Health and Curative Health Care in Bihar: A Comparative Study

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Abstract: *This chapter analyses health and curative health care in Bihar from a comparative perspective with Kerala and Tamil Nadu. There are enough indications to suggest that morbidity, especially chronic morbidity, is grossly under-reported in Bihar. In Bihar, like most of the major Indian states, a strong urban bias in the location of government health infrastructure is visible. The availability of AYUSH practitioners is disproportionately higher in Bihar compared to their utilisation. A large part of the reported ailment in Bihar is not treated on medical advice, and there is a clear caste-based disparity. However, caste-based disparity in the utilisation of inpatient care has declined over the years. Whereas the majority of people depend on the private sector for outpatient care, they predominantly depend on government hospitals for inpatient care. The per capita government expenditure on health, especially capital expenditure, needs to be increased in Bihar.*

Keywords: Health, caste disparity, morbidity, access to health care, health care utilisation, health expenditure, Bihar

1. Introduction

This chapter attempts to document select aspects of health and curative health care in Bihar by using existing literature and secondary data sources. Bihar is one of the major Indian states that faces severe challenges in providing good access to curative health care for its population. The public health literature has long emphasised the importance of social conditions and factors in determining the health outcomes of a population. The social determinants of health are predominantly non-health care factors that have a strong influence on a population's health outcomes. These factors are basically the conditions in which people are born, grow, work, live, and age, as well as a set of forces and systems that shape the conditions of people's daily lives. These forces and systems include economic policies and systems, development agendas, social norms, social policies, and political

systems (CSDH, 2008). Bihar, being one of the most populous and economically backward states in the country, is characterised by economic and social conditions that constrain its population, especially the poor ones, in their access to and utilisation of health care services.

Caste is often portrayed as an important social identity that influences many aspects of individual and household well-being (Das, 1984). There exists evidence of caste disparity in various indicators of access to and utilisation of health care. With regard to morbidity and disease burden, Darmstadt *et al.* (2020) found that there was a disproportionate burden of disease among the SC, ST, and Muslim populations, which accounted for 25 percent of the total population but were marginalised and had low coverage of health interventions. Kumar *et al.* (2020) observed adolescents belonging to SC and ST households in Bihar reporting significantly higher gynaecological morbidity than those belonging to other castes. Caste-based inequality is observed in the access to and utilisation of preventive and promotional health care, especially for women and children. Mittal and Meenakshi (2015) found evidence of caste differences in the utilisation of Integrated Child Development Services (ICDS). By comparing different caste categories, they observed that the highest non-participation rates were among the SC households (53 percent), and the share of SC households was lowest among those who participated and availed comprehensive services. Balakrishnan *et al.* (2016) too found institutional deliveries lower among the SCs and STs. Shetty *et al.* (2017) found caste differences in immunisation coverage of essential vaccines. Full immunisation coverage was highest in the general category (69 percent), followed by the OBC category (63 percent), and lowest in the SC/ST category (58 percent). Patel *et al.* (2018) observed that SC women had inadequate ASHA coverage, poor information access, higher transport costs, and faced more unauthorised charges compared to general caste women, clearly indicating the existence of caste-based discrimination. Women belonging to marginalised caste groups were found to have lower odds of attending antenatal check-ups and delivering at a facility (Wilhelm *et al.*, 2021). A study on the immunisation among the children of migrant brick kiln workers in Bihar, who were mostly SCs, found little more than half of the children were fully immunised and around 6 percent of the children were not immunised at all (Kumar *et al.*, 2020). If caste-based inequality is significant for preventive and promotional health care services, which are largely provided by the government at no cost, it is reasonable to expect that such inequality will be more pronounced for curative health care, where the private sector is a large and significant provider.

This chapter analyses health and the curative care sector in Bihar under the following four dimensions: (1) health status; (2) access to health care; (3) utilisation of health care; and (4) health care expenditure. For the comparative perspective, Bihar is compared with Kerala and Tamil Nadu, as the health sectors of these two states are known for their better performance on many dimensions of efficiency and equity. The chapter uses data from the following sources: 52nd, 60th, 71st, and 75th rounds of National Sample Survey data; 5th National Family Health Survey; RBI State Finances: Study of Budgets; and data published by the Central Bureau of Health Intelligence.

The remaining sections of this chapter are organised as follows: The reported health status, including reporting of chronic illnesses, is discussed in the second section; the third section presents a picture of access to health care using whatever limited information is available on the health infrastructure and health human resources, especially for the public sector; the health care utilisation pattern of the population for both outpatient and inpatient care is discussed in the fourth section; the costs of health care faced by households, insurance coverage, and public health expenditure are discussed in the fifth section; and the final section summarises the major findings and makes a few policy suggestions.

2. Health Status

According to the latest estimates by the Sample Registration System, the infant mortality rate in Bihar is 27, which is lower than the national average as well as many comparable states that fare poorly in terms of human development indicators (see Appendix Table 7.A1). As far as the life expectancy at birth (estimates for 2021–2025) is concerned, Bihar is the state with the lowest female-male difference (0.9 years), whereas females are expected to live 5.7 more years in Kerala. Since females are expected to live longer than males given the same living conditions, on average, females are found to have 4-6 years longer life expectancy at birth compared to males in most of the Indian states. Bihar not falling into this pattern clearly indicates that females in Bihar are expected to live a lower number of years than they should ideally be. This is also evident from the fact that for male life expectancy, Bihar is the top 8th state (among the major Indian states), but for female life expectancy, Bihar is the 16th state from the top and only ahead of comparable states like Odisha, Chhattisgarh, Madhya Pradesh, Assam, and Uttar Pradesh.

Estimates from the last four health survey rounds by the NSS show that Bihar consistently reports a lower morbidity rate compared to most of the states. The latest NSS data (2017–18) shows that Bihar has the lowest reported morbidity per 1000 population, along with Assam (25 per 1000 population). This is substantially lower than states like Kerala, Andhra Pradesh, and West Bengal (the states that show very high reported morbidity per 1000 population), even lower than the national average. Bihar also reports a very low incidence of chronic ailments for the population aged 40 and above. Since the incidence of chronic ailments is expected to be higher among the elderly population, most of the states do not fall into a pattern depicting a positive relationship between life expectancy at birth and the incidence of chronic ailments per 1,000 people. Kerala, which has the highest life expectancy at birth (73.5 and 79.2 years for males and females, respectively) among the major Indian states, shows a very high incidence of chronic ailments per 1000 population (380) for the 40-year-old and above age group. The corresponding figures for Bihar for life expectancy are 70.9 and 71.8 years for males and females, respectively, and 18 for the incidence of chronic ailments. In fact, the estimates from all four rounds of the NSS survey show Kerala's consistently higher level of reported morbidity in comparison to Bihar. There could be a number of reasons for the difference in reported morbidity between Bihar and Kerala. First, the real disease burden could really be low in Bihar compared to Kerala. To some extent, this may be true since Kerala has a much higher share of the elderly in the total population compared to Bihar, and chronic morbidity is expected to be higher for the elderly population. An analysis of the distribution of reported ailments shows that various communicable ailments still account for a larger share of the disease burden in Bihar, which is not the case for Kerala. Ailments due to chronic non-communicable reasons are at a significantly lower level in Bihar compared to Kerala. But this may also be an indication that chronic ailments are perhaps underreported in Bihar. Second, realisation and recognition of morbidity are higher in Kerala compared to Bihar due to a higher educational and health awareness level. Third, better access to health care due to better availability of services and people's higher purchasing power probably encourages them to realise and express their morbidity and seek health care. In this context, Bihar and Kerala show a very contrasting picture.

However, Anand (2014) has observed low overall health status and wide inter-district and inter-regional health disparities in Bihar. Prinja *et al.* (2015) observed that in Bihar, self-reported acute ailments were higher than chronic ones, whereas in Kerala it was just the opposite. In both states, the self-reporting of ailments showed a positive class gradient (i.e., an increasing trend of self-reporting from the poorest to the richest economic status). In fact, the positive economic gradient of self-reported ailments was stronger in Bihar than in Kerala and stronger for chronic ailments than acute

ailments in Bihar. Tewary *et al.* (2013) found an increasing prevalence of diabetes in the young population of Bihar. One may argue that even if the real burden of chronic ailments is low in Bihar, the state needs to monitor its disease transition closely and also the emerging burden of chronic ailments because if chronic ailments are not detected and treated at the early stages, that might have adverse effects on society's health and economy.

3. Access to Healthcare

The low reporting of ailments in Bihar may also be an indication of people's (especially vulnerable and marginalised groups) constrained access to health care. Bihar is a state with a very high incidence of poverty, and the majority of its residents live in rural areas, whereas government health infrastructure is concentrated in urban areas. A set of indicators of physical access to health care for Bihar, Kerala, and Tamil Nadu are presented in Tables 7.1 and 7.2. Bihar shows a strong urban bias in the distribution of its government health infrastructure between rural and urban areas. Urban bias in the distribution of government health infrastructure is defined by the ratio between the share of total government hospital beds in urban areas and the share of urban residents in the total population. The average number of government hospitals per 10 lakh population is much lower in Bihar (17) as compared to Kerala (36) and Tamil Nadu (32). When we focus on indicators like government hospital beds per lakh population or government doctors per lakh population, Bihar significantly lags behind Kerala and Tamil Nadu.

It is worth noticing that Bihar has a large number of AYUSH practitioners in comparison to allopathic doctors (Table 7.2). In all three states (Bihar, Kerala, and Tamil Nadu), AYUSH practitioners vastly outnumber the government allopathic doctors. However, the average number of AYUSH practitioners per government allopathy doctor is 22 in Bihar, as compared to 7 in Kerala and 2 in Tamil Nadu. Ayurveda and Homoeopathy doctors have an almost equal share among the Ayush doctors in Bihar. It is important to know why such a large number of practitioners of alternative medicines have flourished in Bihar. Is it due to the absence of adequate doctors practising modern systems of medicine (popularly known as Allopathy), making treatment by a qualified allopathy doctor more expensive for a large part of the population, or do people in general have a true preference for alternative systems of medicine (AYUSH)? This issue needs to be taken up in the analysis of the utilisation of health care.

Table 7.1 Indicators of Access to Government Health Care and Urban Bias

Indicator	Bihar	Kerala	Tamil Nadu
Share of rural population (2011 Census)	88.7	52.8	51.6
Share of government hospital bed in rural areas[1]	44.4	42.3	50.2
Urban bias ratio[2]	4.9	1.2	1.0
Government hospital per 10 lakh population[3]	17.0	36.0	32.0
Government hospital bed per 1 lakh population[3]	22.0	107.0	69.0
Government doctor per 1 lakh population[3]	3.0	17.0	13.0

Source: Census 2011; National Health Profile 2022, Central Bureau of Health Intelligence (http://cbhidghs.nic.in/)

Notes: 1. Figures are from National Health Profile 2022 for years 2020, 2021; 2 Urban bias is calculated as a ratio between share of urban in total government hospital bed and share of urban population in total population; 3. Figures for hospital, bed and doctors are from National Health Profile 2022 for the years 2020/2021, estimated population for 2021

Table 7.2 Availability of Government Allopathy and AYUSH Practitioners

Indicators	Bihar	Kerala	Tamil Nadu
Number of government allopathic doctor	3300	6147	10277
Number of AYUSH doctor	73250	45395	17296
AYUSH doctor per government allopathic doctor	22	7	2
Distribution of AYUSH doctor:			
Ayurveda practitioner (%)	46.3	63.8	10.8
UNANI practitioner (%)	7.3	0.3	3.2
Siddha practitioner (%)	0.0	5.2	38.5
Naturopathy practitioner (%)	0.0	0.6	7.3
Homeopathy practitioner (%)	46.4	30.0	40.2

Source: National Health Profile 2022, Central Bureau of Health Intelligence (http://cbhidghs.nic.in/)

Though we do not have any information on the distribution of health human resources between rural and urban areas, it is expected to have a similar or higher urban bias compared to what is observed for health care infrastructure. Going by the existing evidence, it seems like a challenging task to motivate qualified medical practitioners to go to rural areas. A study collecting information on the willingness of the young doctors in Bihar to serve the rural population found discouraging responses (Sinha, 2012). Only 9.1 percent showed their willingness to serve in rural areas, despite the fact that 38.6 percent of them had a rural background.

4. Utilisation of Curative Healthcare

Access to health care for the population is an abstract notion that is difficult to observe and measure as there are different dimensions to access, such as physical access, financial access, cultural access, and so on. What we can observe empirically is people's utilisation of health care, which is an outcome of the interaction between the expressed need of the people for health care and access to health care. The NSS collects information on utilisation of health care separately for outpatient care and inpatient care with different recall periods. Whereas inpatient or hospitalisation data are collected with a one-year recall period, outpatient data are collected with a 15-day recall period. As far as outpatient care is concerned, the latest NSS data shows that only about two-thirds of all illnesses received treatment on medical advice in Bihar. The figures are more than 95 percent for Kerala and Tamil Nadu. Table 7.3 also presents the distribution of untreated ailments (i.e., ailments without treatment on medical advice) by reasons for no treatment. Though 'ailments not considered serious enough' is the dominant reason for no treatment, a relatively large percentage of respondents in Bihar reported 'non-availability of facilities in the neighbourhood' as one of the important reasons. It is also important to notice that a lesser percentage of respondents in Bihar, in comparison to Kerala and Tamil Nadu, cited 'ailments not serious enough' as a reason for no treatment. This is people's perception of the seriousness of an ailment, which is not based on clinical assessment and is less reliable as an objective indicator. The most recent data (2017–18) on the percentage of treatment on medical advice shows a clear caste gradient for Bihar (Figure 7.1). There is a clear caste-based disparity in the percentage of treatment based on medical advice.

Table 7.3 Percentage of Ailments Treated on Medical Advice and Distributions of Untreated Ailments by Reasons (2017-18)

Indicator	Bihar	Kerala	Tamil Nadu
Ailments with treatment on medical advice (%)	63.2	96.8	95.3
Reasons for no treatment			
No medical facility in the neighbourhood (%)	13.4	2.3	6.4
Facility too expensive	0.6	0.0	2.2
Cannot afford to wait long due to domestic/economic engagement (%)	2.6	1.2	0.9
Ailment not considered serious enough (%)	72.1	85.5	88.2
Familial or religious belief (%)	0.2	0.5	0.4
Others (%)	11.1	10.5	1.9

Source: Estimated from NSS 75th round unit record data

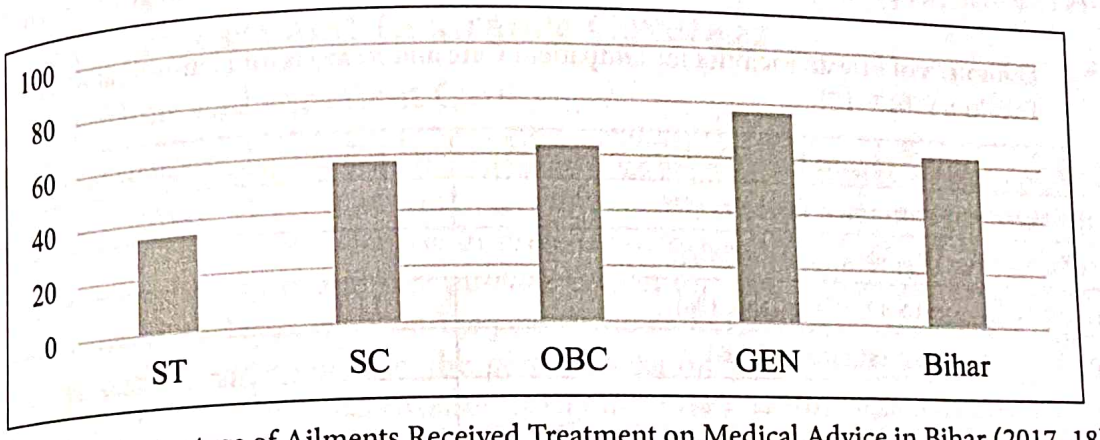

Figure 7.1 Percentage of Ailments Received Treatment on Medical Advice in Bihar (2017–18)

Source: NSS 75th round unit-record data

In Bihar, the share of government facilities in total outpatient care utilisation increased from 6.3 percent in 1995–96 to 18.3 percent in 2017–18. However, in comparison to most of the major Indian states, Bihar still shows very low dependence on government facilities for outpatient care (Appendix Table 7.A2). Even Kerala and Tamil Nadu, where the private health sector is well developed, show much higher dependence on government facilities for outpatient care. In a state where one-third of the population lives below the poverty line, people are expected to depend more on inexpensive or free government health facilities for all types of health care needs. This pattern is not observed in Bihar. The disproportionately higher dependence of people on the private sector for outpatient care in the absence of a well-developed, standardised private outpatient care market indirectly indicates the large presence of unqualified medical practitioners or/and AYUSH, which are getting utilised by the vast majority of people in Bihar. This possibility is strengthened when we look at the data on utilisation of outpatient care by system of medicine. Though allopathy is the dominant system of medicine for outpatient care, the degree of dependence is not the same for rural and urban populations. This rural-urban difference is more pronounced in Bihar compared to Tamil Nadu and Kerala. According to the latest available data from the NSS (2017–18), the share of non-allopathy in total outpatient care is 10.3 and 3.3 percent for rural and urban Bihar, respectively. Such a large rural-urban difference is not observed in Kerala (11 and 10 percent for rural and urban areas, respectively) or Tamil Nadu (1.2 and 1.7 percent, respectively). Raza *et al.* (2016), in their study of rural Bihar, found that the majority of the population utilised some form of health care

from private providers. These private providers are largely non-degree allopathic providers (known as rural medical practitioners), but they are popular in the community they serve. This makes sense because, for acute ailments, close distance and travel time are strong determinants in the choice of health care providers, and certainly these rural medical practitioners have an advantage in reaching the rural population.

Perceived poor quality (unavailability and dissatisfaction together) seems to be the major reason why a large section of the population in Bihar (44.8 percent) is bypassing government facilities (Table 7.4). Poor quality at government facilities has been cited, with a much lower frequency of cases (16.9 percent) in Kerala and a higher frequency of cases (37.8 percent) in Tamil Nadu. Long waiting at government facilities, which seems to be a major issue in Kerala and Tamil Nadu, is not a big issue in Bihar. This is perhaps a reflection of the differences in the opportunity cost of time in these three states. The family members of sick individuals probably tend to lose more income or wage (both likelihood and amount) in Kerala and Tamil Nadu than in Bihar when they spend longer hours seeking health care. This finding suggests that if quality of care is improved at government facilities in Bihar, people may not have much issue with long waiting times at government facilities.

Table 7.4 Utilisation of Private Facilities for Outpatient Care and Reasons for Non-utilisation of Government Facilities (2017–18)

Indicator	Bihar	Kerala	Tamil Nadu
Outpatient care in government facilities (%)	18.5	47.5	54.0
Reasons for non-use of government facilities:			
Required specific services not available (%)	11.6	7.9	8.5
Available but quality not satisfactory (%)	33.2	9.0	29.3
Quality satisfactory but facility too far (%)	8.3	3.3	7.3
Quality satisfactory but involves long waiting (%)	4.6	20.2	28.6
Financial reason (%)	0.2	0.0	0.2
Preference for a trusted doctor/hospital (%)	30.5	50.3	23.2
Others (%)	11.6	9.4	3.0

Source: Estimated from NSS 75th round unit record data

As far as hospitalisation or utilisation of inpatient care is concerned, Bihar is a state with a very low rate of hospitalisation per 1000 population (29) compared to most of the major Indian states (Appendix Table A2). States like Kerala and Tamil Nadu have a much higher rate of hospitalisation per 1,000 people. Table 7.5 presents how the rate of hospitalisation has changed in Bihar for different caste groups over the years. The table clearly shows that the rate of hospitalisation, which earlier had a strong caste gradient, has somewhat weakened now, and there is not much group inequality in the rate of hospitalisation. The share of government hospitals in total inpatient care has also increased in Bihar over the years, and caste-based disparity has declined.

As expected, the dependence of people on government hospitals for inpatient care is higher in Bihar compared to many states (Appendix Table 7.A2). Since we do not know the size of the private inpatient care sector in Bihar, it is difficult to make any statement about whether the dependence of people on government hospitals is greater or less than what is expected. In Bihar, the geographical distribution of government infrastructure shows a strong urban bias, and such bias is expected to be of higher order for the private hospitals.

Table 7.5 Rate of Hospitalisation per 1000 Population and Dependence on Government Hospitals

Caste Group	Rate of hospitalisation per 1000 population				Share of government hospital in total hospitalisation			
	1995-96	2004	2014	2017-18	1995-96	2004	2014	2017-18
ST	2	6	43	29	57.9	42.4	74.1	82.5
SC	6	10	46	25	23.3	15.6	66.4	75.4
OBC	-	10	32	31	-	13.4	53.5	61.2
GEN	-	15	31	25	-	11.3	42.4	40.7
GEN + OBC	7	11	32	30	24.9	12.7	51.2	57.7
Total	7	11	35	29	24.7	13.6	55.4	61.2

Source: Estimated from 52nd, 60th, 71st and 75th round NSS unit record data

5. Cost of Healthcare and Insurance Coverage

Cost of Outpatient and Inpatient Care

The average cost of outpatient care (for those who made payment) increased from Rs. 142 in 1995–96 to Rs. 754 in 2017–18; however, during the same period, totally free outpatient care declined from 72.1 percent to 1.4 percent. The rise in price is normal, keeping pace with the inflation and increasing cost of medical care, and one possible reason for such a drop in zero-cost outpatient care is people's increasing dependence on the private sector. Since the cost of inpatient care is much higher than the cost of outpatient care, the poor population needs protection more for inpatient care costs. The average cost of hospitalisation is significantly lower in Bihar (Rs. 8,979) compared to Kerala (Rs. 21,722) and Tamil Nadu (Rs. 19,065) (Appendix Table 7.A2). The composition of hospitalisation cases is different in Bihar compared to Tamil Nadu and Kerala, as the latter states have a higher share of chronic ailments in total hospitalisation cases, which are more expensive to treat. Surprisingly, both the mean and median cost of inpatient care at government facilities are higher in Bihar (Rs. 3,233 and Rs. 2,200) compared to Tamil Nadu (Rs. 2,837 and Rs. 2,000). This may be an indication that for many components of inpatient care, patients either need to pay for them or get them purchased or done outside the hospital. There is evidence that provides a plausible explanation for why the average cost of inpatient care in a government hospital is higher in Bihar than in Tamil Nadu. Chokshi *et al.* (2015), by comparing the drug procurement systems in Bihar and Tamil Nadu, found that while Tamil Nadu had suppliers for 100 percent of the drugs on their procurement list for all the years, for Bihar the figures were 56 percent, 59 percent, and 38 percent, respectively, for 2006, 2007, and 2008. The ratios of procurement prices for Bihar in comparison with Tamil Nadu were in the range of 1.01 to 22.50.[2]

Insurance Coverage

Historically, insurance coverage has been remarkably low in Bihar. Generally, states that cover a higher percentage of their population under insurance have done so mostly through the expansion of government-sponsored schemes such as the Rashtriya Swasthya Bima Yojana or State Health Insurance schemes. The estimates on the insurance coverage of individuals in Bihar are presented in Table 7.6. While NFHS 5 (2019–21) shows that in 14.5 percent of households, at least one member

Table 7.6 Health Insurance Coverage in Bihar, Kerala and Tamil Nadu

	Bihar	Kerala	Tamil Nadu
NFHS 5 (2019-2021)			
Households in which at least one usual member is covered by a health insurance/financing scheme (%)	14.5	51.5	66.5
Type of coverage (%)			
Employees' State Insurance Scheme (ESIS)	1.5	3.3	5.3
Central Government Health Scheme (CGHS)	8.4	3.7	16.3
State health insurance scheme	1.4	4.6	85.1
Rashtriya Swasthya Bima Yojana (RSBY)	17.7	78.2	0.3
Community health insurance programme	0.3	0.2	0.2
Other health insurance through employer	0.3	0.7	2.1
Medical reimbursement from employer	0.2	0.4	0.8
Other privately purchased commercial health insurance	1.0	6.7	2.3
Other	70.4	4.8	0.5
NSS 75th (2017-18)			
Coverage of individuals by health expenditure protection schemes (%)			
Government sponsored (RSBY, Arogyasri, etc.)	0.13	32.8	11.7
Government/PSU as an employer (CGHS, reimbursement from govt., etc.)	0.2	1.2	2.7
Employer supported (other than govt./PSU) health protection (e.g., ESIS)	0.0	1.7	3.2
Arranged by household with insurance companies	0.1	3.9	1.3
Not covered	99.6	60.1	81.1
Other	0.01	0.3	0.04

Source: NFHS-5 and NSS 75th Round

Note: Estimates from NFHS 5 are based on household-level data and estimates from NSS 75th Round are based on individual-level data.

has been brought under health insurance coverage, the figure is not even 1 percent when we look at NSS estimates from 2017–18.

In the context of Bihar, Panda *et al.* (2016) find that a low renewal rate is a major challenge facing the sustainability of health insurance schemes. Households that have received benefits are more likely to continue the insurance, but because of the low utilisation of inpatient care, such a force is weak. Moreover, the low retention rate is also attributed to the limited benefits of the packages, more claims processing time, and the gap between amounts claimed and amounts paid out by the insurance provider. Chowdhury and Mukherjee (2019) found that on average, only 5.8 percent of the hospitalisation expenditure got reimbursed for those who were covered by government-supported insurance schemes in Bihar.

Government-supported insurance schemes are expected to cater to the poor and vulnerable population, which otherwise faces deterring constraints to accessing inpatient care, especially from the private sector. In such a situation, one would expect higher coverage of the population by

government insurance schemes in states with a higher share of poor populations, and vice versa. Going by the experience of the major Indian states, no such pattern is observed. Bihar, with its very high incidence of poverty, still shows lower coverage of government-supported health insurance than states like Kerala, which have low poverty but high government-supported insurance coverage. However, the situation might have improved after the rollout of Pradhan Mantri Jan Arogya Yojana (PMJAY) in 2018. Coverage of PMJAY used the Socio-Economic Caste Census (SECC) 2011 data to identify the target beneficiaries based on seven deprivation criteria.

Public Health Expenditure

Figure 7.2 shows the trend in per capita government expenditure (in current prices) on medical and public health for Bihar, Kerala, and Tamil Nadu. A few points are evident from the figure and background analysis. First, as compared to Tamil Nadu and Kerala, the government in Bihar spends much less on medical care and public health per person. Bihar spends less than half of what Tamil Nadu spends and less than one-third of what Kerala spends per person. Second, in all three states, a large part of the public health expenditure is on the revenue account, that is, spent mostly on salaries for the workforce in the health sector. The low share of capital expenditure in total health expenditure may not be a big issue for Kerala and Tamil Nadu, as these states have already built up a vast network of public health infrastructure. But given Bihar's low level of infrastructure, it is essential that Bihar incur higher capital expenditure by building new health infrastructure. Third, there is no evidence of convergence in per capita government health expenditures for these states. Even so, there is no sign of convergence between Tamil Nadu and Kerala. The gap between Kerala and Tamil Nadu in terms of per capita government expenditure on health at current prices has marginally increased over the years. Fourth, when we look at Bihar's per capita government health expenditure, even at

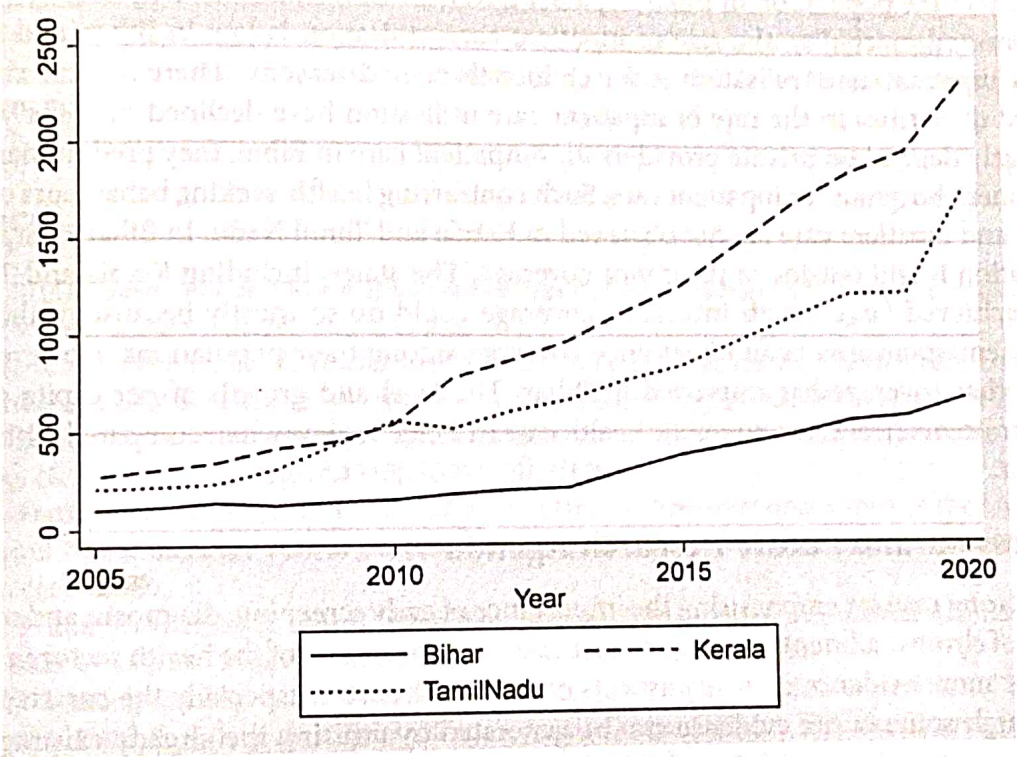

Figure 7.2 Per Capita Government Expenditure on Medical Care and Public Health (at Current Prices)

Source: Authors' calculation using data from RBI State Finances and Census Reports, various years

current prices, it shows an insignificant increase. All these years, per capita government expenditure on health has experienced a consistent increase in Kerala and Tamil Nadu. One of the main reasons for Bihar's low expenditure on health care could be linked to its lower revenue collection and lower overall expenditure on the social sector. One may argue that this is one of the disadvantages of keeping health and education as state subjects since spending on health and education gets affected by each state's capacity to spend in those areas, and capacities and priorities vary enormously from state to state.

6. Conclusion, Policy Implications, and Future Research Agenda

There are enough reasons to suspect that morbidity is grossly under-reported in Bihar, especially chronic ailments. More systematic research is required for a better understanding of the real morbidity burden in Bihar. There is a strong urban bias in the setting up of government curative health facilities in Bihar when we look at the distribution of government hospitals and hospital beds between rural and urban areas of the state. When it comes to assessing the strength of the private sector, there is hardly any reliable data to know the real strength of the private health sector in Bihar. The disproportionately higher availability of AYUSH practitioners in comparison to the utilisation of AYUSH indicates that many of these practitioners are probably engaged in practising the allopathic system of medicine. A large part of the reported ailments in Bihar are not treated on medical advice, and there is a clear caste gradient. Unavailability and/or unaffordability of health care are the main reasons for no treatment. An exceptionally high level of dependence on the private sector for outpatient care in Bihar and just the opposite for inpatient care (in comparison to Kerala and Tamil Nadu) raises questions regarding the nature and quality of the large private outpatient sector in the state. Bad quality of care, long distances, and long waiting are the major reasons why a large section of the population in Bihar bypasses government facilities for outpatient care.

Like reported morbidity, the rate of inpatient care utilisation is low in Bihar, and still, a large portion of inpatient care utilisation is for childbirth-related reasons. There is clear evidence that caste-based disparities in the rate of inpatient care utilisation have declined over the years. While people largely depend on private providers for outpatient care in Bihar, they predominantly depend on government hospitals for inpatient care. Such contrasting health-seeking behaviours of people for outpatient and inpatient care are not observed in Kerala and Tamil Nadu. In Bihar, a large section of the population is still outside of insurance coverage. The states, including Kerala and Tamil Nadu, that have achieved large health insurance coverage could do so mostly because of the expansion of government-sponsored health insurance coverage among their populations. However, the latest data show that coverage has improved in Bihar. The level and growth of per capita government expenditure on medical care and public health care in Bihar are low when compared with Kerala and Tamil Nadu.

Policy Lessons and Future Research Agenda

There is a strong case for emphasising the importance of early screening, diagnosis, and management of all types of chronic ailments in Bihar. For a better understanding of the health sector in Bihar, there is a need for more evidence on many aspects of the health sector, especially the curative health care sector. Though some of the evidence can be generated by utilising the already existing large-scale survey data (such as NSS, NFHS, and IHDS), many issues need updated district-level estimates at regular intervals. This can easily be done by utilising the existing government machinery. Both class- and caste-based disparities in the utilisation of health care facilities need to be studied further using

the intersectionality approach by considering caste-gender and class-caste interaction. The striking rural-urban difference in utilisation of non-mainstream AYUSH systems of medicine needs further detailed scrutiny to understand people's trade-off between preference and constraints to access modern medicine. Apart from caste-based inequality, it is important to know the extent of spatial inequality in various health indicators. For outpatient care, why a large section of the population is bypassing the government facilities, which are expected to provide health care at no cost, and what is the quality of the alternative private health care on which the population is relying needs to be studied. Currently, there is no reliable data to know the real strength of the private sector in Bihar. Knowing the real size of the private sector, including the size of the informal provider segment, is crucial for crafting any meaningful policy interventions in the health sector. The size of the cross-practitioner or unqualified medical practitioner segment seems to be large in Bihar, and the state can learn from the experience of West Bengal on training informal care providers for harm reduction and quality improvement. The current urban bias in the setting up of government health infrastructure needs to be corrected. To better implement the government health insurance schemes, such as the recently announced Ayushman Bharat National Health Protection Mission, a special drive needs to be given in Bihar, especially to include the rural poor. Following the experience of Kerala, a much higher number of public hospitals should be encouraged to get empaneled to provide service to government health insurance beneficiaries.

Notes

1. According to the latest available statistics, about one-third (precisely 33.74 percent) of Bihar's population live below the poverty line. Similar figures are 7.05 percent for Kerala and 11.28 percent for Tamil Nadu. Press Notes on Poverty Estimates, 2011–12 accessed from http://planningcommission.nic.in/news/press_pov2307.pdf.
2. For 50 percent of the analysed drugs, the Bihar–Tamil Nadu price ratio was more than 2. This means that for half of the drugs Bihar was procuring at double the price of what Tamil Nadu was procuring (Chokshi *et al.*, 2015).

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Appendix

Table 7.A1 Select Health Indicators Across Major Indian States

State	Infant Mortality Rate (2020)	Life Expectancy at Birth-Male (2021-25)	Life Expectancy at Birth-Female (2021-25)	Any morbidity per 1000 population (2017-18)	Chronic Morbidity per 1000 population (2017-18)[1]
Andhra Pradesh	24	69.6	73.6	142	278
Assam	36	67	69.7	25	15
Bihar	27	70.9	71.8	25	18
Chhattisgarh	38	67.1	70.8	49	37
Delhi	12	73.5	77	59	43
Gujarat	23	70.4	74.6	67	95
Haryana	28	69.4	74.1	59	64
Jammu & Kashmir	17	72.8	77.8	71	73
Jharkhand	25	70.4	71.8	67	50
Karnataka	19	69.7	73.3	43	52
Kerala	6	73.5	79.2	245	380
Madhya Pradesh	43	66.7	70.5	40	47
Maharashtra	16	71.9	75.9	88	111
Odisha	36	68.6	71.5	92	87
Punjab	18	71.9	76	112	134
Rajasthan	32	68.7	72	49	51
Tamil Nadu	13	70.9	75	61	92
Telangana	21	69.6	75	56	75
Uttar Pradesh	38	66.9	69.1	75	67
Uttarakhand	24	71.1	76.9	35	28
West Bengal	19	71.2	74	138	226
All-India	28	69.4	72.5	75	104

Sources: Sample Registration System, Register General of India; National Sample Survey (75th round)

Note: 1. Rate of chronic morbidity is estimated only for population 40 years and above

Table 7.A2 Select Health Sector Indicators Across Major Indian States (2017-18)

State	Hospitalisation per 1000 population	Share of govt facilities (%)		Average cost per episode (Rs)		Health Insurance Coverage (%)
		Outpatient Care	Inpatient Care	Outpatient Care	Inpatient Care	
Andhra Pradesh	51	21.9	32.6	553	19103	72.7
Assam	23	43	81.3	896	11577	5.1
Bihar	29	18.5	61.8	752	8979	0.4
Chhattisgarh	34	42.2	66.5	423	17761	64.3
Delhi	43	44.3	62.5	903	24354	17.5
Gujarat	38	24.7	37.2	550	16024	13.5
Haryana	45	19.1	40.2	833	22277	7.2
Jammu & Kashmir	37	69.3	91.9	469	9479	3
Jharkhand	28	26.8	59.5	872	14497	0.4
Karnataka	40	21.8	34.6	701	17919	7.2
Kerala	117	47.5	37.3	576	21722	39.7
Madhya Pradesh	36	31.4	65.2	928	11658	1.3
Maharashtra	43	25.2	31	671	24576	7.3
Odisha	46	56.8	76.5	549	12480	15.6
Punjab	41	14.5	35.2	679	27554	6.2
Rajasthan	43	39.9	62.6	973	13932	35.2
Tamil Nadu	42	54	52.9	734	19065	18.8
Telangana	35	20.4	31.7	704	24554	61
Uttar Pradesh	38	14.2	44.8	903	19905	1.3
Uttarakhand	28	32.9	46.9	662	19748	5.4
West Bengal	56	28.7	71	666	16425	13.2
All-India	42	30.2	51.0	715	18047	15.4

Source: Estimated from NSS 75th unit-record data