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Patient's outlook towards the services rendered by subcentres after introduction of Ayushmann Bharat scheme in Gujarat- A cross-sectional study

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ABSTRACT

Background:

To meet the global pledge of achieving the sustainable development goal of universal health coverage, the Government of India launched Ayushmann Bharat Pradhan Mantri Jan Arogya Yojana in 2018. Since then, there has been little knowledge regarding the acceptance of this program at the community level. This study aims to evaluate the uptake of services provided under the Ayushman Bharat program at subcentres from beneficiaries' perspectives in the Vadodara district, Western India.

Methods:

A cross-sectional study with a mixed-method approach was carried out among newly transformed subcentres into functional Health and Wellness centers for six months. Thirty percent (N=27 subcentres) of functional subcentres were randomly selected from each taluka based on probability proportionate to size. Exit interviews of 3 to 4 patients were taken at selected subcentres from Vadodara district, Gujarat, from November 2020 to April 2021.

Results:

Exit interviews were conducted with 100 patients, including equal numbers of males and females. It was found that most patients were satisfied with the current functioning of subcentres, which provided a comprehensive range of services, provided essential drugs and diagnostics, and improved the availability and good conduct of healthcare providers.

Conclusion:

Ayushmann Bharat program has reinforced India's primary healthcare delivery system in providing better services, staff, and logistics to the community and improving trust in the government healthcare system.

Keywords: Primary healthcare, subcentre, patient satisfaction, universal health coverage, Ayushmann Bharat Scheme, India, healthcare services.

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Ethical approval-The study was approved by the Institutional Ethics Committee for Human Research (IECHR) at Medical College Baroda (Vadodara, Gujarat), and the necessary permission was obtained from the Chief District Health Officer (CDHO), Vadodara. Informed written consent was obtained from all study participants in vernacular language.All authors took part in the design of the study. AV drafted the manuscript with input from another author. PP guided the research proposal. The data was collected and analyzed by AV and revised by PP. All authors participated in the preparation and approved the final manuscript for publication.

INTRODUCTION

The concept of health as a fundamental human right has been enshrined. Governments have long held the responsibility of providing this care equitably to all citizens. Two major themes have emerged in recent times for delivering health services. Firstly, organizing all health services to cater to the entire population's needs has become paramount. This includes a comprehensive range of preventive, curative, promotive, palliative, and rehabilitation services. Secondly, the most effective way to deliver healthcare to underserved rural population and the urban poor has been identified as developing robust primary healthcare services supported by a well-functioning referral system. Community participation in promoting their health and well-being has also become essential to the primary healthcare delivery system. (1) In accordance with achieving global commitments to sustainable development goals, the National Health Policy 2017 has reaffirmed the importance of strengthening primary healthcare. Consequently, the Indian government launched the ambitious Ayushman Bharat (AB) Program in 2018, which has two interconnected components. The first component involves the transformation of existing Subcentres (SCs), Primary Health Centres (PHCs), and Urban Primary Health Centres (UPHCs) into Health and Wellness Centres (HWCs) by 2022. The second component is the Pradhan Mantri Jan Arogya Yojana (PMJAY), a health insurance scheme for the poor and vulnerable. (2) India's Ayushman Bharat program upgrades subcentres by adding Community Health Officers (CHOs) to lead existing staff and offer a wider range of services. (4) In the state of Gujarat, implementation of the Ayushman Bharat program began in 2019. The operationalization of HWCs aimed to go beyond routine curative care by introducing expanded service packages, including screening and management of non-communicable diseases (NCDs), mental health services, elderly care, palliative services, and wellness activities such as yoga and health promotion.Patient satisfaction is a key measure of healthcare quality. Satisfied patients are more likely to return for care, recommend the provider to others, and adhere to treatment plans, leading to better health outcomes. (5) Thus, it is important for healthcare organizations to track and improve patient satisfaction. However, knowledge regarding the beneficiary uptake of this program since its launch remains limited. This study evaluates the program's acceptance from the beneficiaries' perspective.

MATERIALS AND METHODS

Study Design

A cross-sectional study design with a mixed-method approach was used to capture beneficiaries' perspectives on newly formed Sub-Centres (SCs) upgraded into Health and Wellness Centres (HWCs) under the Ayushman Bharat (AB) Scheme in Vadodara, Gujarat, India. Based on our preliminary fieldwork, exit interviews of beneficiaries attending Sub-Centres were considered most suitable for capturing their personal experiences. The study was carried out in eight talukas of Vadodara district, Gujarat.Due to logistic constraints, the study included only those Sub-Centres that had been functioning as Health and Wellness Centres for at least six months. Therefore, 30% (N=27) of such functional Sub-Centres were randomly selected from each taluka using probability proportionate to size sampling. Interviews were conducted with 3–4 patients attending each Sub-Centre who were willing to participate in the study.

Data Collection

Data was collected over six months, from November 2020 to April 2021. Patients' exit interviews were taken at respective SCs. All data were collected in the local vernacular language. Interviews were recorded in the form of notes. All participants provided written and informed consent to participate before data collection. For those participants who were minors, assent was obtained from the adults who accompanied them.

Data Analysis

Quantitative variables such as socio-demography, reasons for visit to SC, management by CHO etc., were expressed in terms of rates and proportions. Qualitative data was analysed thematically, and transcripts were translated back and forth, and the content was coded using the technique of open

coding to discover conceptual themes in the text before developing a coding system. The thematic network analysis model and inductive analysis were used for emerging themes and patterns. Representative quotes were retained and mentioned for the key findings of the research study.

RESULTS

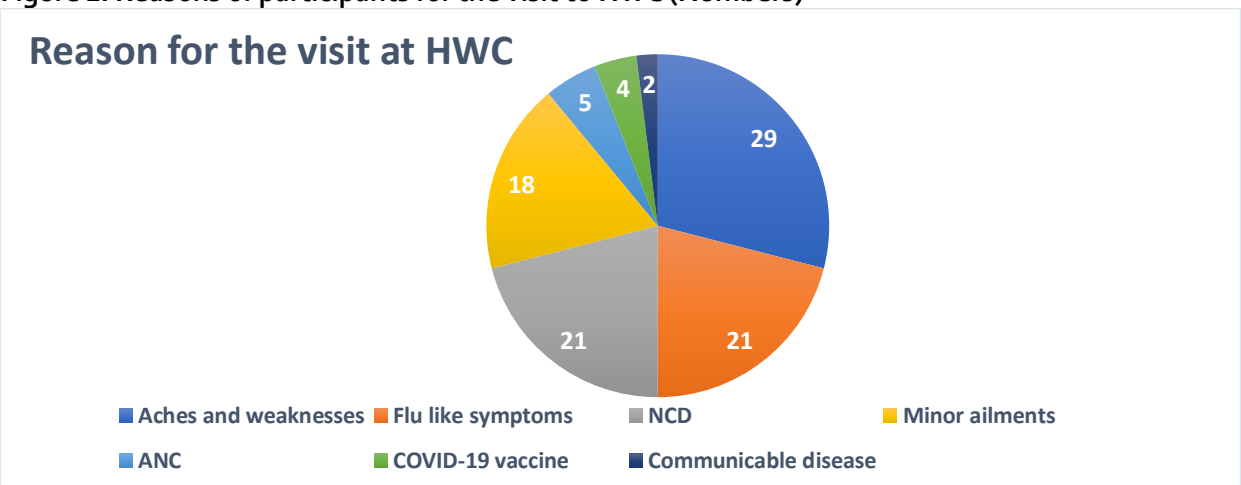
Exit interviews were conducted with 100 beneficiaries from 27 Sub-Centres (SCs) across various talukas in the Vadodara district. The study group included an equal number of male and female participants, with a median age of 44.5 years (range: 3–89 years). For children under the age of seven, interviews were conducted with their mothers. Among the 96 participants aged above seven years, 85 were literate. Approximately 44% of respondents were employed. Of the total, 47 beneficiaries visited the SC for the first time, while 53 had follow-up visits. The socio-demographic details are presented in **Table 1**.

Table 1: Demographic profile of participants

Age Group of patients (N=100)	
Age in years	**Frequency (%)**
0-20	16
21-40	26
41-60	41
>60	17
Gender of the patients	
Male	50
Female	50
Education Level	
Illiterate	15
Primary	18
Secondary	32
Higher Secondary	22
Graduate or higher	13

The reasons for visiting the SCs were categorized into several groups: flu-like symptoms, general aches and weaknesses, non-communicable diseases (NCDs), antenatal check-ups, communicable diseases, COVID-19 immunization, and minor ailments. (Figure 1)

Figure 1: Reasons of participants for the visit to HWC (Numbers)



As shown in Figure 2, the primary management approach for most patients (67%) involved prescribing medicines available at the SCs. Only a small proportion (7%) required referral to higher centers, primarily for injuries and infections requiring advanced care. In addition, **Table 2** shows that healthcare providers (HCPs) counselled patients on various aspects, including proper diet and rest, exercise and yoga, COVID-19-appropriate behaviour, and cessation of tobacco and alcohol use.

Table 2: Health communication by Healthcare Providers (in %)

Counselling and Health Education	Percentage (%)
Advise on adequate rest and nutrition	20
For taking a proper balanced diet and exercise	29
Covid appropriate behavior	5
Advice to tobacco and alcohol addiction	12
Referral to higher centers	7
Others (wound care, personal hygiene, protection from sunlight, etc.)	4

Multiple options possible

Figure 2: Management advised by the Community Health Officer (in %).

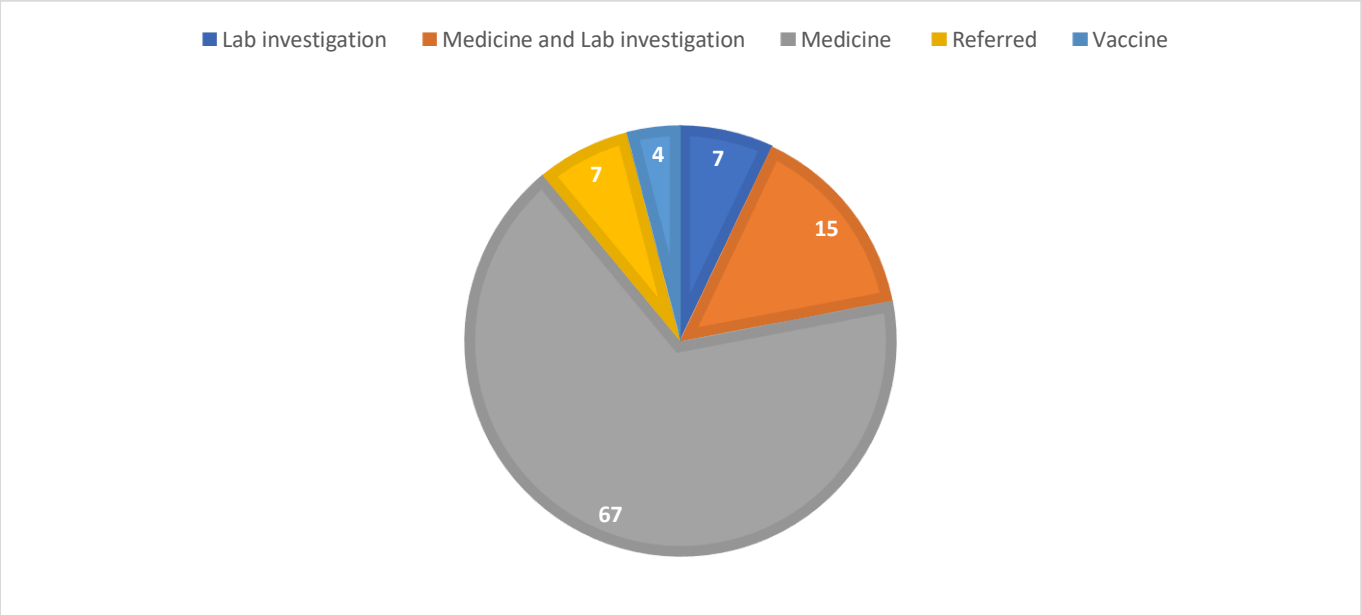


Table 3 assesses patient satisfaction with the services. Most beneficiaries reported satisfaction with their current visit, the friendly nature of the staff, and feeling comfortable discussing their problems with the HCPs.

Table 3 Client Satisfaction regarding services received at Health and Wellness Centres (in numbers- same as percentage with N= 100)

Sr. No.	Client Satisfaction	Yes	No	Don't Know
1	Are you satisfied with your current visit to the center?	86	0	14
2	Is the staff friendly?	89	0	11
3	Was there any privacy during an examination?	60	40	0
4	Are you comfortable discussing your problems with HCP?	100	0	0
5	Did they face any difficulty in reaching HWC?	11	89	0
6	Have you heard of the Ayushmann Bharat/ PMJAY Program?	45	55	0
7	Are you aware of the services provided under the Ayushmann Bharat program at HWC?	18	82	0
8	Have you heard about the PMJAY card?	6	94	0
9	Do you have a PMJAY card?	4	96	0
10	Are you satisfied with the services provided at this center?	85	0	15
11	Will you recommend this center to other people in the village?	96	0	4

Themes identified from the transcribed exit interview data include "Personality of the Doctor," "Accessibility to the Center," and "Awareness regarding the Ayushmann Bharat program."

The Personality of Healthcare Providers

The demeanor and communication style of the Healthcare Providers (HCPs) were consistently highlighted during consultations. Patients emphasized the significance of being treated with politeness, empathy, and respect. A majority of participants reported feeling more satisfied when providers spoke gently, avoided scolding, and showed personal engagement. A 59-year-old female patient shared, "I feel comfortable; they are not harsh or rough with you... they do their part." Similarly, a 42-year-old woman recalled, "Their first expression on seeing me was saying 'Jay Shree Krishna' and asking about the health of my family and me... I feel happy."Some providers were seen as going beyond routine care to foster comfort and trust. A 37-year-old male patient stated, "Probably, I will say he treated me as a person... he left his level of being a doctor and explained my health problems in a way I could understand." Patients appreciated being involved in discussions, listened to, and respected. As a 31-year-old female said, "They have given me time to ask questions...respected my opinion, and I have asked them more. "However, a few patients reported less level of positive experiences. These mostly involved routine visits for follow-up medications or basic check-ups. A 52-year-old male patient noted, "...the doctor just measured the blood pressure, prescribed as usual... just sitting and did not ask much." Instances of dissatisfaction also included problems in accessing medications. A 30-year-old man complained, "The pharmacist gave me medicine with a bad look and told me to collect my medicines from CHO Madam, but she visits my village only once a week... and the

Sub-Centre is far from the PHC... why can't I collect my routine medicines from here?"

Accessibility and Availability of Health Services

Most patients expressed relief and satisfaction about the availability of healthcare services closer to their homes. This reduced their dependence on Primary Health Centres (PHCs) or city hospitals. A 35-year-old mother remarked, "I feel relieved now that the doctor is available within walking distance from my home... previously, I had to take off work and hire an auto to go to the city for any health problems in the family."Another patient, a 47-year-old man, mentioned that the Sub-Centre was previously known only for immunization and often remained closed. Now, with a Community Health Officer (CHO) present and services available throughout the day, it is seen as a reliable first point of care. Patients no longer need to travel to PHCs for common ailments, basic medications, or routine follow-ups.

Awareness regarding the Ayushmann Bharat Program

The Ayushman Bharat (AB) initiative, introduced nationally in 2018 and gradually implemented in Gujarat over the following year, has been poorly understood at the community level. Less than half of all interviewed patients had heard of the program, mostly referring to it as the "PMJAY card" scheme. A 60-year-old woman said, "I don't know; I came here because I'm feeling weak and have body aches; the doctor is available here." A 51-year-old male shared, "I come here to check my blood pressure and get my routine medications."Some younger patients demonstrated limited understanding of service offered. A 17-year-old girl said, "Mother and child health check-up, hemoglobin measurement, vaccination, tablets." Only a few had received their PMJAY cards. Complaints about delays in card issuance were reported. A 43-year-old male said, "I've come to this PHC twice now, but the medical officer keeps telling me to go to the city office to get this card issued." Similarly, a 33-year-old male added, "The person authorizing the cards told us that issuing PMJAY cards has been on hold for a few months due to the COVID-19 pandemic."The program, which intended to provide comprehensive primary care, continuity of care, health promotion, disease prevention, and access to a wide range of essential services, including referrals and health cards for secondary and tertiary treatment under the Pradhan Mantri Jan Arogya Yojana (PMJAY), still lacks awareness among a significant proportion of rural beneficiaries. This highlights a presence of implementation gap and missed opportunity in demand generation.

DISCUSSION

This study shows staffing rural health centers with Community Health Officers (CHOs) improves access to care and reduces strain on higher-level facilities. It also highlights the importance of communication skills for healthcare providers and the need to raise awareness about government health insurance programs in rural areas.These findings can inform policymakers working to improve healthcare access and outcomes in rural communities.A subcentre is the first point of contact for the community to avail primary healthcare services, particularly in rural areas of our country. Sixty five percent of India's population still lives in rural areas (6), and addressing health system deficiencies at this level is essential to ensure affordable and equitable healthcare. The rural public health system, if adequately staffed and equipped with essential drugs, diagnostics, and infrastructure, has the potential to significantly improve health outcomes(7)(8) Several studies have emphasized the vital role of Accredited Social Health Activists (ASHAs) and Auxiliary Nurse Midwives (ANMs) in improving maternal and child health outcomes and addressing nutritional issues through counselling, home visits, and linking beneficiaries with services . (9)(10).

Findings of earlier studies have shown that in India, subcentres have traditionally been under-utilized due to inadequate infrastructure, staff shortages, and weak supervision. (11)(12) This has driven a preference for private healthcare services and resulted in high out-of-pocket expenses for low-income families. Moreover, due to the longstanding focus on reproductive and child health services, other areas like Non-Communicable Diseases (NCDs) and mental health have remained underserved. (13) A study from Kerala pointed out that SCs are currently ill-equipped to manage the growing burden of chronic diseases amidst India's epidemiological transition. (14) Under the AB

program, along with CHO, twelve expanded ranges of services, including promotive, preventive, and curative services (both clinical and diagnostic) were introduced nearer to the community to provide comprehensive primary healthcare at SC and PHC. (15) Our study found that, due to the presence of CHOs, a wide range of services beyond maternal and child health are now being accessed at SCs. Outpatient services are a key indicator of care-seeking behaviour. The availability of CHOs and ANMs at the SCs attracted patients of all age groups and genders, reflecting renewed trust in public primary care facilities. Earlier, SCs were often closed or perceived as non-functional. Similar patterns were observed in an Assam-based study, where patients reported flu-like symptoms, pain, and NCDs as common concerns requiring primary care. (16) Our study mirrored these findings: the majority of patients presented with aches and pains, followed by NCDs such as diabetes and hypertension, communicable diseases (e.g., tuberculosis, chickenpox, malaria), and minor injuries or skin conditions. Notably, 93% of patients were managed entirely at the SC level with essential drugs and basic investigations, underscoring the impact of localized, affordable care.

Patient satisfaction is closely linked to frequency of visits and the quality of interaction with healthcare providers. A study in South Korea reported that patients with more frequent visits were more likely to report full satisfaction. (17) Likewise, a study from Haryana found that 97% of patients intended to revisit and recommend SC services after positive experiences. (18). This study also shows that more than half the number of patients at OPD are follow-up visit.Existing literature indicates that patient satisfaction is influenced by age, gender, education, the communication skills of healthcare providers, and trust in doctors. (19)(20)(21) Our qualitative data affirmed this. When doctors communicated clearly and respectfully, patients understood well, more involved in their care, and reported greater satisfaction. Those who understood their illness and treatment plan were more likely to comply with it, reinforcing the value of effective provider-patient communication. Additionally, staff at SCs demonstrated growing awareness of preventive and promotive health measures, including healthy lifestyle practices, yoga, physical activity, nutrition, and deaddiction services. This aligns with the comprehensive care approach envisioned under Ayushman Bharat. Despite these positive developments, awareness and uptake of the Pradhan Mantri Jan Arogya Yojana (PMJAY) scheme remain limited. In our study, only 6% of patients had heard of the scheme, and just 4% had received a PMJAY card. A Haryana-based study found high satisfaction with the scheme's premium-free nature but noted that many respondents lacked knowledge about its scope and benefits. (22) This calls for robust Information, Education, and Communication (IEC) campaigns. Similar studies in Nepal (23) and Africa (24) demonstrated the effectiveness of multi-channel, consistent IEC efforts in improving knowledge and enrolment in health insurance schemes. Community participation and repeated messaging through diverse media channels emerged as key enablers. These strategies should be considered to strengthen AB-PMJAY outreach and uptake.

Summary and Conclusion

This study found that staffing rural Sub-Centres with Community Health Officers under the Ayushman Bharat program has significantly improved access to healthcare and reduced the burden on higher-level facilities. Before the implementation of the AB program, SCs were often underutilized, irregularly functional, and primarily limited to maternal and child health services. Patients typically travelled to distant Primary Health Centres or private providers even for minor ailments, leading to delays in care and increased out-of-pocket expenses.Since the introduction of CHOs and the transformation of SCs into Health and Wellness Centres, there has been a noticeable shift. A wider range of health conditions—including chronic diseases like hypertension and diabetes—are now being managed at the SC level. Patients reported improved service availability, routine follow-up care, and a sense of comfort and trust when healthcare providers engaged in respectful, empathetic communication.However, despite improvements in service delivery, there remains limited awareness about the AB health insurance component, Pradhan Mantri Jan Arogya Yojana. This lack of awareness represents a missed opportunity to further reduce

financial barriers to care.To improve community satisfaction and trust in rural health services under the Ayushman Bharat program, it is essential to institutionalize dedicated CHO postings at Sub-Centres with clear SOPs, rural incentives, and contingency plans to ensure continuity of care. Communication skills should be embedded into regular CHO and ANM training through practical modules focused on respectful, patient-centered interactions. Awareness about AB-PMJAY must be expanded using community-driven IEC strategies—leveraging ASHAs, SHGs, and VHND platforms to deliver localized messaging, simplify enrolment processes, and dispel misconceptions. Visual aids and regular health camps can reinforce understanding of entitlements.

Limitation of the study

This study was conducted during 2020–2021, in the midst of the COVID-19 pandemic. The findings must be interpreted in that context, as service delivery was affected by staff redeployment, restricted mobility, and limited availability of routine services due to the pandemic response.

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