A Review of Healthcare Expenditure and the Role of Health Insurance in Managing Health Risks in India

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*[**Abstract**: Health is a crucial component of human capital, particularly significant for developing nations like India. This review critically examines literature in health economics, focusing on healthcare expenditure and the emerging role of health insurance in managing financial risks associated with healthcare in India. The paper analyzes trends in public health spending, out-of-pocket expenditure, and the growth of health insurance schemes, highlighting challenges and potential solutions in achieving universal health coverage.]*

Keywords: Health economics, healthcare expenditure, health insurance, public health, India, out-of-pocket expenditure, financial protection.

Introduction

Health is fundamental to productive human capital. In India, where public health infrastructure has historically been underdeveloped, the simultaneous challenge of infectious and chronic illnesses, compounded by high healthcare costs, significantly impacts economic development. While the state has initiated several

public health programs post-independence, healthcare financing remains a critical challenge. Out-of-pocket expenditure continues to dominate the healthcare financing landscape, leading to financial hardship for millions. Health insurance, both public and private, has emerged as a mechanism to reduce this burden (Sardar, 2024).

Aim and Objectives

The main aim of this paper is to review the research works on health expenditure and health insurance.

The specific objectives are:

- To review research studies on healthcare expenditure in India.
- To review the literature on health insurance in managing health risks.

Methodology

This descriptive review is based on a thorough evaluation of secondary data from academic journals, government publications, and reports by national and international health agencies. The focus is on studies from 1990 to 2020 related to healthcare expenditure and health insurance in India.

Healthcare Expenditure: A Review

India's healthcare system is characterized by low public expenditure and high private expenditure. Despite efforts to increase allocations, public health expenditure still lags behind the National Health Policy (2017) recommendation of 2.5% of GDP. According to the National Health Accounts (2018-19), out-of-pocket expenditure (OOPE) accounted for 48.2% of total health spending.

Table 1: Health Expenditure as Percentage of GDP (2020-2025)

Year	Total Health Budget (INR Cr.)	GDP (INR Cr.)	Health Expenditure (% of GDP)
2020-21	69,234	19,829,927	0.35
2021-22	76,902	23,597,399	0.33
2022-23	89,251	26,949,646	0.33
2023-24	92,803	29,535,667	0.31
2024-25	94,371	32,411,406	0.29

(Rajya Sabha, 2025)

A global comparison reveals that India spends considerably less than other countries on public health. For example, according to WHO (2021), public health spending in relation to GDP was 5.2% in Brazil, 6.9% in South Africa, and 8.5% in the UK.

Major Research Studies on Health Expenditure (1990–2020)

1. Studies related to public expenditure

Mahal et al. (2001) examined health service utilization among the poor and concluded that inadequate government funding constrained equitable access. Using World Bank data, they showed that marginalized populations remained under-served despite expansion of public facilities, primarily due to resource shortages and inefficiency.

Berman and Ahuja (2008) analyzed trends in government health expenditure between 1990 and 2005, finding that public spending was disproportionately directed toward tertiary care in urban areas. Their work highlighted the “urban bias” in allocations, leaving rural primary health centers underfunded and ineffective.

Prinja et al. (2012) provided evidence from state-level budgets to argue that increased decentralization improved efficiency and accountability of health financing. However, they also noted wide disparities between high-income and low-income states, making equitable allocation a persistent policy challenge.

2. Studies related to private expenditure

Gumber and Berman (1997) assessed private expenditure trends through household survey data and emphasized that the predominance of private payments created catastrophic burdens for low-income groups. Their analysis pointed to the absence of adequate risk pooling mechanisms.

Peters et al. (2002) studied household expenditure across Indian states and found that private healthcare was not only costly but also of inconsistent quality. They argued that reliance on unregulated private markets perpetuated inequities in access.

Selvaraj and Karan (2009) provided estimates suggesting that approximately 3.5% of Indians ended up in poverty every year due to health-related spending. Their study demonstrated the poverty-inducing nature of out-of-pocket expenditure, particularly in rural households.

Garg and Karan (2009) further reinforced this evidence by showing that private expenditure was highly regressive. Even as household incomes rose modestly during the 2000s, medical costs escalated faster, worsening inequalities in healthcare utilization.

3. Studies related to household expenditure

Duggal (2007) presented evidence that rural households often financed healthcare by borrowing or selling assets, leading to long-term indebtedness. His findings underscored the structural fragility of household-level health financing.

Joe (2015) analyzed National Sample Survey data and highlighted that households were increasingly exposed to financial risks due to non-communicable diseases, which required continuous, long-term expenditure. His work signaled the changing nature of healthcare costs from episodic to chronic, raising new policy concerns.

Health Insurance: A Review

Health insurance schemes, both public and private, have been increasingly emphasized to reduce OOPE. The Indian health insurance sector has evolved considerably over the past two decades, showing growth but also structural challenges (Bhatia, Mittal, & Bansal, 2018). Public programs like Ayushman Bharat – PMJAY offer financial protection to nearly 40% of the population by providing health coverage worth Rs. 5 lakhs per family. However, challenges remain in claim settlement, rural reach, and service quality.

Table 2: Growth of Public Health Insurance Coverage (2018-2025)

Year	PMJAY Beneficiaries (Cr)	Insurance Coverage (as % of population)
2018-19	10.74	25%
2020-21	12.00	28%
2022-23	13.20	30%
2024-25	14.80	34%

(PRS India, 2025)

Figure 1: Trends in Health Expenditure and Insurance Coverage in India (2020–2025)

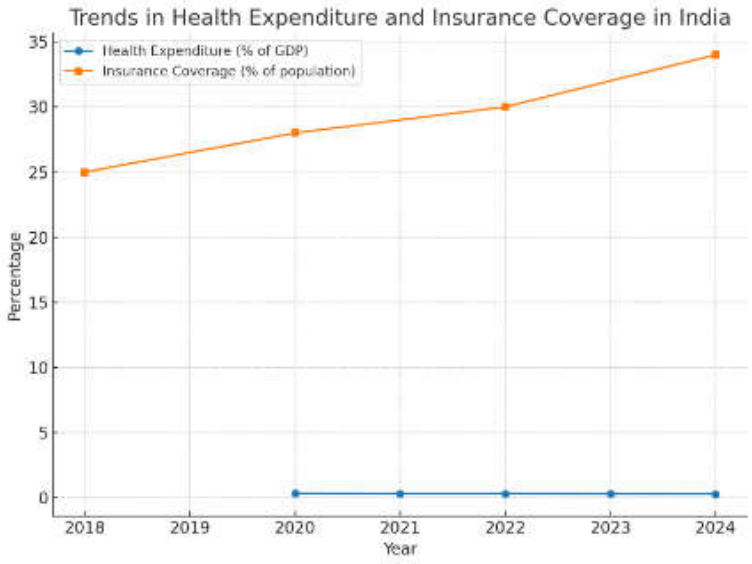

Figure 1 shows the contrasting trends where health expenditure as a percentage of GDP has gradually declined, while insurance coverage has shown steady improvement during the same period.

Literature on Health Insurance Types

Public insurance schemes

Ayushman Bharat – PMJAY, launched in 2018, has been the most extensive government-financed health coverage program. PRS India (2025) data show that by 2024–25, nearly 34% of the population was enrolled. While this marked significant progress, implementation challenges—such as delayed claim settlements, inadequate hospital empanelment, and urban–rural disparities—limit its effectiveness.

Devadasan et al. (2004) examined early community-based health insurance programs supported by local cooperatives and commercial banks. They found these schemes enhanced financial protection but suffered from limited enrollment and management capacity. Their study remains important as it provided early lessons that informed later large-scale schemes.

Life and medical insurance

Bhat (1999) assessed the Mediclaim policy, one of the earliest health insurance products in India. He found uptake was low due to restrictive coverage conditions and relatively high premiums, restricting access to middle- and upper-income groups. This analysis highlighted the limits of private sector-driven health protection in the absence of subsidies.

Bhat and Jain (2006) reviewed the health riders offered by LIC, the state-owned life insurer in India. While LIC's dominance in the insurance sector provided a platform for expanding coverage, lack of awareness and trust constrained growth. Their findings suggested that life insurance companies could play a larger role in integrated financial protection models (Yellaiah, 2013).

General health insurance and private insurers

Reddy et al. (2011) examined the role of general insurance companies in India's health sector. They found that private insurers primarily targeted urban markets with high-priced products, leaving rural populations underserved. The authors argued that regulation was needed to improve accessibility and consumer protection.

A 2023 report issued by the Insurance Regulatory and Development Authority of India reaffirmed these findings, highlighting that only 23% of the population had private health insurance coverage. Despite technological advancements, customer

dissatisfaction due to delays in reimbursements and exclusions remained a major limitation (IJCRT, 2023).

Health insurance by commercial banks

Microinsurance linked with banking institutions has been studied as an innovative model to reach rural households. Devadasan et al. (2004) observed that schemes tied to banks improved enrollment and trust among clients by leveraging existing financial networks. However, their study also highlighted high administrative costs and inefficiencies in claim processing, raising concerns about sustainability.

Conclusion

The review reveals that India's healthcare financing model remains heavily reliant on private expenditure, leading to catastrophic health payments for many households. Although public expenditure has gradually increased, it still falls short of international benchmarks, thereby limiting equity in healthcare access. Globally, comparative studies show that countries with higher public expenditure achieve better health outcomes and stronger financial protection.

Health insurance has emerged as a key strategy to mitigate financial risks. Government initiatives such as Ayushman Bharat have expanded coverage significantly, while private insurers, bancassurance, and microinsurance schemes have diversified the market. However, limited penetration in rural areas, inefficiencies in claim settlements, and the lack of awareness remain persistent challenges.

This review also highlights that improvements in financing mechanisms must be accompanied by efficiency and accountability in resource utilization. Technology-driven solutions such as AI-based claim processing and digital platforms can enhance transparency and accessibility. At the same time, increased healthcare

expenditure and stronger regulation of private insurers are essential to move toward universal health coverage.

Finally, while this study relied only on secondary literature and did not include field-based data, it provides valuable insights into expenditure trends and insurance growth. Strengthening both public expenditure and insurance-based financial protection remains crucial for India to address inequalities and reduce the burden of healthcare costs on households.

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