



An Assessment of Coverage, Implementation and Effectiveness of Ayushman Bharat in Uttarakhand

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Abstract

The Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) represents India's flagship initiative toward achieving Universal Health Coverage (UHC), offering financial protection for secondary and tertiary healthcare to economically vulnerable populations. This paper examines the coverage, expansion and implementation dynamics of PM-JAY in Uttarakhand using multi-year secondary data on total beneficiaries, hospital enrolment, empanelled PM-JAY hospitals. Trend analysis and coverage ratios were employed to assess program growth. The findings reveal a steady increase in both beneficiary coverage and hospital empanelment, with notable contributions from community health workers in card generation. However, gaps persist in the proportion of total hospitals covered under PM-JAY, and beneficiary utilisation rates indicate scope for improved awareness and service access, particularly in remote districts. The paper underscores the importance of sustained outreach, equitable distribution of empanelled facilities, and robust monitoring to bridge coverage gaps and enhance the scheme's impact in achieving UHC goals in hilly and underserved regions. These insights provide actionable evidence for policymakers to strengthen PM-JAY's implementation framework in Uttarakhand and similar geographies.

Keywords: Ayushman Bharat, PM-JAY, Universal Health Coverage, Health Policy, Beneficiary Coverage

Introduction

India's healthcare system continues to grapple with multiple challenges, including unequal access to medical services, high out-of-pocket expenditures, and a persistent shortage and uneven distribution of skilled healthcare professionals, particularly in rural areas (Balarajan et al., 2011; Mehta et al., 2024; Rao et al., 2011; Kasthuri, 2018; Kumar, 2023). The quality of care is highly heterogeneous, with some facilities offering world-class services while many others provide substandard care, a situation compounded by limited reliable data and difficulties in monitoring and improving quality standards (Mohan et al., 2016; Kasthuri, 2018). Systemic issues such as inadequate public funding, a dominant yet often

poorly regulated private sector, insufficient infrastructure, and fragmented governance further strain the healthcare system (Patel et al., 2015; Rao et al., 2011; Kumar, 2023; Ramani, 2014). The increasing burden of non-communicable diseases, persistent socio-economic disparities, and urban-rural inequalities exacerbate these pressures (Balarajan et al., 2011; Kumar, 2023; Paul et al., 2011). Challenges related to human resources – such as inadequate training, low job satisfaction, brain drain, and slow recruitment – affect rural areas most severely (Mehta et al., 2024; Rao et al., 2011). Addressing these issues requires higher investment, stronger regulation, an effective primary care system, and policies emphasizing equity, accountability, and efficient health system management (Balarajan et al., 2011; Patel et al., 2015; Rao et al., 2011; Kumar, 2023).

Universal health coverage (UHC) has emerged as a key policy priority in India, motivated by persistent inequalities in access, high personal healthcare spending, and the need for improved financial protection and service quality (Radheshyam et al., 2025; Patel et al., 2015; Maqbool et al., 2019). The National Health Policy of 2017 explicitly aligned India's health objectives with UHC goals, followed by the launch of Ayushman Bharat in 2018, which introduced Health and Wellness Centres for primary care and the Pradhan Mantri Jan Arogya Yojana (PM-JAY), offering hospital insurance coverage to over 100 million low-income families (Lahariya, 2018; Shroff et al., 2020). These initiatives aim to increase healthcare utilization, enhance service quality, and protect vulnerable populations from financial hardship, particularly among rural and urban poor communities (Radheshyam et al., 2025; Lahariya, 2018). Despite these efforts, challenges persist, including low public health expenditure, fragmented governance, weak regulatory frameworks, and inadequate integration between public and private sectors (Patel et al., 2015; Maqbool et al., 2019; Maurya et al., 2017). District-level analyses reveal considerable geographic and socio-economic disparities in UHC progress, with southern states generally performing better and significant inequalities persisting within districts (Mukherji et al., 2024). Achieving UHC in India will require sustained investment, carefully designed policies, and ongoing monitoring to ensure equitable, high-quality, and financially protective healthcare for all (Radheshyam et al., 2025; Lahariya, 2018; Patel et al., 2015; Maqbool et al., 2019; Mukherji et al., 2024; Shroff et al., 2020).

Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) represents India's largest health assurance program, launched on 23 September, 2018, as a health assurance scheme to provide secondary and tertiary care cover to economically vulnerable families, providing financial coverage for secondary and tertiary hospital care to approximately 500 million low-income households, including those in Uttarakhand. The scheme operates through a network of empanelled public and private hospitals, providing 5 lakh per year per family, with public facilities accounting for over half of the total network. Although some states had prior experience with public health insurance, detailed data specific to Uttarakhand remain limited (Joseph et al., 2021). While AB-PMJAY has improved access and financial protection in many areas, challenges persist in terms of awareness, utilization, and equitable distribution of hospitals, particularly in underserved regions (Joseph et al., 2021). Evidence from northern India indicates that most claims are for general medicine and oncology, with high-cost procedures such as interventional cardiology also frequently utilized, reflecting the scheme's broad service coverage (Mufti et al., 2024). Financial projections suggest that private hospitals can achieve sustainability

under the program after the initial years, potentially encouraging greater private sector participation and improving access in states like Uttarakhand (Jyani et al., 2025). Nevertheless, further research is needed to assess the scheme's state-specific impact, utilization patterns, and operational challenges, as most current studies focus on national or other state-level contexts (Joseph et al., 2021; Mufti et al., 2024; Jyani et al., 2025).

In Uttarakhand, AB-PMJAY has achieved significant enrolment and hospital admissions, yet its implementation continues to face critical challenges. These include a large number of unmapped beneficiary cards, uneven enrolment across plain and hill districts, limited inclusivity of non-binary populations, and disproportionately low coverage among children. Although enrolment and expenditure trends indicate steady growth, the extent to which these translate into improved health outcomes, financial risk protection, and equitable access remains unclear. Despite growing national-level literature on PM-JAY, state-specific studies are limited, particularly regarding micro-level implementation dynamics in Uttarakhand, including district-wise disparities, demographic coverage, and inclusivity of marginalized groups. This study addresses these gaps by comprehensively analysing enrolment patterns, hospital admissions, and expenditure trends in Uttarakhand, providing evidence-based insights to inform both academic discourse in health economics and policy recommendations aimed at strengthening equity, inclusivity, and efficiency in healthcare delivery under PM-JAY.

Methodology

This paper adopts a descriptive and analytical research design based entirely on secondary data. Data was systematically compiled from these authentic sources through government portals, official dashboards, and academic databases like *indiastat*. The analysis has been carried out using descriptive statistics such as percentages, ratios, and trend analysis in context to assess the implementation of PM-JAY in achieving Universal Health Coverage. The paper has taken data range from the year 2018 to 2025. The objectives of this paper are twofold: first, to analyse the distribution and demographic coverage of Ayushman Bharat-PM-JAY beneficiaries in Uttarakhand, disaggregated by district, gender, and age group; and second, to examine the year-wise trends in enrolment, hospital admissions, and scheme-related expenditure from 2018 to 2025. Findings are organized around themes such as scheme coverage, service utilization, policy challenges. However, the study is limited by its reliance on secondary data, absence of district-level data in some cases, and possible discrepancies across reporting agencies.

Study Area

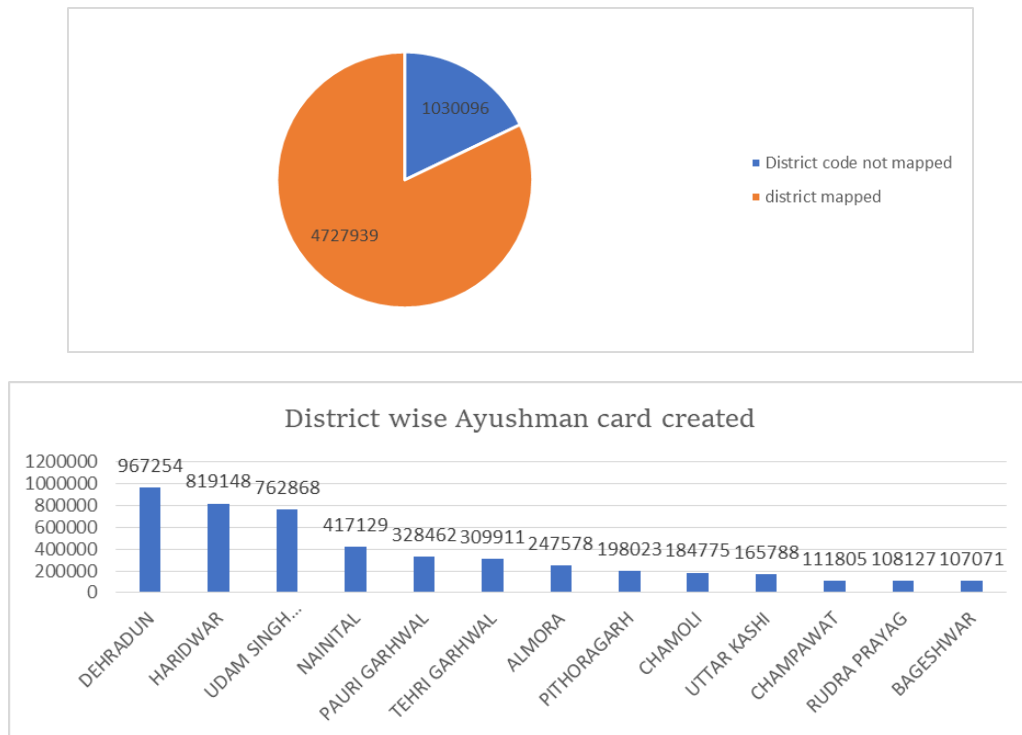
Uttarakhand, established as a separate state from Uttar Pradesh in 2000, is located in the northern Himalayan region of India and is characterized by its diverse topography and rich socio-cultural fabric (Government of Uttarakhand, 2020). Administratively, the state comprises 13 districts and shares international boundaries with China (Tibet) to the north and Nepal to the east, while domestically it borders Himachal Pradesh and Uttar Pradesh. Over the past two decades, the state has undergone significant demographic and socio-economic transformations, particularly with respect to urbanization, literacy, and gender-related development indicators (Census of India, 2011).

Result and Analysis

Ayushman Bharat Coverage

As regards to the coverage of Ayushman Bharat (PM-JAY), this paper provides a critical insight into the extent and effectiveness of health insurance reach among vulnerable populations. By examining enrolment data, socio-economic and regional disparities, it is helpful to evaluate the scheme’s impact on healthcare access and financial risk protection. As per the report of PM-JAY dated on 2nd September 2025 5,758,035 Ayushman cards generated in the state.

Figure 1: Distribution of district-wise creation of total Ayushman card.



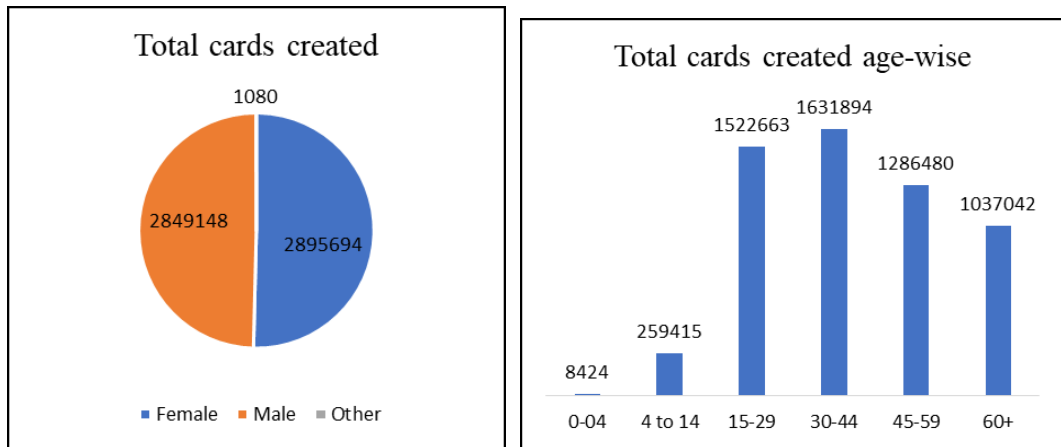
Source: PM-JAY, 2025 as per date 2nd sept 2025

Figure 1 shows the present status of district code mapping in the creation of Ayushman cards in Uttarakhand. It reveals that out of the total cards generated, 4,727,939 were successfully mapped with district codes, whereas 1,030,096 remained unmapped. This discrepancy suggests that while the majority of beneficiaries are accurately linked to their respective districts, a considerable share still lacks proper mapping, which may pose challenges for district-level monitoring, planning, and evaluation of the scheme’s implementation. Figure further elaborates on the district-wise distribution of Ayushman cards, highlighting major variations across regions. Dehradun leads with the highest number of cards created (967,254), followed by Haridwar (819,148) and Udham Singh Nagar (762,868). In contrast, the hill districts such as Bageshwar (107,071), Rudra Prayag (108,127), and Champawat (111,805) recorded the lowest numbers. Districts like Nainital (417,129), Pauri Garhwal (328,462), and Tehri Garhwal (309,911) fall within a moderate range, reflecting uneven progress across the state. However, the data is also affected by variation in population.

Social Status of Total Cards Created

To identify the coverage of Ayushman Bharat scheme among different genders, the section highlights the number of Ayushman cards created among different ages.

Figure 2: Distribution of social status of total cards created in Uttarakhand.



Source: *ibid*

Figure 2 illustrates the demographic distribution of Ayushman cards created in Uttarakhand across both age and gender categories. In terms of gender, the scheme demonstrates nearly balanced coverage, with 2,895,694 cards issued to females and 2,849,148 to males, while only 1,080 cards were created for individuals identifying as “other,” indicating limited inclusivity for non-binary groups. Furthermore, age-wise analysis shows that the largest share of beneficiaries belongs to the 30–44 age group (1,631,894), followed closely by the 15–29 group (1,522,663), reflecting strong coverage among the working-age population. This is followed by 1,286,480 cards for individuals aged 45–59 and 1,037,042 for those aged 60 and above, signifying significant participation among middle-aged and elderly groups. In contrast, children aged 0–4 (8,424) and those between 4–14 years (259,415) account for a relatively smaller share. The data suggests that while the Ayushman Bharat scheme has achieved gender-balanced outreach and significant penetration among the working-age and elderly populations, coverage among children remains comparatively low, highlighting a gap that requires policy attention to ensure universal family-level health protection.

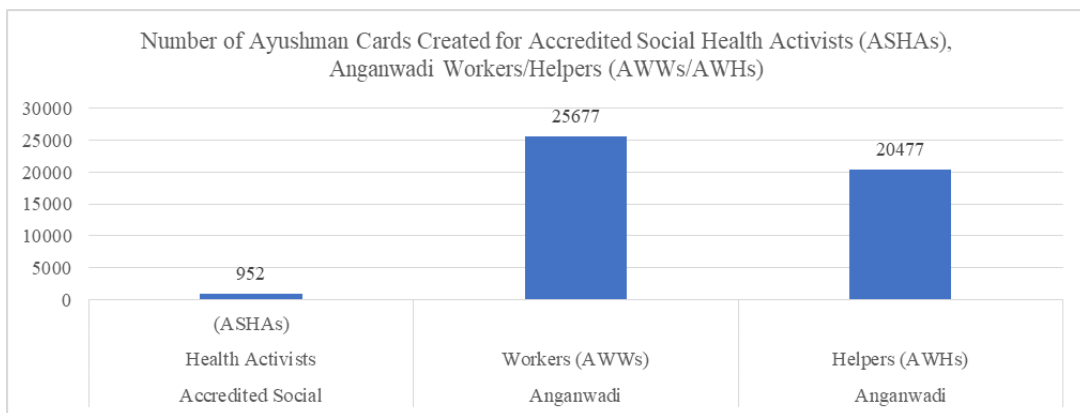
Figure 3: Trends analysis of number of cards created under Ayushman Bharat-PMJAY in Uttarakhand.



Source: *Rajya Sabha Unstarred Question No. 1723, dated on 06.08.2024.*

Figure 3 illustrates the year-wise trend of Ayushman card creation in Uttarakhand from 2018–2019 to 2024–2025 (up to June 2024). The data reveals a steady upward trajectory in card generation during the initial years, beginning with 20,864 cards in 2018–2019 and rising significantly to 130,224 in 2019–2020. A slight decline occurred in 2020–2021 (121,578), followed by consistent growth in subsequent years, reaching 181,835 in 2021–2022 and 260,694 in 2022–2023. The highest number of cards was created in 2023–2024, peaking at 372,473, marking the most successful year in terms of enrolment. However, the figures for 2024–2025 (up to June 2024) show a steep drop to 31,277, which may be attributed to the partial coverage of the year rather than an actual decline in enrolment. Overall, the trend demonstrates significant progress in card creation since the scheme’s inception, reflecting increasing acceptance and outreach, though the partial data for the latest year requires cautious interpretation.

Figure 4: Distribution of Number of Ayushman Cards Created for ASHA, AWW, AWHs.



Source: Lok Sabha Starred Question No. 404, dated on 28.03.2025.

Figure 4 depicts the number of Ayushman cards created for frontline health and childcare workers, including Accredited Social Health Activists (ASHAs), Anganwadi Workers (AWWs), and Anganwadi Helpers (AWHs). The data indicates that only 952 cards were created for ASHAs, which is significantly lower compared to Anganwadi staff. Among Anganwadi personnel, 25,677 cards were generated for workers (AWWs), while 20,477 cards were issued to helpers (AWHs). This disparity highlights that Anganwadi staff have been better covered under the scheme compared to ASHAs, despite the latter playing a critical role in community health outreach. The relatively low number of cards for ASHAs suggests potential gaps in enrolment or awareness, underscoring the need for targeted interventions to ensure comprehensive coverage of all categories of frontline health workers who form the backbone of rural health and nutrition services.

Ayushman Bharat Implementation

As regards to the implementation of Ayushman Bharat in Uttarakhand, the scheme covers the aspects like empanelled and de-empanelled hospitals and number of hospital admission in Uttarakhand.

Table 1: Distribution of year-wise number and type of empanelled and de-empanelled hospitals under Ayushman Bharat- PMJAY in Uttarakhand.

Number of Public/Private Hospitals De-Empanelled under Ayushman Bharat-Pradhan Mantri Jan Aarogya Yojana (AB-PMJAY) in Uttarakhand (2018-2019 to 2024-2025)													
2018-2019		2019-2020		2020-2021		2021-2022		2022-2023		2023-2024		2024-2025	
Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
0	0	0	19	0	1	0	32	0	32	0	1	0	0

Source: Lok Sabha Unstarred Question No. 4684, dated on 28.03.2025.

Number of Private and Public Hospitals Empanelled under Ayushman Bharat-Pradhan Mantri Jan Aarogya Yojana (AB-PMJAY) in Uttarakhand (2018-2019 to 2024-2025)													
2018-2019		2019-2020		2020-2021		2021-2022		2022-2023		2023-2024		2024-2025	
Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public
48	97	2	6	15	-	20	-	26	-	46	1	28	2

Source: Lok Sabha Unstarred Question No. 4684, dated on 28.03.2025.

The data on empanelled and de-empanelled hospitals under Ayushman Bharat-Pradhan Mantri Jan Aarogya Yojana (AB-PMJAY) in Uttarakhand between 2018-2019 and 2024-2025 highlights significant trends in the participation of both public and private health institutions.

In terms of de-empanelment, no public hospitals were removed during the period, whereas private hospitals saw multiple instances of de-empanelment. The highest occurred in 2021-2022 and 2022-2023, with 32 private hospitals each year being de-empanelled, followed by 19 in 2019-2020 and smaller figures of one each in 2020-2021 and 2023-2024. By 2024-2025, no hospitals were de-empanelled, indicating possible stabilization in the network.

Regarding empanelment, private hospitals consistently accounted for a substantial share, though with fluctuations over the years. Initially, 48 private and 97 public hospitals were empanelled in 2018-2019. However, subsequent years show irregular growth, with only 2 private and 6 public hospitals added in 2019-2020, and then 15 private hospitals in 2020-2021. The trend continued with 20 private hospitals in 2021-2022, 26 in 2022-2023, 46 in 2023-2024, and 28 in 2024-2025.

On the public sector side, empanelment stagnated after the initial 97 hospitals, with only sporadic additions of 6 in 2019-2020, and just 1-2 hospitals in later years. Overall, the data reflects a greater reliance on private hospitals for service expansion under PM-JAY, but also a higher rate of de-empanelment in this category, raising questions about sustainability, compliance, and quality standards. Conversely, the public hospital network

has remained relatively stable, though with limited new empanelment, suggesting that future policy efforts may need to focus on strengthening both the stability of private sector participation and the expansion of public sector involvement.

Table 2: Distribution of Number of Hospital Admissions under Ayushman Bharat PM-JAY in Uttarakhand.

Number of Hospital Admissions under Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) in Uttarakhand (As on 01.03.2025)	
State	Hospital Admissions
Uttarakhand	1446751

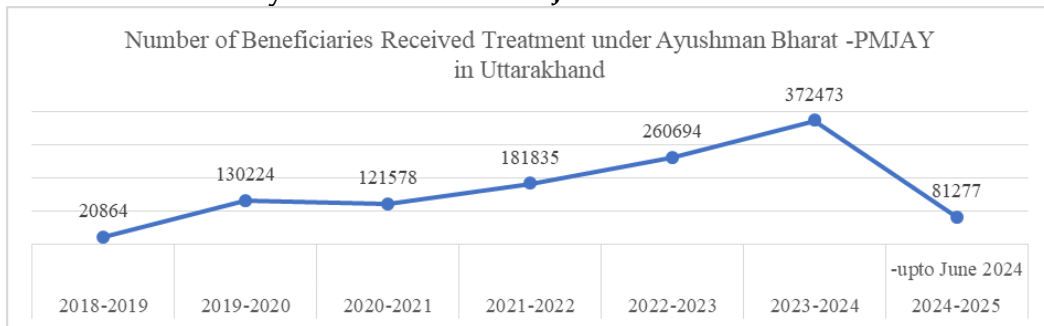
Source: Lok Sabha Starred Question No. 404, dated on 28.03.2025.

The data on hospital admissions under Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) indicates the extent of healthcare utilization in Uttarakhand. As of March 1, 2025, the state recorded a total of 1,446,751 hospital admissions under the scheme. This substantial figure reflects the critical role played by PM-JAY in enhancing access to inpatient care, particularly for economically vulnerable households, and demonstrates the scheme’s effectiveness in reducing financial barriers to healthcare services.

Service Utilization

The data on the number of beneficiaries treated and the expenditure incurred under Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) in Uttarakhand from 2018–2019 to 2024–2025 (up to June/August 2024) provides valuable insights into the scheme’s expansion and utilization over time.

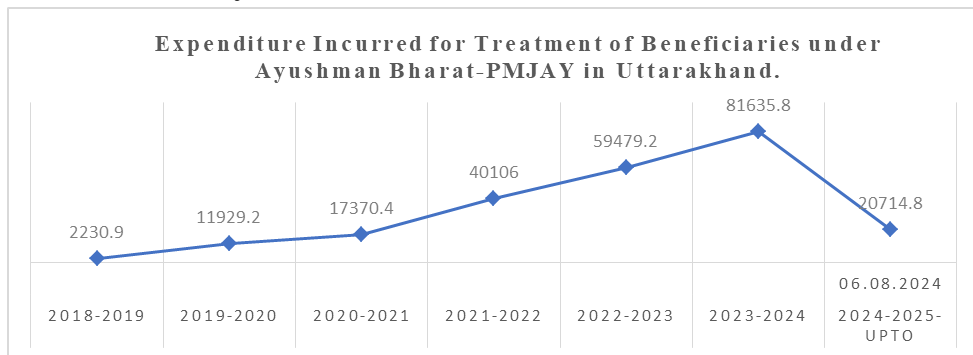
Figure 5: Trend Analysis of Number of beneficiaries Received treatment under Ayushman Bharat- PMJAY in Uttarakhand



Source: *ibid.*

In terms of beneficiaries, the program has shown a consistent upward trend in coverage since its inception. Starting with 20,864 beneficiaries in 2018–2019, the figure rose significantly to 130,224 in 2019–2020, though it slightly declined to 121,578 in 2020–2021, possibly due to the disruptions caused by the COVID-19 pandemic. From 2021–2022 onwards, there has been steady growth: 181,835 in 2021–2022, 260,694 in 2022–2023, and a peak of 372,473 in 2023–2024, reflecting wider awareness and accessibility of the scheme. For 2024–2025 (up to June 2024), 81,277 beneficiaries were reported, which, given it is partial data, still suggests continuing momentum in utilization.

Figure 6: Trends in Expenditure incurred for treatment of beneficiaries under Ayushman Bharat-PMJAY in Uttarakhand



Source: Rajya Sabha Unstarred Question No. 1723, dated on 06.08.2024.

The expenditure data mirrors this growth pattern. In 2018–2019, total spending amounted to ₹2,230.9 lakh, which increased more than fivefold in the following year (₹11,929.2 lakh in 2019–2020). Expenditure rose further to ₹17,370.4 lakh in 2020–2021 and more than doubled to ₹40,106 lakh in 2021–2022. The upward trend continued with ₹59,479.2 lakh in 2022–2023 and a peak of ₹81,635.8 lakh in 2023–2024, corresponding with the maximum number of beneficiaries treated that year. For 2024–2025 (up to August 2024), expenditure stood at ₹20,714.8 lakh, which, despite being partial data, indicates substantial ongoing financial outlays.

Overall, these figures highlight the increasing uptake and fiscal commitment toward PM-JAY in Uttarakhand, showcasing its growing role in providing financial risk protection and access to healthcare. The parallel rise in both beneficiaries and expenditure underscores the scheme's expanding coverage and the state's strengthening healthcare financing under this initiative.

Key Findings

The analysis of Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) in Uttarakhand reveals several critical findings regarding its coverage, demographic distribution, and utilization trends. Out of the total 5,758,035 Ayushman cards generated in the state, 4,727,939 (82.1%) were successfully mapped with district codes, while 1,030,096 (17.9%) remained unmapped, indicating a challenge in ensuring accurate district-level monitoring and evaluation. District-wise distribution shows significant variation, with Dehradun (967,254), Haridwar (819,148), and Udham Singh Nagar (762,868) accounting for the highest number of cards, while sparsely populated hill districts such as Bageshwar (107,071), Rudra Prayag (108,127), and Champawat (111,805) recorded the lowest enrolments. In terms of demographic coverage, the scheme has achieved gender balance, issuing 2,895,694 cards to females and 2,849,148 to males, though inclusivity remains limited for non-binary individuals with only 1,080 cards issued. Age-wise distribution highlights strong coverage among the working-age population, particularly the 30–44 years (1,631,894) and 15–29 years (1,522,663) cohorts, followed by middle-aged (45–59 years, 1,286,480) and elderly groups (60+ years, 1,037,042). However, coverage among children remains disproportionately low, with only 8,424 cards issued for the 0–4 years group and 259,415 for those aged 5–14 years, pointing to a policy gap in ensuring comprehensive family-level health protection.

The temporal analysis of card creation from 2018 to 2025 demonstrates a steady upward trend, beginning with 20,864 cards in 2018–2019 and peaking at 372,473 in 2023–2024, though a decline in 2020–2021 (121,578) reflected the disruptions of the COVID-19 pandemic. The partial data for 2024–2025 (31,277 up to June 2024) shows a sharp decline but is attributable to incomplete reporting rather than an actual reduction in enrolments. In terms of healthcare utilization, a total of 1,446,751 hospital admissions were recorded under PM-JAY in Uttarakhand as of March 1, 2025, reflecting the scheme's role in enhancing access to inpatient services and reducing financial barriers for vulnerable households. Furthermore, 973,184 families were identified as eligible beneficiaries, highlighting the program's wide entitlement base within the state. The year-wise trend of beneficiaries treated mirrors the enrolment trajectory, rising from 20,864 in 2018–2019 to a peak of 372,473 in 2023–2024, with a brief decline in 2020–2021 due to the pandemic and continuing momentum thereafter. Expenditure patterns align with this growth, increasing from ₹2,230.9 lakh in 2018–2019 to ₹81,635.8 lakh in 2023–2024, while partial data for 2024–2025 already accounts for ₹20,714.8 lakh, underscoring the state's growing fiscal commitment to healthcare financing. Collectively, these findings demonstrate the significant expansion of PM-JAY in Uttarakhand in terms of coverage, inclusivity, and utilization, while also identifying persistent challenges such as incomplete district mapping, limited recognition of non-binary groups, and inadequate coverage among children

Conclusion and Policy Implications

The implementation of Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) in Uttarakhand reflects notable achievements in healthcare access and financial protection, with over 5.7 million cards generated, 1.4 million hospital admissions, and nearly one million families covered, making it a critical pillar of health financing in the state. The scheme shows balanced gender coverage and strong participation among working-age and elderly populations, alongside a consistent rise in both enrolment and expenditure, which indicates growing institutional support and public acceptance. Nevertheless, key challenges remain, including a significant share of unmapped cards affecting district-level monitoring, uneven enrolment across hill districts, limited inclusion of non-binary groups, and disproportionately low coverage of children. These gaps highlight the need for policy measures such as improving data accuracy, strengthening outreach in remote regions, initiating school-based and family-level campaigns for child coverage, and ensuring greater inclusivity of marginalized populations. At the same time, scaling up healthcare infrastructure and workforce capacity will be vital to match rising demand with quality care delivery. Future research should move beyond enrolment figures to evaluate health outcomes, financial risk protection, and reductions in out-of-pocket spending, while also exploring regional disparities, community-level determinants of utilization, and the experiences of vulnerable groups. Such evidence would provide a deeper understanding of the scheme's effectiveness and inform strategies for making PM-JAY a more inclusive and sustainable pathway toward universal health coverage.

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