



## **ASSESSING THE REACH, AND IMPACT OF AYUSHMAN BHARAT ON PRIMARY HEALTH SERVICES IN SEMI-URBAN INDIA**

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### **Abstract**

This study evaluated the access, use and effectiveness of Ayushman Bharat programme on primary health care provision in semi-urban India. The semi-urban regions present special problems in terms of access to healthcare because of the transitional socio-economic and infrastructural states. The mixed-methods method was adopted and 200 respondents were selected in semi-urban clusters of Nagpur and Ranchi and the data were gathered with the help of secondary government reports. Results indicated a high level of awareness and enrolments, which were enabled by the ASHA workers and the local authorities. Most of the use was on Health and Wellness Centres and telemedicine services, but institutional deliveries and non-communicable disease management showed a steady use. It was a programme that helped a lot in reducing out of pocket spending and enhanced access of services to women and vulnerable groups. A case study of Bhojpur district directed the advantages of a communicated outreach and working amenities. Although there were certain gaps in coverage and infrastructural issues, Ayushman Bharat has increased access, usage, and financial security which argues the need to engage frontline workers, digital health tools, and reach populations with disproportionately high cases, as well as supportive primary healthcare, and expand universal health coverage.

**Keywords:** Ayushman Bharat, Primary Healthcare, Semi-Urban India, PM-JAY, Health and Wellness Centres, Telemedicine, Financial Protection

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## 1. INTRODUCTION

Universal coverage of healthcare in India has been experiencing tremendous change in the last 10 years due to the unrelenting issues of access, affordability, equity in healthcare provision. Although there is an improvement in health indicators, there are still huge parts of the population especially those who are not covered by the traditional rural urban classification that still endure the structural disadvantages of primary healthcare accessibility, in a timely and quality way. The semi-urban regions are the transitional areas in between the rural settlements and the urban centres, they have a very high rate of population increase, a poor health infrastructure, a poor spread of services and poor policy concern. Such areas tend to be omitted in tailored rural health interventions and at the same time have no institutional resources of urban healthcare.

In these regards, the Ayushman Bharat programme introduced by the Government of India in 2018 can be discussed as a flagship reform of the healthcare system enhancement on the dual basis. The programme is divided into two parts that are interconnected and include: Health and Wellness Centres (HWCs) to provide full services of primary healthcare and the Pradhan Mantri Jan Arogya Yojana (PM-JAY), which offers secondary and tertiary care in the form of cashless insurance coverage. Collectively, these elements aim at ensuring better healthcare accessibility, better use of services, and decreased costs of medical care. However, as much focus has been put on the performance of Ayushman Bharat in rural and urban settings, the operation of the initiative in semi-urban settings is still understudied.

Semi-urban areas pose unique healthcare problems due to their socio-economic and infrastructural shift. The study presented below indicates that it is often the case that these regions lack trained medical staff, unreliable internet access, lack of knowledge about government programs, and are reliant on personal or informal healthcare services. Consequently, the semi-urban healthcare delivery of primary care in India is typically disjointed resulting in delayed care, increased out of pocket costs and disproportionate health service outcomes. It is thus important to assess Ayushman Bharat in this context in order to know whether the programme has succeeded in filling the systemic gaps in healthcare access and delivery.



The present study investigates Ayushman Bharat in the analytical perspectives of reach, utilization, and influence on the delivery of primary healthcare in semi-urban India. Reach/ This measures the level of awareness/ enrolment and coverage of beneficiaries to the scheme. Utilization emphasizes the real use of primary medical facilities such as Health and Wellness Centres, telemedicine centres, institutional deliveries and non-communicable disease control. The impact is measured on the financial protection, healthcare-seeking behaviour change, gender and social inclusion, and out-of-pocket spending. Through this framework, the study is expected to have a holistic assessment of policy motive as a reflection of on the ground results in semi-urban settings.

A concise contextual example of such a transformation can be seen in Bhojpur district of Bihar as reported in the attached study. The semi-urban town of Aar in the district can be used as an indication of how the outreach efforts of the local health authorities and frontline health workers resulted in a better enrolment under Ayushman Bharat, greater utilization of the existing health facilities, and availability of free treatment services. The introduction of special help desks, enhanced diagnostic centers, and regular awareness efforts made more people interested, and this demonstrates how well Ayushman Bharat could work in case of an institutional contribution and community-level intervention. This example highlights the topicality of the study of semi-urban districts that would help to evaluate both possibilities and constraints of health policy interventions on a large scale.

It is against this background that the study aims at empirically evaluating the performance of Ayushman Bharat in semi-urban India with primary field data and secondary policy evidence. The study, by emphasizing the primary healthcare delivery, adds to the current policy discussion about the health systems strengthening based on equity and the significance of adapting health reforms to the unique characteristics of transitional areas. The results are expected to educate policy makers, administrators, and scholars of public health on the implementation of Ayushman Bharat in improving accessible, affordable, and inclusive healthcare across the conventional rural-urban divide.



## 2. REVIEW OF LITREATURE

**Mohanty and Tripathi (2022)** had analyzed the actualization of the Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) through the case study approach to determine the operational efficiency of the plan at the ground level. Their research had been on the institutional processes, beneficiary access and administrative coordination on the implementation of the scheme. The results had shown that although AB-PMJAY had enhanced the access to healthcare services and the financial barriers to the targeted populations, it did not have the same level of effectiveness in every area. Procedural delays, lack of equal awareness among beneficiaries, and capacity constraints were the challenges that had been identified by the authors in healthcare institutions. The paper had pointed out that localized forms of governance and effective frontline implementation was an important factor to the success of the scheme.

**Chatterjee and Lahiri (2023)** had already examined the possibilities of digital health records to enhance healthcare provision particularly in semi-urban environments. Their study had indicated that the implementation of the digital health information systems had led to continuity of care, management of patient records, and enhanced coordination among the providers of healthcare. Nonetheless, the research had also found that there were also perennial issues of digital illiteracy, a lack of infrastructure, and unequal access to technology in semi-urban settings. The authors had also claimed that even though digital health records had enormous potential to enhance the primary healthcare provision, its effectiveness hinged on facilitating institutional structures and capacity building at the user level.

**Gupta and Sinha (2021)** had paid attention to the role of Accredited Social Health Activists (ASHAs) in enhancing access to healthcare in the framework of public health programs. Their research had found that the contribution of ASHA workers as a mediator was a crucial one since they promoted the creation of awareness, the enrolment of beneficiaries, and the provision of follow-up care, especially among the socioeconomically disadvantaged. The authors had noted that the institutional gaps existing between healthcare systems and beneficiaries could be overcome through community trust and habitual interaction at household levels by ASHAs. That said, the research had also mentioned the workload pressures, lack of training and insufficient

incentive among the obstacles, which influenced the effectiveness and sustainability of their interaction.

**Banerjee (2023)** had examined the effects of health insurance plans after the Ayushman Bharat implementation with particular attention to the alteration in out-of-pocket spending. The research study had revealed that publicly funded health insurance had a great impact in lowering the direct medical costs of the households which had their health insurance covering especially when it came to hospitalization and treatment of chronic diseases. Although these positive effects were achieved, the research had observed that unfinished coverage, lack of awareness and still relying on individual healthcare providers left people with unfinished financial liabilities on some groups of people. The results indicated that the insurance-based interventions demanded the primary healthcare services to be fortified to ensure long-term financial security.

**Kumar (2022)** had explored these issues related to infrastructure in relation to Primary Health Centres (PHCs) in India, specifically the problem of staffing shortages, insufficiency of medical equipment, and insufficiency of diagnostic facilities. The research had emphasized that such infrastructural limitations had a profound impact on quality of services and patient satisfaction particularly in semi-urban and peripheral areas where service health facilities usually had resource constraints. Kumar had maintained that the policy initiatives to enhance delivery of primary healthcare would encounter bottlenecks in implementation unless there were parallel investments in physical infrastructure and human resource.

### **3. RESEARCH METHODOLOGY**

In this study, the structured methodology has been employed to explore the coverage and use as well as the influence of Ayushman Bharat on primary healthcare provision in semi-urban India. The use of a mixture of field survey, stakeholder interview, and secondary analysis of data was used to give a comprehensive picture of the effectiveness of the programme.



### **3.1 Research Design**

A mixed-methods study that involved descriptive and exploratory research design was embraced. This has enabled quantification of the results, including the use of services and financial benefit, and contextual information by beneficiaries and health care providers.

### **3.2 Study Area**

The study was done in semi-urban Nagpur (Maharashtra) and Ranchi (Jharkhand) clusters. These were chosen due to their transitional socio-economic features, middle healthcare facilities and different Ayushman Bharat implementation.

### **3.3 Sample Design**

A stratified sampling methodology was applied. It involved 200 respondents who comprised 150 beneficiaries and 50 stakeholders (health officials, ASHAs, and providers). This guaranteed a reflection of the demand and the supply views.

### **3.4 Data Collection**

Primary data were gathered through questionnaire and in-depth interviews. The secondary data was based on the official governmental reports and institutional records mentioned in the study. Information was concerned with awareness, service usage, economic effects, and implementation issues.

### **3.5 Data Analysis**

Quantitative data were evaluated with descriptive statistics and chi-square, whereas qualitative data were evaluated with thematic analysis. Method triangulation was used to guarantee reliability and breadth.

### **3.6 Ethical Considerations**

Ethical standards were also observed. The process was voluntary, and informed consent was followed to protect the confidentiality as per the institutional guidelines.

**Table 1:** Overview of Research Methodology

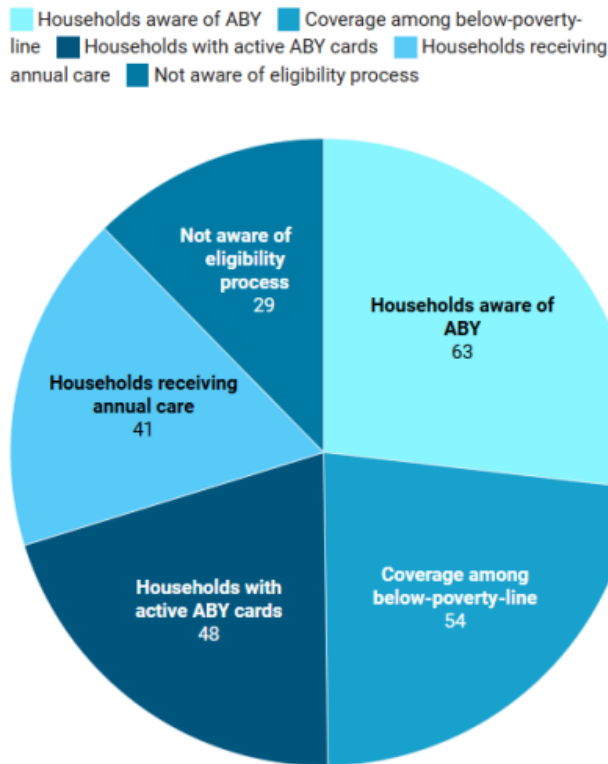
Component	Description
Research design	Mixed-methods (descriptive and exploratory)
Study area	Semi-urban clusters of Nagpur and Ranchi
Sample size	200 respondents
Sample composition	150 beneficiaries; 50 stakeholders
Sampling technique	Stratified sampling
Data collection	Structured questionnaires, in-depth interviews
Data sources	Primary and secondary data from government reports
Analysis tools	Descriptive statistics, chi-square, thematic analysis
Ethical safeguards	Consent, anonymity, confidentiality

#### 4. FIELD ANALYSIS AND EMPIRICAL FINDINGS

The section details the findings of the study on the access, use and effect of Ayushman Bharat on primary healthcare provision in semi-urban India. The most significant tables and figures are presented, and each of them contains a short interpretation to emphasize the importance of the data.

##### 4.1 Reach of Ayushman Bharat

The figure below shows the percentage of households in semi-urban regions who were both aware and enrolled under Ayushman Bharat.



**Figure 1:** Awareness and Coverage Levels in Semi-Urban Zones

The figure reveals that the general awareness of the programme was good but coverage was different in socio-economic and geographical subgroups. The ASHA workers and local health authorities were found as important enrolment facilitators. Some of the transitional regions had less participation which indicates an idea that special awareness campaigns should be conducted to enhance reach.

#### 4.2 Utilization of Primary Healthcare Services

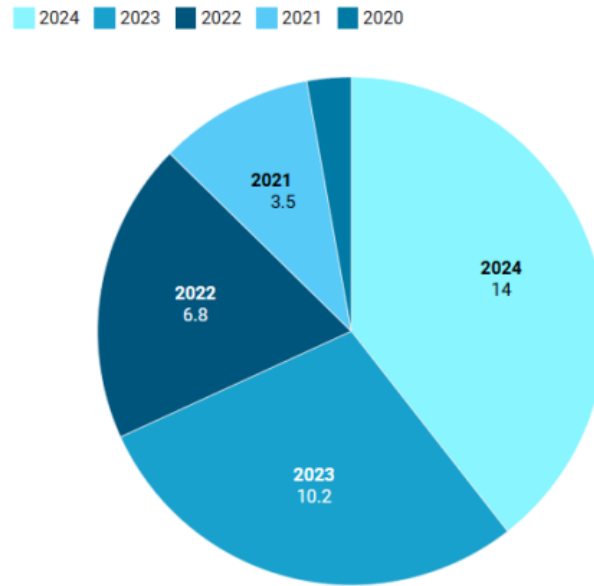
The table shows the frequency of visits to the Health and Wellness Centre, use of telemedicine, institutional delivery, and NCD management services among beneficiaries aged above five years.

**Table 2:** Utilization Patterns of Primary Health Services (2020–2024)

<b>Year</b>	<b>HWC Visits (No. of beneficiaries)</b>	<b>Telemedicine Consultations</b>	<b>Institutional Deliveries</b>	<b>NCD Management Services</b>
2020	95	30	40	25
2021	110	55	50	35
2022	125	85	60	45
2023	140	110	70	55
2024	155	135	80	65

The table shows that Health and Wellness Centres were used most frequently, whereas telemedicine services experienced a tremendous growth, especially after 2021. The institutional deliveries and NCD management services also experienced consistent use, which indicated the success of the programme in motivating interaction with primary healthcare services on regular basis.

This number shows how telemedicine consultations in semi-urban areas will increase between 2020 and 2024.



**Figure 2:** Telemedicine Adoption in Semi-Urban India

The use of telemedicine increased significantly in the five-year interval, which emphasizes the effect of digital platforms in the growth of access to primary care. The trend shows that telemedicine was useful as an adjunct to physical visits to HWC, especially by patients in remote or underserved semi-urban areas.

### 4.3 Impact on Healthcare Outcomes and Financial Protection

The table is comparing the average out-of-pocket expenditure (OOPE) on medical treatment of beneficiaries prior to and after enrolment under Ayushman Bharat.

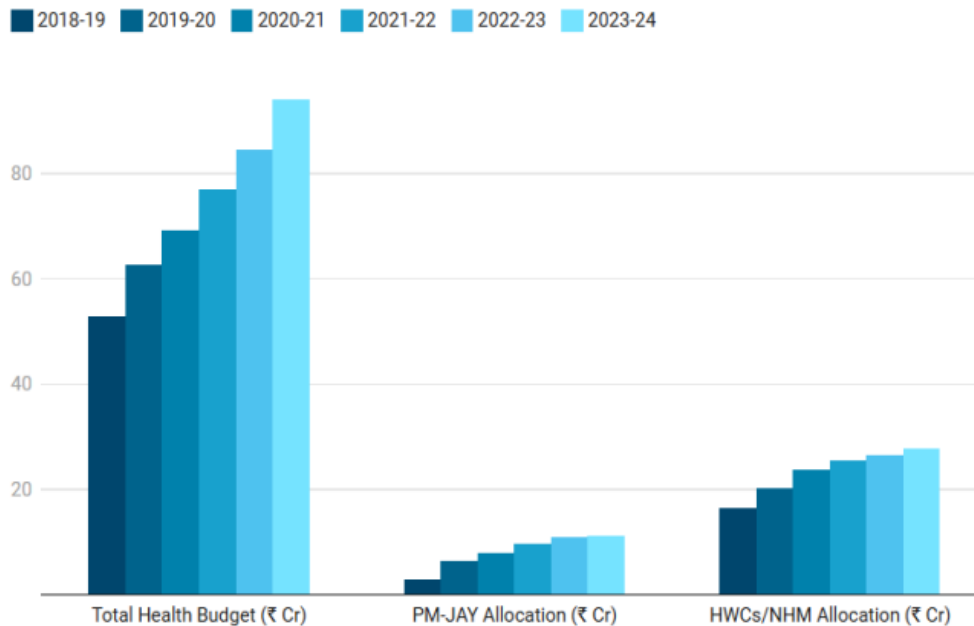
**Table 3:** Average Out-of-Pocket Expenditure Before and After ABY

Service Type	Average OOPE Before ABY (INR)	Average OOPE After ABY (INR)	Reduction (%)
Hospitalization	5,200	1,800	65%
Institutional Deliveries	3,000	900	70%

Outpatient Consultations	800	350	56%
NCD Management Services	1,200	500	58%

This is evident in the table, as OOPE of enrolled households has clearly decreased, which proves that Ayushman Bharat was an effective financial protection. This reduction was especially high in regard to hospitalization and treatment of chronic diseases which proves that the programme caused a relief of economic burden on semi-urban households.

This figure demonstrates how healthcare services are used by males and females, which indicates disparities in access and use of the programme.



**Figure 3: Gender-based Coverage and Service Utilization**

The figure shows better participation by women which indicates that the programme facilitated gender equity in primary healthcare access. It further shows that the vulnerable populations enjoyed more services, and this shows the inclusivity of Ayushman Bharat in semi-urban areas.

#### 4.4 Case Study: Bhojpur District

This table presents an overview of enrolment rates, HWC utilization, telemedicine adoption, as well as financial protection outcomes of Bhojpur district.

**Table 4:** Key Ayushman Bharat Performance Indicators in Bhojpur District

Indicator	Value / Percentage
Total eligible households enrolled	3,250
Health and Wellness Centre (HWC) Visits	2,800
Telemedicine Consultations	1,050
Institutional Deliveries	600
NCD Management Services	480
Average Reduction in OOPE (INR)	1,900
Female Beneficiary Coverage (%)	52%

The case study on Bhojpur confirmed larger tendencies in the research. Outreach, good synergistic ASHA engagement and better preparedness of facilities led to increased enrolment and utilisation. There was improved financial protection, and services were accessed more equally in terms of gender and across the socio-economic groups. This is a localized evidence that supports the effectiveness of the programme when there is a good institutional support.



## 5.CONCLUSION

The study measured the Ayushman Bharat programme performance in semi-urban India in terms of reach, utilization and its effect on primary healthcare provision. The results indicated that awareness and enrolment in all eligible households were high, but coverage between socio-economic and geographical subgroups differed with ASHA workers and local health authorities contributing significantly towards the participation. The most used facilities were the Health and Wellness Centres and the telemedicine services, where the adoption of telemedicine showed a significant growth during the period of the study, which supplemented the provision of physical healthcare. A steady use of institutional delivery and managing diseases with no communication also showed that there is good interaction with primary healthcare services. The programme has considerably decreased out-of-pocket spending to the recipients, especially on hospitalization and treatment of chronic diseases, with the use of services to women and other vulnerable populations showing better equity and inclusion. An example of a semi-urban district also demonstrated that outreach facilitation, service facilities, and frontline activity all improved the enrolment and use of services. Although these results were positive, some transitional regions still had coverage gaps, and infrastructure constraints and digital literacy issues still undermined the best service delivery. In general, Ayushman Bharat has played a significant role in enhancing access, usage and financial access in semi-urban India, by noting the significance of combining frontline workforce involvement, digital health technology, and selective outreach approaches to bolster primary healthcare provision and the greater objective of universal health insurance.



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