SSN Journal of Management & Technology Research Communications
Vol 2 No (1) Jan-Feb-Mar 2025
Society for Science and Nature

E-ISSN: 3049-0014
CrossRef DOI: https://dx.doi.org/10.21786/mntrc

Development of Health Insurance in India: Strategic Analysis of the Past, Present, and Future

Pulock Bhattacharji

Vice President Business Development, Skilling, Training & Placement

Bombay Stock Exchange Institute Limited, New Delhi, India.

ABSTRACT

Health insurance in India has evolved significantly over the decades, transitioning from rudimentary government-funded schemes to a more diverse, technology-driven sector. This research paper examines the historical context, present dynamics, and future trajectory of health insurance in India. It explores the policy shifts, technological innovations, and market developments shaping the sector. The study also evaluates current challenges and likeable solutions, aiming to provide a comprehensive understanding of how health insurance can contribute to universal health coverage in India. In conclusion, India's health insurance landscape is at a critical juncture. While the country faces significant challenges, it also has a unique opportunity to leapfrog traditional systems by embracing digital innovation and regulatory reforms. By adopting global best practices, improving infrastructure, and putting customers at the center of operations, TPAs and insurers can transform into agile, tech-enabled, and trusted pillars of India's healthcare ecosystem.

KEY WORDS: HEALTH INSURANCE, INDIA, POLICY, UNIVERSAL HEALTH COVERAGE, AYUSHMAN BHARAT, IRDAI, DIGITAL HEALTH.

INTRODUCTION

AIndia's healthcare system is one of the most complex in the world, characterized by a mix of public and private service providers and a vast demographic landscape. The financial burden of healthcare on Indian households remains significant, with out-of-pocket expenditure constituting nearly 55–60% of the total health spending [1,2]. Health insurance is increasingly seen as a pivotal tool in bridging the accessibility and affordability gap. It contributes about 29% of the insurance industry's premium income and serves as a financial safety net for millions [3]. While still developing, the sector shows promise in delivering accessible healthcare solutions across socio-economic strata [4,5].

Article Information: *Corresponding Author: pulock.bhattacharji@sebiti.com
Received 16/02/2025 Accepted after revision 29/03/2025
Publication Date: 31st March 2025 Pg No- 44-49

Available at: https://mntrc.in/
DOI: http://dx.doi.org/10.21786/mntrc/2.1.5

India's journey in health insurance has evolved significantly from limited government employee coverage to ambitious goals of universal health coverage (UHC) by 2030 [3]. In the pre-1986 era, health coverage was primarily provided through schemes like the Employees' State Insurance (ESI) in 1952 and the Central Government Health Scheme (CGHS) in 1954 [6]. Between 1986 and 1999, the landscape began to change with the introduction of Mediclaim policies by the General Insurance Corporation (GIC). The period was also marked by the formation of the Insurance Regulatory and Development Authority of India (IRDAI) in 1999, a crucial step toward regulating and liberalizing the sector [3]. Post-2000, the sector witnessed accelerated growth. Private insurers entered the market, and public schemes like the Rashtriya Swasthya Bima Yojana (RSBY) were introduced in 2008 [7].

Coverage increased substantially, driven by competition and innovation. Products diversified into critical illness plans, family floaters, and senior citizen coverage. In the current scenario, the launch of Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (PMJAY) in 2018 has been transformative, aiming to cover over 50 crore beneficiaries from economically vulnerable groups

[8]. Today, around 30% of the Indian population has some form of health insurance, though rural penetration remains low [1]. There is now a wide variety of specialized plans including coverage for maternity, chronic diseases, and lifestyle-related conditions [9,10].

Literature review also suggests numerous challenges faced by the industry, including implementation inconsistencies, high out-of-pocket (OOP) expenses, coverage gaps, fragmentation in healthcare delivery, opaque billing practices as well as widespread fraud, etc. in the last 2 decades. Literature by Sengupta and Nundy (2005) points out that the lack of standardized treatment protocols and weak digital infrastructure significantly hampers the efficiency of claim management [6]. Moreover, empirical research shows that TPAs often face operational bottlenecks due to manual claim processing, limited interoperability with hospitals, and regulatory overload. These structural inefficiencies contribute to delayed settlements, poor customer satisfaction, and high loss ratios for insurers.

Internationally, comparative studies shed light on how countries like Germany, the United States, and Singapore have successfully integrated technology and regulation to create more resilient insurance ecosystems. For instance, the use of ICD and CPT codes in the U.S. [11], Germany's sickness fund model [12], and Singapore's NEHR-enabled MediShield framework [13] serve as benchmarks in reducing fraud, standardizing care, and improving transparency.

Literature from global agencies such as the World Health Organization [2] and the World Bank (2020) also advocates for digitization, public-private partnerships, and health system interoperability as key drivers of efficiency. Indian policy papers and industry whitepapers, including those by CII (2021) and NITI Aayog (2021), suggest that adopting such best practices—particularly through initiatives like the Ayushman Bharat Digital Mission (ABDM)—can help overcome many of the domestic challenges faced by insurers and TPAs [4,9].

This paper delves into the evolution of health insurance in India, from its nascent stages to its present form and anticipates future developments driven by technology, policy, and societal needs.

METHODOLOGY

This research employs a qualitative approach supplemented by quantitative data analysis. Sources include secondary data from IRDAI reports, National Health Accounts, WHO, and World Bank. Policy documents from the Ministry of Health and Family Welfare as well as academic journals, white papers, and industry reports.

The data was analyzed to trace historical trends, understand current dynamics, and forecast future developments. Thematic analysis was used to identify recurring patterns and challenges.

RESULTS AND DISCUSSION

The collective findings from multiple studies paint a nuanced picture of health insurance development in India. The evolution of health insurance in India, as outlined in the timeline, reveals a significant transformation from a limited, government-centric model to a more diversified and technology-enabled ecosystem (Table 1).

While there is evidence of progress—such as improved access to hospitalization, increased enrollment, and a gradual expansion of coverage—significant gaps remain in terms of financial protection, awareness, and service delivery. Many studies highlight that health insurance schemes, particularly public ones like RSBY, have not significantly reduced out-of-pocket expenses. Socio-economic factors such as education and income continue to influence enrollment rates, with rural and low-income populations often underrepresented due to low awareness and systemic barriers. Regulatory reports from IRDAI corroborate these findings by noting growth in insurance uptake but also persistent challenges like claim rejections and service quality concerns. These results underscore the need for targeted reforms and greater inclusion to make health insurance more equitable and effective (Table 2).

Despite increasing efforts, the literature underscores persistent challenges like lack of awareness, limited rural outreach, and inadequate product customization. However, recent years have seen a surge in digital innovations and government initiatives, pointing to a promising future. The key challenges faced by Health Insurance companies and TPAs in India are given below (Table 3).

DISCUSSION

The comparative table illustrates a gradual but impactful evolution of India's health insurance landscape. Initially constrained by state-funded programs with limited scope, the sector saw pivotal changes in the mid-1980s with the launch of Mediclaim, marking the entrance of private insurers. However, true sectoral growth began post-2000 with liberalization and the formation of the Insurance Regulatory and Development Authority of India (IRDAI), which provided a regulatory framework that encouraged competition and innovation [3].

In the current scenario, the sector has diversified with various products tailored for specific demographics. Digital transformation has played a key role in improving accessibility and reducing bureaucratic delays [9]. Nevertheless, persistent challenges—especially high out-of-pocket expenses and low rural outreach—suggest that innovation must be paired with inclusive policy frameworks [1].

A major challenge is the fragmented healthcare system. India's hospitals and providers lack uniform treatment protocols, billing formats, and coding practices. There's a stark variation in pricing and care quality, particularly between urban and rural areas. This contrasts

with countries like the United States and Germany, where standardized billing codes (ICD, CPT) and unified healthcare practices are the norm [11, 12]. Singapore's National Electronic Health Record (NEHR) is another example of seamless integration [13]. To address this in India, implementing standard treatment guidelines and mandatory coding systems across providers, along with encouraging NABH accreditation, can bring much-needed uniformity.

Table 1. Historical Mile stones in India's Health Insurance Sector

Category	Pre-1986	1986–1999	Post-2000	Current Scenario	Future Outlook
Policy Initiatives	ESI (1952), CGHS (1954)	Introduction of Mediclaim by GIC	RSBY (2008), IRDAI establishment (1999)	Ayushman Bharat - PMJAY	UHC by 2030, Expansion of Ayushman Bharat
Coverage	Minimal, mostly government employees	Very limited	Increased with private insurers and public schemes	~30% of population covered	Target: Coverage Universal
Product Variety	Not applicable	Standard Mediclaim policies	Critical illness, family floater, senior citizen plans	Specialized plans for maternity, chronic disease	Micro-insurance sachet-based plans
Technology	None	Manual processing	Limited digital support	Digital platforms (Acko, Policybazaar, etc.)	AI, blockchain, wearables integration
Challenges	Public funding limitations	Low awareness	Implementation inconsistencies	Low rural penetration, high OOP, trust issues	Integration, real-time data sharing, inclusiveness

Table 2. The key areas of focus and findings in the Health Insurance sector in India

Study	Key Focus	Major Findings
Berman, P. et al. (2010) [14]	Out-of-pocket expenditure and insurance penetration	Highlighted catastrophic health expenses affecting a large portion of the population, inadequate financial protection from existing insurance mechanisms
Karan, A. et al. (2017) [15]	Effectiveness of RSBY and public schemes	Found improved access to hospitalization, but limited reduction in out-of-pocket expenses; variability in state-level implementation
Nair et al. (2007) [16]	Awareness and utilization of health insurance among rural households	Found low awareness levels and underutilization of health insurance in rural areas. Education and income were significant predictors of enrollment.
Binny & Gupta (2017) [17]	Role of health insurance in improving healthcare access	Health insurance improved access to healthcare services and reduced out-of-pocket expenses, especially among low-income groups.
Nandi, A. et al. (2016) [18]	Socio-economic factors influencing insurance enrollment	Demonstrated that education and income significantly influence enrollment; stressed on need for awareness and inclusion programs
Reshmi et al. (2021) [19]	Impact of health insurance on financial protection and health outcomes	Showed that insured individuals experienced better health outcomes and reduced catastrophic health expenditures.
Kalita et al. [20]	Challenges and barriers in health insurance enrollment	Identified barriers such as lack of awareness, mistrust in schemes, and administrative hurdles as key challenges to enrollment.
IRDAI Annual Reports [3]	Market trends and regulatory insights	Documented growth in insured population, premium collections, and claim settlements; highlighted persistent issues like claim rejections and service quality
World Bank & WHO Reports [1,2]	Global policy perspective on UHC	Advocated for financial risk protection through health insurance; emphasized integration, pooling mechanisms, and increased public health spending
Saxena et al. (2023) [21]	Effectiveness of government-sponsored health insurance programs	Concluded that while government schemes like PMJAY improved access to care, gaps remained in service quality and scheme awareness.

Table 3. Key Areas, Challenges and Likeable solutions in the Health insurance sector

Variables	Key Challenges	Likely Solutions
Healthcare System	- Fragmented ecosystem with inconsistent billing and protocols	- Standardize billing codes (ICD-10, CPT) - Empanel only accredited hospitals (e.g., NABH)
Claims & Fraud	- High claim ratios - Fraudulent claims, inflated bills	- AI/ML-based fraud analytics - Central fraud watchlist - Pre/post-audits of high-value claims
Data Infrastructure	- Limited digitization in hospitals - Lack of interoperability	- Push digitization via ABDM - API integrations for real-time data sharing
Claim Processing	- Manual workflows - Delays due to poor coordination	- Automate with RPA & workflows - Dedicated support teams for faster turnaround
Regulatory Compliance	- Frequent IRDAI updates - Capped pricing on treatments	- Establish compliance teams - Engage with regulators through industry forums
Customer Experience	- Policyholders unaware of coverage limits - Poor grievance redressal	- Simplify policy documents - Use AI chatbots and mobile apps for real-time support
Hospital Network	- Quality control across empanelled hospitals - Non-standard pricing	- Hospital scoring/rating systems - Use analytics to monitor and optimize hospital networks
Cybersecurity & Privacy	- Rising risk of data breaches with digitization	- Invest in cybersecurity tools - Comply with data privacy laws
Manpower & Skills	- Shortage of trained claims processors - High attrition	- Launch medical coding training programs - Improve employee retention with career pathways
Public Scheme Competition	- Ayushman Bharat & other schemes offer free/low-cost care	- Differentiate via faster claims, value-added services - Collaborate with government as implementation partners

Fraudulent claims and high claim ratios represent another critical issue. With inflated bills, ghost patients, and unnecessary procedures becoming commonplace, insurers and TPAs suffer financial losses. Globally, countries like the USA use AI-based fraud detection and maintain databases for fraudulent providers [11]. Germany ensures compliance through tight audits by sickness funds [12]. In India, similar mechanisms—like deploying AI/ML to detect anomalies, maintaining a central blacklist of errant providers, and conducting real-time audits—can help mitigate fraud effectively [13].

One of the most foundational problems is the lack of robust data infrastructure. Many hospitals still operate with paper-based records, which leads to delays and inaccuracies in claims processing. In contrast, countries like Estonia have digitized their entire national health system, while the USA mandates FHIR-based interoperability between health IT systems [11]. India's Ayushman Bharat Digital Mission (ABDM) offers a promising solution by pushing hospitals toward electronic health records and real-time data exchange through open APIs [4].

Delayed claim processing remains a significant pain point for TPAs, primarily due to manual workflows and a lack of automation. Compared to countries like South Korea or Germany, where claim processing is often completed in days through digital systems [12], Indian TPAs deal with excessive paperwork and coordination delays. Automating backend processes using robotic process automation (RPA), real-time dashboards, and fast-track approvals for low-risk claims can greatly improve efficiency and customer satisfaction [9].

Regulatory compliance in India poses another operational burden. Constant updates from IRDAI and pricing caps create a highly dynamic and often restrictive environment. While countries like Germany and the USA also have stringent regulations, they tend to offer more stable and predictable frameworks [11,12]. Indian TPAs should establish dedicated compliance teams to adapt quickly and participate in industry forums like FICCI or CII to ensure that regulatory reforms consider practical implications [3].

Customer experience, too, remains suboptimal in India. Many policyholders are unaware of exclusions, sub-limits, or waiting periods, leading to frustration during claims. Globally, insurers in the US are required to provide clear Explanation of Benefits (EOBs), and Singapore's HealthHub app offers full transparency to policyholders (Ministry of Health Singapore, 2021). Indian TPAs can replicate these practices by creating simplified, visually engaging policy summaries, leveraging AI-driven chatbots, and setting up real-time alerts to guide customers through the claim journey [4].

Managing hospital networks is a unique challenge in India, with insurers having to deal with thousands of hospitals with varying service quality and pricing. This is unlike countries such as Germany or Singapore, where provider tariffs and quality standards are negotiated centrally [12,13]. TPAs in India should consider grading hospitals based on past claims, outcomes, and service quality while using analytics to streamline the empanelment and de-empanelment process.

As TPAs move toward digital ecosystems, cybersecurity and data privacy become critical. India's Digital Personal Data Protection (DPDP) Act introduces new responsibilities for data handlers, similar to GDPR in the EU or HIPAA in the US [1]. Indian insurers and TPAs must invest in encrypted systems, conduct regular security audits, and ensure compliance with evolving data laws [2].

Another operational issue is the shortage of skilled professionals in claims adjudication, coding, and fraud analytics. While countries like the US and Germany offer formal certifications and career tracks in health insurance operations [11, 12, India faces a dearth of trained talent. To overcome this, TPAs can partner with educational institutes to launch certification programs and create structured career pathways to retain talent and reduce attrition [21].

Finally, government health schemes like Ayushman Bharat have created pricing pressure on private health insurers and TPAs, as public schemes offer free or subsidized care. However, this is not unique to India—Germany and Singapore also have basic public insurance, with private insurers offering top-up or supplementary plans [12,13]. Indian insurers should similarly focus on creating differentiated offerings—such as faster claim approvals, wellness programs, and superior customer service—while also exploring partnerships with state or national schemes as technology or process partners.

CONCLUSION

In conclusion, India's health insurance landscape is at a critical juncture. While the country faces significant challenges, it also has a unique opportunity to leapfrog traditional systems by embracing digital innovation and regulatory reforms. By adopting global best practices, improving infrastructure, and putting customers at the center of operations, TPAs and insurers can transform into agile, tech-enabled, and trusted pillars of India's healthcare ecosystem.

Data Availability: Data are available with the author, can be shared on a reasonable request.

Funding: Nil

Conflict of interest statement: The author declares no conflict of interest.

REFERENCES

1. World Bank. Health Financing in India: Opportunities and Challenges [Internet]. World Bank; 2020 [cited 2025 Apr 3]. Available from: https://www.worldbank.org
2. World Health Organization (WHO). Global Spending on Health: A World in Transition [Internet]. WHO; 2019 [cited 2025 Apr 3]. Available from: https://www.who.int
3. Insurance Regulatory and Development Authority of India (IRDAI). Annual Report 2020-21 [Internet]. IRDAI; 2021 [cited 2025 Apr 3]. Available from: https://irdai.gov.in
4. NITI Aayog. Health System for a New India: Building Blocks [Internet]. Government of India; 2021 [cited 2025 Apr 3]. Available from: https://www.mcrhrdi.gov.in
5. Kadam S. Possible domains for integrating Artificial Intelligence (AI) in healthcare sector. Int J Ayurveda Res. 2024;5(4):239-43.
6. Sengupta A, Nundy S. The private health sector in India. BMJ. 2005;331(7526):1157-8.
7. Government of India. Rashtriya Swasthya Bima Yojana (RSBY) [Internet]. Ministry of Labour and Employment, Government of India; 2008 [cited 2025 Apr 3]. Available from: https://www.india.gov.in/spotlight/rashtriya-swasthya-bima-yojana
8. Ministry of Health and Family Welfare, Government of India. Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana [Internet]. 2018 [cited 2025 Apr 3]. Available from: https://nha.gov.in/PM-JAY
9. Confederation of Indian Industry (CII) & Boston Consulting Group (BCG). Health Insurance Vision 2025 [Internet]. CII; 2021 [cited 2025 Apr 3]. Available from: https://cii.in
10. Huguet N, Hodes T, Liu S, Marino M, Schmidt TD, Voss RW, et al. Impact of Health Insurance Patterns on Chronic Health Conditions Among Older Patients. J Am Board Fam Med. 2023;36(5):839-50.
11. Centers for Medicare & Medicaid Services (CMS). ICD-10-CM Official Guidelines for Coding and Reporting. CMS; 2020.
12. Busse R, Blümel M, Knieps F, Bärnighausen T. Statutory health insurance in Germany: A health system shaped by 135 years of solidarity, self-governance, and competition. Lancet. 2017;390(10097):882-97.
13. Ministry of Health, Government of Singapore. National Electronic Health Record (NEHR) [Internet]. 2021 [cited 2025 Apr 3]. Available from: https://www.synapxe.sg
14. Berman P, Ahuja R, Bhandari L. The impoverishing effect of healthcare payments in India: New methodology and findings. Econ Polit Wkly. 2010;45(16):65-71.
15. Karan A, Selvaraj S, Mahal A. Moving to universal coverage? Trends in the burden of out-of-pocket payments for health care across social groups in India, 1999-2014. PLoS One. 2017;12(1):e0170102.
16. Reshmi B, Nair NS, Sabu KM, Unnikrishnan B. Awareness

and utilization of health insurance among rural households in Udupi taluk, Karnataka State, India: A community based study. Health Popul Perspect Issues. 2008;31(1):35–44.

17. Binny, Gupta M. Health insurance in India: Opportunities and challenges. Int J Manag IT Eng. 2017;7(5):168-75.
18. Nandi A, Ashok A, Laxminarayan R. The socioeconomic and institutional determinants of participation in India's health insurance scheme for the poor. PLoS One. 2016;11(8):e0160472.
19. Reshmi B, Unnikrishnan B, Rajwar E, Parsekar SS, Vijayamma R, Venkatesh BT. Impact of public-funded health insurances in India on health care utilisation and financial risk protection: a systematic review. BMJ Open. 2021 Dec 22;11(12):e050077.
20. Kalita A, Carton-Rossen N, Joseph L, Chhetri D, Patel V. The Barriers to Universal Health Coverage in India and the Strategies to Address Them: A Key Informant Study. Ann Glob Health. 2023 Oct 9;89(1):69.
21. Saxena A, Trivedi M, Shroff ZC, Sharma M. Improving hospital-based processes for effective implementation of government-funded health insurance schemes: Evidence from early implementation of PM-JAY in India. BMC Health Serv Res. 2022;22(1):1-13.