing teleconsultations with doorstep delivery of prescribed medicines. The aim was to reduce the financial burden, improve adherence, and enhance health outcomes among the tribal population.

This report presents findings from a retrospective study comparing clients from the pre- and post-intervention phases (119 pre, 100 post), analyzing their demographics, treatment access, adherence behavior, and recovery.

Population Characteristics

The client population consisted predominantly of women (70%), adults aged 26–45 years, and individuals with low or no formal education. Agriculture was the primary occupation, and over half of the households lacked emergency funds. Out-of-pocket healthcare expenditures were common, often forcing families into debt or the sale of assets.

Despite similar profiles across pre- and post-intervention groups, the shared burden of poverty and health-related expenses highlighted the need for affordable and accessible care.

Key Impacts of the Intervention

- **Improved utilization:** Volume of teleconsultations increased from an average of ~214 per month pre-intervention to ~455 per month post intervention, indicating a 112.6 % increase.
- **Improved Access:** Receipt of free prescribed medicines increased from 26% to 94%,

while the number of clients purchasing medicines dropped from 55% to 7%.

- **Better Adherence:** Completion of full treatment courses rose sharply from 42% to 90%, with notable reductions in cost-saving practices like skipping or reducing doses and using home remedies.
- **Improved Outcomes:** Clients reporting full recovery from specific health conditions, rates rose from 62% to 67%.
- **Timely Care:** Access to health services within 8 hours improved from 83% to 91%.
- **High Satisfaction:** 90% of clients were satisfied with teleconsultations; 96% were satisfied with the provision of free medicines; 86% said access to free medication influenced their decision to seek care via NAS.
- **Community Health Workers:** Played a vital role in medicine delivery, client follow-up, and building trust in public healthcare services.

Community Voices and Qualitative Insights

Clients reported avoiding private healthcare due to unaffordability and highlighted the value of free and doorstep health services provided under NAS. Many described shifting from neglect or informal treatments to actively seeking care and completing full courses of medications. Community health workers were frequently acknowledged for timely visits, empathetic care, and ensuring follow-through.

Conclusion and Way Forward

The NAS program's integration of free medication delivery with teleconsultation services has proven effective in addressing last-mile challenges in healthcare access, particularly in remote tribal areas. It significantly reduced financial barriers, improved adherence, and led to better health outcomes and higher client satisfaction. The free medicines initiative also highlighted the strong link between cost and health-seeking behavior. This finding aligns with broader global evidence that even small fees can sharply reduce uptake, while free provision ensures increase in utilization, timely care, sustained adherence, and greater equity in access.

The success of the intervention rests on a holistic model that leverages digital technology, local health workers, and free medicine provision. This model offers a scalable solution for other underserved regions seeking to improve healthcare delivery and equity.

As India moves toward universal health coverage, this experience demonstrates the value of integrated, community-based healthcare systems that are both accessible and accountable to the populations they serve.



Image 1: Women from the tribal communities of the intervention area of Nashik

Abbreviations and Acronyms

1. n: Sample size
2. INR: Indian Rupees
3. PHCs: Primary Health Centers
4. CHCs: Community Health Centers
5. FLWs: Front Line Workers
6. BPL: Below Poverty Line
7. EHR: Electronic Health Record
8. ICD: International Classification of Diseases
9. SNOMED: Systematized Nomenclature of Medicine
10. N: Total Population
11. FLHW: Frontline Health Workers



Image 2: Frontline Health Workers Doing House Visit

Table of Contents

Executive Summary	2
Abbreviations and Acronyms	5
Table of Contents	6
Background	7
Our Approach	9
Objectives	10
Methods	10
Study Setting and Population	10
Study Design	11
Participant Recruitment	12
Selection Criteria	13
Data Collection	14
Data Analysis	14
Results	15
Demographic Profile	15
Socio-economic Profile	16
Health Profile of the Clients	20
Health Profile of the Clients by Gender	20
Health Access and Treatment Adherence:	21
Patient Outcomes and Health Recovery	30
Community Perceptions about NAS	36
Summary and Discussion	39
Recommendations	40
Conclusion	40
Annexure	41
References	43

Background

Tribal communities in India, encompassing various ethnicities, cultures, and languages, constitute a significant population of 8.6% (104 million individuals) of the total population (1.44 billion) [1]. Tribal communities are overcoming an inequitable burden of environmental challenges, socioeconomic disparities [2], limited literacy [3], digital divide [4], and cultural competence and sensitivity [5] to access an essential healthcare service.

Spread across various states in remote and inaccessible areas such as forests and hills; numerous challenges hinder their access to adequate healthcare. These areas often lack basic



infrastructure such as roads, transportation facilities, and communication networks, making it difficult for them to reach healthcare facilities. As a result, tribal communities may have limited or no access to primary healthcare services, preventive care, emergency medical assistance, and specialized treatment.

Image 3: Elderly women from the Tribal community of Nashik

In Maharashtra, 9.35% (10.5 million) of individuals are identified as belonging to tribal communities. Being the second most populous and industrialized state in India, the state, especially the tribal communities, faces several health challenges, such as malnutrition, food insecurity, higher child mortality rates, communicable and non-communicable diseases[6], and the inability to prioritize health [7]. Nashik is one of 36 districts in Maharashtra, which constitutes 6 million people (5.43 %) of the total Maharashtra population. It contains 589 subcenters, 155 PHCs, 24 CHCs, 6 Subdivisional hospitals, and one district hospital to serve the population. However, the lack of adequate healthcare infrastructure in tribal areas, including a shortage of healthcare professionals and facilities, hampers efforts to address the health needs of these marginalized populations[8]. Situated on the border of Gujarat and Maharashtra, Peth and Surgana are 100% tribal talukas belonging to the Kokana tribe. Such tribal regions lack health access due to extensive forest cover, low-income groups, unemployment, and migration. Each tribal group has its own traditional beliefs, practices, and healthcare systems, which may

differ significantly from mainstream medical practices. This diversity underscores the need for culturally sensitive and community-specific healthcare interventions.



Image 4: Planning of distribution of free medication among FLHWs

Intelehealth is implementing its intervention in Nashik to support and preserve the health of these tribal communities. Intelehealth's health worker to a doctor, called Nashik Arogya Sampada, a telemedicine platform is currently implemented in tribal blocks of Nashik. The program sought to bridge the gap in healthcare access by leveraging technology to facilitate remote consultations and delivery of

free medications. Telemedicine services enabled them to access health services that were previously beyond their reach. Despite the provision of teleconsultations, lower adherence to treatment has been observed, attributed to socioeconomic challenges and limited access to medicines. To address this, the Nashik Arogya Sampada has also initiated a new intervention, the provision of free medications, on January 17, 2024, to clients following their teleconsultations. Presently, there is a need to understand the impact of telemedicine care by assessing treatment-seeking behavior and adherence among clients using the Arogya Sampada platform. A more nuanced understanding is required to comprehend if the delivery system of free drugs made a difference in the clients' treatment-seeking behavior, adherence to treatment, and health recovery.

Our Approach

In the catchment area, the average population density is about 6,000-10,000 people within a 10km radius, with the nearest general physician approximately 15 km away. The Nashik Arogya Sampada (NAS) program offers provider-to-provider telemedicine services here. NAS recruits frontline workers (FLWs) and delivery personnel from the community, training them in basic health screening and telemedicine application usage. Four FLWs and four delivery personnel cover the area, visiting clients' homes to register patients, document health complaints, and conduct screenings using the Intelheath telemedicine platform.

When a client requires a consultation, FLWs visit their home, register them, and initiate a screening. They then connect with a doctor who, through video/audio consultation, diagnoses the patient and issues a prescription. This prescription is printed and given to the patient. The program also ensures regular follow-ups and provides reliable referrals to tertiary hospitals when necessary.

NAS collaborates with a local pharmacy in Peth to deliver prescribed medicines directly to clients' doorsteps, ensuring high-quality care, adherence to treatments, and improved patient recovery. Patients have the choice to purchase medications via the local pharmacy and get doorstep delivery or they could purchase it themselves. In addition, for the lowest economic status, the medications are given for free, for about 20-25% of patients. This decision was made on the basis of the health workers who are members of the community and were aware as to which patients needed free medicines. In January 2024, we were able to expand the access to free medications to the entire patient population due to a multi-year grant received from a family foundation.

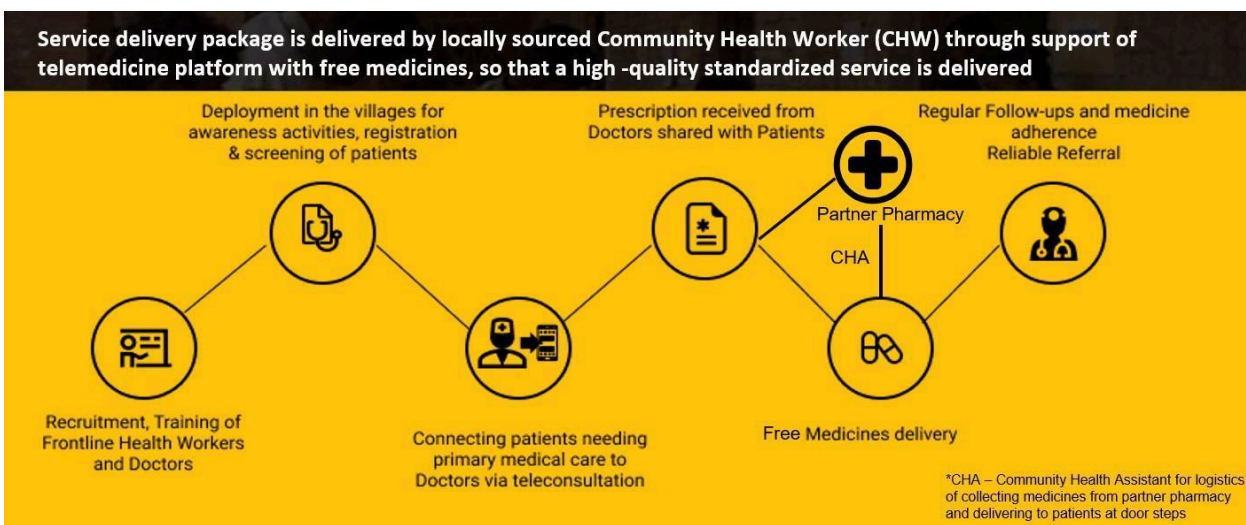


Image 5: Pathway of Patient Care in the NAS program

The study's primary objective was to assess the impact of telemedicine and expanded package of doorstep delivery of free prescribed medications on treatment-seeking behavior and adherence to treatment by conducting a retrospective cross-sectional study. The study spanned one month, encompassing the timeframe before the availability of free prescription medication for all and the subsequent one month following free prescribed medicines for all.



Image 6: FLWs building rapport with clients

The strategies built upon the study's findings will improve the continuum of care by improving training, diagnosis, and follow-up management. By iteratively conducting a retrospective study, the study's findings will provide robust insights into the effectiveness of telemedicine in enhancing treatment-seeking behavior and facilitating recovery among clients attending teleconsultations in the Arogya Sampada program.

Objectives

1. To assess the change in the treatment-seeking behavior and adherence to treatment among the clients who received telemedicine care due to the expansion of free medications in the Nashik Arogya Sampada program with various health conditions.
2. To assess the change in self-report recovery rate among clients who attended teleconsultations in the Nashik Arogya Sampada program with various health conditions before and after initiation of free medications.

Methods

Study Setting and Population

Peth (Peint) and Surgana talukas in Maharashtra's Nashik district are rural and comprise 25-30 villages each with 50-200 households. The survey included clients from four project clusters: Ghotapada, Surgana, Badagi, and Jambhulpada, covering 30 villages with 2800 households.

Data collection happened in April 2024.

Study Design

This study adopts a retrospective cross-sectional design and used A stratified, probability-proportionate-to-size (PPS) sampling approach to recruit at least 200 clients from the Electronic Health Record (EHR) data. The sample was stratified by gender and morbidity to ensure representativeness.



Image 7: Intelhealth's Training program for data collectors

Further stratification was performed based on the time point of initiation of free medicines access, dividing the data into pre-intervention and post-intervention periods. A sample of 100 clients was selected from EHR data, from the clients who have sought care at least one month before the free

prescribed medication provision (pre-intervention group) and another 100 clients who sought telemedicine care after the implementation of free prescribed medication provision (post-intervention group). This will enable us to understand their treatment-seeking behavior and adherence to treatment in both phases.

Initially, the population was stratified based on two key criteria: gender and type of illness, i.e. main communicable diseases such as respiratory tract infections, urinary tract infections, diarrhea, and flu; main non-communicable diseases such as diabetes, hypertension, anaemia, arthritis, psoriasis; and general illnesses such as headache, toothache, abdominal pain, fatigue with equal representation of each subgroup. For the qualitative survey, 20 clients were selected in total, with 10 clients from each period (pre- and post-intervention). Ethical approval (IRB number: 10115/IRB/23-24) was obtained before data collection from the Sigma-IRB (Institutional Review Board), Division of Sigma Research and Consulting Pvt. Ltd, New Delhi, India.

Participant Recruitment

Pre-Free Medication Phase (Pre-intervention): Between December 17, 2023, and January 16, 2024, all cases attending teleconsultations were included in the study, totalling 377 unique clients. During this phase, only the most vulnerable patients were receiving free medications from the program.

Post-Free Medication Phase (post-intervention): From January 17 to February 16, 2024, all cases attending teleconsultations were identified, amounting to 473 unique clients. Data from the clients' electronic health records (EHR) was collected and standardized for this study. Given the retrospective nature and subjectivity of self-reporting in the study, there is a limitation in establishing the accurate timelines of illnesses, point of seeking treatment, progression of the disease, level of complications, and recovery status. Hence, the quality and completeness of the EHR records were ensured by the clinical team before including them in the sample.



Image 8: Frontline health workers with clients

The pre-to-post phase serves as a comparison point to utilization, and recovery from various morbidities. However, electronic health records may only be partially complete, leading to potential missed secondary diagnoses. To standardize the associated diagnoses and comorbid conditions, the team further scrutinized and clinically re-analyzed them before recruiting into the sample. ICD and SNOMED coding was performed to provide a standardized way to record the

medical conditions and ensure comprehensive documentation, including all diagnoses. Clinicians reviewed the EHR data to identify any missed diagnoses and ensure their inclusion in the analysis. Subsequently, the cases were selected to gather a diverse sample across various morbidities, including communicable, non-communicable, and general illnesses.

Finally, 100 clients were selected from the EHR data, with 100 clients seeking care at least one month before the free medication provision. In comparison, the other 100 clients sought telemedicine care post-implementation of free medication provision. Considering a one-month recovery time, the clients were recruited during the second week of March 2024.

Selection Criteria

Inclusion Criteria:

- Clients who had attended telemedicine care from the Arogya Sampada Program
- Clients diagnosed with primary provisional diagnosis or primary confirmed diagnosis
- Clients who had a sufficient recovery period/ reduction time based on their diagnosis
- Age above 18 years.
- Had the capacity to participate in the study

Exclusion Criteria:

- Clients who were unwilling or unable to participate in follow-up assessments.
- Clients with severe cognitive impairment hindering participation.
- Clients with terminal illnesses
- Clients with any additional comorbidity was excluded because it can affect the recovery of primary diagnosis (EHR records clinically reviewed by the doctors)



Image 9: Explaining the study to the client and taking their consent

Data Collection

Quantitative data were collected using a structured questionnaire to capture detailed information on treatment-seeking behavior and adherence patterns. Qualitative data were gathered through semi-structured interviews, guided by a qualitative interview protocol, to provide deeper insights into clients' experiences and perceptions regarding the intervention. Data collection was carried out using a combination of structured questionnaires, semi-structured face-to-face interviews, and a review of electronic medical records. The principal investigators and trained enumerators conducted these activities. The KoBoToolbox application was utilized for efficient data collection and integration.



Image 10: Data collection with a NAS client

Data Analysis

Statistical analysis was performed using STATA. Descriptive statistics were conducted, utilizing both univariate and bivariate analyses. Through bivariate analysis, the analysis investigated the relationships between pre-post free medication, socio-demographic, and economic background variables, all within the context of evaluating the impact of telemedicine and free prescribed medication on treatment-seeking behavior and adherence. The qualitative analysis was performed using MAXQDA software. A codebook was developed based on emergent themes and sub-themes identified during initial data coding. The codebook outlined themes and sub-themes to guide the coding process. Qualitative findings were integrated with quantitative data, wherever applicable, to provide a comprehensive understanding of the impact of telemedicine on healthcare-seeking behavior, access to medications, adherence to treatment, health recovery journey, and community perceptions.

Results

Demographic Profile

Table 1 represents the demographic characteristics of the clients, with a total of 219 clients, including 119 in the pre-intervention group and 100 in the post-intervention group. Age distribution showed a higher proportion of participants aged 26-45 years in the pre vs post-intervention phase, while those aged 65 and above decreased. There are more female clients overall accessing NAS telemedicine intervention. There is a high proportion of no literacy in the community. Overall there are similar socio-demographic characteristics between pre and post-intervention groups.

Table 1: Demographic characteristics of the clients

Demographic characteristics	Pre-intervention group %, (n=119)	Post-intervention group %,(n=100)
Age		
18-25 years	12	7
26-35 years	18	24
36-45 years	21	25
46-55 years	10	17
56-65 years	19	17
65 years and above	20	10
Gender		
Female	70	70
Male	30	30
Marital Status		
Currently married	82	87
Never married	10	2
Widowed	6	10
Divorced/Separated/Deserted	2	1

Education		
No education	52	45
Primary school(1-5)	18	18
Middle school(5-8)	10	17
High School (8-10)	7	11
Higher Secondary (10-12) and above	13	9

Socio-economic Profile

Pre-intervention group:

Table 2 represents the socio-economic profile of the clients, showing similar trends across both pre and post-intervention groups in household compositions, employment statuses, primary occupations, income distributions, availability of disposable emergency funds, health expenditures, out-of-pocket expenses, debt, and poverty line statuses. A majority of households (89% pre-intervention, 93% post-intervention) consist of more than four members, with a high percentage having multiple earning members. The majority of clients engage in agriculture as their primary occupation, encompassing 91% of participants pre-intervention and 91% post-intervention. Moreover, a larger portion depends on agriculture as their main source of income, whether by selling agricultural produce or working as agricultural labourers (60% pre-intervention, 63% post-intervention).

Despite these trends, financial challenges persist over half of the population (54% pre-intervention, 59% post-intervention) report having no disposable emergency funds 28% of clients in pre and 32% post-intervention incurred substantial out-of-pocket expenses, averaging INR 35,696 and INR 35,206, respectively, over the last three months. However, this difference is not statistically significant. The main domains of out of pocket expenditure reported by clients are health/sickness, marriage, other family functions, agriculture-related expenses, and housing, in both pre and post-intervention.

Monthly household health expenditure remains a financial burden, with 65% pre-intervention and 70% post-intervention spending less than INR 500 to INR 2000 monthly. 67% of clients reported spending on health-related expenses in the last 3 months preceding the survey in the pre-intervention period, an average amount of INR 12,962. In the post-intervention phase 53% of households reported spending money on health-related expenses in the last three months preceding the survey, an average amount of INR 14,928. However the difference between

these two numbers is not statistically significant. We do not anticipate that we would be able to see the effects of the provision of free medications to the entire patient population on significant out of pocket expenditure in such a short time period.

Table 2: Socio-economic characteristics of the clients.

Socio-economic characteristics	Pre-intervention group % (n=119)	Post-intervention group %, (n=100)
Number of members residing in the household		
1-3 members	11	7
4-5 members	34	36
6 members and above	55	57
Number of earning members residing in the household		
No earning members	13	7
1 earning members	23	25
2 earning members and above	65	68
Currently working		
Yes	40	40
No	60	60
Primary occupation		
Agricultural worker	91	91
Govt. Service worker	1	0
Production worker	2	5
Professional/Sales worker	3	1
Others	4	3
Paid occupation		
Yes	40	51
No	60	49
Primary source of income (last 3 months)		
Farmer: producing cereal crops (wheat, Maize, barley), cash crops (cotton, Sugarcane, jute), or vegetables and fruits	44	43
Agricultural wage labor (employed for farm work)	16	20
Daily labor (unskilled work, agricultural/non-agricultural/skilled)	10	14
Salaried worker (fixed monthly salary)-Government, private, etc.	3	5
Sale of agriculture/non-agriculture products	3	3
Seasonal labor	13	3
Self-employed (non-agriculture/petty business)	2	4

Pension/Remittances/Niradhar Scheme	6	7
Others	4	1
Monthly household income (INR)		
No income	5	5
INR 800-2500	24	11
INR 2501-5000	18	29
INR 5001-10,000	34	23
INR 10,001-40,000	20	32
Mean household income (INR)	INR 7987	INR 8715
Average monthly disposable emergency funds		
No disposable income	55	59
INR 300-1000	18	11
INR 1001-3000	13	18
INR 3001-10,000	13	12
Mean disposable emergency funds	INR 1151	INR 1187
Large out-of-pocket expenditure (last three months)		
Yes	28	32
No	72	68
Out-of-pocket expenditure (last three months)		
Less INR 1000	9	3
INR 1001-5000	30	22
INR 5001-10,000	15	13
INR 10,001-50,000	30	41
INR 50,001 and above	15	22
Mean out-of-pocket expenditure (last three months)	INR 35,696*	INR 35,206*
Reasons for out-of-pocket expenditure (last three months)		
Health/Sickness	67*	53*
Average large OOP expenditure on health	INR 12,962*	INR 14,928*
Monthly household health expenditure(INR)		
No expenditure	10	9
Less than INR 500	22	18
INR 501-1000	18	25
INR 1001-2000	25	27
INR 2001-5000	13	15
INR 5001-30,000	11	6
Dept on household		
Yes	23	22

No	77	78
Dept amount (INR)		
Less INR 10,000	19	23
INR 10,001-50,000	48	55
INR 50,001-100,000	26	14
INR 100,001 and above	7	9
Below Poverty Line (BPL)		
Yes	81	80
No	19	20

**Difference not statistically significant, unpaired t-test (p-value = 0.97)*

The qualitative findings underscore the stark choices clients have faced before the initiation of the program when prioritizing health care against competing economic demands. Specifically, the inability to promptly seek treatment due to financial constraints exemplifies the choices clients face when prioritizing healthcare against competing economic demands.

“When I got treatment from a private hospital, I spent a total of forty to forty-two thousand rupees. For that, I took loans from neighbours and relatives, and I also sold a pair of bullocks that I had at home for treatment.”

-19 year old female, pre-intervention client

Along with that, environmental and operational factors also contribute to healthcare accessibility challenges which include the long distance to healthcare facilities, lack of public transportation, and staff unavailability in healthcare facilities.

“If there is no money, we can't travel, and even if we have money, sometimes transportation is not available. Because of this, sometimes we don't get medicines on time.”

-29 year old male, pre-intervention client

“A private doctor comes to the village but he only comes twice a week on his fixed day. They arrive at 11 am and leave at 1 pm. But the people of the village are going to work at that time, so they cannot get treatment at that time.”

-22 year old male, post-intervention client

Health Profile of the Clients

Morbidity Profile of the Clients

Figure 1 represents the morbidity profile of clients in both pre-intervention and post-intervention phases, showing a balanced representation of patients with various health conditions across both phases. Joint and bone pain were the most represented conditions, with 48% in the pre-intervention phase and 52% in the post-intervention phase. Respiratory conditions were also reported, with 18% pre-intervention and 25% post-intervention. Other conditions such as injury, skin issues, and dental problems varied between the pre and post-intervention.

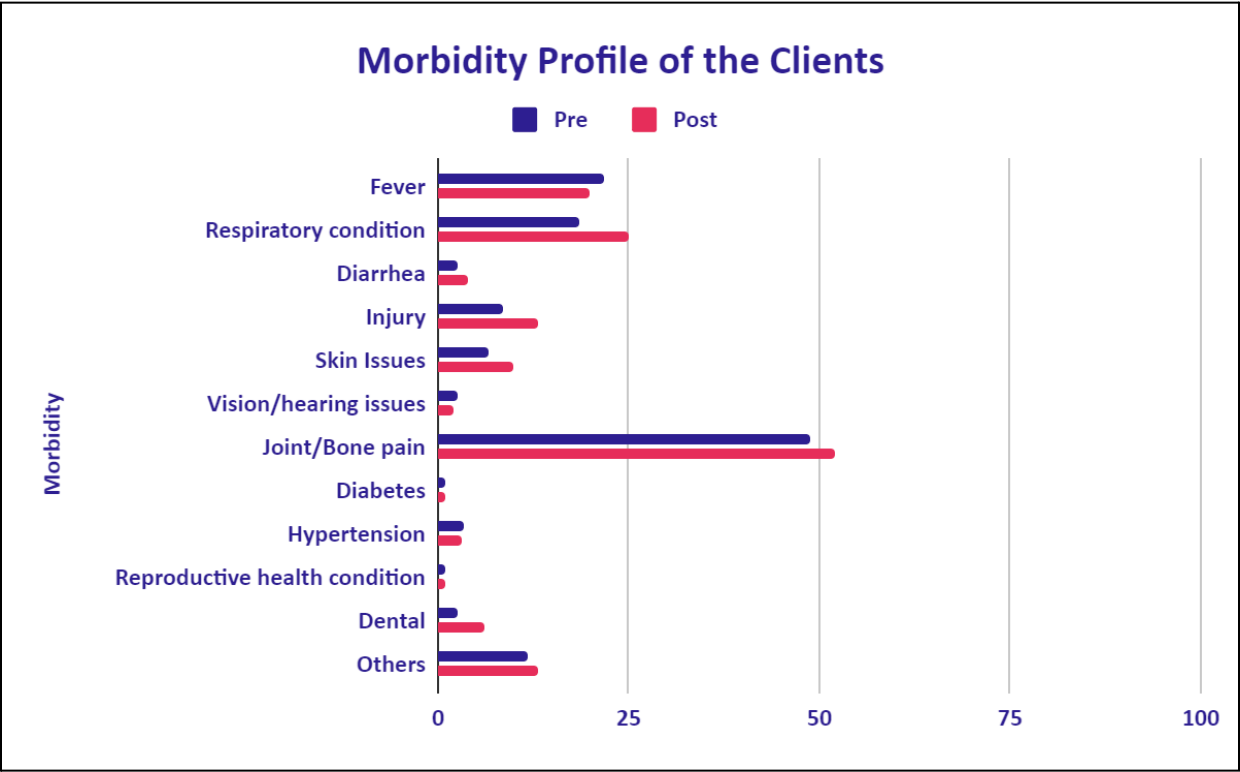


Figure 1: Morbidity profile of the study clients

Health Profile of the Clients by Gender

Morbidity Profile of Clients by Gender of the Pre and Post-Intervention

Overall, there was a similar distribution of clients by gender and morbidity between the pre and post-intervention groups as shown in Table 3.

Table 3: Morbidity profile of clients by gender of the pre and post-intervention group

Morbidity	Pre-intervention			Post-intervention		
	No. of patients	Female (%)	Male (%)	No. of patients	Female (%)	Male (%)
Fever	26	77	23	20	65	35
Respiratory condition	22	68	32	25	60	40
Diarrhea	3	67	33	4	75	25
Injury	10	80	20	13	77	23
Skin Issues	8	63	38	10	60	40
Vision/hearing issues	3	33	67	2	100	0
Joint/Bone pain	58	67	33	52	81	19
Diabetes	1	0	100	1	100	0
Hypertension	4	50	50	3	100	0
Reproductive health condition	1	100	0	1	100	0
Dental	3	67	33	6	67	33
Others	14	79	21	13	46	53

Health Access and Treatment Adherence:

Teleconsultations Completed Pre and Post-intervention

The introduction of the free medication initiative in January 2024 led to a notable increase in both consultation volume and growth rate. From January to December 2023, the average monthly volume of teleconsultations was 214. Following the launch of the free medication program, this average increased to 455 per month from January to December 2024. This change represents a 112.6% increase in the average monthly volume of teleconsultations.

A segmented regression analysis (Fig. 2) of the data shows a shift in the observed monthly growth rate. The average month-over-month increase was +3.16 consultations before the intervention. After the intervention, this rate accelerated to +8.27 consultations per month.

While the p-value of 0.611 does not meet the conventional standard for statistical significance at a 0.05 level, the practical implications are evident. The more than doubling of the monthly growth rate demonstrates a meaningful change in the program's trend, which can be attributed to the new initiative. Temporary dips in consultation numbers in March and August 2024 were due to operational reasons, such as training and application updates, and did not affect the overall positive trend.

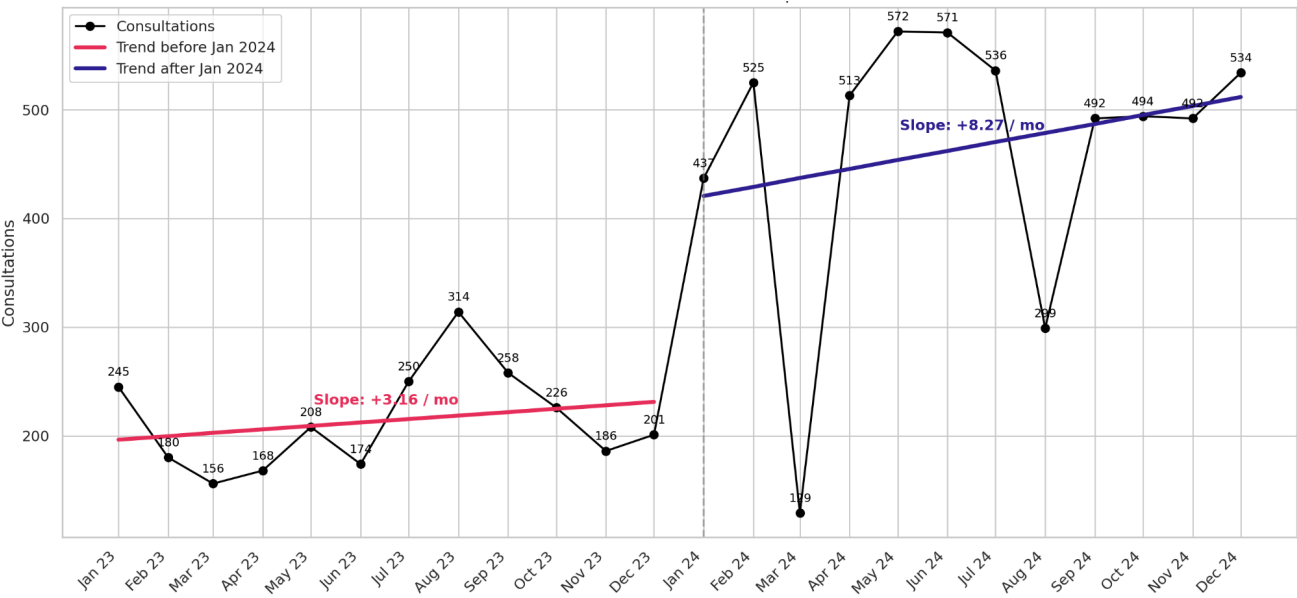


Figure 2: Monthly Teleconsultations Pre and Post Free Medication Program (Free medicines introduced in January 2024)

Access to Treatment Pre and Post-Intervention

Figure 3 illustrates the access to treatment among clients in both pre and post-intervention phases. Access to treatment slightly improved in post-intervention, with 99% of patients receiving prescriptions after telemedicine consultations compared to 96.64% pre-intervention. The percentage of clients receiving free prescribed medications rose sharply from 26.05% to 94%, highlighting substantial benefits in healthcare access. Doctor-advised treatment plans remained consistently high at 82.86% and 84.21% across both phases. The proportion of clients purchasing prescribed medications decreased markedly from 55.46% pre-intervention to 7.07% post-intervention, indicating reduced financial burden on patients.

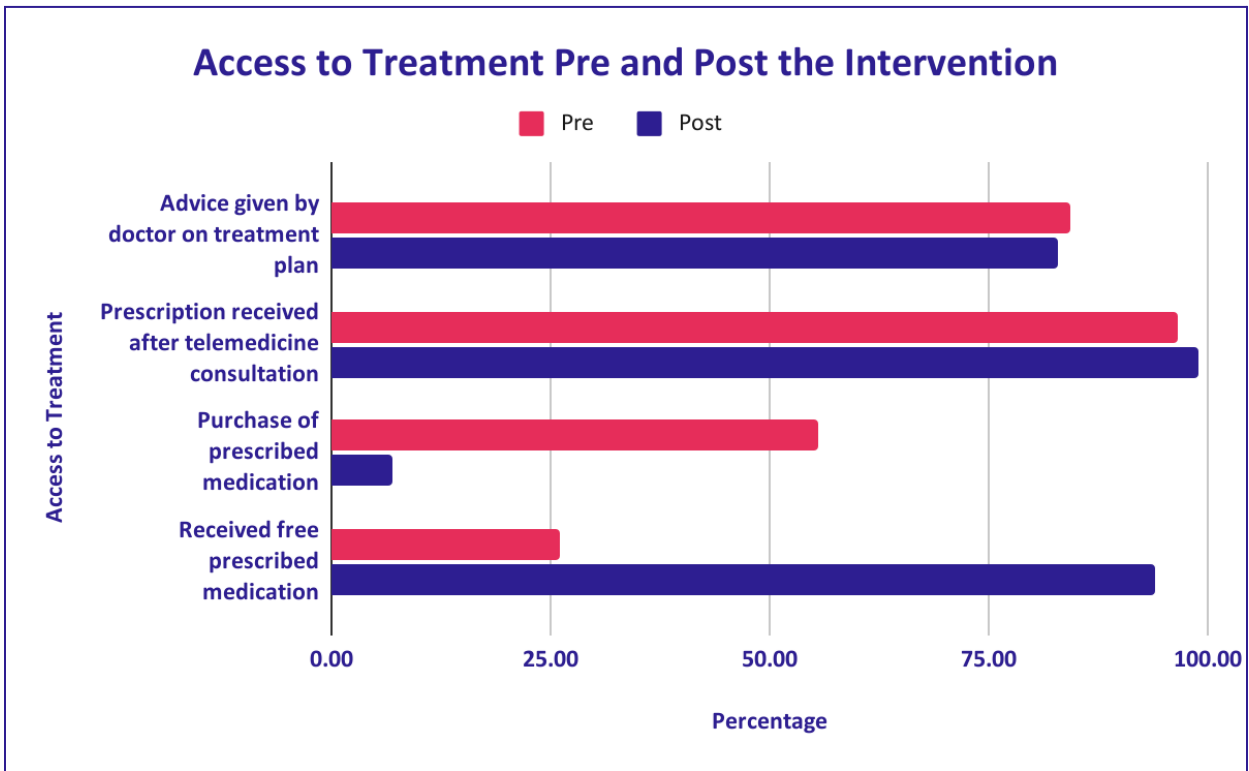


Figure 3: Access to treatment pre and post-intervention

Pre-intervention, clients received free prescribed medication from government health facilities, and pharmacies. The qualitative findings highlight the different sources with certain limitations.

There is a pharmacy here which is about 1 to 0.5 km away. There, only if we show the medical records and necessary details, we get free medicine. But from Arogya Sampada, we get medicine on the spot and it saves us time. We can get treatment whenever we want.

-63 year old female, pre-intervention client

"Before, we had to go to the taluka headquarters for even minor illnesses to get medicines, so we would often ignore."

- 55 year old male, pre-intervention client

Post-intervention clients consistently reported receiving all medications free of cost during the interviews. The convenience of receiving medicines directly was emphasized, eliminating their ignorance of illnesses and the need to purchase medications from outside sources.

“...Before, we had to buy medicines, and sometimes we didn't have the money, so we wouldn't buy them and would just ignore our illnesses. But now that we are getting them for free, we are taking all the medicines and getting treatment.”

- 43 year old male, post-intervention client

Along with that, community health workers played a pivotal role in clients' accessibility.

“Health workers visit the villages on their scheduled days and go door to door. Whether we are at home or not, the health worker visits our home once in a while and inquires about our health.”

- 19 year old female, pre-intervention client

Access to Treatment By Morbidity

Figure 4 and 5 presents the access to treatment for various morbidities in both pre-intervention and post-intervention phases. It shows that across all conditions, there was a high rate of advice given by doctors on treatment plans, with slight variations between phases. Prescription receipt after telemedicine consultations was consistently high, ranging from 75% to 100% across all conditions post-intervention. A notable decrease in the purchase of prescribed medication was observed post-intervention, contrasting with a substantial increase in receiving free prescribed medication, reaching 100% for several health conditions.

- 1. Advice given by the doctor on a treatment plan:** 84% and 82% of clients received medical advice pre & post intervention respectively. 97% and 99% of clients received prescriptions pre & post intervention respectively. There is some variation by morbidity, but on the whole the prescribing practices in pre and post can be considered as similar.
- 2. Purchase of prescribed medication:** Pre-intervention 55% of clients purchased medications from out of pocket expenses. Post-intervention, there was a significant drop to 7% for purchasing prescribed medications across all morbidities. This decrease suggests a shift towards more accessible and cost-effective treatment options, possibly due to the free medication intervention.
- 3. Received free prescribed medication:** Pre-intervention 26% of clients received free medications and post-intervention, there was a rise with 94% of clients receiving free prescribed medication for all morbidities. This positive change shows better access to essential medicines.

There is a low number of patients accessing care for diabetes and hypertension, with 1 diabetes patient in pre and 1 in post-intervention; 4 hypertension patients in pre and 3 in

post-intervention. There is a need to strengthen access to care for these priority non-communicable diseases.

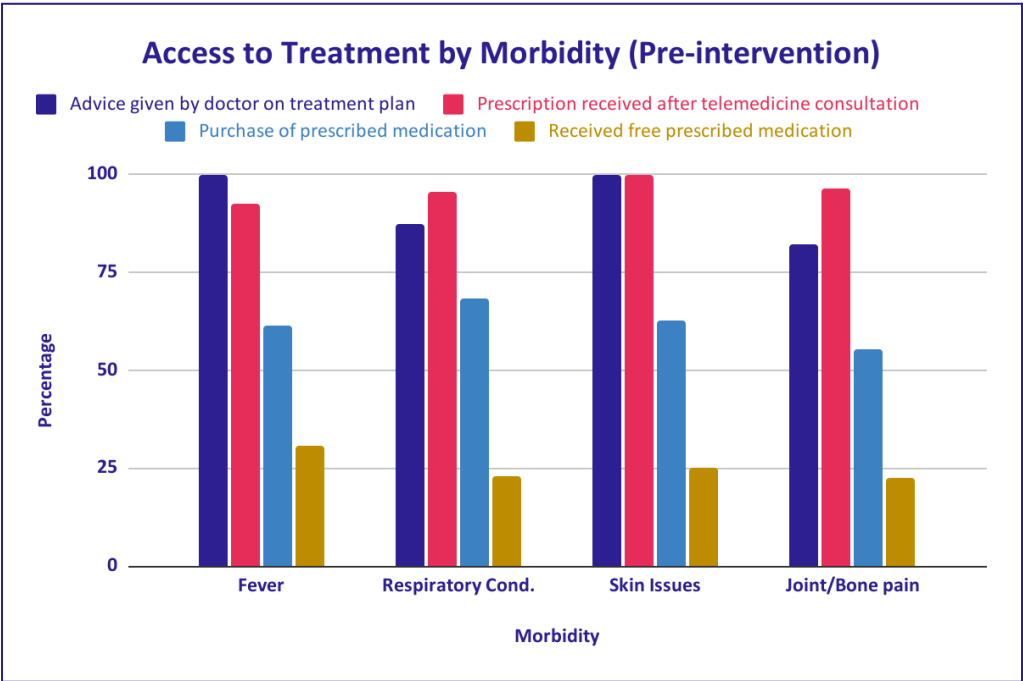


Figure 4: Access to treatment by morbidity (pre-intervention)

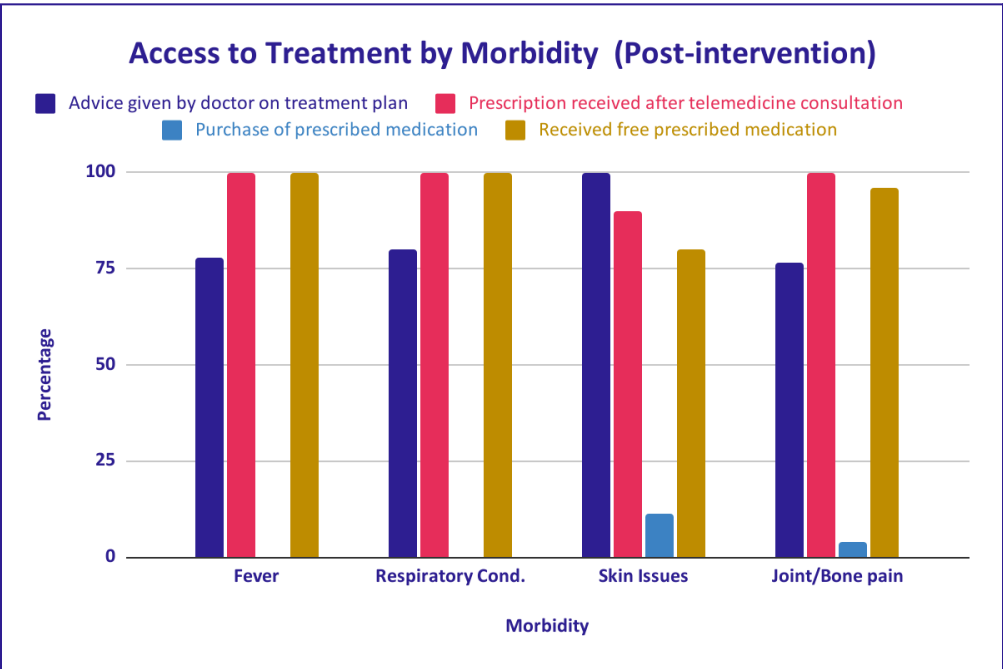


Figure 5: Access to treatment by morbidity (post-intervention)

Timely Access to Health Services

Figure 6 shows that the percentage of clients who attended their health services within less than 8 hours, remained consistently high in both phases. Post intervention, an increase in percentage of patients receiving health services within 8 hours was observed from 83% to 91%, however this increase is not statistically significant.

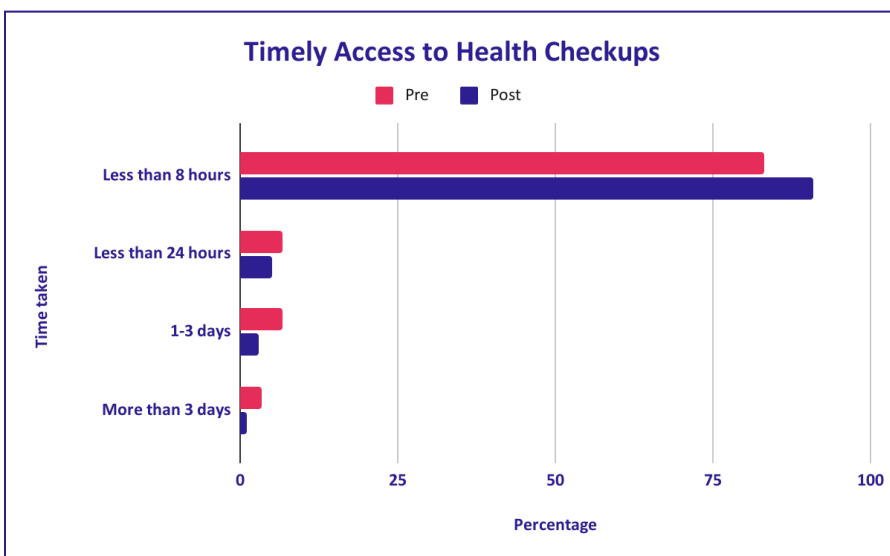


Figure 6: Timely access to health services

Timely Access to Health Services By Gender

Figure 7 shows the percentage of females and males who attended their health services within less than 8 hours. Post-intervention, there was an increase in the percentage of both genders by 8%.

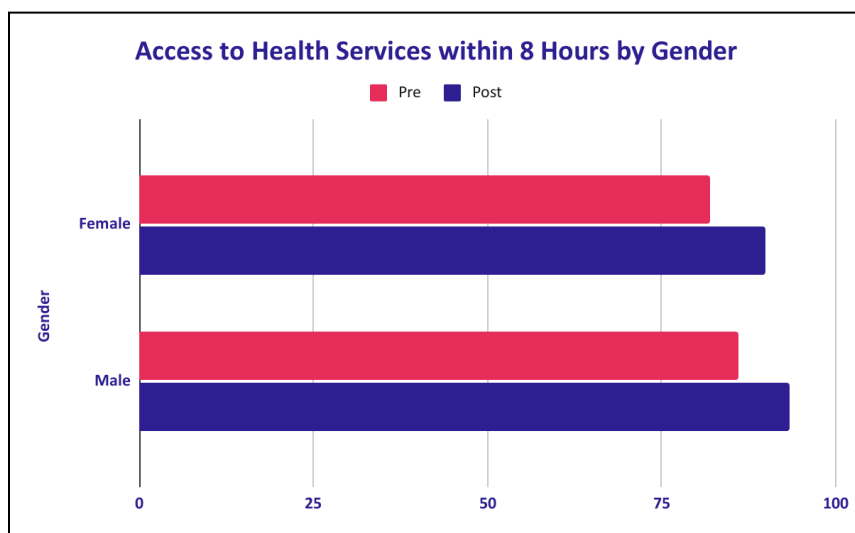


Figure 7: Timely access to health services by gender

Timely Access to Health Services By Morbidity

Figures 8 provide the percentage of clients accessing timely health services within 8 hours by morbidities in both phases. In fever, timely access within 8 hours increased from 85% pre-intervention to 90% post-intervention. In respiratory conditions, it increased from 91% to 92%. In joint pain, it increased from 83% to 94%. Conversely, in skin conditions, there was a drop from 100% to 90%. Nearly a quarter, 25% of clients who access health services take 8-24 hours to access health services. Overall, the percentage of clients accessing health services within 8 hours increased from pre to post-intervention for all except skin conditions.

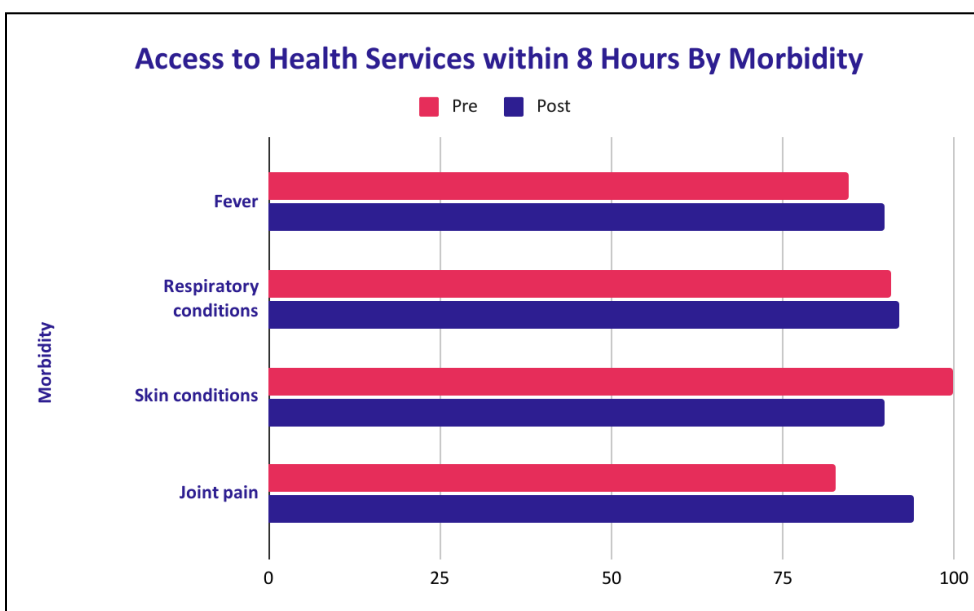


Figure 8: Access to health services within 8 hours by morbidity

Timely access to health services: Qualitative feedback

The qualitative findings found that accessing healthcare services are inconvenient due to long distances and waiting times, and receiving prompt care from NAS health workers is beneficial as highlighted by clients.

For a private clinic, we have to walk 3-4 km and even after going there, we have to wait for 4-5 hours for a check-up. It is very beneficial and pleasant for us to get check-ups from Tai (health worker), and free medicines on the same day.

41 year old female, pre-intervention client

Community health workers have made a positive change by ensuring that the clients receive their medications on the same day of diagnosis, which resulted in a timely access to medications as well.

"After I came home from Nashik, I saw that ... Mama (health nurse assistant) used to bring medicines to our village every day, ... I told them that I had a fungal infection on my face. At that time, they took his photos and brought me an ointment and medicines on the same day."

- 22-year-old male, post-intervention client

"The change is that she comes on time and comes on the spot and asks if there is any problem and then tells me what to do or where to go to a big hospital."

- 40 year old male, post-intervention client

Adherence to Treatment and Cost-saving Practices in the Last 3 Months

Figure 9 presents improvement in adherence to treatment and cost-saving practices in the 3 months, in post-intervention.

- The percentage of clients skipping medications decreased from 51% to 32% post-intervention;
- taking less medications decreased from 73% to 17%;
- not filling medication prescriptions decreased from 67% to 18%;
- delay filling a prescription decreased from 60% to 35%;
- use of home remedies decreased from 60% to 37%, This suggests that more individuals have reduced reliance on self-therapies (often based on household ingredients) due to the presence of professional medical advice to address health issues.
- The percentage of clients purchasing generic medications to save money decreased from 31% to 25%; due to the accessibility to free medication intervention.
- delayed medical care due to cost barriers decreased from 57% to 49%;

Overall, a major decrease was found among clients in practices such as taking fewer medications and not filling medication prescriptions to save cost.

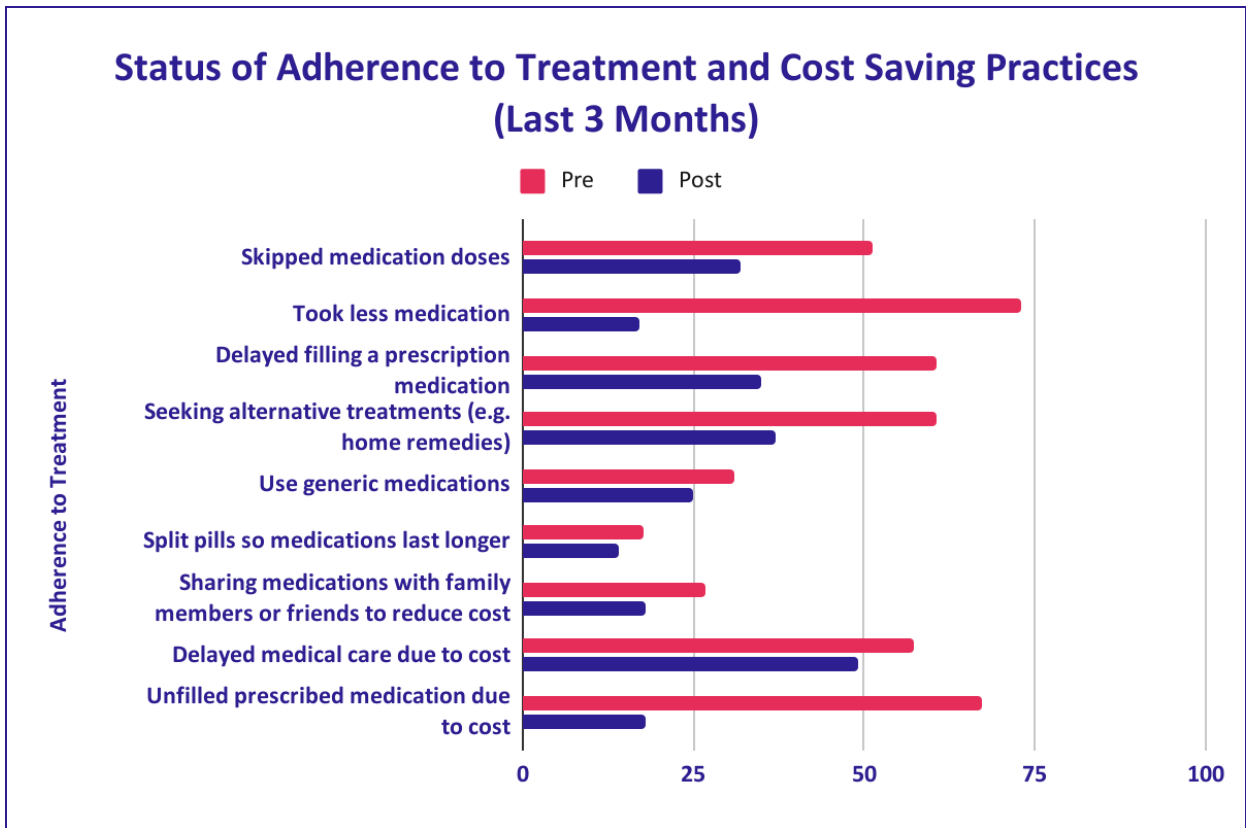


Figure 9: Status of adherence to treatment and cost-saving practices (Last 3 months)

Adherence to Treatment by Morbidity

Table 4 shows the adherence patterns of the pre-intervention and the post-intervention across clients with various health conditions.

Table 4: Adherence to treatment by morbidity.

Morbidity	You skipped medication doses (%)		You delayed filling a prescription medication (%)		You are seeking alternative treatments (e.g. home remedies) (%)		In the last 3 months, delayed medical care due to cost (%)		In the last 3 months, unfilled prescribed medication due to cost (%)		Pre (n)	Post (n)
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post		
Fever	50	35	50	35	69	40	58	45	58	15	26	20
Respiratory condition	45	28	59	32	59	40	64	32	68	16	22	25
Skin Issues	38	10	88	30	75	20	50	20	100	10	8	10
Joint/Bone pain	60	33	69	42	60	44	57	56	66	8	58	52
Hypertension	25	67	25	67	75	67	50	100	50	0	4	3

During the pre-intervention scenario, the excerpts highlight that there was a past pattern of ignoring illnesses due to financial limitations, reflecting a broader issue of healthcare access and awareness within the community.

Earlier, we used to ignore illnesses because we didn't have the time or money to go to the doctor....”

-38 year old female, post-intervention client

“And there are a lot of people here who have kidney stones. So people just take medicine for their stomach pain and then ignore it. “

-43 year old male, post-intervention client

After the intervention, the positive impact of the intervention on medication adherence and reduced reliance on cost-saving practices is highlighted by the real-life incidents of clients.

“We had to buy medicines at that time, and they were for a month, but we didn't take them all because we got demotivated from taking them. But now that we are getting free medicines, we are taking them all...”

-43 year old male, post-intervention client

“Before, we had to buy medicines, and sometimes we didn't have the money, so we wouldn't buy them and would just ignore our illnesses. But now that we are getting them for free, we are taking all the medicines and getting treatment.”

-29 old female, post-intervention client

Completion of the Entire Course of Treatment Post-Receiving Medications:

As Table 5 shows, from pre-intervention to post-intervention, the percentage of clients reported completing the entire course of treatment increased by more than half, 42% to 90%. Also, there was a decrease in partial completion of treatment, dropping from 56% to 9%.

Table 5: Completion of the entire course of treatment post-receiving medications.

Completion of the entire course of treatment as prescribed	Pre-intervention group (% n=97)	Post-intervention group (% n=99)
Yes	42	90
Partially until my symptoms recover	56	9
Not at all	2	1

Completion of the Prescribed Treatment by Morbidity

As Table 6 shows, overall, there was a improvement in completing the entire course of treatment as prescribed across all morbidities post-intervention, fever by 52%, respiratory conditions by 68%, skin issues by 32%, joint/bone pain by 55%, and hypertension by 75%. Overall a major decrease was found in hypertension and respiratory conditions.

Table 6: Completion of the Prescribed Treatment by Morbidity

Morbidity	Completion of the entire course of treatment as prescribed							
			Partially until my symptoms recover (%)				Pre (n)	Post (n)
	Yes (%)				Not at all (%)			
	Pre	Post	Pre	Post	Pre	Post		
Fever	38	90	63	5	0	5	24	20
Respiratory condition	20	88	80	8	0	4	20	25
Skin Issues	57	89	43	11	0	0	7	9
Joint/Bone pain	36	90	64	10	0	0	45	52
Hypertension	25	100	75	0	0	0	4	3

The qualitative findings also highlighted that the clients consistently followed their doctor's advice, adhered to the prescribed medication regimen, and experienced positive results.

Yes, I took the prescribed medicine as per the doctor's advice, I felt better because of the medicine, so I told my son to take the complete medicine too.

- 41 year old female, pre-intervention client

"Yes, we did. And they(health workers) had told us that after these pills are over, go to a doctor outside once for an in-person checkup. But there was no such need and the problem did not arise."

- 29-year-old male, post-intervention client

Patient Outcomes and Health Recovery

Level of improvement of symptoms after treatment initiation

As Table 7 shows, there was a noticeable increase in clients with significant improvement in symptoms, rising from 50% to 67%, by 17%. Clients with slightly improved symptoms were consistent, in both phases. Followingly, there was a drop in the clients reporting that their symptoms were the same from 27 to 9%.

Table 7: Level of improvement of symptoms after treatment initiation

Level of improvement in symptoms after treatment initiation	Pre-intervention group (%, n=119)	Post-intervention group (%, n=100)
Symptoms improved significantly	50	67
Symptoms improved slightly	23	23
Symptoms remained the same	28	9
Symptoms worsened	0	1

The qualitative findings highlighted that the free medication intervention led to health improvement compared to previous treatments received from private facilities despite multiple visits and expenses.

“Before.. I had called a private doctor at my home for treatment... At that time I was suffering ...the doctor told me that I had chikungunya. Taking the doctor's medicine did not make any difference so I went outside to a private clinic for treatment. There, the doctor gave me two injections. In total, I went for 15 days for injections so it cost me a lot for 15 trips and 15 injections in total. But then I was not completely feeling well. I felt better only after receiving treatment from Nashik Arogya Sampada.”

-40 year old male, pre-intervention client

“Before ...my son had taken treatment from a private hospital. Medicines had to be bought at that time but he did not feel any difference then. So I asked him to get treatment from Nashik Arogya Sampada. ... So, instead of going outside for treatment, we take treatment from here, and he is better now”

-53 year old female, post-intervention client

Level of improvement of symptoms after treatment initiation by morbidity

Figures 10 and 11 show the level of improvement of symptoms (significant/ slight/ same/worsened) after the initiation of treatment among the pre-intervention and post-intervention groups across various health conditions.

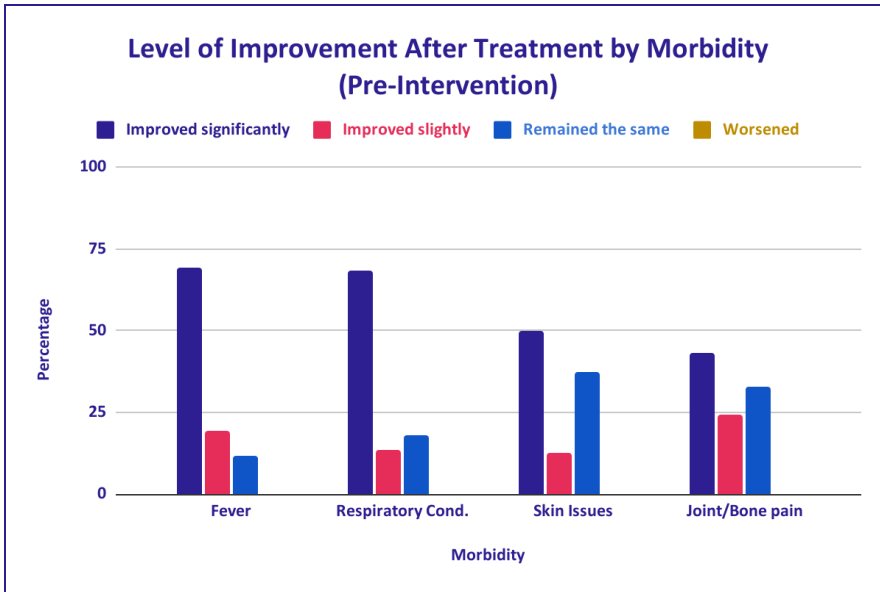


Figure 10: Level of improvement after treatment by morbidity (pre-intervention)

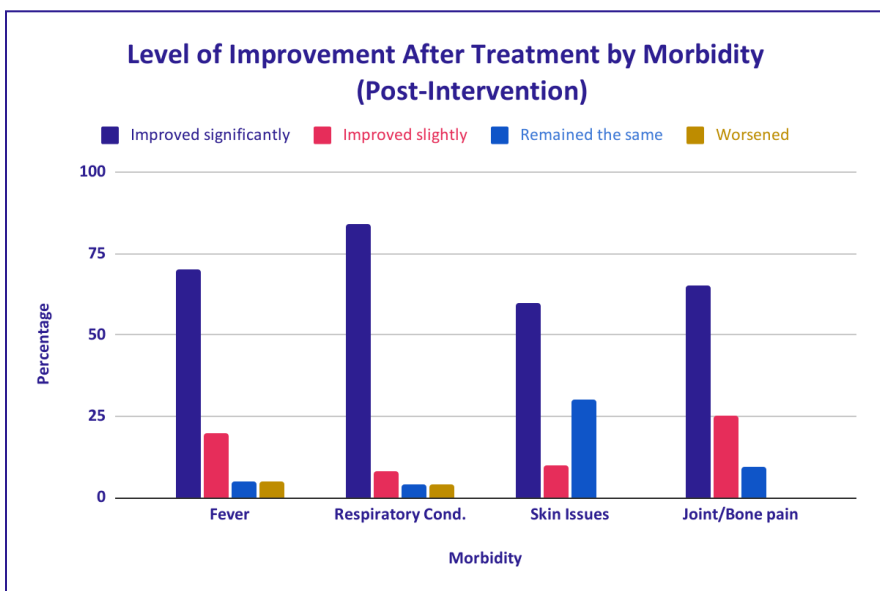


Figure 11: Level of improvement after treatment by morbidity (post-intervention)

Treatment adherence among people who had significant improvement in symptoms

Figure 12 illustrates the treatment adherence among the patients who have significant improvement in symptoms. Notably, adherence to taking full medications and fulfilling medications as prescribed increased by 63% and 43%, respectively. Moreover, seeking standard care increased by 36%. The adherence to refilling prescriptions on time also saw improvement, rising by 23%. The adherence to non-skipping medications and non-sharing medications rose by around 12%.

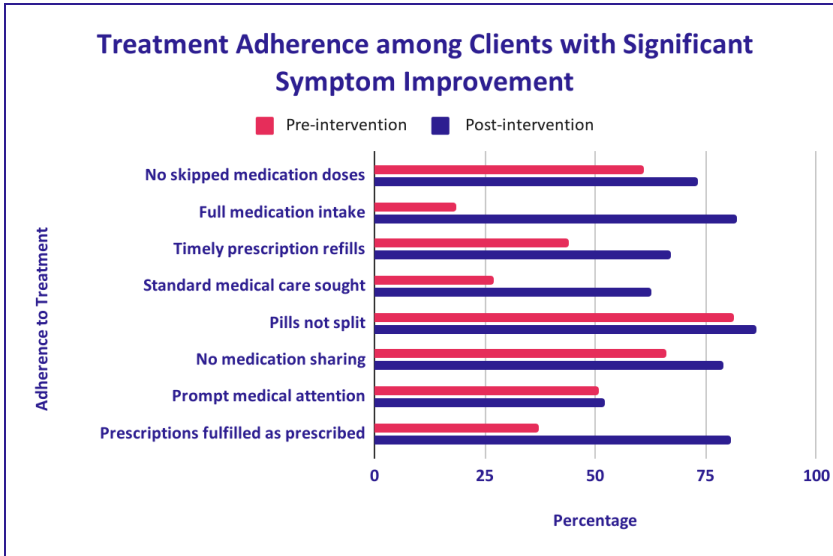


Figure 12: Treatment adherence among clients with significant symptom improvement

Status of full recovery from a specific health condition

Post-intervention, clients reporting full recovery from specific health conditions, rose from 62% to 67%, suggesting a positive trend(Fig. 13).

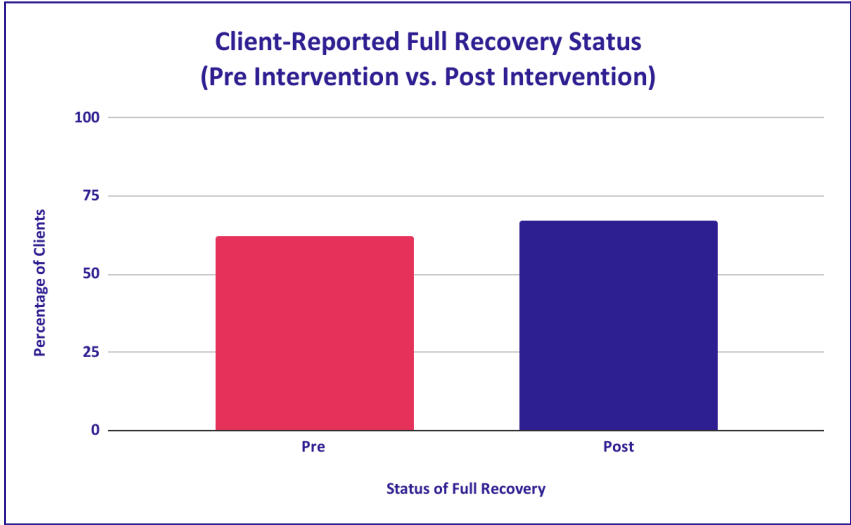


Figure 13 : Client Reported Full Recovery Status (pre-intervention vs. post-intervention)

Status of Full Recovery by Morbidity

Figure 14 shows the status of full recovery by specific morbidities. In fever, full recovery decreased by 18% post-intervention. In respiratory conditions, full recovery increased marginally by 2%. In skin issues and joint pain, full recovery increased by around 10%. Notably, we cannot measure the recovery status for NCDs due to the small sample size of diabetes and hypertension patients. Overall, the status of full recovery across morbidities varied, with recovery seen in respiratory, skin, and joint pain conditions and not in fever.

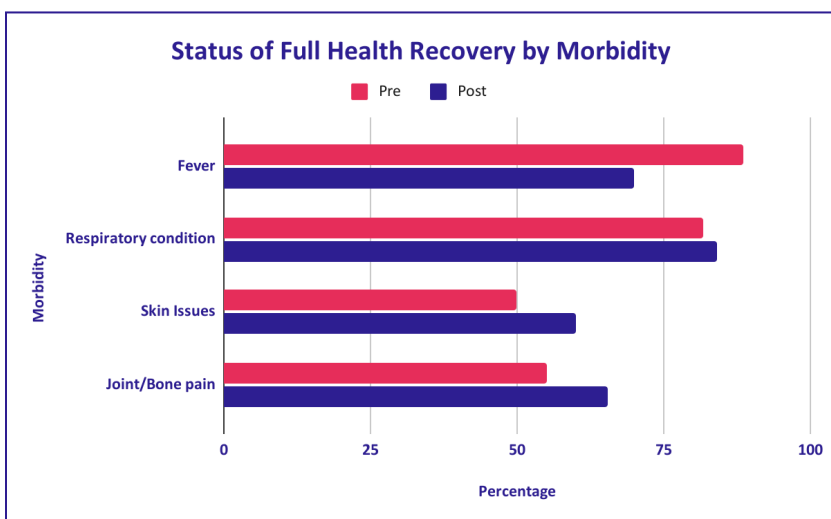


Figure 14: Status of full recovery by morbidity

Clients' Current Status of Health Recovery

As Figure 15 shows, post-intervention, clients reporting full recovery from specific health conditions, rose from 62% to 67%, suggesting a positive trend. It is observed that the clients who have partially recovered have increased by 12% in post-intervention compared to pre-intervention. Conversely, there is a relapse found by 3%. Clients who felt no difference in health status have also decreased by 9%.

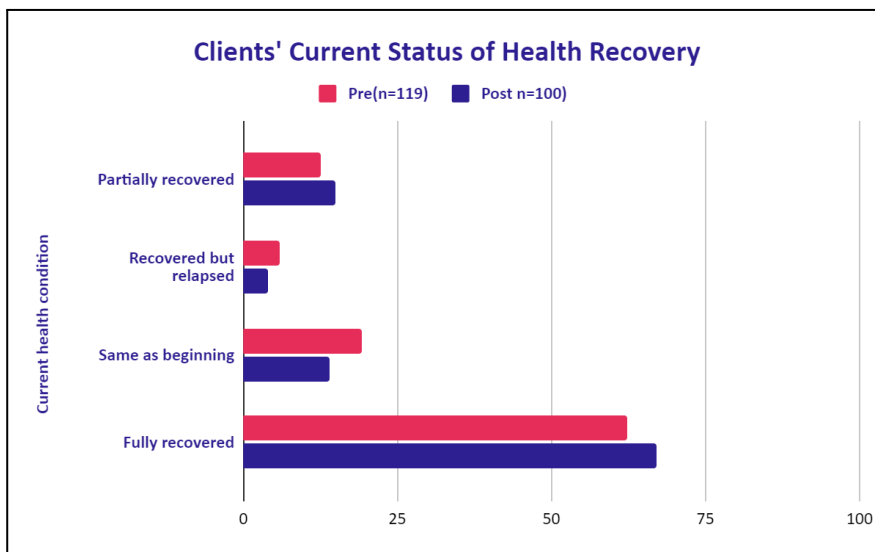


Figure 15: Clients' Current Status of Health Recovery

Satisfaction with teleconsultations from the Nashik Arogya Sampada Program

As figure 16 shows, overall, 90% of clients were satisfied or very satisfied with the teleconsultations with nearly a quarter of them very satisfied which underscores clients' ease of accessing satisfactory healthcare services.



Figure 16: Clients' satisfaction with teleconsultations

Figure 17 reflects a highly positive trend, with 96% satisfied with free medicines with more than half of them expressing satisfaction.

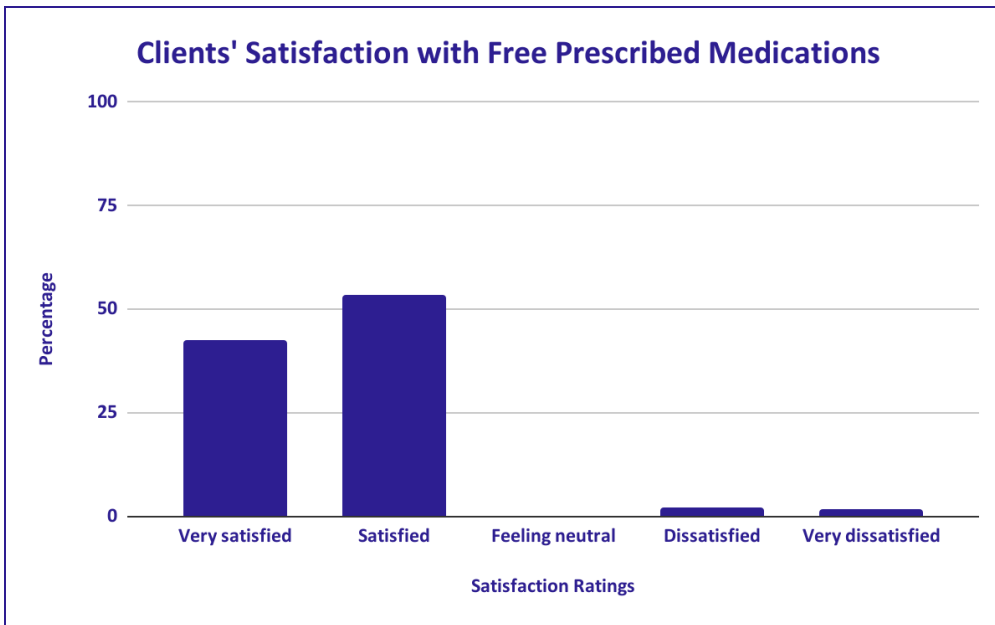


Figure 17: Clients' satisfaction with free prescribed medications

Influence of free medication on treatment-seeking behavior

As shown in table 8, 86% of clients stated that the availability of free medications influenced their decision to seek teleconsultations via the Nashik Arogya Sampada program.

Table 8: Influence of free medication on treatment-seeking behavior

Influence of free medication on treatment-seeking behavior	Overall (% , n=125)
Influence of free medication to seek telemedicine consultations	86

n= those who received free medications

Community Perceptions about NAS

Continued Areas of Unmet Need

The qualitative findings cover a spectrum of perspectives on further improving the program. The clients highlight the critical need for ambulances during emergencies, stressing the potential life-saving impact of urgent access to doctors and ambulance services. While these are not within the scope of the program, these are the most reported felt needs by the community.

“Yes, there should be changes...if there is a need for treatment in an urgent situation, the doctor should be available in the least time so that the client can get the treatment on time. It takes time to get there. At such a time, if a patient is more serious, he may die. If an ambulance comes to the village in case of emergency... it will be convenient for everyone”.

-19 year old female, pre-intervention client

Additionally, the need for local provision of essential medical tests, such as blood and radiological investigations, is underscored to enhance accessibility and affordability.

“If I need a blood test, there is no other option but to go to Peth. If Arogya Sampada provides such facilities here, it will be good for the village.”

- 29 year old male, pre-intervention client

“Once I went to a private clinic for treatment, the doctor asked me to do sonography, but I could not do sonography because of the high cost. So I feel that such facilities should be available from Nashik Arogya Sampada.”

-32 year old female, pre-intervention client

Continuation and Recommendation

Patients also highlighted the positive impact of NAS treatments, noting significant improvements in their health.

“Yes, I will also take treatment from Nashik Arogya Sampada and recommend it to my family members and neighbors too. I can tell them that instead of going outside to a private hospital, we can afford to get treatment.....his treatment has made a difference to me, so I would definitely tell them.”

- 29 year old male, pre-intervention client

Overall, this excerpt underscores the community's understanding of the adage "prevention is better than cure" and their willingness to advocate for accessible healthcare services that benefit everyone.

"...no matter what the illness is, if you ignore it, a 5 rupee illness will turn into a 10 rupee illness later on. So it is important to get treatment early. And if you want to get treatment from Arogya Sampada, it is a home delivery service and it is free of charge because the medicines are free and the treatment is good. The doctors also explain clearly what to do and what not to do."

- 43 year old male, post-intervention client

Summary and Discussion

The Nashik Arogya Sampada program, with its existing free teleconsultation services and the addition of free medications, has significantly improved treatment-seeking behavior among the tribal population. Prior to the intervention, many clients ignored ailments or relied on home remedies due to financial constraints, with some resorting to borrowing money or selling assets to afford care. These coping mechanisms highlight the stark trade-offs households face when health care competes with other economic demands. The introduction of free medications mitigated these barriers, reducing out-of-pocket (OOP) purchases and financial distress, while increasing treatment adherence and completion rates.

Community health workers and telemedicine played a pivotal role by bridging geographic barriers and facilitating rapid access to providers. Qualitative findings showed improved timeliness of care, often within eight hours of symptom onset; and increased adherence to prescribed regimens. This integration of free medications with teleconsultations shifted patients away from informal or costly private care toward publicly provided services. Clients reported higher satisfaction, with greater continuity in refills and adherence to full medication courses. The impact varied across morbidities: acute conditions such as fever and respiratory illness saw better adherence and outcomes, while chronic conditions like hypertension and diabetes showed some improvements but faced challenges inherent to long-term management. For conditions requiring in-person examination, such as dermatological issues, referrals remained necessary. Overall, the intervention reinforced that eliminating cost barriers enhances timely care and health outcomes, particularly when combined with technology-enabled delivery.

These findings are consistent with broader Indian and global evidence. In India, Tamil Nadu and Rajasthan implemented free essential drug schemes supported by centralized procurement systems, which increased public facility utilization and sharply reduced OOP expenditure [11]. By contrast, West Bengal's "Fair Price" drug shops (where medicines were subsidized but not free) saw declining public facility use and the highest OOP burdens among poor households [11]. These contrasting experiences illustrate how partial subsidies often fail to eliminate affordability barriers, leaving vulnerable populations uncovered.

Globally, systematic evidence confirms this trend. A review of 17 studies across Africa, Asia, and Latin America concluded that reducing or removing user charges in LMICs increased utilization of services and modestly improved health outcomes, particularly among children and low-income groups [9]. For example, abolition of user fees in Ghana, Uganda, and Burkina Faso led to substantial increases in facility deliveries and child health visits. While improvements in health outcomes depend on health system capacity, reduced costs

consistently ensure more timely contact with providers, which is a prerequisite for improved outcomes.

The price sensitivity of demand has been highlighted by randomized controlled trials in East Africa. In Kenya, uptake of deworming drugs dropped from 75% when free to 19% when a \$0.30 fee was charged [12]. Similar steep declines were observed in Kenya, Zambia, and Uganda for bed nets and water purification products, where even nominal charges reduced demand by 50–60 percentage points [13]. These studies underscore that demand for essential health goods is highly price elastic in LMICs. Importantly, charging small fees does not improve adherence or correct use. Households receiving free bed nets or deworming medicines were equally likely to use them compared to those who paid [12]. In some cases, free provision increased future willingness to pay after households experienced benefits [13].

From an adherence perspective, removing user fees is particularly critical for chronic disease management. Cost-related non-adherence i.e. skipping doses or stopping therapy due to expense, is widespread in LMICs. Free drug provision reduces this risk by ensuring patients can complete courses and return for refills. In Rajasthan's free medicine program, continuity improved for hypertension and diabetes patients when supplies were reliable [10]. Conversely, even minimal costs disrupted treatment among households with competing financial pressures.

The implications extend to health outcomes and financial protection. Qin et al. (2019, multi-country) found consistent though modest improvements in child morbidity and mortality linked to fee reductions [9]. Indian states with free drug programs reported sharp declines in household health spending, enhancing financial protection [11]. By contrast, subsidized models left poor households with high medicine expenditures, undermining their protective potential. Free provision thus advances universal health coverage by reducing catastrophic spending and medical impoverishment.

Concerns about perceptions that free medicines may be undervalued or seen as low quality have been raised in some contexts. In Rajasthan, skepticism about the quality of generics in the public sector initially challenged program acceptance [10]. However, trust improved with reliable supply chains and quality assurance. Evidence from RCTs in Kenya and Uganda further disproves the notion that free goods are undervalued: usage did not decline with free distribution, and in some cases awareness of utility led to increased future demand [13].

Taken together, the Nashik program findings and global evidence converge on a clear conclusion: free provision of medicines maximizes equity, utilization, adherence, and financial protection in LMICs, whereas subsidized models consistently underperform. They exclude the poorest, achieve lower uptake, and provide weaker financial protection without improving

adherence or efficiency. Free programs require sustained government investment and robust procurement to prevent stock-outs, but when implemented effectively, they are among the most impactful strategies for advancing health equity. For rural and tribal India, where both financial and geographic barriers are severe, free medicines—combined with teleconsultations and community health worker support—represent an essential pathway to improving access, outcomes, and satisfaction.

Analyzing findings from a Rights-based and Equity Lens

The Nashik experience shows that providing medicines free of charge is more than a technical fix—it is an expression of the right to health. International and national commitments affirm that governments must ensure care is available, accessible, and affordable to all citizens. By combining free medicines with teleconsultations, the program operationalized this principle for tribal and rural communities who are typically the most underserved. It demonstrates that access to essential medicines is not a privilege or a discretionary welfare scheme, but a core component of the right to health.

From a universal health coverage standpoint, the addition of free medicines highlights the importance of financial protection. UHC is not only about expanding service supply but also about shielding families from financial distress when they fall ill. In Nashik, free medicines reduced out-of-pocket spending and reduced instances of forgoing care due to lack of affordability, directly contributing to this protective function of UHC. Subsidized models, by contrast, often exclude the poorest, reduce uptake, and provide weaker financial protection. They leave households exposed to catastrophic expenditures, undermining both equity and the promise of UHC.

Seen through a poverty lens, the intervention disrupts the cycle in which illness drives indebtedness and pushes families deeper into poverty. Prior to the program, households coped by borrowing, selling assets, or most commonly foregoing care entirely—clear violations of the right to an adequate standard of living. By ensuring timely, no-cost access to medicines, the program prevents these impoverishing trade-offs and restores health as a means of enabling livelihood, productivity, and dignity.

Adding a gender lens underscores these impacts further. Women often bear the hidden costs of care such as time spent caregiving, lost income opportunities, or going without treatment themselves so that limited resources can be spent on children or men. Free medicines ease this burden, enabling women to seek care in their own right and to continue treatment without competing against other household priorities. This shift strengthens both women's agency in health decisions and household financial stability.

Finally, by centering tribal and rural populations—who face compounded geographic and economic barriers—the program advances equity and justice. It aligns with the Sustainable Development Goals’ mandate to “leave no one behind,” ensuring that the right to health is realized not just for the urban or affluent but for the most excluded. It reframes service delivery as a step toward fairer, more inclusive health systems that respect rights, reduce poverty, and promote gender equity.

In this sense, free medicines and teleconsultations are not simply service delivery innovations; they are mechanisms through which we uphold rights obligations, reduce poverty, and make universal health coverage a lived reality.

Recommendations

1. The free prescribed medication has improved access to free medications drastically, but still some individuals purchase medications. Future need assessments can be focused on the availability of medications, disease coverage, and stock management of medications.
2. The intervention resulted in improvements across several key indicators of medication adherence like no splitting and sharing of medications, seeking prompt medical care, and fulfilling prescribed medications, however, there is still room for improvement through counselling on medicine management to increase the adherence to free prescribed medications.
3. Findings suggest a slight decrease in doctor-client communication regarding treatment plans post-intervention, possibly due to heavy case burden. Thus we recommend reinforcing client education on self-management and ensuring periodic follow-ups to address evolving healthcare needs.

Conclusion

The intervention of free provision of prescribed medication in the Arogya Sampada Program showcased significant improvements across different aspects of access, adherence, and satisfaction. Access to treatment notably increases which is evident in the higher rate of prescriptions received post-telemedicine consultations and a decrease in medication purchases. Treatment adherence marked improvements, with fewer instances of skipped medication doses, timely prescription refills, and reduced reliance on alternative treatments. Patient outcomes saw substantial enhancement, with more clients reporting significant symptom improvement and completing prescribed treatment courses. Additionally, high satisfaction levels were noted with telemedicine services and the provision of free

medications. Thus continuing these efforts to improve the Nashik Arogya Sampada program is important to ensure widespread access to healthcare and improved positive outcomes, advancing the health status of the last-mile populations.

Annexure

Themes	Sub Themes	Explanation
Community experience on healthcare before telemedicine	Previous choice of treatment	The healthcare choices made before accessing telemedicine services, if they were earlier detected and effective (+), leading to better health outcomes. If they were ineffective, causing adverse effects, potentially resulting in worsened health conditions or delayed treatment (-).
	Factor affecting health-seeking behavior before NAS	Any factors (environmental and operational, economic, individual) influencing clients' decisions in seeking healthcare services, typically with a negative impact (-).
	Coping strategies if cannot seek professional treatment	Strategies clients employ if unable to access professional healthcare, such as symptom suppression (-), self-medication (-), or ignorance or avoidance of seeking professional care (-).
Access to telemedicine and prescribed medications	Awareness/ Initial Contact	The initial awareness and contact made with Community Health Workers (+) to access healthcare services.
	The approach of telemedicine doctors	Treatment plans or lifestyle modification advice discussed by doctors with clients during teleconsultations (+).
	The approach of community health workers	Interaction with community health workers, including factors like history taking (+) vitals recording (+), scheduling teleconsultations (+), and follow-up procedures (+).
	Received free prescribed medications	Received free prescribed medications for the health complaints (+)
	Bought prescribed medications	Bought (+) or didn't buy (-) prescribed medications for health complaints depending on accessibility, affordability, and availability.

Adherence to teleconsultations and prescribed medications	Improvement in treatment-seeking behavior	Improvement (+) or unimprovement (-) observed in clients' behavior regarding seeking healthcare.
	No. of times visited for teleconsultations	More (+)/Less (-) than one consultation after the initial consultation.
	Completion of medications	Whether clients completed (+) or did not complete (-) the medications prescribed by doctors.
	Willingness to continue with teleconsultations	clients' inclination to continue (+) or discontinue (-) utilizing NAS teleconsultation services.
Value addition of telemedicine	Affordability	The ability(+) or inability(-) to afford telemedicine services compared to traditional healthcare options.
	Accessibility	The ease (+) or unease (-) of access to services and their quick turnaround time with clients, delivery of medications on the same day(+)
	Availability	Availability(+) or non availability(-) of health workers
	Quality of care	The good (+) or poor(-) standard of care provided as perceived by clients.
Patient health outcomes after telemedicine	Physical health status after teleconsultations	Improved (+) or unimproved (-) health condition of clients after teleconsultations
	Emotional health status when seeking treatment	Emotional states during the process of seeking treatment, such as initial fear (-), worry (-), during their first-hand experience, and also growing confidence (+) and building trust over time(+) through the treatment journey.
Community Perceptions of telemedicine	Suggestions to improve telemedicine services	Suggestions (+) or bottlenecks (-) discussed for the enhancement of telemedicine services
	Recommendations	Willingness to recommend or not recommend (-) telemedicine services

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