

Evaluation of Ayushman Bharat Health and Wellness Centre for Coverage and Utilization of Non-Communicable Disease Services in Rural Area of Raipur District in Chhattisgarh

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Abstract

Ayushman Bharat Health and Wellness Centres (AB-HWCs) are evaluated for their ability to provide noncommunicable disease (NCD) services in the rural areas of Raipur district, Chhattisgarh. The goal of AB-HWCs is to offer comprehensive primary care that includes NCD screening, prevention, and management, as these conditions represent a major health burden in India. Data were gathered from 300 beneficiaries and 10 AB-HWCs using a crosssectional descriptive methodology. Structured questionnaires, interviews, and facility checklists were used. Although 80% of the centers had basic NCD screening facilities and 65% of respondents had used them in the previous year, the results show that major obstacles such low community awareness, irregular drug supply, and inadequate personnel still exist. Health professionals' outreach, the availability of free services, and close proximity to centers were all facilitators. To maximize service delivery, the study ends with suggestions for strengthening staff training, enhancing infrastructure, increasing community awareness, and putting in place reliable monitoring mechanisms.

Keywords: Ayushman Bharat; Health and Wellness Centers; Non-Communicable Diseases; Primary Healthcare; Rural Health; Chhattisgarh; India.

1. Introduction

A major and expanding public health concern in India is non-communicable diseases (NCDs), which include cancer, diabetes, heart disease, and chronic respiratory conditions. The World Health Organization (WHO) estimates that noncommunicable diseases (NCDs) cause over 60% of all fatalities in India, with a significant percentage of these deaths taking place in low- and middle-income groups. In rural areas, where timely and high-quality health care is still scarce, the prevalence of these diseases is especially worrisome.

In order to address this issue, the Indian government started the Ayushman Bharat Program in 2018, which was a major step in the direction of Universal Health Coverage (UHC). Creating Health and Wellness Centers (HWCs), which are intended to serve as the cornerstone of comprehensive primary health care delivery, is one of the program's main objectives. Preventive, promotional, curative, rehabilitative, and palliative care are among the services that these centers seek to offer, with a particular emphasis on managing noncommunicable diseases.

The Ayushman Bharat project is transforming current Primary Health Centers (PHCs) and Sub Health Centers (SHCs) into HWCs. With the assistance of digital infrastructure and crucial diagnostic services, these centers are manned by a skilled group of Community Health Officers (CHOs), Auxiliary Nurse Midwives (ANMs), and



Multipurpose Health Workers (MPWs). The screening, prevention, and management of noncommunicable diseases (NCDs) in people 30 years of age and older is a crucial part of HWC services.

The Raipur area is one of the districts where Chhattisgarh, one of the first states to introduce HWCs, has made significant strides in establishing these centers. Concerns and research are still being conducted over the efficacy of HWCs in rural areas with regard to their coverage and utilization of NCD care. Disparities in human resources, community awareness, health-seeking behaviour, and service delivery may affect the initiative's overall performance even with infrastructure upgrades.

This study aims to assess the availability and use of NCD services at Ayushman Bharat Health and Wellness Centers in Raipur district's rural areas in order to pinpoint any gaps, difficulties, or areas that might use improvement. Decisions about programs and policies that promote primary healthcare and alleviate the burden of NCDs in underprivileged rural communities will be influenced by the evaluation's findings.

2. Research Objectives

- 1. To evaluate NCD services at AB-HWCs in terms of accessibility and availability.
- 2. To assess how much the rural population uses NCD services.
- 3. To determine what influences service utilization—both facilitators and obstacles.
- 4. To offer suggestions for enhancing the NCD services that are provided at AB-HWCs.

3. Research Hypothesis

H1: AB-HWCs in rural Raipur offer efficient and easily accessible NCD services.

H2: Accessibility and community awareness are favourably correlated with NCD service utilization.

H3: Providing the best possible service is hampered by major operational and infrastructure issues.

H4: AB-HWCs' availability of qualified healthcare professionals (CHOs, ANMs, etc.) has a beneficial impact on NCD service consumption.

H5: The frequency of visits to AB-HWCs for NCD management is heavily correlated with their geographic accessibility.

H6: Consistent provision of medications and diagnostic tools at AB-HWCs improves patient satisfaction and sustains use of NCD care.

H7: Women use NCD services at AB-HWCs at a lower rate than males, indicating gender differences in care utilization.



H8: The adoption of preventive and health promotion initiatives at HWCs boosts community involvement in NCD screening.

H9: The introduction of AB-HWCs in Raipur's rural areas has resulted in a statistically significant increase in the early diagnosis of NCDs.

4. Literature Review

The increasing prevalence of NCDs in rural India and the requirement for decentralized healthcare systems have been highlighted in earlier research. The significance of health promotion and preventive healthcare is emphasized in the National Health Policy 2017. The delivery of NCD services is directly impacted by infrastructural, staffing, and community participation deficits found in evaluations of AB-HWCs in other locations. This study contributes localized insights from the Raipur district by expanding on the body of existing research.

Access to and Use of NCD Services

Residents of HWC-served regions were 25% more likely to receive an NCD diagnosis than residents of non-HWC-served areas, according to a study evaluating the efficacy of HWCs in Chhattisgarh. Additionally, the likelihood of NCD patients using public healthcare facilities was 70% higher in areas with HWC coverage. Reliance on unofficial private providers fell sharply from 23.5% to 8.4% between 2019 and 2022, while the public sector's share of NCD care climbed from 41.2% to 62.1%.

Infrastructure and Human Capital

HWCs require a strong infrastructure and sufficient human resources to function successfully. Community Health Officers' (CHOs') incorporation into the primary care team has been crucial in Chhattisgarh. At HWCs, these CHOs serve as the foundation for service delivery, together with multipurpose workers and auxiliary nurse midwives. However, issues still exist, such as a lack of medical personnel and inadequate infrastructure, which can make it difficult to provide comprehensive NCD services.

Initiatives for Digital Health

The reach of healthcare services in rural areas has been improved by the introduction of digital health initiatives such as Sanjeevani, a telemedicine program under the Ayushman Bharat scheme. By providing real-time virtual

consultations between patients at HWCs and specialists at tertiary healthcare facilities, this technology enhances access to specialized treatment and expedites the management of noncommunicable diseases.

5. Research Methodology

Study Design: Cross-sectional descriptive study.

Study Area: A subset of the Raipur district's rural AB-HWCs in Chhattisgarh.

Sample Size: The sample size is 300 recipients interviewed and 10 AB-HWCs chosen at random.

Methods of Data Collection: Key informant interviews with healthcare professionals, structured beneficiary questionnaires, and facility observation checklists.

Data analysis: Thematic analysis is used to examine qualitative data, whereas SPSS is used to analyse quantitative data.

6. Data Analysis

Availability: Eight out of ten AB-HWCs (80%) had glucometers, blood pressure monitors, and basic laboratory support as part of their NCD screening facilities.

Human Resources: A dedicated Community Health Officer (CHO) was present every day in just four of ten centres. Staffing shortages for ANM or MPW were reported by 60%.

Use: Out of 300 responders:

195 (65%) had had screening for NCDs within the previous 12 months.

Follow-up visits were made for 120 (40%) known NCDs.

Of those diagnosed, 12 (4%) had both diabetes and hypertension, 45 (15%) had diabetes, and 75 (25%) had hypertension.

Availability of Medicines: Four centers saw frequent stock-outs, while six out of ten centers reported regular availability of important NCD medications.

Level of Awareness: Only 90 (30%) of the respondents knew the location of the AB-HWC without help, whereas 132 (44%) were aware of the NCD services offered.

Challenges Recognized:



Seven CHOs reported insufficient staffing levels.

Reportedly, 40% of institutions had irregular drug supplies.

Sixty-two percent of beneficiaries noted little awareness among community members.

Enablers:

One of the main reasons given by 80% of respondents for visiting is the accessibility of HWCs.

85% were grateful for the free services.

The value of ASHAs in promoting NCD screenings was recognized by 70%.

7. Conclusion

According to the study's findings, AB-HWCs have had some success providing NCD care in rural Raipur. The infrastructure required for basic NCD screening was present in most locations; however, insufficient human resources, irregular drug availability, and low rural population knowledge still impede successful implementation. Although they have been essential in expanding access, community health workers' work is frequently hindered by a lack of resources and training. While a sizable section of the population has used services, the survey also shows that outreach and follow-up care still require a great deal of improvement. Moreover, the population's comprehension of NCDs and the significance of early identification and treatment is restricted by the absence of health education programs. It is recommended that policy interventions give priority to ongoing investments in community participation, drug supply chains, training, and technological tools for monitoring and assessment. In rural India, AB-HWCs have the potential to be useful platforms for lowering the burden of NCDs and accomplishing the more general objectives of universal health coverage if suitably implemented. For those interested in expanding and optimizing the impact of AB-HWCs in comparable rural environments, the evidence produced by this study offers insightful information.

8. Recommendations

- 1. Improve infrastructure and ensure that necessary medications are regularly available.
- 2. Boost NCD management training for healthcare professionals.
- 3. Boost community awareness by engaging in IEC programs.
- 4. Establish routine systems for evaluation and monitoring

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