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RURAL HEALTHCARE DEVELOPMENT IN INDIA: EVIDENCES FROM RURAL HEALTH STATISTICS 2019-20 AND NATIONAL HEALTH PROFILE 2019

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RESEARCH ARTICLE

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Abstract

Purpose: Development in healthcare sector is essential in both urban and rural areas. This study aims at critically examine the rural healthcare development in India.

Design: This analytical study takes evidences from two published reports i.e., Rural Health Statistics 2019-20 And National Health Profile 2019.

Findings: Almost 25% rural households in country are financing their OOP health expenditure from borrowings. The healthcare centres are over- burdened all over the country and there is acute shortage of healthcare infrastructure too.

Research Implications: This study will be helpful in determining the healthcare requirements in different states regarding the services and infrastructure availability of the healthcare institutions.

Practical Implications: The state-specific suggestions are mentioned at last, which would be helpful in improving the healthcare system of country.

Originality**:** This is first of its kind in best of authors' knowledge and consists of a critical analysis of two published documents of government.

Keywords: Rural, Healthcare, Development, Statistics

Introduction

Health care means functioning of both public and personal health care services. Health system of any country is consisted of those activities and structures, the primary purpose of which is to influence health in a wider sense (Arah et al., 2006). Global economic growth is highly dependent upon human capital. Human capital plays an important role in the status of economic outcomes of countries. A higher ratio of human capital to physical capital shows higher economic growth. There is a high association between the level of economic development and the performance of states in terms of education and health outcomes (Chakraborty, 2019). According to the OECD, human capital is defined as "the knowledge, skills, competencies and other attributes embodied in individuals or groups of individuals acquired during their life and used to produce goods, services or ideas in market circumstances". There is a positive relationship of physical & human capital with GDP (Viswanath et al., 2009)**.** The primary healthcare system such as Sub Centres, PHCs and CHCs are the front-line institutions and should be working as social models which are providing healthcare services to people near their homes (Ramani et al., 2019).

The healthcare expenditure plays an important role in providing better health provisions which in turn create strong human capital, improve the productivity and in the end contribute to economic performance of the country (Raghupathi & Raghupathi, 2020). The economic growth or GDP results in more economic means to households to spend more on their healthcare and also it gives means to governments to provide better healthcare systems and to invest in healthcare infrastructure (Lange & Vollmer, 2017). The health economy of the world is growing at a faster rate than the global economy but despite this fact, the health expenditure of the countries all over the world is unequally distributed. In 2015, almost 10% of the global GDP has been spent on world's health system. The global per capita average health expenditure is 1,011 USD although more than half of the countries spent just less than 366 USD per capita (*New Perspectives on Global Health Spending for Universal Health Coverage*, 2018). Health along with education may be considered as an integral part contributing to the country's productivity and the relationship between health outcomes and economic growth is complex and the magnitude of this effect is less clear due to the two-way causation between health & income and multi-dimensionality of the health outcomes (Menon, 2017).

According to the *Healthcare financing reforms* there are three basic features of Indian Healthcare System: Low public spending, poor quality of healthcare and inadequate public health provision. The reforms in healthcare focus towards increased allocation to public health sector, preventive care, greater access to healthcare by poor and improving the productivity of public allocations. It mentions that India's health achievements are very low as compared to the country's income level. Out of 6,28,708 government beds, 1,96,182 beds are in rural areas. The doctor–population ratio in India is 1:1,674 and as per WHO guidelines it must be

1:1000. Private sector has created 63% of total hospital beds in the country from the year 2002 to 2010 and currently providing 80% of outpatient care and 60% of inpatient care (Thomson et al., 2013). Discussing about the Indian health system, it was found that direct out of-pocket expenditure is 89% of the private expenditure & 60% of the country's total expenditure for healthcare sector in 2012, out-of-pocket expenditure is acting as a barrier to access the healthcare services and it brings the poor sections under financial burden. The study mentioned that a High-Level Expert Group on UHC (Universal Health Coverage) is constituted by Planning Commission in 2010 with a purpose to achieve affordable and acceptable healthcare for all Indians (Singh *et al*., 2018). According to *UNDP's Human Development Report* (HDR) 2010, India ranked 119th in a set of 193 countries, while in the 2018 HDR, India ranked 130th. The important factor responsible for poor health status of India was low public spending. In 2007, India was at 184th place among 191 countries of WHO in terms of public expenditure on health as a % of GDP. To reform the rural healthcare sector, NRHM (National Rural Health Mission) is launched in 2005 which has an objective to improve the healthcare for the poor in rural. The aim of RSBY (Rashtriya Swasthya Bima Yojana) is to provide financial protection from OOP expenditure and it is providing insurance coverage for selected hospital expenses to people below poverty line (Rao and Choudhury, 2012).

Review of Literature

The following studies highlight the existing status of healthcare system in India as well as in other nations by considering the various indicators:

The growth rate of service sector in India has increased to 7.9% from 4.5% between the period 1971 to 2003 while for China this rate is 7.7% which grew from 5.2% in same period. The contribution of service sector in the Indian GDP is 49.5% in the year 2001, whereas on the other hand, in China, the share is just 24.1%. These facts support the importance of strong service sector in India as compared to China (Klien, 2004).

Investment in health generates benefits to the economy of the country. A 10% increase in life expectancy at birth leads to 0.35% increase in economic growth per year. Due to scarcity of resources, health expenditure in the budgets of SAARC and ASEAN nations is still under-represented. There is positive relationship between per capita income & sanitation on life expectancy at birth and an increase in health expenditure leads to reduced death rate & infant mortality rates in SAARC-ASEAN region even though health expenditure has no impact on life expectancy at birth (Rahman et al., 2018; Yaqub et al., 2017; Elola et al.,1995; Novignon et al., 2012). An increase in both public and private health expenditure as a % of GDP improves the life expectancy at birth, death rates and IMR where public health expenditure is more efficient in reducing death rates and IMR than private health expenditure.

Hassan et al. (2013) observes that health expenditures are not enough in SAARC nations and only this study has found inverse relationship between health care spending and life expectancy. It is also highlighted that with the increase in government health spending, there is no significant improvement in Infant Mortality Rate (IMR). An increased GDP per capita and health spending have improved the status of IMR and life expectancy in Nigeria which highlights the sign of good governance in the country (Yaqub et al., 2017; Ogundipe and Lwal, 2011; Elola et al., 1995; Novignon et al., 2012).

With an increase in health expenditure, there is improvement in fertility rates and life expectancy and it further contributes to higher economic growth (Ogundipe and Lwal, 2011).

Elola et al. (1995) highlighted the fact that there is an inverse relationship between healthcare expenditures and IMR but a positive relationship with life expectancy of females in Western Europe. It addition to this, it is concluded that countries with national health systems have lower IMR rates even if they have similar GDP level and health care expenditures. There is positive relation noticed between personal health care expenditure and gross state product and vice versa in Mississippi, Tennessee, Louisiana and Alabama (Bukenya, 2009)**.**

The decade of 2021-2030 envisages better opportunities for the economic growth of country and the future economic policies would create positive impact both on rural and urban population. Between the year 1950-2020, there is a significant increase in life expectancy of Indian population which is less than countries like China, Japan and Spain throughout all these years (Guisan, 2021).

A report by WHO discusses that one percent increase in GDP contributes to higher government health spending than OOP, but the increased expenditure by government is not sufficient to provide all services free of cost and still people are paying out of pocket for medicines and tests (Xu et al., 2010). In context of Indian rural healthcare system, it is found that primary healthcare services are provided via public primary health care centres (PHCs) or Sub Centres (SCs) which are running under-staffed and located in far-away places and the qualified doctors are available only in health centres of urban areas (Das et al., 2022). The maternal health care services in the country are under-utilized and not adequate according to various socio-economic groups and the utilization is determined by several socio-economic as well as demographic factors (Paul & Chouhan, 2020). The Indian rural health care system is not prepared for COVID-19 pandemic specially in the northern states due to shortage of hospital beds, doctors and medical equipment. There is a need for immediate strengthening of primary health care system in rural India (Kumar et al., 2020). The public or government health expenditure in India is the lowest among the nations across the world which is just about 1% of country's GDP. There is need for reforms like Universal Health Coverage (UHC), adequately funded public healthcare system, efficient implementation and reviewing the scheme progress (Angell et al., 2019) (Borooah, 2022). The government health expenditure has a direct and positive effect on economic growth of the country and infant mortality rate.

Government should prioritize the funding of public health care sector which would generate economic growth for the country (Kaur, 2023). There should be funding of 2.5% of GDP and at least 70% of this funding should be allocated to primary healthcare system only which should be periodically tracked. The Prime Minister Jan Arogya Yojana (PMJAY) should cover primary healthcare too along with secondary and tertiary sector (Mohan & Kumar, 2019). About 50% of the children are malnourished in the country and nearly 10 lakh children die every year out of them every year. The number of under-weight children below the age of 5-year in India are same as of Sub-Saharan Africa (Narayan et al., 2019).

Need of the Study

It is supported by the above review that the health budgets of countries in SAARC and ASEAN, of which India is a member, are lacking in addressing the requirement of actual health expenditure. The health care expenditure is found to be significant factor in improving health outcomes such as Life Expectancy, IMR and Death rates, Fertility rates as well as higher economic growth. The public healthcare expenditure by government is much effective in improving health indicators as compared to private or out-of-pocket expenditure, which in case of India, is not enough to cater the healthcare needs of citizens at free of cost. The increase in Gross State Product led to increase in personal health expenditure and a reciprocated relationship also found to be exist between these both. The primary healthcare system in India is centralised in urban areas which is found to be understaffed.

All these previous studies have highlighted upon the existing status of healthcare in India or in other developed nations. The ground realities and actual requirements of rural healthcare system in India at the village level has not been discussed in depth which is the core requirement for framing healthcare policies and programmes. The reports published by the government itself have not been analysed to exactly identify the gaps which require priority in policy formulation, reforming implementation strategies, monitoring of the performance and funding too. This reflects the need to study the healthcare developments in India through the reports of government's own published reports. This research article aims to examine the rural healthcare in India by critically analysing the two published health reports by Government of India which are the basis for the major health programmes launched by it and suggesting policy measures to be taken to address the state-specific problems in healthcare system of India.

Research Design

1. Objective of the Study

The objective of this study is to critically examine the rural healthcare development in India.

2. Time Period

The secondary data has been used from the latest reports of Rural Health Statistics 2019-20 and National Health Profile 2019. The time period it covers since 2014 till date.

3. Conceptual Background

Rural Healthcare Development: It is discussed in the context of healthcare system, expenditure pattern, coverage, infrastructure & institutions and health outcomes for households in rural areas.

4. Source of Data

Health indicators and expenditure pattern from the NSSO surveys, Human Development Reports, Indian Human Development Surveys round I and II, NCAER reports and National Health Profile 2019, Rural Health Statistics 2019-20, NFHS round 5-2022 are studied and mentioned in this paper to develop a linkage between both.

5. Results & Discussion

The paper is presented under the following sub-themes: Rural Healthcare System in India, Healthcare Expenditure Pattern, Health Coverage, Infrastructure and then Health outcomes of rural households in India.

5.1. Rural Healthcare System in India

Health is a state subject. Although the guidelines for healthcare sector are issued at the central level by the union government but the final implementation is done at the state level by the concerned state governments. India has a federal system of government and like other areas of governance and operations the healthcare sector also has been divided between union and state governments. The Indian healthcare sector has a mixture of public and private healthcare service providers and the fact is that most of the private institutions are located in in urban ranges providing secondary and tertiary healthcare services. The public healthcare in India has three tier system (Table 1) providing access based on the population norms (Chokshi et al., 2016).

Table 1: Three-tier Rural Healthcare System

Centre	Population Norms *	
	Plain Area	Hilly/Tribal/Difficult Area
Sub Centre	5000	3000
Primary Health Centre	30000	20000
Community Health Centre	120000	80000

Sub-Centre

Sub-Centre is the first level contact point between the community and a Primary Healthcare System. These are assigned with responsibilities for interpersonal communication for bringing a behavioural change in community. It serves 5,000 and 3,000 population in plain and hilly/tribal areas respectively. On March 2020, there are 1,55,404 Sub-Centres (SCs) in rural India and there is an significant increase in number of SCs particularly in the states of Gujarat, Rajasthan, Karnataka, Madhya Pradesh and Chhattisgarh from the year 2005.

PHC

Primary Health Centre (PHC) is first contact between community and the medical officer. The PHCs are entrusted with providing curative and preventive healthcare to the rural community. These are established and maintained by State government and serve to a population of 30,000 in plain areas and 20,000 in hilly or tribal areas. There are 24918 functional PHCs in rural areas of the country

CHC

Community Health Centre (CHC) acts as a referral centre for 4 PHCs and provides specialist healthcare facilities. It serves to a population of 1,20,000 and 80,000 respectively in plain and hilly/tribal areas. As on 31st March, 2020 there are 5,183 functional CHCs in rural areas.

5.2. Healthcare Expenditure Pattern

Healthcare expenditure is the critical key for reaching the target of Universal Health Coverage (UHC). The indicators of healthcare expenditure give an understanding of the health expenditure pattern, funding sources, funds allocation and efficiency of funds in achieving the health outcome targets. *(NHP, 2019)*

Indian Government spends only 1.02% of its GDP on health sector in 2015-16, in which the centre-state share is in the ratio of 69:31. The large proportion of total health expenditure is being financed by the private sources. The average OOP share is high (20-80% of all health spending) in low income countries and health needs of households are financed by selling assets or borrowing cash. Only 47 countries among all the WHO member-countries, account for 5% of private health expenditure and there is no consensus on how much a country should spend on health because it is difficult to specify adequate voluntary private spending. There are more challenges for poorer countries to not only spend more on health but also to spend more equitably (Musgrove *et al.*, 2002).

The trends in Indian public health expenditure (PHE) have been given in Table 2. The PHE as percentage of GDP is lowest in the year 2014-15 i.e. 0.98% and highest is 1.28% in the year 2017-18. The per-capita expenditure goes on increasing since the year 2015-16 but still very low if compared to health expenditure of other developed countries.

Table 2: Trends in Public Health Expenditure

Year	Public Expenditure on Health (in Rs. Crores)#	Population (in Crores)$	GDP*	Per capita Public Expenditure on Health (in Rs.)	Public Expenditure on Health as Percentage of GDP (%)
2009-10	72536	117	6477827	621	1.12
2010-11	83101	118	7784115	701	1.07
2011-12	96221	120	8736039	802	1.1
2012-13	108236	122	9951344	890	1.09
2013-14	112270	123	11272764	913	1.00
2014-15	121600.23	125	12433749	973	0.98
2015-16	140054.55	126	13764037	1112	1.02
2016-17 (RE)	178875.63	128	15253714	1397	1.17
2017-18 (BE)	213719.58	129	16751688	1657	1.28

Source: National Health Profile, 2019

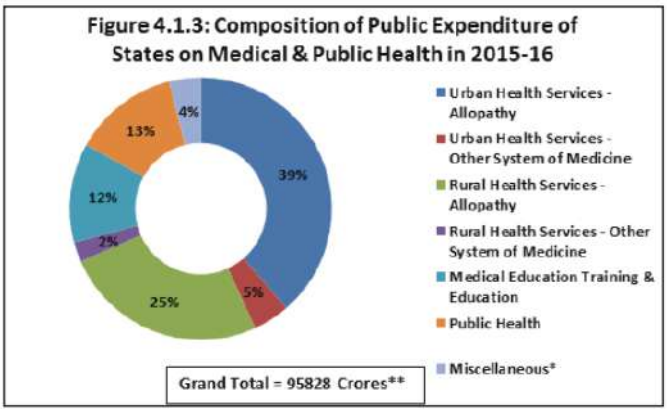
The population goes on increasing and the improvements in per capita health expenditure are significant in the given years as compared to improvements in GDP. According to the budget estimates, it is Rs. 1,657 in the year 2017-18 which has increased more than double since the year 2009-10(at current prices). In terms of constant prices, the per capita public health expenditure in the year 2017-18 is equivalent to Rs. 1011 (1657/1.6387; where 1.6387 is Index of Prices between 2009-2018) which is an increase of 62.8% in the time span of 10 years, whereas, the GDP at constant prices has increased by just 57.8%.

Rural-Urban Disparities in Health Expenditure

The Indian rural healthcare infrastructure comprises of sub-center (SHC), a primary health center (PHC) and community health centre (CHC). The provisions both quantitative and qualitative for health in rural sector are much lesser than the norms defined by World Health Organization (WHO). There is an overall shortfall in terms of infrastructure, expenditure and facilities to be provided to public and service providers. In the year 2015-16, the expenditure of states on Medical & Public Health on urban

health services is 43% (39+5) but it is 27% (25+2) for rural health services which shows a significant difference in healthcare expenditure at rural and urban level (Fig 1).

Figure 1: Composition of Public Expenditure



Source: National Health Profile, 2019

The out-of-pocket healthcare expenditure which comprises of 60%-75% of total health expenditure put 55 million Indians to below-poverty in the year 2011-12 which is much large than the population of countries like South Korea, Spain or Kenya.

In rural areas, the 67.8% households are financing their total health expenditure from the household income or savings, 24.9% from borrowings, 0.8% from sale of physical assets, 5.4% by contributions from friends and relatives and 0.7% from other sources.

These figures are 74.9%, 18.2%, 0.4%, 5.0% and 1.3% respectively for urban households (Table 3).

Table 3: Source of Financing Health Expenditure

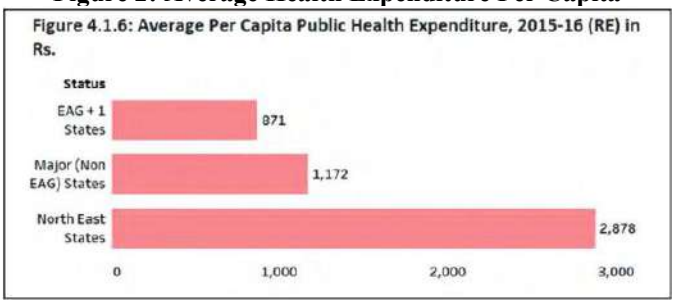
Quintile Class of UMPCE*	% of households reporting as source of finance for meeting the medical expenditure					
	Household Income/ Savings	Borrowings	Sale of Physical Assets	Contribution From Friends / Relatives	Others	All
RURAL						
1	65.6	26.8	1.1	5.3	0.5	100
2	67.1	25.8	1.4	4.8	0.5	100
3	68.1	25.3	0.6	5.1	0.5	100
4	68.8	26.0	0.4	3.8	0.8	100
5	68.1	23.1	0.9	6.9	0.7	100
All	67.8	24.9	0.8	5.4	0.7	100
URBAN						
1	68.4	21.7	0.4	6.4	2.7	100.0
2	71.8	21.9	0.4	4.5	1.1	100.0
3	74.1	20.7	0.3	3.9	0.7	100.0
4	74.9	16.1	0.3	6.9	1.6	100.0
5	80.9	13.7	0.4	3.7	1.0	100.0
All	**74.9**	**18.2**	**0.4**	**5.0**	**1.3**	**100.0**

Source: National Health Profile, 2019

Inter-State Disparities in Health Expenditure

The Average per capita health expenditure for the Empowered Action Group (EAG) states in the year 2015-16 is Rs. 871; for Non-EAG states it is Rs. 1172; for North-Eastern (NE) states it is Rs. 2878 (Fig 2).

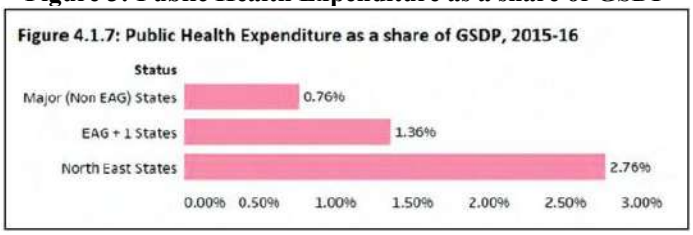
Figure 2: Average Health Expenditure Per Capita



Source: National Health Profile, 2019

In the same year, public health expenditure as a share of Gross State Domestic Product (GSDP) is 1.36% for EAG states, 0.76% for Non-EAG states and 2.76% for NE states (Fig 3).

Figure 3: Public Health Expenditure as a share of GSDP



Source: National Health Profile, 2019

Among the Non – EAG states, in the year 2015-16, Delhi is spending highest health expenditure (11.45%) when expressed *as a % of Total State Expenditure* and at the lowest (3.59%) is Haryana. Similarly, in EAG states highest expenditure is by Assam (7.09%) and lowest is by Bihar state (3.94%). Among the North-Eastern states, the highest health expenditure is of Mizoram (3.94%) and lowest is of Manipur (5.45%) (Fig 4).

Table 4: Per Capita Health Expenditure across States during 2015-16

State/UT	Total State Expenditure on Health (Rs. In Crores)1	Total State Expenditure (Rs. In Crores)2#	Health Expenditure as a % of Total State Expenditure	Population 2015-16 (in Crores)3	GSDP 2015-16 Current Prices (Rs in Crores)4	Per Capita Health Expenditure (Rs)	Health Expenditure as a % of GSDP
	(1)	(2)	(3)=(1)/(2)	(4)	(5)	(6)@=(1)/(4)	(7)=(1)/(5)
Major (Non EAG) States							
Andhra Pradesh$	5013	106638	4.70%	4.95	609934	1013	0.82%
Delhi	4183	36520	11.45%	2.10	548081	1992	0.76%
Goa	729	12010	6.07%	0.20	54275	3643	1.34%
Gujarat	7432	126821	5.86%	6.25	1025188	1189	0.72%
Haryana	3055	85037	3.59%	2.73	485184	1119	0.63%
Himachal Pradesh	1894	28373	6.67%	0.71	112852	2667	1.68%
Jammu & Kashmir	2925	49294	5.93%	1.24	119093	2359	2.46%
Karnataka	6980	138715	5.03%	6.21	1012804	1124	0.69%
Kerala	5207	88960	5.85%	3.56	557947	1463	0.93%
Maharashtra	12066	237327	5.08%	11.94	2001223	1011	0.60%
Punjab	3400	57963	5.87%	2.90	391543	1173	0.87%
Tamil Nadu	8543	171349	4.99%	6.92	1161963	1235	0.74%
Telangana	4626	96297	4.80%	3.50	567588	1322	0.82%
West Bengal	7239	135929	5.33%	9.31	n.a	778	
Major (Non EAG) States^			5.34%			1172	0.76%
EAG + 1 States**							
Assam	4992	70428	7.09%	3.23	226276	1546	2.21%
Bihar	5067	128706	3.94%	10.33	381501	491	1.33%
Chhattisgarh	3480	65898	5.28%	2.57	260776	1354	1.33%
Jharkhand	2891	59995	4.82%	3.34	231294	866	1.25%
Madhya Pradesh	5535	132647	4.17%	7.73	530443	716	1.04%
Odisha	3921	81741	4.80%	4.23	330874	927	1.19%
Rajasthan	9858	175589	5.61%	7.25	683758	1360	1.44%
Uttar Pradesh	15872	312811	5.07%	21.64	1119862	733	1.42%
Uttarakhand	1871	30799	6.07%	1.06	175772	1765	1.06%
EAG + 1 States			**5.05%**			**871**	**1.36%**
North East States							
Arunachal Pradesh	673	11740	5.73%	0.13	20433	5177	3.29%
Manipur	536	9841	5.45%	0.26	19233	2061	2.79%
Meghalaya	623	9253	6.73%	0.28	25967	2223	2.40%
Mizoram	645	7731	8.34%	0.11	15339	5862	4.20%
Nagaland	588	10156	5.79%	0.24	19816	2450	2.97%
Sikkim	308	5431	5.66%	0.06	16954	5126	1.81%
Tripura	829	12537	6.62%	0.38	34368	2183	2.41%
North East States			**6.30%**			**2878**	**2.76%**
Union Territories (UT)***							
Andaman & Nicobar	310	n.a		0.05	5932	6201	5.23%
Chandigarh	378	n.a		0.17	28643	2224	1.32%
Dadra & Nagar Haveli	98	n.a		0.04	n.a	2451	
Daman & Diu	62	n.a		0.03	n.a	2073	
Lakshadweep	60	n.a		0.01	n.a	6018	
Puducherry	534	6062	8.82%	0.16	25060	3340	2.13%
Union Territories (UT)						**3137**	**2.42%**

Source: National Health Profile, 2019

When expressed *as a % of GSDP,* in the year 2015-16, the highest share (2.46%) of GSDP on health expenditure has been occurred by Jammu & Kashmir and lowest share (0.60%) is of Maharashtra among the Non-EAG states. On the similar lines, among the EAG states, highest share of GSDP (2.21%) on health expenditure is of Assam and lowest (1.04%) is of Madhya Pradesh. Among the NE states, the highest share is of Mizoram (4.20%) and lowest share is of Sikkim (1.81%). The same data about Union Territories is missing in the reports.

5.3. Health Coverage in Rural India

Table 5: Rural Health Infrastructure: Norms & Actual Status

Indicator	National Norms		Status (2020)	
Rural Population (mid-year population 2020, as on 1st July 2020) covered by a:	General	Tribal/Hilly/Desert	Rural Area	Tribal/ Hilly/Desert
Sub Centre	5000	3000	5729	3381
Primary Health Centre (PHC)	30000	20000	35730	23930
Community Health Centre (CHC)	120000	80000	171779	97178
Number of Sub Centres per PHC	6		6	7
Number of PHCs per CHC	4		5	4

In the primary healthcare system, as on 1st July 2020, a sub-centre has served average 5,729 rural population, PHC covered a rural population of 35,730 and a CHC catered to 1,71,779 rural population. In all three cases, the population covered is above the norms set for these (Table 5).

The average rural area covered (in sq.km) is 19.87 for a Sub-Centre, 123.93 for a PHC and 595.82 for a CHC (Table 6).

Table 6: Average Rural Area Covered (in Sq.km)

Sub Centre	19.87
Primary Health Centre (PHC)	123.93
Community Health Centre (CHC)	595.82

The average number of villages covered is 4, 27 and 128 for Sub-Centre, PHC and CHC respectively (Table 7).

Table 7: Average No. of Villages Covered

Sub Centre	4
Primary Health Centre (PHC)	27
Community Health Centre (CHC)	128

The average rural population covered by a Sub-Centre (SC) is highest in Bihar i.e., 11,763 and lowest in the Mizoram state i.e., 1,768. The average rural population covered by a Primary Health Centre (PHC) is highest in Jharkhand i.e., 11,763 and lowest in the Goa i.e., 7,655. Along with these, the average rural population covered by a Community Health Centre (CHC) is highest in Bihar i.e., 18,80,474 and lowest in the Arunachal Pradesh i.e., 19,017 (Table 8).

Table 8: State-wise Average Rural Population Covered by SCs, PHCs and CHCs

AVERAGE RURAL POPULATION COVERED by SCs, PHCs and CHCs				
		(As on 31st March, 2020)		
S. No.	State/UT	Average Rural Population [mid-year population as on 1st July 2020] covered by a		
		Sub Centre	PHC	CHC
1	Andhra Pradesh	4,606	29,996	2,42,950
2	Arunachal Pradesh	3,205	9,588	19,017
3	Assam	6,330	31,175	1,55,221
4	Bihar	11,763	62,977	18,80,474
5	Chhattisgarh	4,142	27,218	1,26,806
6	Goa	1,931	7,655	70,167
7	Gujarat	3,971	24,631	1,04,540
8	Haryana	6,639	45,127	1,47,237
9	Himachal Pradesh	3,159	11,716	77,741
10	Jharkhand	7,358	97,296	1,65,573
11	Karnataka	4,116	17,378	2,00,079
12	Kerala	1,992	13,746	51,076
13	Madhya Pradesh	5,840	49,807	1,93,262
14	Maharashtra	6,063	35,295	2,32,212
15	Manipur	5,132	25,235	1,26,176
16	Meghalaya	5,893	21,790	92,607
17	Mizoram	1,768	9,649	61,111
18	Nagaland	3,197	9,715	60,143
19	Odisha	5,551	28,822	98,469
20	Punjab	6,050	41,799	1,24,811
21	Rajasthan	4,302	27,691	1,05,814
22	Sikkim	2,578	15,792	1,89,500
23	Tamil Nadu	4,153	25,480	93,979
24	Telangana	4,300	32,077	2,40,012
25	Tripura	2,669	24,075	1,17,091
26	Uttarakhand	4,020	28,767	1,32,018
27	Uttar Pradesh	8,413	60,696	2,45,857
28	West Bengal	6,069	68,843	1,80,615
29	Andaman & Nicobar Islands	1,847	10,409	57,250
30	Chandigarh	N App	N App	N App
31	Dadra & Nagar Haveli and Daman & Diu	2,447	23,000	57,500
32	Delhi	12,333	29,600	N App
33	Jammu & Kashmir	3,788	10,138	1,21,519
34	Ladakh	882	6,563	30,000
35	Lakshadweep	273	750	1,000
36	Puducherry	8,830	19,500	1,56,000
	All India	**5,729**	**35,730**	**1,71,779**

Source: Rural Health Statistics, 2019-2020

5.4. Status of Health Outcomes of Rural Households

Rural Area in India

In India, the highest rural area (sq.km.) is of Himachal Pradesh (99.51%) followed by the states of Sikkim (99.46%), Manipur (99.20%), Meghalaya (98.74%), Nagaland (98.53%), Assam (98.39%) and Uttrakhand (98.31%). On the lowest side of the rural area, there is state of Goa (78.42%) followed by Kerala (80.44%), Tamil Nadu (89.52%) and West Bengal (94.23%) (Table 9).

Table 9: State-wise Percentage of Rural Population

STATE/UT-WISE AREA, DISTRICTS AND VILLAGES IN INDIA								
S. No.	State/UT	Area [Sq. Km.]					Number of Districts	Number of Villages
		Tribal**	Rural	Urban	Total	Rural %		
1	Andhra Pradesh*	14132	158856.00	4119.00	162975.00	97.47	13	17950
2	Arunachal Pradesh	NA	NA	NA	83743.00	NA	20	5545
3	Assam	18549.42	77178.12	1259.88	78438.00	98.39	27	27927
4	Bihar	NA	91838.28	2324.72	94163.00	97.53	38	45413
5	Chhattisgarh	82315.23	131810.30	3381.70	135192.00	97.50	27	20618
6	Goa	163	2903.14	798.86	3702.00	78.42	2	410
7	Gujarat	35284.32	188840.46	7403.54	196244.00	96.23	33	19034
8	Haryana	NA	42235.92	1976.08	44212.00	95.53	22	7652
9	Himachal Pradesh	23695.00	55402.18	270.82	55673.00	99.51	12	21204
10	Jharkhand	40795.16	77467.12	2248.88	79716.00	97.18	24	32712
11	Karnataka	20662.00	185783.46	6007.54	191791.00	96.87	30	34334
12	Kerala	NA	31253.20	7598.80	38852.00	80.44	14	1664
13	Madhya Pradesh	93000.00	300505.59	7746.41	308252.00	97.49	51	55910
14	Maharashtra	50757.00	298628.75	9084.25	307713.00	97.05	35	44345
15	Manipur	NA	22147.50	179.50	22327.00	99.20	9	3932
16	Meghalaya	NA	22146.11	282.89	22429.00	98.74	11	6983
17	Mizoram	21081.00	20494.00	587.00	21081.00	97.22	9	864
18	Nagaland	NA	16335.52	243.48	16579.00	98.53	11	1626
19	Odisha	4785.36	152355.34	3351.66	155707.00	97.85	30	52141
20	Punjab	NA	47847.40	2514.60	50362.00	4.99	22	12968
21	Rajasthan	19770.15	335606.04	6632.96	342239.00	98.06	34	46737
22	Sikkim	4520.00	7057.75	38.25	7096.00	99.46	4	454
23	Tamil Nadu	2538.00	116427.97	13632.03	130060.00	89.52	32	18478
24	Telangana*	16156.00	94949.00	3735.00	98684.00	96.22	31	11227
25	Tripura	7132.56	10094.12	391.88	10486.00	96.26	8	898
26	Uttarakhand	NA	52581.08	901.92	53483.00	98.31	13	17053
27	Uttar Pradesh	NA	233365.71	7562.29	240928.00	96.86	75	107256
28	West Bengal	32911.31	83632.59	5119.41	88752.00	94.23	23	41002
29	Andaman & Nicobar Islands	1841	8211.08	37.92	8249.00	99.54	3	560
30	Chandigarh	NA	0.00	114.00	114.00	0.00	1	0
31	D & N Haveli and Daman & Diu	306	501.68	100.32	602.00	83.34	3	101
32	Delhi	NA	326.44	1156.56	1483.00	22.01	11	222
33	Jammu & Kashmir	NA	161844.10	1245.90	163090.00	99.24	20	6854
34	Ladakh	59146.00	59146.00	0	59146.00	100	2	243
35	Lakshadweep	0	8.05	21.95	30.00	26.83	1	27
36	Puducherry	0	335.44	154.56	490.00	68.46	4	125
	All India	**549541**	**3088115**	**102225**	**3274083**	**94.32**	**705**	**664469**

Source: Rural Health Statistics, 2019-2020

Rural Population Below-Poverty Line

According to Tendulkar Methodology, 21.9 % of total population of country is below poverty line (BPL). This ratio is highest for Chhattisgarh i.e., 40% approximately and lowest is for Goa, 5.1%. The states like Chhattisgarh, Arunachal Pradesh, Bihar, Jharkhand, Madhya Pradesh, Manipur, Odisha and Uttar Pradesh have high BPL ratio than the national one. The highest BPL rural population is in Chattisgarh (44.6%) and lowest is in Goa (6.8%). The overall BPL ratio for rural population is 25.7% and states like Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Manipur, Mizoram, Odisha and Uttar Pradesh have higher BPL rural population than the national rural average (Table 10).

Table 10: State-wise Below Poverty Line Population

(Tendulkar Methodology)							
		Rural		Urban		Total	
S. No.	State/UT	Percentage of Persons	No. of Persons (lakhs)	Percentage of Persons	No. of Persons (lakhs)	Percentage of Persons	No. of Persons (lakhs)
1	Andhra Pradesh	11.0	61.8	5.8	17.0	9.2	78.8
2	Arunachal Pradesh	38.9	4.2	20.3	0.7	34.7	4.9
3	Assam	33.9	92.1	20.5	9.2	32.0	101.3
4	Bihar	34.1	320.4	31.2	37.8	33.7	358.2
5	Chhattisgarh	44.6	88.9	24.8	15.2	39.9	104.1
6	Goa	6.8	0.4	4.1	0.4	5.1	0.8
7	Gujarat	21.5	75.4	10.1	26.9	16.6	102.2
8	Haryana	11.6	19.4	10.3	9.4	11.2	28.8
9	Himachal Pradesh	8.5	5.3	4.3	0.3	8.1	5.6
10	Jammu & Kashmir	11.5	10.7	7.2	2.5	10.3	13.3
11	Jharkhand	40.8	104.1	24.8	20.2	37.0	124.3
12	Karnataka	24.5	92.8	15.3	37.0	20.9	129.8
13	Kerala	9.1	15.5	5.0	8.5	7.1	23.9
14	Madhya Pradesh	35.7	191.0	21.0	43.1	31.6	234.1
15	Maharashtra	24.2	150.6	9.1	47.4	17.4	197.9
16	Manipur	38.8	7.4	32.6	2.8	36.9	10.2
17	Meghalaya	12.5	3.0	9.3	0.6	11.9	3.6
18	Mizoram	35.4	1.9	6.4	0.4	20.4	2.3
19	Nagaland	19.9	2.8	16.5	1.0	18.9	3.8
20	Odisha	35.7	126.1	17.3	12.4	32.6	138.5
21	Punjab	7.7	13.4	9.2	9.8	8.3	23.2
22	Rajasthan	16.1	84.2	10.7	18.7	14.7	102.9
23	Sikkim	9.9	0.4	3.7	0.1	8.2	0.5
24	Tamil Nadu	15.8	59.2	6.5	23.4	11.3	82.6
25	Tripura	16.5	4.5	7.4	0.8	14.0	5.2
26	Uttar Pradesh	30.4	479.4	26.1	118.8	29.4	598.2
27	Uttrakhand	11.6	8.2	10.5	3.4	11.3	11.6
28	West Bengal	22.5	141.1	14.7	43.8	20.0	185.0
29	A & N Islands	1.6	0.0	0.0	0.0	1.0	0.0
30	Chandigarh	1.6	0.0	22.3	2.3	21.8	2.3
31	Dadar & Nagar Haveli	62.6	1.2	15.4	0.3	39.3	1.4
32	Daman & Diu	0.0	0.0	12.6	0.3	9.9	0.3
33	Delhi	12.9	0.5	9.8	16.5	9.9	17.0
34	Lakshadweep	0.0	0.0	3.4	0.0	2.8	0.0
35	Puducherry	17.1	0.7	6.3	0.6	9.7	1.2
	INDIA	**25.7**	**2166.6**	**13.7**	**531.2**	**21.9**	**2697.8**

Source: National Health Profile, 2019

Birth Rate

The birth rate at national level is 20 per 1,000 population. It is 21.6 for rural and 16.7 for urban population. In case of rural India, the states like Assam, Bihar, Chhattisgarh, Haryana, Jharkhand, Madhya Pradesh, Meghalaya, Rajasthan and Uttar Pradesh have higher birth rate than the national average. The lowest birth rate for rural population is 12 that is of Goa and highest birth rate is 26.8, in Bihar (Table 11).

Death Rate

The death rate is 6.2 per 1,000 population of the country. For the rural proportion the rate is 6.7 and 5.1 for urban population. The states like Andhra Pradesh, Chhattisgarh, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Odisha, Punjab, Tamil Nadu, Telangana and Uttar Pradesh have high death rates than the national average. The highest death rate for rural population is 8.6, in Chhattisgarh and lowest is 4.2 shared by two states, Manipur and Nagaland (Table 11).

Table 11: Birth Rate & Death Rate

STATE WISE ESTIMATES OF BIRTH RATE AND DEATH RATE - 2018							
S. No.	State/UT	Birth Rate			Death Rate		
		Total	Rural	Urban	Total	Rural	Urban
1	Andhra Pradesh	16.0	16.4	15.3	6.7	7.4	5.0
2	Arunachal Pradesh	17.9	18.4	15.4	6.0	6.2	4.7
3	Assam	21.1	22.2	14.6	6.4	6.6	5.1
4	Bihar	26.2	26.8	21.9	5.8	5.9	5.1
5	Chhattisgarh	22.5	24.0	17.8	8.0	8.6	6.3
6	Goa	12.4	12.0	12.7	5.9	7.0	5.1
7	Gujarat	19.7	21.6	17.4	5.9	6.3	5.3
8	Haryana	20.3	21.7	18.0	5.9	6.6	4.9
9	Himachal Pradesh	15.7	16.2	10.3	6.9	7.1	4.8
10	Jammu & Kashmir and Ladakh	15.4	17.0	11.7	4.9	5.1	4.2
11	Jharkhand	22.6	24.0	18.1	5.4	5.7	4.5
12	Karnataka	17.2	18.1	15.9	6.3	7.2	4.8
13	Kerala	13.9	13.8	14.0	6.9	7.1	6.7
14	Madhya Pradesh	24.6	26.6	19.1	6.7	7.1	5.5
15	Maharashtra	15.6	15.9	15.2	5.5	6.3	4.5
16	Manipur	14.3	14.5	13.9	4.5	4.2	5.0
17	Meghalaya	22.1	24.0	13.6	5.8	6.1	4.5
18	Mizoram	14.8	17.5	12.1	4.1	4.0	4.3
19	Nagaland	12.9	13.7	12.2	3.5	4.2	2.7
20	Odisha	18.2	19.2	13.4	7.3	7.6	5.9
21	Punjab	14.8	15.3	14.0	6.6	7.7	5.1
22	Rajasthan	24.0	24.9	21.3	5.9	6.1	5.0
23	Sikkim	16.3	15.2	17.9	4.5	5.2	3.5
24	Tamil Nadu	14.7	14.8	14.6	6.5	7.8	5.3
25	Telangana	16.9	17.2	16.5	6.3	7.5	4.5
26	Tripura	13.0	13.7	11.2	5.5	5.0	6.5
27	Uttarakhand	16.7	16.8	16.4	5.2	6.5	5.3
28	Uttar Pradesh	25.6	26.6	22.5	6.6	7.0	5.3
29	West Bengal	15.0	16.5	11.5	5.6	5.6	5.7
30	Andaman & Nicobar Islands	11.2	12.0	10.3	5.3	6.4	4.0
31	Chandigarh	13.3	18.7	13.2	4.3	3.4	4.3
32	Dadra & Nagar Haveli	22.9	20.1	25.1	3.8	4.6	3.3
33	Daman & Diu	19.6	15.8	20.4	4.5	5.5	4.3
34	Delhi	14.7	16.2	14.7	3.3	3.7	3.3
35	Lakshadweep	15.3	21.6	13.7	5.6	7.1	5.3
36	Puducherry	13.7	13.6	13.7	6.9	7.9	6.6
	All India	**20.0**	**21.6**	**16.7**	**6.2**	**6.7**	**5.1**

Source: Rural Health Statistics, 2019-2020

Infant Mortality Rate

The Infant Mortality rate (IMR) of India is 32 per 1,00,000 live births and for rural population it is 36 and 23 for urban. The highest rural IMR is in Madhya Pradesh i.e., 52 and lowest is in Nagaland i.e., 5. The states like Uttar Pradesh, Rajasthan, Odisha, Madhya Pradesh, Chhattisgarh, Assam and Arunachal Pradesh have high IMR than the national rural average (Table 12).

Table 12: Infant Mortality Rate in Rural & Urban India

STATE WISE INFANT MORTALITY RATES - 2018				
S. No.	State/UT	Infant Mortality Rate [IMR]		
		Total	Rural	Urban
1	Andhra Pradesh	29	33	21
2	Arunachal Pradesh	37	38	28
3	Assam	41	44	20
4	Bihar	32	32	30
5	Chhattisgarh	41	42	35
6	Goa	7	8	7
7	Gujarat	28	33	20
8	Haryana	30	33	25
9	Himachal Pradesh	19	20	14
10	Jammu & Kashmir and Ladakh	22	23	20
11	Jharkhand	30	31	26
12	Karnataka	23	25	20
13	Kerala	7	9	5
14	Madhya Pradesh	48	52	36
15	Maharashtra	19	24	14
16	Manipur	11	12	9
17	Meghalaya	33	35	17
18	Mizoram	5	7	2
19	Nagaland	4	5	3
20	Odisha	40	41	31
21	Punjab	20	21	19
22	Rajasthan	37	41	26
23	Sikkim	7	8	6
24	Tamil Nadu	15	18	12
25	Telangana	27	30	21
26	Tripura	27	26	31
27	Uttarakhand	31	31	29
28	Uttar Pradesh	43	46	35
29	West Bengal	22	22	20
30	Andaman & Nicobar Islands	9	12	3
31	Chandigarh	13	4	13
32	Dadra & Nagar Haveli	13	19	9
33	Daman & Diu	16	19	16
34	Delhi	13	8	13
35	Lakshadweep	14	14	14
36	Puducherry	11	9	12
	All India	**32**	**36**	**23**

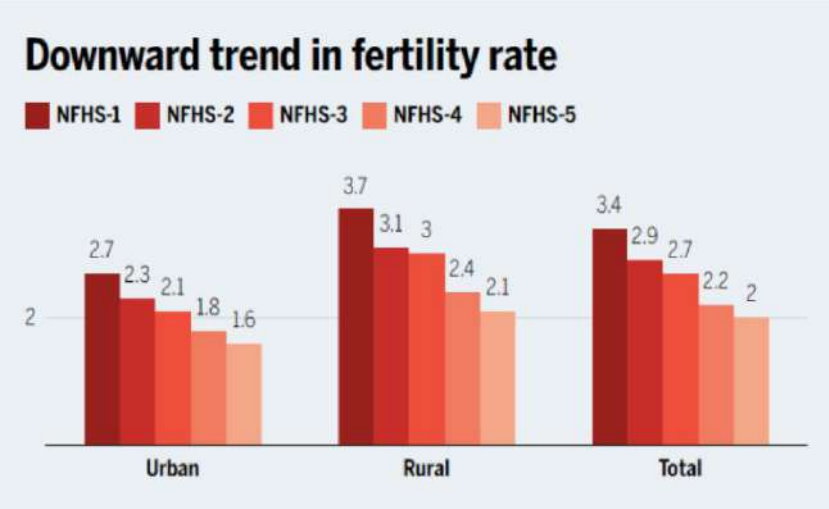
Source: Rural Health Statistics, 2019-2020

Total Fertility Rate

The Total Fertility Rate (TFR) is average number of children that a woman will have during her entire lifespan. It is measured by calculating age-specific fertility rates over five-year intervals divided by 1,000. The replacement level TFR is 2.1 to replace the previous generation including parents. The TFR in India is 2.0 (down from 2.2 in 2015-16) according to latest National Family Health Survey (NFHS)-5 which is first time below the replacement level fertility rate.

For rural areas, TFR is 2.1, means still it is above Replacement level fertility rate and also higher than the Urban TFR which is 1.6 (Fig 4).

Figure 4: TFR in India



Source: NFHS-5, 2019-21

5.5. Healthcare Infrastructure & Human Resource

The Healthcare system in India is functioning as 3-tier system i.e., Primary, Secondary and Tertiary Healthcare. The actual population coverage by Sub-Centres, PHCs and CHCs is higher than the specified norms. It is specified that there is 18% shortfall in SHCs, 22 in PHCs and 30% in CHCs and the worse situation is that these are inaccessible too and people from the rural areas have to travel to urban cities or avail the services of costly private healthcare practitioners.

Hospitals and Bed Capacity

The number of government hospitals is 25,778 out of which 21,403 are in rural areas and remaining 4,375 in urban areas. Out of total rural government hospitals, the highest number (4,442) is in Uttar Pradesh and lowest (18) is in Goa. The six states, Goa, Jammu & Kashmir, Manipur, Mizoram, Nagaland and Sikkim have less than 100 government hospitals in rural areas.

The number of beds for in-patient hospitalization is 7,13,986 in country out of which 2,65,275 beds are in rural government hospitals of the country. The lowest number of beds in government hospitals of rural areas is of Sikkim state i.e., 260 and highest is in Tamil Nadu i.e., 40,179. The states like Manipur, Mizoram, Nagaland and Sikkim have less than 1,000 beds in their government hospitals of rural areas (Table 13).

Table 13: State wise number of hospitals and bed capacity

S. No.	State/UT/Division	Rural Hospitals (Govt.)		Urban Hospitals (Govt.)		Total Hospitals (Govt.)		Reference Period
		No.	Beds	No.	Beds	No.	Beds	
	India	21403	265275	4375	448711	25778	713986	
1	Andhra Pradesh	193	6480	65	16658	258	23138	01.01.2017
2	Arunachal Pradesh*	208	2136	10	268	218	2404	31.12.2018
3	Assam *	1176	10944	50	6198	1226	17142	31.12.2017
4	Bihar	1032	5510	115	6154	1147	11664	31.12.2018
5	Chhattisgarh	169	5070	45	4342	214	9412	01.01.2016
6	Goa*	18	1397	25	1615	43	3012	31.12.2018
7	Gujarat	363	11688	75	8484	438	20172	31.12.2018
8	Haryana*	609	6690	59	4550	668	11240	31.12.2016
9	Himachal Pradesh*	705	5665	96	6734	801	12399	31.12.2017
10	Jammu & Kashmir	35	1221	108	6070	143	7291	31.12.2018

11	Jharkhand	519	5842	36	4942	555	10784	31.12.2015
12	Karnataka*	2467	21176	375	48545	2842	69721	31.12.2018
13	Kerala	981	16865	299	21139	1280	38004	01.01.2017
14	Madhya Pradesh	330	9900	135	21206	465	31106	01.01.2018
15	Maharashtra	273	12398	438	39048	711	51446	31.12.2015
16	Manipur	23	730	7	697	30	1427	01.01.2014
17	Meghalaya*	143	1970	14	2487	157	4457	31.12.2017
18	Mizoram*	56	604	34	1393	90	1997	31.12.2017
19	Nagaland	21	630	15	1250	36	1880	31.12.2015
20	Odisha*	1655	6339	151	12180	1806	18519	31.12.2018
21	Punjab*	510	5805	172	12128	682	17933	31.12.2017
22	Rajasthan *	2090	12540	760	34514	2850	47054	31.12.2018
23	Sikkim*	24	260	9	1300	33	1560	31.12.2017
24	Tamil Nadu*	692	40179	525	37353	1217	77532	31.12.2017
25	Telangana*	802	7668	61	13315	863	20983	31.12.2017
26	Tripura*	130	1982	26	2447	156	4429	31.12.2018
27	Uttar Pradesh*	4442	39104	193	37156	4635	76260	31.12.2017
28	Uttarakhand	410	3284	50	5228	460	8512	31.12.2015
29	West Bengal	1272	19684	294	58882	1566	78566	01.01.2015
30	A&N Island	27	575	3	500	30	1075	31.12.2016
31	Chandigarh	0	0	9	3756	9	3756	31.12.2018
32	D&N Haveli*	11	303	1	316	12	619	31.12.2018
33	Daman & Diu	5	240	0	0	5	240	31.12.2015
34	Delhi	0	0	109	24383	109	24383	01.01.2015
35	Lakshadweep	9	300	0	0	9	300	01.01.2016
36	Puducherry	3	96	11	3473	14	3569	01.01.2016

Source: National Health Profile, 2019

Shortfall in required SCs, PHCs and CHCs

The rural healthcare system comprises of Sub Centres, PHCs and CHCs. There is shortfall of Sub Centres in the 14 states i.e., Assam, Bihar, Chhattisgarh, Haryana, Jharkhand, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Odisha, Punjab, Uttar Pradesh and West Bengal. The highest shortfall (58%) is in Bihar and lowest (3%) is in Chhattisgarh and Nagaland. The shortfall in infrastructure of PHCs is highest in Jharkhand and lowest is in Andhra Pradesh. The states having shortfall are Andhra Pradesh, Assam, Bihar, Chhattisgarh, Haryana, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Punjab, Telangana, Uttar Pradesh and West Bengal.

CHCs have highest infrastructure shortfall among all three health institutions i.e., 94% in Bihar. The lowest shortfall of infrastructure in CHCs is registered by Punjab i.e., 3% only. The CHCs of five states, Andhra Pradesh, Bihar, Maharashtra, Telangana and Uttar Pradesh have more than 50% shortfall (Table 14).

Table 14: Shortfall in Health Facilities

SHORTFALL IN HEALTH FACILITIES AS PER MID YEAR POPULATION (as on 1st July 2020) IN INDIA IN RURAL AREAS															
S.No.	State/ UT	Estimated mid-year Population for Rural areas	Estimated mid-year Population for Tribal areas	Sub Centres				PHCs				CHCs			
				R	P	S	% Shortfall	R	P	S	% Shortfall	R	P	S	% Shortfall
1	Andhra Pradesh	34256000	2258788	7152	7437	*	*	1179	1142	37	3	294	141	153	52
2	Arunachal Pradesh	1141000	845133	340	356	*	*	52	119	*	*	13	60	*	*
3	Assam	29492000	4032528	6436	4659	1777	28	1050	946	104	10	262	190	72	27
4	Bihar	107187000	1475163	21634	9112	12522	58	3597	1702	1895	53	899	57	842	94
5	Chhattisgarh	21557000	7949854	5371	5205	166	3	851	792	59	7	212	170	42	20
6	Goa	421000	66873	93	218	*	*	15	55	*	*	3	6	*	*
7	Gujarat	36380000	8411532	8397	9162	*	*	1352	1477	*	*	338	348	*	*
8	Haryana	17374000	0	3474	2617	857	25	579	385	194	34	144	118	26	18
9	Himachal Pradesh	6608000	400577	1375	2092	*	*	226	564	*	*	56	85	*	*
10	Jharkhand	28313000	8891251	6848	3848	3000	44	1091	291	800	73	272	171	101	37
11	Karnataka	37815000	3461432	8024	9188	*	*	1318	2176	*	*	329	189	140	43
12	Kerala	10777000	267151	2191	5410	*	*	363	784	*	*	90	211	*	*
13	Madhya Pradesh	59718000	16222003	14106	10226	3880	28	2260	1199	1061	47	565	309	256	45
14	Maharashtra	64555000	9444840	14170	10647	3523	25	2309	1829	480	21	577	278	299	52
15	Manipur	2145000	839400	540	418	122	23	85	85	0	0	21	17	4	19
16	Meghalaya	2593000	2336538	830	440	390	47	125	119	6	5	31	28	3	10
17	Mizoram	550000	531192	180	311	*	*	27	57	*	*	6	9	*	*
18	Nagaland	1263000	1172642	408	395	13	3	61	130	*	*	15	21	*	*
19	Odisha	37123000	9548607	8697	6688	2009	23	1396	1288	108	8	349	377	*	*
20	Punjab	17848000	0	3569	2950	619	17	594	427	167	28	148	143	5	3
21	Rajasthan	57986000	9787883	12902	13480	*	*	2095	2094	1	*	523	548	*	*
22	Sikkim	379000	138618	94	147	*	*	14	24	*	*	3	2	1	33
23	Tamil Nadu	36182000	641701	7321	8713	*	*	1216	1420	*	*	304	385	*	*
24	Telangana	20401000	2777773	4450	4744	*	*	726	636	90	12	181	85	96	53
25	Tripura	2576000	1061341	656	965	*	*	103	107	*	*	25	22	3	12
26	Uttarakhand	7393000	278218	1515	1839	*	*	251	257	*	*	62	56	6	*
27	Uttar Pradesh	174804000	1160439	35115	20778	14337	41	5846	2880	2966	51	1461	711	750	51
28	West Bengal	62854000	4907496	13225	10357	2868	22	2176	913	1263	58	544	348	196	36
29	A & N Islands	229000	25803	49	124	*	*	8	22	*	*	2	4	*	*
30	Chandigarh	4000	0	N App	N App	N App	N App	N App	N App	N App	N App	N App	N App	N App	N App
31	D & N Haveli and Daman & Diu	230000	149753	65	94	*	*	10	10	0	0	2	4	*	*
32	Delhi	148000	0	29	12	17	59	4	5	*	*	1	0	1	100
33	Jammu & Kashmir	9357000	1281909	2042	2470	*	*	333	923	*	*	83	77	6	7
34	Ladakh	210000	210000	70	238	*	*	10	32	*	*	2	7	*	*
35	Lakshadweep	3000	2856	0	11	*	*	0	4	*	*	0	3	*	*
36	Puducherry	468000	0	93	53	40	43	15	24	*	*	3	3	0	0
	All India/ Total	**890329000**	**100579297**	**191461**	**155404**	**46140**	**24**	**31337**	**24918**	**9231**	**29**	**7820**	**5183**	**3002**	**38**

Source: Rural Health Statistics, 2019-2020

Separate Public-Utilities for Males and Females

In terms of availability of separate toilets in Sub Centres across the country, the highest number of sub-centres with separate toilets for male and female is in Maharashtra (68.27%) followed by Haryana (64.5%), Madhya Pradesh (58.06%), Gujarat (53.7%) and Tripura (51%). Telangana has not a single sub centre with separate toilets. Kerala has just 0.06% sub centres with this infrastructure availability followed by Meghalaya (10.9%), Nagaland (13.16%), Goa (16%) and Uttrakhand (17.5%).

In case of Primary Health Centres (PHCs), Kerala and Telangana have 100% availability of separate toilets followed by Andhra Pradesh (97.8%), Haryana (95.58%), Tripura (95.32%), Maharashtra (93.71%) and Tamil Nadu (91.19%). The least number of PHCs having separate toilets is in Bihar (33.01%) followed by Arunachal Pradesh (36.13%), Nagaland (38.46%), Goa (40%), and Himachal Pradesh (46.48%).

All the Community Health Centres (CHCs) in the states of Andhra Pradesh, Bihar, Goa, Jharkhand, Kerala, Maharashtra, Tamil Nadu, Telangana and Tripura have separate toilets for male and female. After these, the highest number of CHCs having separate toilets are in Assam (99.47%), Madhya Pradesh (98.38%), Rajasthan (98.35%), Odisha (97.87%), Haryana (97.45%) and Karnataka (95.76%). All the remaining states have more than 50% CHCs having such facility (Table 15).

Table 15: Infrastructure with Separate male and female toilets

Availability of Toilets in SCs, PHCs and CHCs (As on 31st March 2020) in Rural Areas							
S.No.	State/UT	Sub Centre		Primary Health Centre		Comminity Health Centre	
		No. of Sub Centre Functioning	With Separate Toilet for Male & Female Patients	No. of PHCs Functioning	With Separate Toilet for Male & Female Patients	No. of CHCs Functioning	With Separate Toilet for Male & Female Patients
1	Andhra Pradesh	7437	3137	1142	1117	141	141
2	Arunachal Pradesh	356	61	119	43	60	33
3	Assam	4659	1405	946	824	190	189
4	Bihar	9112	1651	1702	562	57	57
5	Chhattisgarh	5205	2276	792	668	170	157
6	Goa	218	35	55	22	6	6
7	Gujarat	9162	4928	1477	1232	348	290
8	Haryana	2617	1688	385	368	118	115
9	Himachal Pradesh	2092	0	564	262	85	64
10	Jharkhand	3848	1724	291	213	171	171
11	Karnataka	9188	3039	2176	1887	189	181
12	Kerala	5410	3	784	784	211	211
13	Madhya Pradesh	10226	5938	1199	1092	309	304
14	Maharashtra	10647	7269	1829	1714	278	278
15	Manipur	418	92	85	59	17	14
16	Meghalaya	440	48	119	80	28	25
17	Mizoram	311	124	57	51	9	8
18	Nagaland	395	52	130	50	21	15
19	Odisha	6688	2918	1288	838	377	369
20	Punjab	2950	1183	427	289	143	129
21	Rajasthan	13480	4640	2094	1637	548	539
22	Sikkim	147	59	24	19	2	1
23	Tamil Nadu	8713	2888	1420	1295	385	385
24	Telangana	4744	0	636	636	85	85
25	Tripura	965	493	107	102	22	22
26	Uttarakhand	1839	322	257	200	56	51
27	Uttar Pradesh	20778	8120	2880	2296	711	638
28	West Bengal	10357	3809	913	627	348	317
29	Andaman & Nicobar Islands	124	26	22	22	4	4
30	Chandigarh	0	N App	0	N App	0	N App
31	Dadra & Nagar Haveli and Daman & Diu	94	35	10	10	4	4
32	Delhi	12	3	5	3	0	N App
33	Jammu & Kashmir	2470	584	923	565	77	67
34	Ladakh	238	21	32	4	7	1
35	Lakshadweep	11	9	4	3	3	3
36	Puducherry	53	53	24	24	3	3
	All India/Total	**155404**	**58633**	**24918**	**19598**	**5183**	**4877**

Source: Rural Health Statistics, 2019-2020

Discussion & Findings

The public health expenditure as percentage of GDP is very low in India as compared to other developed as well as Asian counterparts of India. As a consequence of low public health expenditure by government in country, the OOP expenditure is very high which has put 55 million Indians to BPL category. Almost 25% rural households in country are financing their OOP health expenditure from borrowings, which in turn put them under debt burden. The states like Assam, Mizoram, J&K and Delhi are spending highest on their health sector among all other, while the states like Haryana, Bihar, Manipur, Maharashtra, Madhya Pradesh and Sikkim are on the lowest side.

The Sub Centre, PHCs and CHCs are over- burdened, covering population above the norms set for these all. The highest rural population covered by the health facilities is in Bihar and Jharkhand and lowest is in Mizoram, Goa and Arunachal Pradesh. Out of it, the highest rural population which is below poverty line is in Chhattisgarh followed by Jharkhand, Arunachal Pradesh, Manipur, Madhya Pradesh, Odisha, Mizoram and Bihar.

In terms of health outcomes, the states like Goa, Nagaland, Tripura, Kerala, Manipur, Tamil Nadu and Maharashtra have lowest birth rates. Chhattisgarh, Tamil Nadu, Punjab, Odisha, Telangana, Andhra Pradesh and Karnataka have highest death rates among all other states. The states like Madhya Pradesh, Uttar Pradesh, Assam, Chhatisgarh, Odisha and Rajasthan have highest Infant Mortality. The rural TFR is higher than replacement level fertility rate as well as urban TFR.

In terms of health infrastructure, the states, Goa, J&K, Manipur, Mizoram, Nagaland and Sikkim are states having less than 100 hospitals in total in rural areas. The states like Manipur, Mizoram, Nagaland and Sikkim have less than 1000 beds in total in their rural government hospitals. There is shortfall in number of required health facilities in 14 states; the highest is in Bihar and Jharkhand. There are just a few health facilities having separate public utilities or not at all in the states of Telangana, Kerala, Meghalaya, Goa, Uttrakhand and Bihar.

Suggestions

This study gives insights that expenditure on healthcare sector in India should be revised by taking into consideration the evidences given by these two reports i.e., Rural Health Statistics 2019-20 and National Health Profile 2019 along with other factors like rural population of states, existing infrastructure capacity as well as health status in terms of health indicators.

The states like Bihar, Haryana, Manipur, Maharashtra, Madhya Pradesh and Sikkim should allocate more funds by government to improve their healthcare status or outcomes to be at par with other states in country. To cater to below-poverty rural population, the universal health coverage schemes are required in Chhattisgarh, Jharkhand, Arunachal Pradesh, Manipur, Madhya Pradesh, Odisha, Mizoram and Bihar on the lines of Central Scheme – Ayushman Bharat which would cover all primary, secondary and tertiary services as well as OPD expenses.

The states like Bihar, Jharkhand, Chhattisgarh, Odisha, Goa, J & K, Manipur, Mizoram, Nagaland and Sikkim need more primary healthcare centres with adequate human resource to reduce burden of urban health centres and to maintain standard norms of population served per health centre as prescribed by national standards.

To address the problem of lowest birth rates and prevailing rates of infant mortality in the states of Goa, Nagaland, Tripura, Kerala, Manipur, Tamil Nadu, Madhya Pradesh, Uttar Pradesh, Assam, Chhatisgarh, Odisha, Rajasthan and Maharashtra, the central schemes like Janani Suraksha Yojana, Surakshit Matritva Abhiyan should be implemented thoroughly to have sufficient demographic dividend and economic growth in country for upcoming decades.

Family planning awareness is urgently required in rural areas as rural TFR is more than the replacement level and urban TFR leading to increase in country population which in turns making it difficult to achieve Sustainable Development Goals (SDGs

Policy Implications

Inequalities are there in the Indian healthcare system and these are both sector specific and area specific especially north-eastern states. In addition to these, states like Chhattisgarh, Odisha, Jharkhand, Uttar Pradesh, Bihar and Madhya Pradesh. To eliminate these healthcare inequalities legislation plays an important role. The appropriate policy decisions and their effective implementation is the key to establish a quality healthcare system in these states.

The above-mentioned states are facing diverse problems in accessing the public healthcare services. By covering specifically these states, a major proportion of country will be reformed in context of healthcare advancements.

Majority of the population is availing the healthcare services with out-of-pocket expenditure especially when they go to private hospitals. The policy makers would be helped in re-designing the regulation process of functioning of private sector.

The future plans for health budget of union and state-governments as well as government hospitals' funding can be framed accordingly by taking into consideration these state-specific needs.
To make healthcare services affordable, legislature can take steps for having an Act like USA's Affordable Care Act, 2010, for expanding health coverage and access.

Limitations of the Study

This study has taken factual information from the two government reports only, Rural Health Statistics 2019-20 and National Health Policy 2019. Further, the critical analysis is done for states as the data of Union Territories (UTs) is either not disclosed fully or completely missing in these reports.

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