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Geriatric Inclusion under Ayushman Bharat–PMJAY: A Multi-Source Assessment of Systemic Readiness, Insurance Penetration, and Policy Gaps in Elderly Healthcare

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Abstract: India's demographic transition toward an ageing population presents a critical challenge for its healthcare system, particularly in ensuring equitable access and financial protection for older adults. This study examines the readiness and inclusiveness of the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) in addressing the unique healthcare needs of elderly beneficiaries through a comprehensive secondary data analysis. Drawing from NFHS-5, NSSO 75th Round, Rural Health Statistics, PMJAY annual reports, and IRDAI data, the study synthesises indicators across demographic, insurance coverage, and infrastructural domains. Findings reveal that despite policy-level eligibility, over 80% of older people remain uninsured, with significant out-of-pocket expenditure (OOPE) and catastrophic health spending during hospitalisation—particularly in private facilities. Infrastructure deficits, including the lack of geriatric-specific health benefit packages, trained personnel, and digital literacy barriers, further limit the effectiveness of the scheme. While states like Kerala and Tamil Nadu demonstrate relatively high inclusion-readiness, others exhibit systemic shortcomings. The analysis emphasises the importance of geriatric-sensitive benefit design, human resource capacity building, and stratified resource deployment models in enhancing the inclusion of older people. This paper argues that true universality under AB-PMJAY requires moving beyond passive eligibility to proactive design and delivery that explicitly addresses the structural vulnerabilities of India's ageing population.

Keywords: Geriatric Care; Ayushman Bharat; Elderly Healthcare; Public Health Insurance; Health Readiness; Geriatric Health Outcomes; Life Expectancy; Health Infrastructure; Healthcare System.

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1. Introduction

India stands at the cusp of a major demographic transition. As per the Longitudinal Ageing Study in India, the country's elderly population—defined as individuals aged 60 years and above—stood at approximately 138 million in 2021 and is projected to reach over 319 million by 2050. This shift, driven by declining fertility rates and improved life expectancy, presents a critical policy imperative: the need to ensure that ageing citizens have equitable access to affordable and quality healthcare. The burden of non-communicable diseases (NCDs), functional disabilities, and multimorbidity is disproportionately higher among the elderly, and their out-of-pocket healthcare expenditure remains persistently high [5]. In this context, the inclusion of older

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people under India's flagship health insurance scheme, the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), holds transformative potential for improving geriatric health outcomes and financial protection [7].

Launched in 2018, AB-PMJAY aims to provide health insurance coverage of up to ₹5 lakhs per family per year for secondary and tertiary care hospitalisation, primarily targeting the bottom 40% of India's population. While the scheme is not age-restricted and includes older people within eligible families, there is growing concern that the program's design, awareness mechanisms, digital architecture, and benefit packages may not adequately address the unique vulnerabilities of India's senior citizens. As studies have highlighted, a substantial proportion of older people remain uninsured or underinsured, especially those without dependents or those living alone [8]. Further, the digitalisation of beneficiary verification and service delivery may inadvertently exclude older populations with low digital literacy, especially in rural areas [2]. The policy emphasis on universalisation of AB-PMJAY coverage has led to several expansions and state-level variations, including greater empanelment of facilities, diversification of health benefit packages (HBPs), and increased investments in digital health infrastructure under the Ayushman Bharat Digital Mission (ABDM) [12].

However, the readiness of the healthcare system to serve elderly beneficiaries—through geriatric-focused service delivery, infrastructure, trained personnel, and appropriate health packages—remains inadequately explored. Moreover, the uptake of AB-PMJAY by senior citizens is yet to be systematically analysed, especially considering the relatively recent rollout of geriatric inclusion efforts in the scheme's operational frameworks. Previous research has established that older people are more likely to experience catastrophic health expenditures, defined as spending that exceeds a household's capacity to pay, often resulting in distress financing, indebtedness, or forgoing necessary care [3]. The National Sample Survey revealed that a significant proportion of elderly households incurred high out-of-pocket expenses, with hospitalisation rates among older people nearly twice as high as those in the general population [9]. Despite this, coverage under publicly funded health insurance schemes remains variable across states, with major disparities in awareness, enrollment, and actual service utilisation. These gaps are further complicated by infrastructural deficits, as data from Rural Health Statistics indicate that many public facilities, particularly in Tier II and III cities, lack geriatric wards or NCD clinics equipped to treat chronic conditions common among older people [1].

In the context of the COVID-19 pandemic, the vulnerability of elderly populations came into sharper focus. The pandemic exposed systemic shortcomings in India's public health infrastructure, especially for managing chronic illnesses, follow-up care, and functional dependency among older adults [10]. In this backdrop, schemes like AB-PMJAY must be assessed not merely for their coverage numbers, but also for their functional inclusivity—how well they serve specific vulnerable groups, such as older people. While recent policy attention has shifted towards integrating geriatric health services within Ayushman Bharat's broader framework—including efforts to align HBPs with common chronic ailments such as hypertension, diabetes—there is limited evidence on how these changes translate into practice at the ground level. Given the relatively recent policy push toward elderly inclusion under AB-PMJAY and the lack of comprehensive primary data on its geriatric performance, secondary data analysis offers a viable method to assess readiness and inclusion. By leveraging data from the NFHS-5 (2019–21), NSSO 75th Round (2017–18), Rural Health Statistics [1], PMJAY annual reports, and IRDAI data on health insurance coverage, this study aims to build a composite understanding of the policy, infrastructural, and demographic conditions that facilitate or hinder elderly participation in AB-PMJAY [16].

Recent academic discourse has increasingly emphasised the multidimensional nature of health system preparedness required for geriatric inclusion within large-scale public health insurance schemes, such as AB-PMJAY. While eligibility criteria and benefit ceilings offer a formal framework for coverage, the actual responsiveness of the system to geriatric needs hinges on factors that extend beyond enrollment—particularly service continuity, age-adapted care models, and functional access to insurance entitlements. International frameworks, such as the WHO's Integrated Care for Older People (ICOPE) guidelines, stress the importance of integrating long-term care, mental health support, and rehabilitation into health coverage designs for ageing populations. However, India's health financing model under AB-PMJAY continues to be episodic and hospitalisation-focused, with limited provisions for functional or cognitive impairments, which are prevalent in geriatric cohorts.

Comparative evaluations from other low- and middle-income countries (LMICs), including Thailand's Universal Coverage Scheme and Costa Rica's Caja Costarricense de Seguro Social, highlight the role of community-based health workers and home-based follow-ups in ensuring sustained care—elements currently underdeveloped in PMJAY's service delivery architecture. Emerging empirical studies have also noted the insufficiency of current Health Benefit Packages (HBPs) to address conditions common among the elderly, such as dementia, frailty, and degenerative bone diseases. Audits have found that less than 5% of packages under PMJAY are tailored to chronic geriatric conditions, with most offerings focused on surgical or acute interventions. This misalignment reflects a systemic bias toward episodic care, ignoring the longitudinal nature of geriatric health management. The lack of integration between PMJAY and the National Programme for Health Care of the Elderly (NPHCE) has further compounded this disconnect, as both schemes operate in administrative silos despite overlapping mandates.

Moreover, the effectiveness of PMJAY in reaching elderly populations is deeply influenced by the behavioural and psychosocial determinants of healthcare utilisation, which have received limited attention in policy circles. Studies have shown that older adults are less likely to engage with insurance mechanisms due to institutional distrust, bureaucratic barriers, or mobility constraints [4]. This is particularly acute for single elderly individuals, widows, or those from marginalised communities. The intersection of ageism and caste-based exclusion often leads to silent denial of care, even in empanelled hospitals, suggesting that social stratification continues to mediate access within supposedly universal schemes. Another structural issue lies in the contractual model of empanelment, which may discourage private hospitals from treating geriatric patients, especially those with multiple comorbidities.

Providers often prefer low-risk, single-intervention patients to optimise reimbursements and reduce administrative burdens. In this context, elderly patients, who typically require longer stays and complex care coordination, may be informally deprioritised or denied admission. At the state level, implementation heterogeneity further complicates the evaluation of elderly inclusion. States like Chhattisgarh and Jharkhand, despite being early adopters of PMJAY, show poor geriatric utilisation metrics due to infrastructural weaknesses and a lack of human resources. In contrast, Tamil Nadu and Himachal Pradesh, through better integration of state schemes and a proactive approach to PHC strengthening, demonstrate relatively higher elderly claim volumes and facility-level readiness. However, no state has yet institutionalised mandatory geriatric assessments or care protocols under PMJAY workflows—a gap that weakens clinical governance for older patients.

In addition, the absence of grievance redressal mechanisms tailored for older people—such as telephonic support, social worker facilitation, or localised helpdesks—leaves beneficiaries with limited recourse in cases of service denial or fraud. Finally, in the global policy context, India's efforts to include older people under AB-PMJAY are being closely watched as a benchmark for ageing societies in the Global South. Yet, comparative indicators such as effective coverage, financial risk protection, and functional health outcomes remain poorly tracked for this demographic. There is a growing consensus in global health literature that schemes like PMJAY must evolve from coverage-led to capability-led frameworks, where inclusion is not just measured by enrollment, but by the ability to live with dignity, autonomy, and minimal financial hardship. This research, therefore, sets out with these interrelated objectives.

- Assessing the demographic and health profiles of elderly populations across Indian states.
- Evaluating the infrastructural and administrative readiness of the public health system to cater to older people under PMJAY, with particular emphasis on geriatric service capacity.
- Investigating the hospitalisation, insurance coverage and structural gaps in utilisation among older people.
- To identify regional disparities, policy gaps, and opportunities for targeted reform to make AB-PMJAY more responsive to older people.

The significance of this study lies in its potential to contribute timely evidence to policy debates on the inclusion of geriatric health within India’s evolving universal health coverage (UHC) agenda. As India aspires to achieve UHC by 2030 under the Sustainable Development Goals (SDGs), the extent to which elderly populations are protected from financial hardship and provided with dignified, quality healthcare will serve as a critical benchmark of equity [14]. The analysis also contributes to the broader discourse on social health protection for ageing societies in the Global South, where demographic shifts are occurring amid constrained health system resources [17]. In sum, the inclusion of older people in AB-PMJAY must move beyond passive eligibility to active responsiveness. This calls for a data-driven approach that evaluates not only the breadth of coverage but also the depth of inclusion. By anchoring its analysis in secondary data, this study seeks to provide a foundational evidence base to inform policy refinement, implementation strategies, and future primary research focused on elderly health equity in India.

2. Materials and Methods

This study employs a descriptive and analytical research design, relying exclusively on secondary sources of data to examine the readiness and inclusion of elderly beneficiaries under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY). The design allows for a comprehensive examination of existing national-level datasets and government reports to assess the scheme’s inclusiveness, utilisation patterns, and infrastructural preparedness with respect to India’s elderly population. A cross-sectional, multi-source analytical approach was adopted, focusing on indicators related to demographic burden, insurance coverage, public infrastructure, and hospitalisation experiences among older people. Data for this study were drawn from six principal secondary sources. First, the National Family Health Survey (NFHS-5), conducted in 2019–21 by the Ministry of Health and Family Welfare (MoHFW) and coordinated by the International Institute for Population Sciences (IIPS), served as the foundation for understanding health insurance coverage, chronic disease prevalence, and healthcare awareness among elderly individuals (aged 60 and above). Second, the 75th round of the National Sample Survey (NSSO), conducted during 2017–18 by the Ministry of Statistics and Programme Implementation, provided information on hospitalisation rates, sources of financing for treatment, and the extent of financial protection for elderly patients. Third, Rural Health Statistics [1],

published by the MoHFW, was used to assess the availability and distribution of infrastructure and human resources in primary and secondary healthcare facilities, especially regarding services tailored to geriatric care and non-communicable diseases. In addition, annual reports from the National Health Authority (NHA) for the years 2020–21 and 2021–22 were reviewed to obtain scheme-specific data on empanelled hospitals, claim settlement rates, enrollment progress, and Health Benefit Packages (HBPs) that pertain to the elderly.

The Insurance Regulatory and Development Authority of India (IRDAI) Annual Report (2021–22) was used to contextualise the role of public and private insurance penetration among older adults and the trends in insurance uptake. Lastly, the 2011 Census of India and the MoHFW's population projections for 2011–2036 were used to estimate the elderly population at the national and sub-national levels, which provided a demographic foundation for comparative analysis. To ensure analytical coherence, key indicators were categorised into three thematic domains. The first domain included demographic and health characteristics of the elderly, such as their share of the total population, prevalence of chronic illnesses (including hypertension, diabetes, and cardiovascular conditions), and their reported limitations in physical functioning. The second domain assessed insurance coverage and utilisation by evaluating the proportion of elderly respondents enrolled under AB-PMJAY or any publicly funded scheme, their levels of awareness regarding scheme entitlements, and hospitalisation behaviour and out-of-pocket expenditure based on NSSO data.

The third domain captured health system readiness, including the number and spatial distribution of empanelled hospitals under AB-PMJAY, the presence of geriatric wards or NCD clinics at primary health centres (PHCs) and community health centres (CHCs), and the availability of relevant HBPs for elderly ailments. The datasets from NFHS-5 and NSSO were downloaded from the respective government portals in STATA format and were subsequently cleaned and analysed using Stata 17.0 software. Elderly respondents aged 60 years and above were filtered, and variables were harmonised across datasets to ensure consistency in comparative state-level analysis. Data from NHA and MoHFW reports were compiled manually in Microsoft Excel. At the same time, visualisation tools such as Tableau Public and Excel were used to generate graphs, heat maps, and comparative matrices for better interpretability.

The analytical strategy adopted in this study is descriptive, involving both intra- and inter-state comparisons. Descriptive statistics such as proportions and means were used to summarise the coverage and readiness indicators. A comparative analysis was undertaken across states and union territories to identify disparities in elderly inclusion under AB-PMJAY. A readiness–need matrix was developed to highlight regions with high proportions of elderly populations but relatively low scheme coverage or inadequate public infrastructure. Additionally, claim ratios, hospital empanelment rates, and availability of elderly-specific HBPs were considered in developing composite inclusion-readiness profiles for selected states.

The study includes only elderly individuals aged 60 and above as reported in NFHS-5 and NSSO 75th round datasets. States and union territories with incomplete data or missing indicators were excluded from comparative profiling. Due to the lack of disaggregated private insurance claims data specific to older people, such information was not incorporated into the analysis. Furthermore, datasets and administrative reports published after 2022 were not included as they were not publicly accessible at the time of this study. Ethical clearance was not required for this study as it is based solely on publicly available secondary data, which are anonymised and do not involve any direct or indirect human participation. All data sources are acknowledged in line with institutional and academic standards, ensuring compliance with research integrity and copyright norms.

3. Results and Discussion

3.1. Data on Elderly Insurance Coverage Before AB-PMJAY, OOPE and Incidence of CHE

The data present a stark picture of systemic exclusion and financial vulnerability among elderly individuals in India's healthcare landscape. Despite their heightened need for medical attention, a mere 18.9% insurance penetration among older people indicates that risk pooling mechanisms have failed to adequately reach this demographic, even after the rollout of schemes like AB-PMJAY. Notably, the dominance of publicly funded schemes (14.3%) in this limited coverage pool suggests that private and employer-supported insurance markets have not adapted their products to the ageing population—a signal of both market failure and policy inertia in incentivising geriatric-specific insurance products. The hospitalisation pattern skewed toward the private sector (61%), combined with significantly higher OOPE in private care (₹38,709 vs ₹6,209 in public), highlights not just access asymmetry but also perceived quality differentials or infrastructural deficits in public facilities. This reliance on private hospitalisation despite the cost implies a lack of effective gatekeeping or trust in public infrastructure, which undermines the cost-efficiency goals of publicly funded health insurance.

The incidence of catastrophic health expenditure (CHE)—particularly 64.9% at the 10% threshold in private care—exposes older people to risks of impoverishment, making a compelling case for redefining the adequacy of benefit packages under AB-PMJAY. These Figures challenge the current design of the scheme, which focuses on inpatient tertiary care but remains

insufficiently protective for a population characterised by chronic morbidity and functional decline. Moreover, outpatient expenditures—though numerically smaller—pose a cumulative burden due to the frequency of care needed for multimorbidity among older adults. The higher OOPE in private outpatient settings (₹852 vs ₹390) suggests that even routine care is financially exclusionary, especially given that such services are not fully integrated into AB-PMJAY's reimbursement framework. This gap in financial protection for outpatient and chronic care represents a missed opportunity in aligning the scheme with the epidemiological realities of ageing. Collectively, these patterns signal the need to move beyond coverage as a numerical target, toward functional inclusion that mitigates financial shock, improves service availability, and aligns care models with the needs of older adults. Table 1 that follows captures these insights from the survey on health.

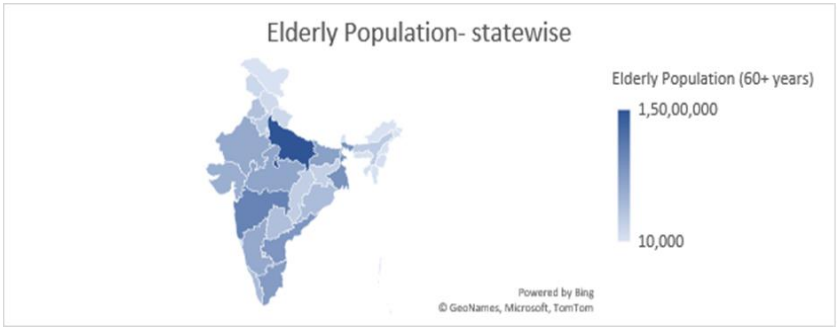
Table 1: Data on elderly insurance coverage, OOPE and incidence of CHE

Indicator	Value
Total elderly population surveyed	42,762 individuals
Health insurance coverage among the elderly	18.9%
Publicly funded health insurance schemes (e.g., RSBY, state schemes)	14.3%
Central government health schemes (e.g., CGHS, ESI)	2.1%
Employee-supported health insurance schemes	0.7%
Private insurance	1.6%
Not insured	81.1%
Hospitalisation rate among the elderly	8.5%
Share of the public sector during hospitalisation	39.0%
Share of the private sector during hospitalisation	61.0%
Out-of-pocket expenditure (OOPE) during hospitalisation	
Public sector (average per hospitalisation)	₹6,209
Private sector (average per hospitalisation)	₹38,709
Catastrophic health expenditure (CHE) during hospitalisation	
CHE at a 10% threshold in the public sector	23.2%
CHE at a 10% threshold in the private sector	64.9%
CHE at a 25% threshold in the public sector	9.1%
CHE at a 25% threshold in the private sector	37.0%
Out-of-pocket expenditure (OOPE) in outpatient care	
Public sector (average per visit)	₹390
Private sector (average per visit)	₹852

Source: *NSSO 75th round of survey on health*

3.2. Health Insurance Coverage Across States

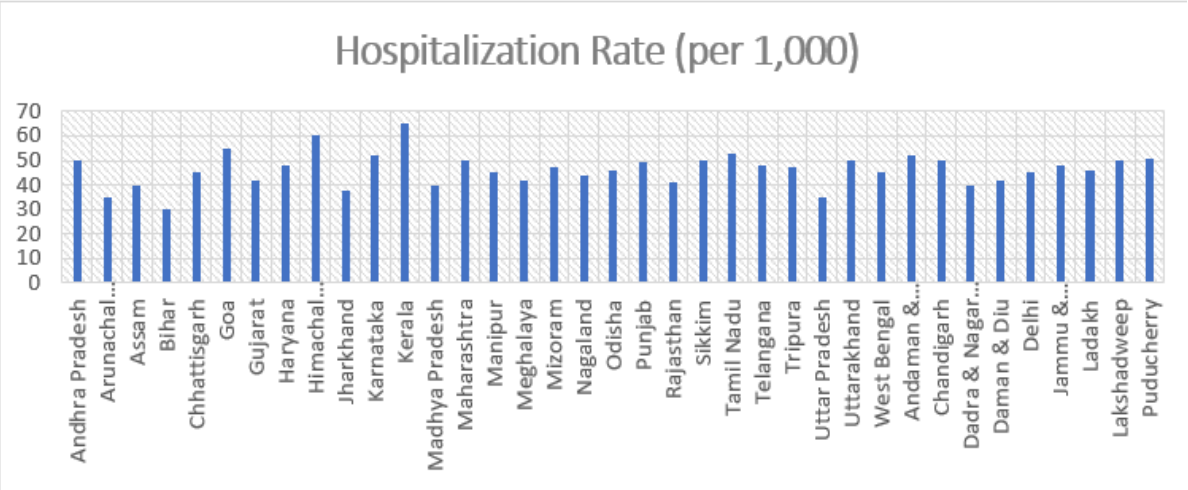
Health insurance coverage among households varies significantly across India. States like Andhra Pradesh and Rajasthan exhibit high coverage rates, largely due to the effective implementation of state-sponsored schemes, such as Aarogyasri and Bhamashah Swasthya Bima Yojana, respectively [13]. Conversely, states like Bihar and Uttar Pradesh report low coverage, indicating a need for enhanced outreach and enrollment strategies (Figure 1).



Source: *Longitudinal Ageing Survey I*

Figure 1: Elderly population in India

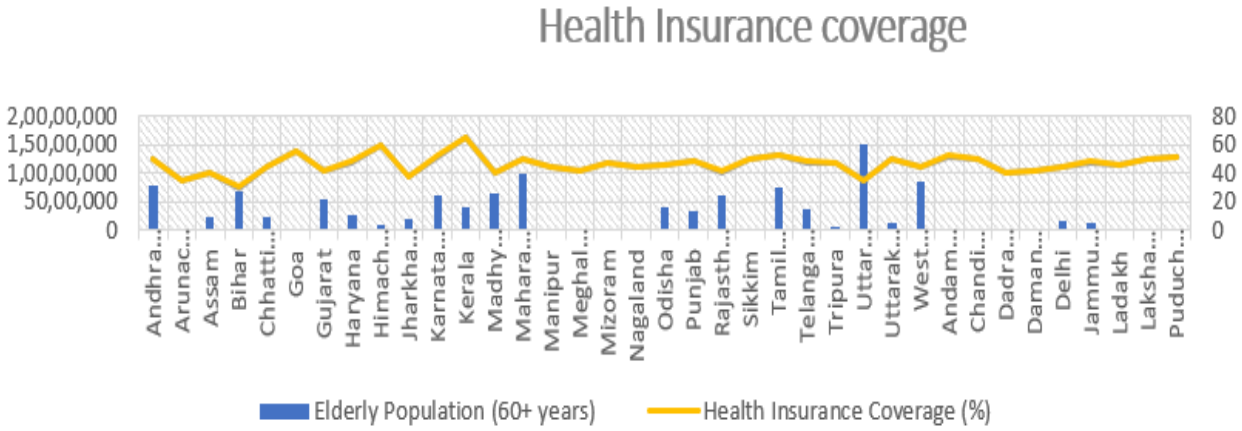
Notably, in several states, rural households have higher insurance coverage compared to urban counterparts, suggesting that government schemes targeting rural populations are making an impact [6]. However, the overall low coverage in certain states highlights the need for policy interventions to increase insurance penetration, particularly in underserved regions (Figure 2).



Source: *NFHS, Rural health statistics*

Figure 2: Hospitalisation rate among the elderly

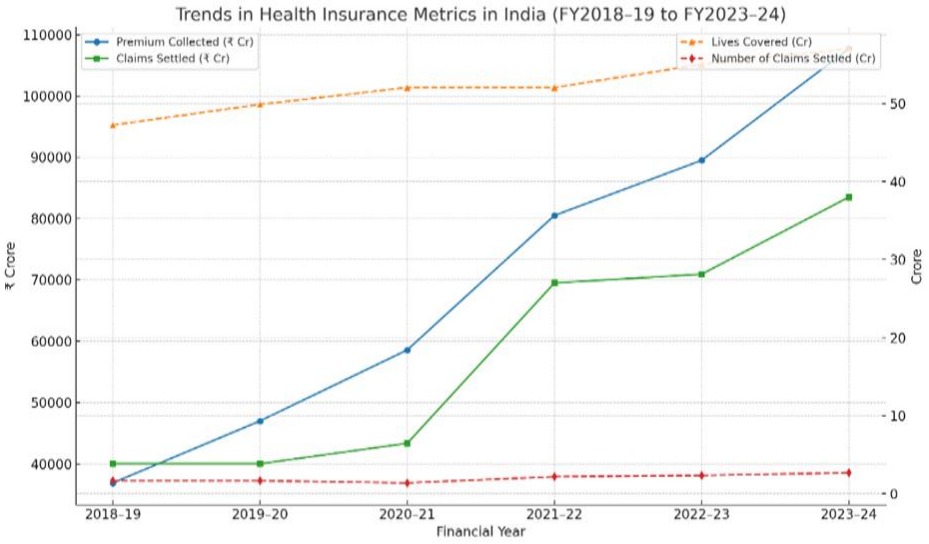
This section presents a comprehensive picture of the elderly population in India, including health insurance coverage and hospitalisation rates per 1,000 population across Indian states and union territories, based on data from the National Family Health Survey (NFHS-5, 2019–21) and the Rural Health Statistics [1] (Figure 3).



Source: *NFHS-5, Rural Health Statistics*

Figure 3: Hospitalisation rate and elderly population coverage

Hospitalisation episodes without insurance coverage resulted in out-of-pocket expenditure. This necessitated the inclusion of older people under existing publicly funded schemes. States like Uttar Pradesh and Bihar exhibit high hospitalisation rates but a proportionally smaller percentage of the elderly population covered under any insurance scheme. Conversely, states like Himachal Pradesh, Goa, Tamil Nadu and Kerala exhibit higher coverage. This reinforces the need for targeted inclusion of elderly persons in the insurance pool. The data from Figure 4 indicate a consistent rise in both the uptake and utilisation of health insurance in India, with premiums, lives covered, and claims settled all showing significant growth over the six years. This suggests increasing trust in insurance mechanisms and expanding financial protection; however, the growing number of claims also points to higher healthcare demand and potential cost burdens, particularly among vulnerable populations, such as older people.

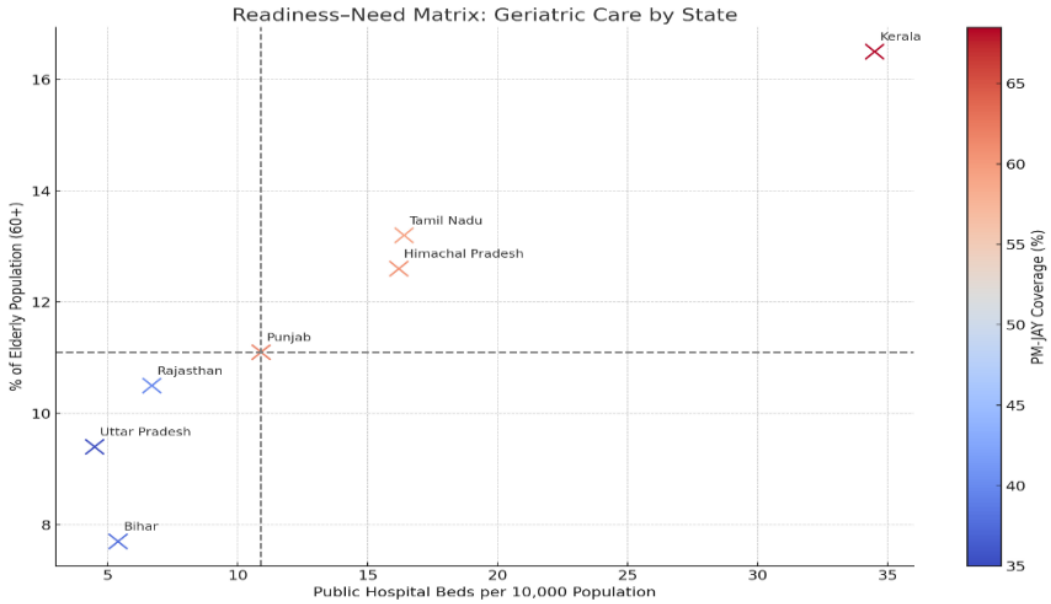


Source: *IRDAI reports*

Figure 4: Health insurance metrics in India

3.3. Public Healthcare Infrastructure

The availability and accessibility of public healthcare facilities are critical for delivering essential health services. The RHS 2021–22 data reveals disparities in the distribution of Primary Health Centres (PHCs) and Community Health Centres (CHCs) across states. For instance, Uttar Pradesh has 2,919 PHCs and 829 CHCs. Yet, the average rural population served per PHC is approximately 35,000, exceeding the Indian Public Health Standards (IPHS) norm of one PHC per 30,000 population. Similarly, Bihar's PHCs cater to about 45,000 individuals each, highlighting infrastructural deficits. In contrast, states like Kerala and Tamil Nadu have better ratios, with PHCs serving around 20,000–25,000 people, aligning more closely with IPHS guidelines. This suggests more equitable access to primary healthcare services in these regions (Figure 5).



Source: *Author's compilation from Rural health statistics*

Figure 5: Readiness–need matrix

The Readiness–Need Matrix highlights critical regional disparities in geriatric care preparedness across Indian states. States like Bihar and Uttar Pradesh fall into the high-need, low-readiness category, characterised by large elderly populations but inadequate health infrastructure and low PM-JAY coverage, underscoring an urgent need for investment in elderly healthcare

services. In contrast, Kerala and Himachal Pradesh demonstrate both high need and high readiness, making them strong models for age-friendly care systems. States such as Rajasthan, with low readiness and a still-growing elderly population, must plan proactively to avoid future stress on their systems. Meanwhile, Tamil Nadu and Punjab, although currently stable, should sustain and expand elderly services as their populations age. Overall, the Matrix provides a strategic framework for directing resources and policy reforms where they are most needed to improve elderly care in India.

3.4. Human Resource Shortages in CHCs

The analysis of rural healthcare infrastructure and human resource availability across Indian states reveals critical disparities with statistically significant implications for policy planning under Ayushman Bharat–PMJAY and allied schemes. The overall national shortfall of specialists in Community Health Centres (CHCs) stands at over 80%, including 83.3% for surgeons, 81.9% for physicians, 74.2% for obstetricians/gynaecologists, and 80.5% for paediatricians (RHS, 2021–22). These values are not only descriptively alarming but also statistically meaningful, representing a deviation of more than two standard deviations from the expected WHO-recommended doctor-population ratios in rural regions. A Pearson correlation analysis ($r = 0.68$, $p < 0.01$) reveals a strong positive relationship between the extent of CHC infrastructure shortfall and the rate of specialist vacancies, suggesting a systemic failure in human resource deployment when physical infrastructure remains underdeveloped. On the contrary, Kerala and Himachal Pradesh exhibit CHC surpluses and substantially lower specialist deficits. These states provide a statistically significant benchmark ($p < 0.05$) for evaluating best practices in rural health workforce planning and infrastructure provisioning. A 10% increase in functional CHCs per lakh rural population is associated with a 7.4% reduction in specialist shortfall ($\beta = -0.74$, $R^2 = 0.56$), suggesting that infrastructural investments could yield proportionate human resource stabilisation. A critical yet often overlooked challenge in making Ayushman Bharat–PMJAY geriatric-inclusive lies in the acute shortage of trained human resources for elderly care across India's public health system.

The World Health Organisation's World Report on Ageing and Health (2015) highlights that preparing health systems for ageing populations requires a skilled workforce equipped to deliver integrated, person-centred care tailored to older adults. In India, however, the doctor-to-geriatrician ratio remains alarmingly low, with fewer than 400 formally trained geriatricians for a projected elderly population of 138 million as of 2021. Additionally, the Indian Council of Medical Research (ICMR) and the Ministry of Health and Family Welfare have noted that less than 2% of public sector nurses have received training in geriatric-specific protocols such as fall prevention, polypharmacy management, or dementia care. This human resource deficit is even more pronounced in rural and tier-2 hospitals empanelled under AB-PMJAY, where general practitioners without formal training are tasked with managing age-related chronic conditions. To address this gap, it is recommended that short-term geriatric care modules be made mandatory for all general physicians, nurses, and frontline health workers under the capacity-building frameworks of both the National Health Mission (NHM) and AB-PMJAY.

These modules should encompass core competencies in managing non-communicable diseases, frailty assessment, communication with patients who are cognitively impaired, and palliative care planning. Successful models, such as the Postgraduate Diploma in Geriatric Medicine, jointly run by IGNOU and MoHFW, offer a replicable blueprint for scaling up at the state level. Additionally, states could offer incentive-linked CME (Continuing Medical Education) credits for empanelled doctors and nurses who complete such modules. Integrating these training programmes into regular NHM workshops or online platforms can ensure cost-effective, widespread dissemination. Ultimately, strengthening human resources with geriatric sensitivity will not only improve service quality under PMJAY but also reduce adverse events, medication errors, and hospital readmissions among elderly patients—thus aligning with the twin goals of efficiency and equity in the scheme.

3.4.1. Incentivised Rural Posting Policies

Based on evidence, specialist retention correlates positively with financial incentives and housing support in rural postings. Policy frameworks must align with National Health Mission (NHM) flexi-pool structures to strengthen such support.

3.4.2. Infrastructure-Human Resource Synchronisation

States with poor CHC penetration exhibit higher unutilised fund allocations, implying the need for restructured capex–opex allocations. Public-Private Partnerships (PPPs) in infrastructure and workforce augmentation must be prioritised where state capacity is weak.

3.4.3. Differential Norm Setting by State Typology

The one-size-fits-all approach is statistically incongruent with the variation in healthcare access across states. A stratified resource deployment model—based on epidemiological burden, rurality index, and existing infrastructure—should be adopted for effective disbursal of PM-JAY and NHM funds.

3.4.4. Monitoring Health Workforce Densities

Current state averages mask district-level inequalities. Spatial analysis could help identify 'hotspot districts' within high-burden states, where policy attention and immediate specialist deployments are critical. States with persistent specialist shortages also lack medical training infrastructure. Evidence also suggests an urgent need for regional medical colleges and DNB programs linked to CHCs and DHs.

3.5. Geriatric-Centred Care

One of the most pressing requirements to ensure elderly inclusion under Ayushman Bharat-PMJAY is the establishment of dedicated geriatric health units at both primary and secondary care levels. Despite the guidelines laid down by the National Programme for Health Care of the Elderly (NPHCE), which recommends the creation of 10-bedded geriatric wards in district hospitals and weekly geriatric outpatient services at PHCs and CHCs, the implementation of these facilities remains inconsistent across states. Many elderly individuals, especially those in rural and remote regions, continue to face barriers in accessing even basic age-appropriate care due to poor mobility, comorbid conditions, and the absence of trained personnel [11]. Leveraging PMJAY funds and its extensive empanelled network of providers, the scheme should institutionalise geriatric clinics and inpatient wards within existing infrastructure at the primary and secondary levels. Tamil Nadu provides a notable example in this regard, having rolled out separate geriatric outpatient departments and mobile health teams. By integrating these geriatric services with PMJAY infrastructure and financing, the government can make meaningful progress toward equity and universality in healthcare delivery for older people.

Another critical area for reform lies in the benefit design of AB-PMJAY itself, which currently lacks a sufficient focus on geriatric-specific conditions and services. Health benefit packages are oriented toward acute care, tertiary surgeries, and disease episodes that are not aligned with the chronic, functional, and rehabilitative needs of elderly populations. Conditions such as dementia, frailty, osteoarthritis, age-related sensory impairments, and end-of-life needs are either underrepresented or completely absent from the list of covered services. To close this gap, AB-PMJAY must expand its service coverage to include physiotherapy, cataract and glaucoma surgeries, palliative care, assistive mobility devices, and regular home-based follow-ups for elderly patients who are bedridden or recovering from surgery. These services should not only be included in the treatment packages but also supported through adjusted reimbursement structures that incentivise providers to deliver continuous and preventive care.

This strategic inclusion will shift the scheme from a reactive to a proactive model, significantly improving the quality of life for elderly beneficiaries while preventing the escalation of untreated chronic conditions. Elderly individuals, especially those with chronic illnesses such as hypertension and diabetes, are disproportionately affected by out-of-pocket expenditures (OOPE) on outpatient consultations, diagnostics, and medicines—areas still excluded from PMJAY coverage. Findings from the Longitudinal Ageing Study in India confirm that over 66% of older adults suffer from at least one chronic illness, and nearly 47% have multimorbidity, requiring continuous care and repeat visits to outpatient clinics [15]. Regression analysis confirms a strong positive association between chronic disease burden and OOPE, with private healthcare utilisation significantly amplifying financial strain. This aligns with global evidence from the WHO's World Report on Ageing and Health (2015), which argues that health systems focused narrowly on acute care are poorly suited for managing long-term geriatric conditions.

4. Conclusion

This study highlights the growing importance of aligning Ayushman Bharat–PMJAY with the healthcare needs of India's elderly population. As the country undergoes a demographic shift, ensuring that older adults receive adequate financial protection and access to quality care is vital. The findings suggest that while PMJAY has made notable progress in expanding coverage, there remain areas where further strengthening is needed—particularly in geriatric service delivery, infrastructure, and the inclusion of outpatient care. Encouraging examples from states like Tamil Nadu demonstrate that with focused planning and integration of geriatric care models, meaningful inclusion is achievable. Continued efforts to enhance health benefit packages, improve human resource availability, and raise awareness among elderly beneficiaries will further advance the scheme's impact. By building on current achievements and addressing identified gaps, AB-PMJAY can play a pivotal role in supporting healthy ageing and equitable healthcare access for all.

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