

## Public Spending on Health in India and States

Being an essential pillar of *Economic Development*, social indicators have received a lot of attention in both developed and developing economies, where States play a significant role in providing necessary resources to the citizens, in order to develop and nourish the *Human Capital*. Health expenditure is an essential component of social expenditure, which not only leads to better health-outcomes, but also improves productivity and earning capacity of an individual. However, both Centre and State spending are extremely low, and high inter-state inequality persists. Therefore, the essay aims at comparing the Public Health Expenditure across states, and identifying major challenges, by analyzing expenditures for 2013-14 to 2017-18.

### **PUBLIC HEALTH EXPENDITURE**

In India, both center (one-third) and states (two-thirds) contributes to the public health expenditure (Appendix), which is categorized as *Medical and Public Health care*, and *Family Welfare* (NHP, 2019). The aggregate data shows that total public health expenditure doubled, while per-capita health expenditure increased by approximately 80% from 2013-14 to 2017-18 (Fig. 1). However, India spends nearly 1% of its GDP on health, which is lower than countries like Myanmar, Nepal, Sri-Lanka, and Bhutan, indicating poor focus of Indian government on Health-system (NHP, 2019).

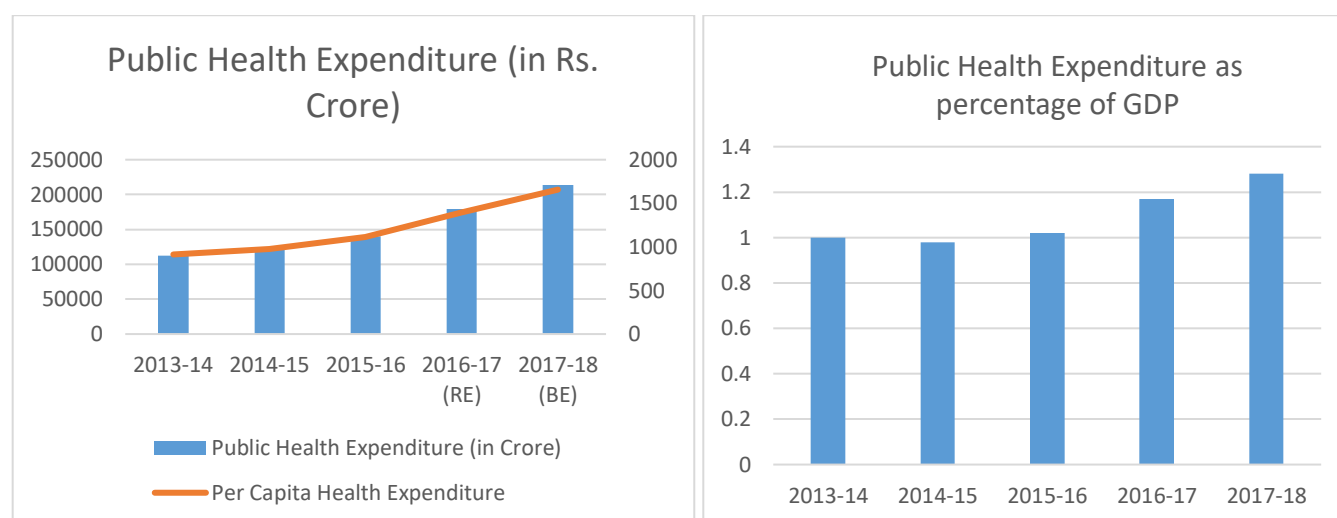


Fig. 1, Source: NHP, 2019

### **State-Wise Comparison**

By comparing the state expenditure data for 2013-14 to 2017-18, it is evident that total public health expenditure and its share from *Gross State Domestic Product* (GSDP) has increased (Fig. 2). Additionally, few states like Himachal Pradesh, Maharashtra, West Bengal, Bihar, Jharkhand, Puducherry, and North-Eastern States have experienced a slight decline in the health expenditure from 2016-17 to 2017-18. On an average, the Non-EAG states had highest health spending from 2013-14 to 2016-17, while in 2017-18 EAG+1 States had higher average spending, while North-Eastern States had lowest, which is attributed to their smaller geography. Despite lowest total spending, North-Eastern States, on an average, spend the highest GSDP on health, followed by EAG+1 States and Non-EAG States (Appendix).

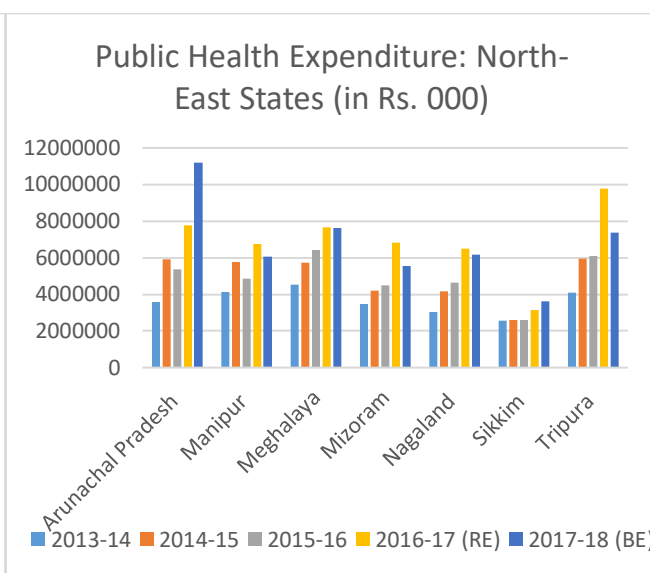
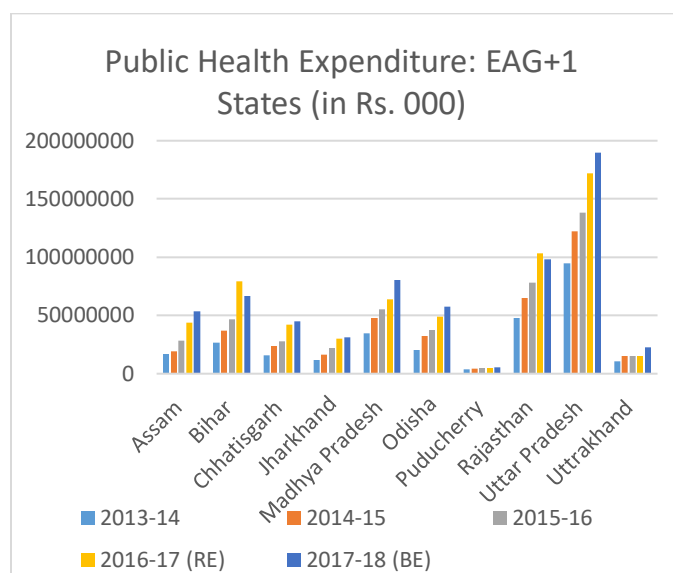
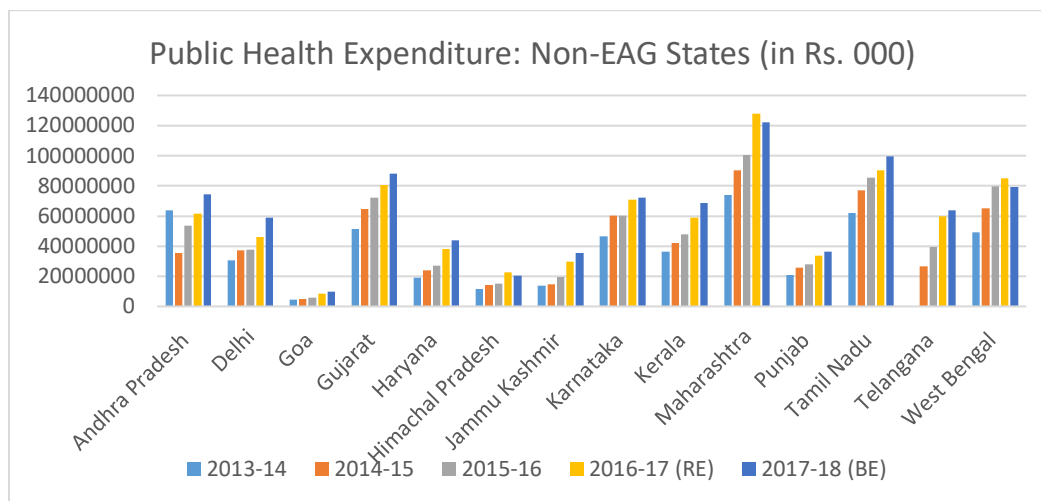
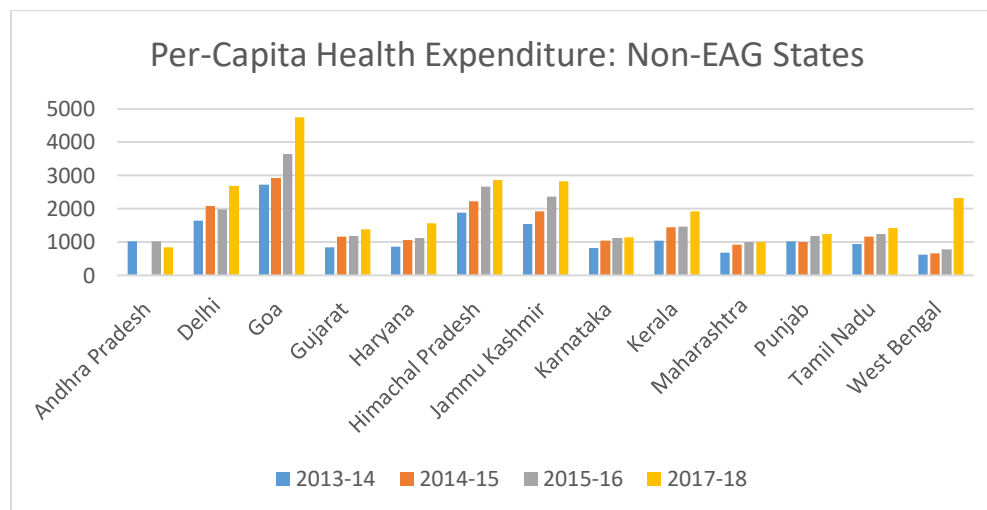


Fig. 2, Source: Health Sector Financing by Centre and States in India, NHA

Furthermore, the per-capita health expenditure has also increased from 2013-14 to 2017-18, but for few states, the spending has reduced slightly from 2015-16 to 2017-18 (Fig. 3). Average per-capita expenditure indicates that North-Eastern States spend highest, while EAG+1 States had the lowest spending (Appendix).



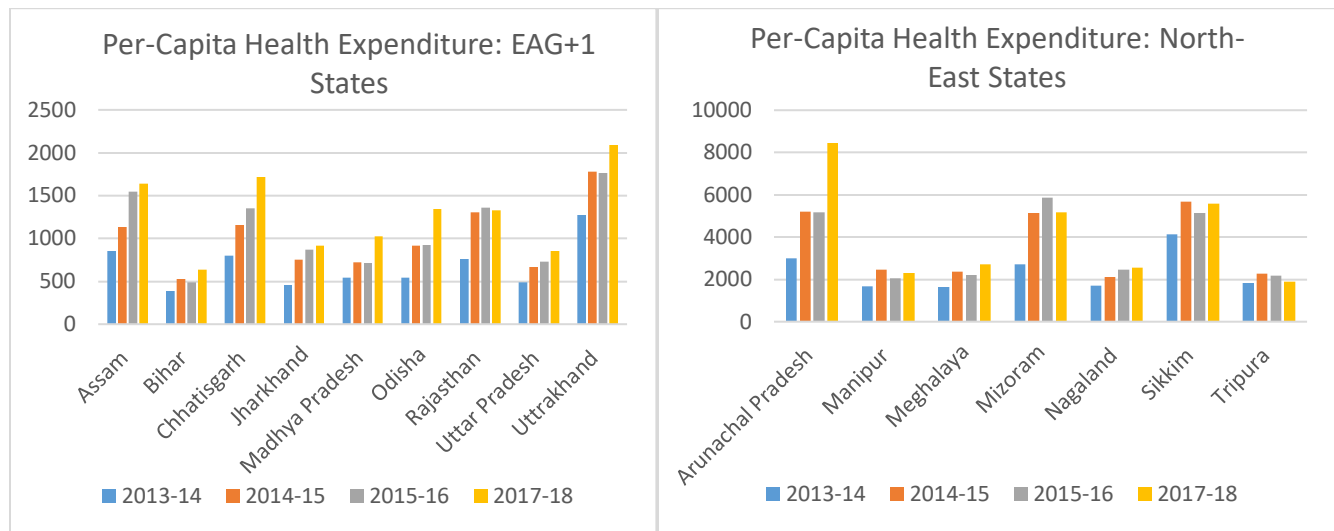


Fig. 3, Source: NHP (2019, 2017, 2016)

The data for health expenditure on *Medical and Public Health* and *Family Welfare* suggests that spending on public health is greater than family welfare, as the components under the first category are higher. The average ratio of medical and public health to the family welfare expenditure depicts that the ratio was highest for North-Eastern States for 2013-14 to 2016-17, while Non-EAG States had the maximum ratio for 2017-18, and EAG+1 states had lower ratio, highlighting more proportionate spending by North-Eastern and Non-EAG States (Fig. 4). Additionally, the share of health expenditure from the total expenditure of the states has not moved in a specific direction from 2013-14 to 2017-18 (Appendix). However, it can be inferred from the State categories that North-Eastern States have higher share of health expenditure of more than 5% for each year, while EAG+1 States have the lowest of around 4-4.5% (Fig. 5).

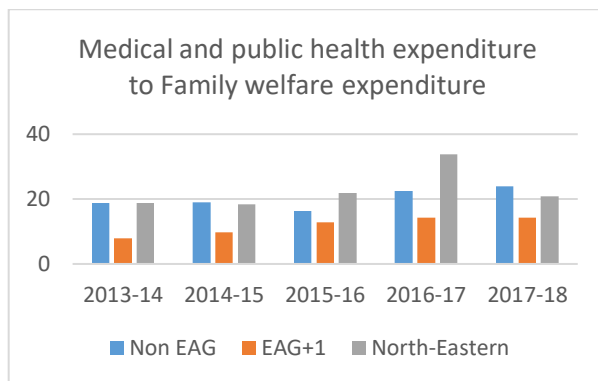


Fig. 4, Source: Health Sector Financing by Centre and States in India, NHA

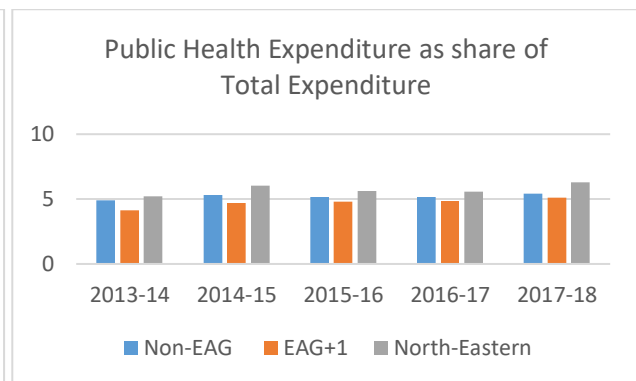


Fig. 5, Source: RBI: State Finances

Additionally, the data indicates that states like Uttar Pradesh, Maharashtra, and Tamil Nadu, which have the highest GSDP also have the highest total health expenditure, while the states with the lowest GSDP like Nagaland, Mizoram, and Manipur also had the lowest total health expenditure (Fig. 6). The correlation between GSDP and public health expenditure is around 0.87, indicating their positive relationship. On the contrary, the states with lowest health expenditure spend the highest share of GSDP on health and vice-versa, and the correlation coefficient is around -0.60, highlighting their negative relationship (Fig. 7). Similarly, the per-capita expenditure is also higher for the poorer states as compared to their wealthier counterparts, and the correlation between GSDP and per-capita expenditure is around -0.51.

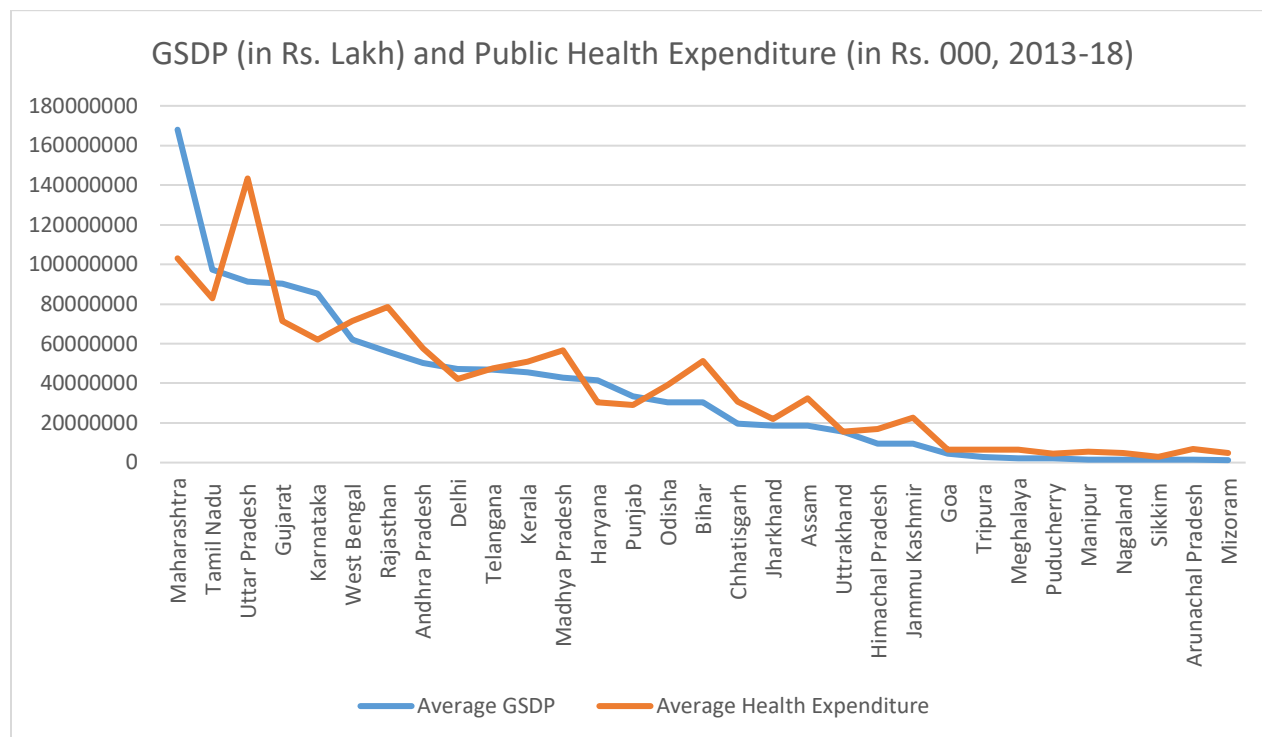


Fig. 6, Source: Niti Ayog, Health Sector Financing by Centre and States in India (NHA)

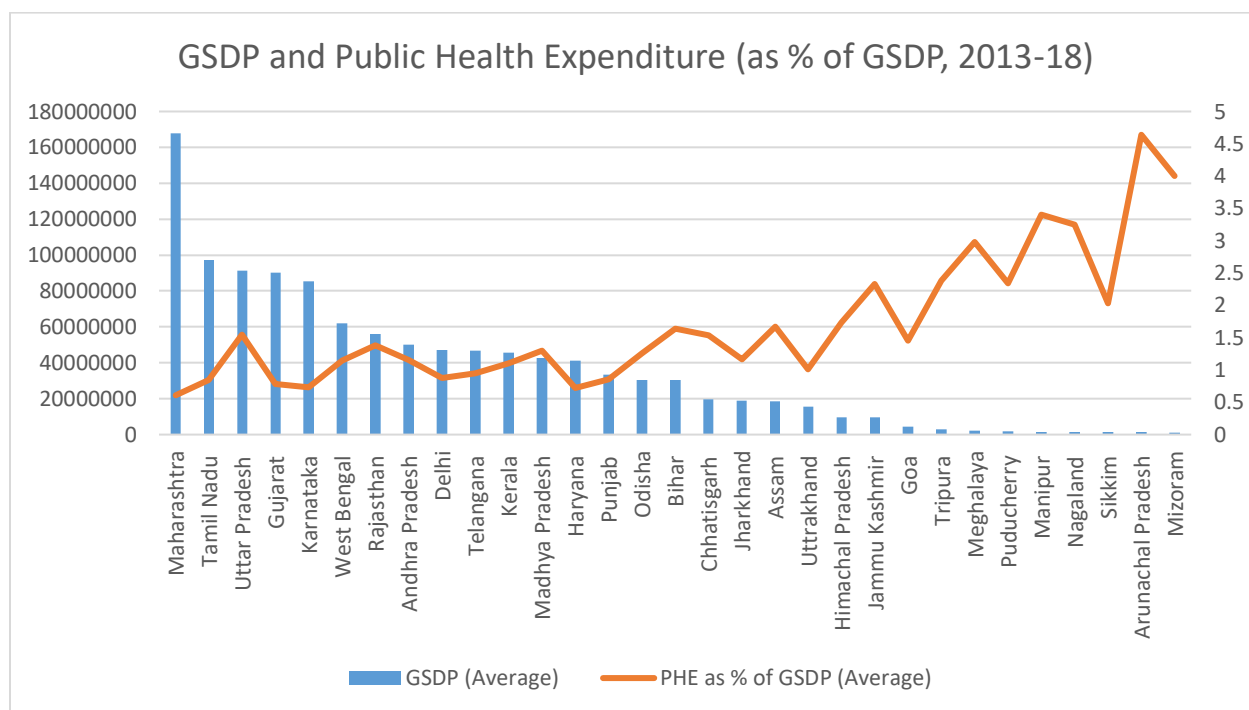


Fig. 7, Source: Niti Ayog, Health Sector Financing by Centre and States in India (NHA)

The data further indicates the presence of large inter-state variation in both the public health spending and the share of GSDP spent on health. The coefficient of variation for public health expenditure is around 87%, and 71% for share of GSDP spent on health, on average for 2013-14 to 2017-18. Furthermore, the variation in public health expenditure has reduced by 10% with time, while the variation in expenditure as a percentage of GSDP has increased by 7%. (Fig. 8)

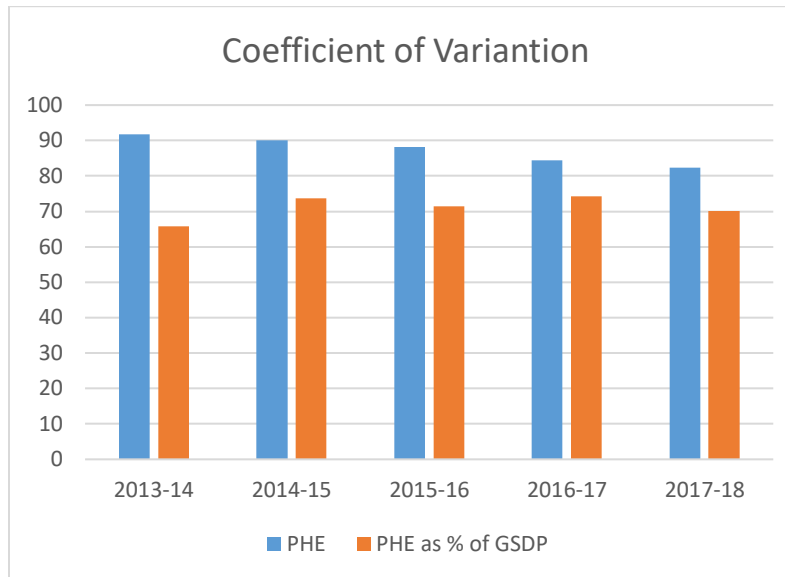


Fig. 8, Source: Niti Ayog, Health Sector Financing by Centre and States in India (NHA)

The high level of inter-state difference in per-capita health expenditure indicates that the health-outcomes differ significantly as the per-unit cost of health services remains the same nation-wide (Sirnath et. al, 2018). Consequently, the Central government transfers funds to the States through various schemes like *National Health Mission* (NHM), in order to equalize the health expenditures in India (Hooda, 2013). The correlation coefficient between the grants allocated to the State under NHM for tackling *Infant Mortality Rate*, and the per-capita health expenditure on health for major states is around 0.50 (Appendix), indicating that the grants received by states with higher per-capita health expenditure is slightly higher than others. It can be deduced from correlation and various studies that Central Government has been inefficient in equalizing the health spending across states, otherwise the correlation should have been negative (Rao, Choudhury, 2008; Sirnath et. al, 2018). This increases the inter-state health-outcomes, and reduces earning capacity of an individual.

## **CONCLUSION**

The analysis of the Non-EAG, EAG+1, and North-Eastern states on different health financing parameters yields the following findings, challenges, and recommendations:

### **Major Findings**

- Both the total public health expenditure, and per-capita health expenditure has increased from 2013-14 to 2017-18, indicating improvements in each state. However, studies indicate that this increase is inadequate as the cost of health services have increased simultaneously, giving minimal real improvement in the health expenditure.
- The data indicates a large inter-state disparity in per-capita expenditure, where states like Mizoram spend around INR5,000 per-person, while Bihar spends only INR600. Additionally, wealthier states have lower per-capita health expenditure, indicating their poor focus on health.
- Government has undertaken many studies for equalizing expenditure and health-outcomes across states, however, the data for NHM indicates that Union-to-States transfers are similar, or slightly higher to the states with higher per-capita health expenditure. Therefore such transfers are inefficient in reducing inter-state disparities concerning health expenditure.

### Challenges

- Public health expenditure contributed only 20% of the total expenditure, due to which *out-of-pocket expenditure* is as high as 80%, which has catastrophic consequences on the poorest population. High OOPEx not only denies the poorest population from availing quality treatment, but also leads to high indebtedness and pushes them deeper in the vicious cycle of poverty. Government has implemented various health-insurance schemes to reduce OOPEx, but due to poor targeting, inadequate coverage, and malpractices, the schemes have not yielded desirable results, and therefore low spending and lack of Universal-Health-Coverage continues to be a challenge.
- Lack of infrastructure and human resources due to low public health expenditure is another major challenge, especially during a pandemic like COVID-19 outbreak, as the lack of infrastructure like public hospitals, beds, medical equipment, doctors and staff has hampered the quality of public healthcare in India. This has also increased the disparity between public and private healthcare sector, where patients receive better treatment at private hospitals, which increases the failure of providing quality healthcare to different income-groups.
- The large inter-state disparity and failing intergovernmental transfers for equalizing expenditure have serious toll on the differences in the health-outcomes among the states. This increases the difficulty in achieving equitable healthcare for all, and aggravates the income inequality among the states. Additionally, India also faces challenges in implementing various health-related schemes, as schemes designed to reduce inter-state inequality are in-fact increasing it (Jacob, 2016).

### Recommendations

- Increasing spending on healthcare for building infrastructure and providing health coverage at both Centre and State level is an absolute necessity for India in order to curb the challenges. Additionally, better union of public and private healthcare system can accelerate the pace of achieving major healthcare goals.
- Improving the governance and monitoring at both Centre and State level is necessary to increase the efficiency of the health-care system and to reduce inequalities. In Kerala and Tamil Nadu, despite having moderate GSDP, the health-outcomes are relatively higher, which is attributed to improved spending and governance. Thus, by implementing similar strategies, other states can bridge the inter-state disparities in health.
- Centre and States should increase the focus on improving preventive health measures, by providing “proper sanitation, timely vaccination, increasing awareness through health education, regular health check-up”, and awareness and guidance for various health-schemes (Garg). This will not only promote a healthy lifestyle, but also reduces the risks of reaching an unmanageable health crisis.

## REFERENCE

- Garg, S. “Healthcare Policy in India- Challenges and Remedies”, *Indian Institute of Management, Ahmedabad, Reports*, [https://www.iima.ac.in/c/document\\_library/get\\_file?uuid=f4758624-d359-4608-82e7-abb73ad2f51f&groupId=52123](https://www.iima.ac.in/c/document_library/get_file?uuid=f4758624-d359-4608-82e7-abb73ad2f51f&groupId=52123)
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## Data Source:

- Health Sector Financing by Centre and States/ UTs in India, (Years: 2015-16 to 2017-18, 2014-15 to 2016-17, 2013-14 to 2015-16), *National Health Accounts Cell, Ministry of Health and Family Welfare, Government of India*.
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## APPENDIX

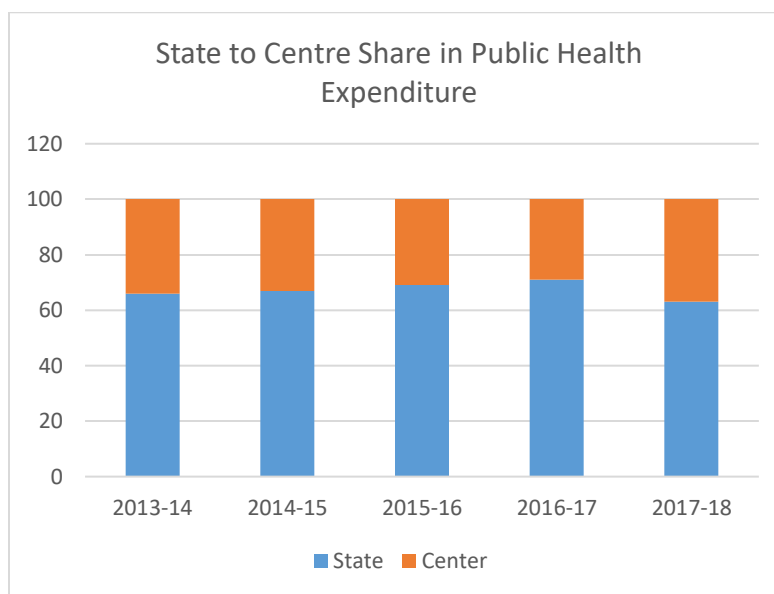


Fig. 1, Source: NPA, 2019

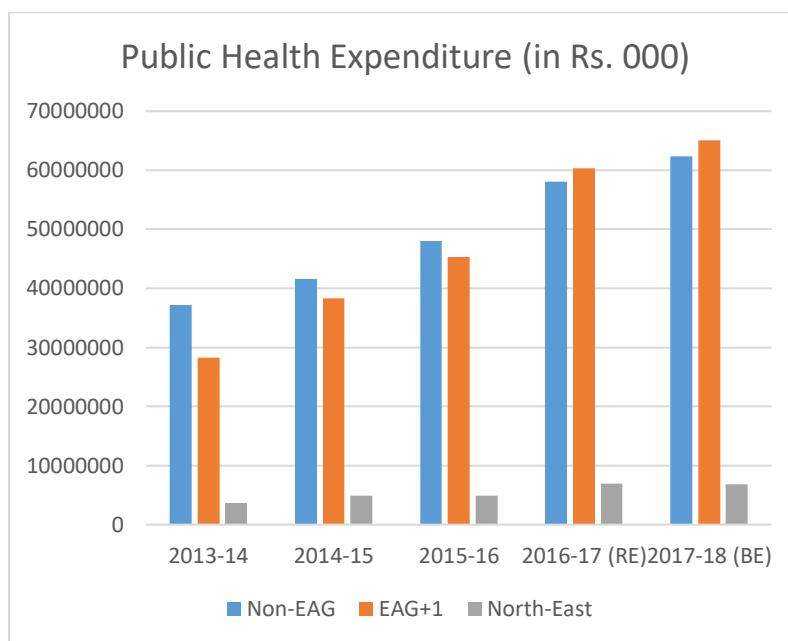


Fig. 2, Source: Health Sector Financing by Centre and States in India (NHA)



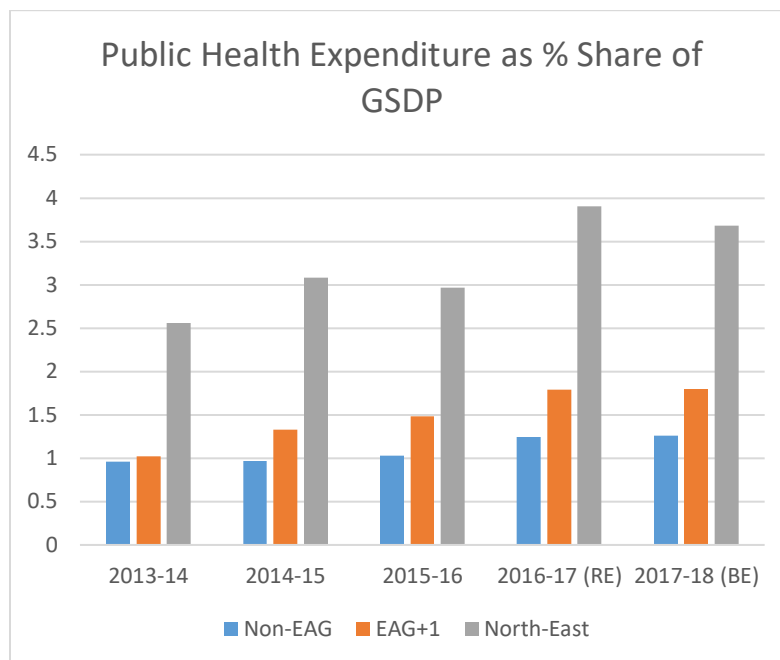


Fig. 3, Source: Niti Ayog, Health Sector Financing by Centre and States in India (NHA)

Table.1: Funds Allocated under NHM for IMR, and Per-Capita Public Health Expenditure

States	Per-Capita PHE	Funds Allocated
Andhra Pradesh	1013	147
Bihar	491	129
Chhattisgarh	1354	227
Gujarat	1189	165
Haryana	1119	147
Jharkhand	866	165
Karnataka	1124	146
Kerala	1463	176
Madhya Pradesh	716	176
Maharashtra	1011	140
Odisha	927	177
Punjab	1173	150
Rajasthan	1360	177
Tamil Nadu	1235	158
Uttar Pradesh	733	148
West Bengal	778	151
Correlation Coefficient		0.501219

Source: Rao, M.G. 2015. “Central Transfers to States in India Rewarding Performance while Ensuring Equity”, *Niti Ayog*, (NHM Funds Allocated), NPA (Per-capita Health Expenditure)

Table 2: Public Health Expenditure, PHE as share of GSDP, PHE as share of Total Expenditure

Year	2013-14			2014-15		
State/UT	Public Health Expenditure (in Rs. 000)	PHE as % of GSDP	PHE as % of Total Expenditure	Public Health Expenditure	PHE as % of GSDP	PHE as % of Total Expenditure
Andhra Pradesh	63727979	1.565357	4.3	35513370	0.798835	4.1
Arunachal Pradesh	3568173	2.891939	4.4	5907260	4.107213	6.6
Assam	17109325	1.107218	4.6	19271650	1.166478	4.2
Bihar	26554463	0.984776	3.2	36889989	1.319939	3.8
Chhattisgarh	15815142	0.866206	3.9	23762336	1.278828	4.9
Delhi	30673563	0.78068	8.7	37255934	0.869744	11.7
Goa	4631213	1.467038	5.7	5071713	1.264246	5.6
Gujarat	51382290	0.699761	4.9	64463438	0.794445	5.5
Haryana	18948686	0.545276	3.6	24099708	0.650404	4.0
Himachal Pradesh	11747197	1.417944	5.1	14109313	1.584245	5.4
Jammu Kashmir	13647101	1.603363	5.4	14609202	1.773562	5.6
Jharkhand	11492248	0.693071	3.8	16307755	0.874249	4.0
Karnataka	46561807	0.660914	4.1	60110735	0.803118	4.5
Kerala	36380638	0.903235	5.2	42285724	1.00691	5.3
Madhya Pradesh	34907987	0.956032	3.8	47989729	1.249913	4.3
Maharashtra	74097210	0.510447	3.9	90093410	0.583822	4.3
Manipur	4121708	2.920072	5.7	5780379	3.79168	6.5
Meghalaya	4520667	2.181188	6.6	5738521	2.846724	7.5
Mizoram	3479035	3.849163	4.7	4184690	3.716078	5.2
Nagaland	3021764	2.19086	4.2	4180932	2.903673	5.1
Odisha	20143774	0.757594	3.5	32329874	1.194459	4.9
Puducherry	3611382	1.883847	7.1	4406786	2.420427	7.9
Punjab	20984847	0.70078	4.1	25782647	0.826035	4.4
Rajasthan	47956209	0.986286	5.0	65108751	1.248469	5.6
Sikkim	2559763	2.113053	5.7	2608668	1.995772	5.4
Tamil Nadu	62017984	0.727931	4.5	76964378	0.860981	4.7
Telangana	NA	NA	NA	26497501	0.636451	4.1
Tripura	4091047	1.792816	5.2	5958213	2.209593	6.1
Uttar Pradesh	94882241	1.182968	4.6	1.22E+08	1.463209	5.1
Uttarakhand	10735329	0.800055	4.9	15343275	1.086037	5.5
West Bengal	49201561	0.880964	4.5	64950503	1.130824	5.2

Source:

- i. PHE- Health Sector Financing by Centre and States in India (NHA), 2013-14 to 2015-16, 2014-15 to 2015-16
- ii. GSDP- Niti Ayog
- iii. PHE as share of Total Expenditure- RBI, State Finance

Table 3: Public Health Expenditure, PHE as share of GSDP, PHE as share of Total Expenditure

Year	2015-16			2016-17 (RE)		
State/UT	Public Health Expenditure (in Rs. 000)	PHE as % of GSDP	PHE as % of Total Expenditure	Public Health Expenditure	PHE as % of GSDP	PHE as % of Total Expenditure
Andhra Pradesh	53470483	1.072399	4.5	61550039	1.11814	4.7
Arunachal Pradesh	5357577	3.762222	4.3	7762079	5.305101	5.8
Assam	28643237	1.498791	6.8	43576860	2.150284	5.6
Bihar	46528287	1.569313	4.1	79080770	2.448292	4.3
Chhattisgarh	27543544	1.441922	5.1	42005179	2.026044	5.6
Delhi	37594067	0.790418	10.3	45961230	0.89855	10.8
Goa	5750373	1.247617	5.5	8338680	1.619722	6.1
Gujarat	71993325	0.804876	5.6	80404487	0.819838	5.7
Haryana	27058044	0.654881	3.1	37957112	0.842242	3.7
Himachal Pradesh	15330549	1.592386	5.2	22722310	2.204872	5.2
Jammu Kashmir	19539174	2.01432	5.7	29804690	2.95887	5.6
Jharkhand	21822461	1.247845	4.0	29922341	1.548985	4.2
Karnataka	60153923	0.723553	4.1	70717466	0.750509	4.1
Kerala	47715032	1.057491	5.2	58979697	1.215321	5.6
Madhya Pradesh	55229521	1.31858	4.4	63731378	1.353062	3.8
Maharashtra	1.01E+08	0.607673	4.5	1.28E+08	0.707456	4.2
Manipur	4856580	2.95706	5.4	6743438	3.947705	4.8
Meghalaya	6438624	3.119727	7.6	7679394	3.533968	6.8
Mizoram	4506119	3.656499	5.8	6810560	5.009529	5.3
Nagaland	4649643	3.171547	5.1	6495454	4.150471	4.8
Odisha	37435595	1.281037	4.7	49095011	1.451783	5.4
Puducherry	4876530	2.558483	8.3	5119388	2.49995	8.0
Punjab	28005392	0.848515	4.1	33596066	0.951621	2.8
Rajasthan	78183293	1.387854	4.6	1.03E+08	1.736983	5.1
Sikkim	2618237	1.822079	5.8	3143926	2.041872	5.9
Tamil Nadu	85248545	0.881065	4.9	90412777	0.872069	4.2
Telangana	39476058	0.849784	3.9	59863964	1.178064	4.1
Tripura	6104618	2.278957	5.3	9785895	3.357494	5.5
Uttar Pradesh	1.38E+08	1.51991	4.5	1.72E+08	1.768666	4.9
Uttarakhand	14962656	0.979881	5.0	15373472	0.916707	4.8
West Bengal	79762114	1.308552	5.6	84846308	1.298504	5.2

Source:

- i. PHE- Health Sector Financing by Centre and States in India (NHA), 2015-16 to 2017-18
- ii. GSDP- Niti Ayog
- iii. PHE as share of Total Expenditure- RBI, State Finance

Table 4: Public Health Expenditure, PHE as share of GSDP, PHE as share of Total Expenditure

Year	2017-18 (BE)		
State/UT	Public Health Expenditure (in Rs. 000)	PHE as % of GSDP	PHE as % of Total Expenditure
Andhra Pradesh	74299271	1.212468	4.3
Arunachal Pradesh	11199034	7.130844	6.4
Assam	53770407	2.44878	6.8
Bihar	66685781	1.869162	4.5
Chhatisgarh	44871975	2.053274	5.9
Delhi	59027640	1.063737	11.6
Goa	9601472	1.691536	6.9
Gujarat	88164653	0.808657	5.4
Haryana	43849236	0.901805	3.7
Himachal Pradesh	20544690	1.871024	5.8
Jammu Kashmir	35454949	3.295671	5.6
Jharkhand	31292593	1.437963	4.2
Karnataka	72295591	0.696671	4.4
Kerala	68824749	1.327973	5.5
Madhya Pradesh	80651222	1.612537	4.4
Maharashtra	122250772	0.62926	4.3
Manipur	6045568	3.378692	5.2
Meghalaya	7619627	3.209291	7.2
Mizoram	5558640	3.759064	6.0
Nagaland	6164974	3.809304	5.1
Odisha	57514627	1.594211	5.1
Puducherry	5269367	2.343068	7.4
Punjab	36378787	0.96872	3.8
Rajasthan	98143384	1.550643	5.6
Sikkim	3636621	2.208401	7.7
Tamil Nadu	99761913	0.893657	5.1
Telangana	63914252	1.141835	4.2
Tripura	7364735	2.283441	6.3
Uttar Pradesh	189671521	1.820066	5.3
Uttarakhand	22471783	1.242608	4.4
West Bengal	79211955	1.113453	4.9

Source:

- i. PHE- Health Sector Financing by Centre and States in India (NHA), 2015-16 to 2017-18
- ii. GSDP- Niti Ayog
- iii. PHE as share of Total Expenditure- RBI, State Finance