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**Research Paper**

# Evaluating Government Health Expenditure in Assam: A Comparative Analysis of Revenue and Capital Expenditure

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## ABSTRACT

This study examines the trends and composition of government health expenditure in the state of Assam, a state of North-east India between 2015-16 and 2022-23, focusing on revenue and capital expenditure and their implications for health infrastructure and Out-of-pocket health expenditure. Using a descriptive research design, secondary data were collected from Finance Accounts of Assam, National Health Accounts, National Family Health Survey and Central Bureau of Health Intelligence. The analysis indicates a steady increase in Total Health Expenditure, with revenue outlay continuing to dominate while capital expenditure gradually rises demonstrating improvements in physical infrastructure. Health indicator such as population to government hospital ratio declining (from 1888 in 2015 to 1550 in 2022) shows increasing of healthcare facilities in Assam. Additionally, increasing government expenditure has contributed to a reduction in out-of-pocket expenditure in healthcare access. The study suggests that balanced allocation between revenue and capital expenditure greater investment in promotive and preventive care to be made for greater accessing healthcare services by the households of Assam.

***Keywords:*** *Government Health Expenditure, Out-of-Pocket Expenditure, Revenue Expenditure, Capital Expenditure, Assam*

Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity. (WHO, 1948). Health has given importance by various organization. Alma-Ata Declaration of 1978 was a landmark of public health agreement which declare primary healthcare as the key to achieving 'Health for All' by 2000 A.D. health has given importance in United Nations Millenium Development Goals (2000-2015) and Sustainable Development Goals (2015-2030). Nowadays economic Development of a country is measured by Human Development Index (HDI) and health is one of the three key parameters of HDI. India's rank in HDI is not satisfactory as it ranked 134$^{th}$ out of 195 independent countries in 2024. Assam is a state of North-Eastern India which ranked 31$^{st}$ among the state of India in case of HDI. Healthcare financing is necessary because it helps ensure that everyone has access to quality healthcare, regardless of their financial circumstances (WHO, 2010).

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Health financing is a key component of health sector than can enable progress towards universal health coverage (WHO, 2010). Healthcare financing encompasses the mobilization, allocation and utilization of financial resources to support healthcare systems and it plays a critical role in achieving universal Health Coverage (UHC) and ensuring equitable access to quality healthcare services worldwide (National Health System Resource Centre). WHO's health financing strategy revolves around three core functions which are- (a)Revenue rising which includes government budgets, compulsory or voluntary prepaid insurance schemes, direct out-of-pocket payments by users and external aid, (b) pooling of funds which means accumulation of prepaid funds on behalf of some or all of the population, (c) purchasing of services i.e., the payment or allocation of resources to health service providers. Among these three functions, function (a) is related to public expenditure in healthcare.

Government health expenditure is crucial for achieving better health outcomes and improving the overall well-being of the people. It plays a significant role in reducing mortality rates, increasing life expectancy, and enhancing the quality of life. (Mohanty& Behera,2020). Investing in health can also have economic benefits, such as reducing healthcare costs, increasing productivity which helps to promote economic growth of the country.

The status of health in a country or in a state can be known by health indicators such as infant mortality rates, Maternal mortality rates, under-5 mortality rates, life expectancy at birth etc. if we compare the health indicators of Assam with the national average and world average then we see that Assam is in a position in some indicators than national average and in some indicators, Assam is lag behind. Comparing world average Assam is still lag behind in the position of health indicators. Following table gives a clear picture about the health indicators of Assam, Indian average and world average from which health position of Assam can be known.

***Table 1: Comparison of Health Indicators in Assam. India and World average***

| **Health Indicators** | **Assam** | **Source** | **India** | **Source** | **World Average** | **Source** |
|---|---|---|---|---|---|---|
| Infant Mortality Rate | 32 | NFHS-V | 35 | NFHS-V | 26.693 (2021) | World Population Prospection-UN |
| Under-5 Mortality Rate | 39 | NFHS-V | 42 | NFHS-V | 37 (2022) | UNICEF |
| Maternal Mortality Rate | 195 | Special Bulletin on MMR 2018-20 | 97 | Special Bulletin on MMR 2018-20 | 223 (2020) | UNICEF |
| Neonatal Mortality Rate | 22.5 | NFHS-V | 25 | NFHS-V | 17.3 (2021) | UNICEF |
| Institutional Delivery | 84 | NFHS-V | 89 | NFHS-V | 76 (2015) | UNICEF |
| Crude Birth Rate | 16.8 | NFHS-V | 17.1 | NFHS-V | 17.873 (2021) | World Population Prospection-UN |
| Life Expectancy at birth | 66.1 | NFHS-V | 65.8 | NFHS-V | 71.3 (2021) | WHO |

To address these challenges, public investment in healthcare is necessary. Increasing state expenditure on public health has shown a positive relation with the health performance index

in Assam. (Bhuyan et al.,2018). Therefore, investing in healthcare professionals and implementing effective health programs can help in improve the health indicators in Assam.

For the effective healthcare budget government need to combine participatory planning, clear decision-making structures, and evidence-based allocation of revenue and capital expenditure. Revenue expenditure covers operational costs such as salaries of doctors, nurses and supporting staff, medicines, and service delivery which are recuring basis. (Homauni et al., 2023)

Capital expenditure refers to investment on physical resources like medical and non-equipment, hospitals buildings, clinics, software, IT system etc which are crucial for economic growth. (OECD, 2023)

Expenditure on preventive care boost productivity and reduces the risk of disease however as countries are growing and developing, they demand more out-patient care and curative care. Countries to be invest on both types of services to balance for better and stronger economic growth (Wang F., 2018). In case of U.S. and Tiwan moderate investment on preventive care shown best results but less investment was not so beneficial as it helps the country where universal coverage exists (Wang, Wang, & Huang, 2016).

Various studies found that public expenditure and out-of-pocket expenditure in healthcare are negatively related to each other, indicating that as public expenditure increases, out-of-pocket expenditure in healthcare decreases. (Wagstaff & Doorslaer., 2003), (Doorslaer & Wagstaff.,2000), Another study found that Out-of-pocket health expenditure is positively related to public expenditure (Xu & Evans.,2003).

## REVIEW OF LITERATURE

In India government spend in healthcare is less than 5% of GDP which is very low comparing developed countries (Ahuja R. 2004). In India 4.8% of total expenditure was spend in healthcare by OOP and out of this 4.8% of OOPE 65-70% was spent on drugs and remaining 30-35% was spent in inpatient and outpatient care. High income states spend more on healthcare and vice versa. Assam falls under low spending Out-of-pocket expenditure in healthcare. (Garg& Karan 2008). In North eastern states of India there are suffering from infectious disease particularly febrile illness is more as compared to that in all India. due to awareness and education morbidity in NER is high. Economic burden of illness in both expenditure burden and burden of income due to health reasons were found high in NER than India. Ghatak& Lalitha (2018). In Assam, Out-of-Pocket health expenditure is more than north-eastern average and Indian average. Out -of-pocket expenditure on healthcare will make people poor and will fall into the poverty trap. There is need of public investment to reduce the out-of-pocket expenditure on healthcare. (Basumatary & Srivastav, 2017).

China's health insurance system can be considered as effective in healthcare utilization and reduce household's burden in payment of healthcare expenditure. However different types of income groups benefitted differently. The main beneficiaries of health insurance schemes are the people with lower middle- income people. After insurance, inpatients expenditure reduces but outpatient expenses are not reduced. Institutional barriers are in case of migrants are presents due to which they are not benefitted from health insurance schemes. (Zhang et.al., 2017)

Devi 2019 found in her study area (Bamuni Pathar) Assam due to lack of quality services in their nearby government hospital people go for private hospital which creates high out-of-pocket expenses. Also, people have to spent high out-of-pocket expenses in case of in-patient care as they have to come across private pharmacies due to lack of lack of these facilities in government hospitals. The burden of healthcare expenditure is more due to high expenditure in drugs and medicines.

The historical trajectory of health expenditure in Assam shows a gradual shift from pre-independence era to post independence era. Also, it transits from colonial neglect and post-independence underfunding toward more structured reforms under NHM and state-led insurance schemes. With this initiative people are now expand healthcare access especially in maternal and child health but Assam continues to allocate below the recommended share of its budget to health as National Health Policy recommended that states should invest 8% of budget in health sector. There aro some barrier persists in equity and efficiency in the healthcare sector in Assam such as high out-of-pocket expenditure, dominance of private sector, regional disparities particularly in tribal, tea garden and flood prone districts. To reach the national health policy benchmarks and improved outcomes, Assam must prioritize sustained government investment, robust regulation of private providers and strategies for vulnerable regions. (Sarma et al., 2025)

In India, on average 4.8% of household consumption expenditure is spent on receiving health services from out-of-pockets and this is on medicines. Out of this OOPE , 65-70% are spent on medicines, 30 -40% are spent on inpatient or outpatient care. It is found that there is positive corelation between per capita state domestic product and out-of-pocket-health-expenditure. Poor states spent less share on OOPHE out of consumption expenditure and higher income states spent more share to health expenditure. For some states it holds conversely due to governmental and or non-governmental interventions may reverse the situation. Due to poor governmental facilities and dependence on private facilities in nearby towns sometimes make higher out-of-pocket expenditure on healthcare as in the case of Uttar Pradesh. (Garg& Karan, 2009)

Basumatary (2022) highlights several issues related to heavy Out-of-pocket health expenditure especially there is high OOPHE in inpatient care. Poor individuals spend less OOPHE and rich individuals spends higher amount of health expenditure from their pocket. Whereas the burden of OOPHE is more on the poor individuals. This burden of OOPHE push them into poverty trap and for the inpatient care, this burden is more severe for inpatient care. Majority of expenditure have to borne in purchasing of medicines for both inpatient and outpatient care, followed by doctor's fees and diagnostics. After OOPHE Poverty Gap and Poverty Headcount increases significantly which reflects financial vulnerability of the poor people.

(Kaladharan & Manayath, 2024) found that there is positive corelation between GDP of a country and OOPHE; similarly General Government health expenditure also positively affects OOPHE due to inefficiencies in public system whereas Government Social Contribution to Health and Family Security (GSCCHFS) and Voluntary Health Insurance Schemes (VHIS) negatively impacts on OOPHE as they provide financial protection to individuals. To reduce OOPHE policy should be designed keeping in view of health promotion & prevention care, comprehensive insurance coverage for all major and minor

illness for vulnerable people, public health system strengthening and control of price in case of essential drugs.

Das et al. (2018) studied central government health expenditures in Indian states and examined that states with low spending at the start grew faster means catching up than those that already spent more. However, with this progress the difference between states bigger means inequality in health spending increased over time. This was due to 1990's Economic reform in India and political decision about fund distribution.

Between 2017 to 2021 OECD countries spend nearly about 0.6% of GDP as capital expenditure which was very low as those countries invest around 9% of their GDP on the healthcare sector. For which during covid pandemic economies remained strain. (OECD, 2023)

Basumatary & Srivastav (2018) stated that poor people in Assam have to financed their health expenditure by selling livestock, debt, savings so for the poor people health expenditure is catastrophic. People of Assam are not aware of health insurance so without government expenditure people have to pay their out-of-pocket.

## DATA SOURCE AND METHODOLOGY

This study is based on a descriptive research design, uses secondary data which were collected from authentic and published sources such as books, articles, working papers, journals, census of India, National Health Account Estimates for India of different years published by Ministry of Health and Family Welfare, National Family Health Survey reports, Finance Accounts, Govt. of Assam. This study covers a specific time period 2015-16 to 2022-23 to analyze the trends in health expenditure and comparison of revenue and capital expenditure in healthcare services in Assam. The main objective of this study is to analyze the trends and composition of Government health expenditure in Assam, focusing on revenue and capital expenditure and to assess its impact on the burden of Out- of pocket health Expenditure on Households.

**Objective 1: To examine the trend and pattern of government health expenditure in Assam including the composition of revenue and capital expenditure.**

Assam is a state of North-Eastern part of India. according to 2011 census of India, population of Assam was 312.05 lakh. GSDP growth rate of Assam was 10.2% which is higher than GDP growth rate of India (7.2%) in 2022-23 at constant prices (source: Press release, National statistical office). The status of health infrastructure in Assam has been improving over the years. As per 22$^{nd}$ December 2021 Assam there are 12 medical colleges and hospitals, 21 civil hospitals, 16 sub-divisional hospitals.

If we compare the health expenditure in Assam with national average then we see that in Assam Total health expenditure is less than national average in most of the years. While, the share of Government health expenditure in total health expenditure and in GSDP is more than the national average. This is shown by the following table.

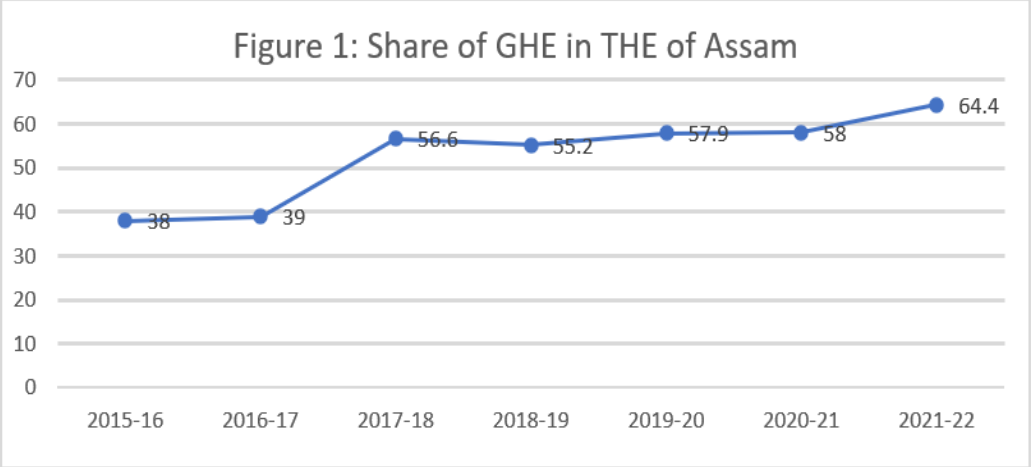
***Table 2: Trends in Total Health Expenditure (THE) and Government Health Expenditure (GHE) in Assam and India***

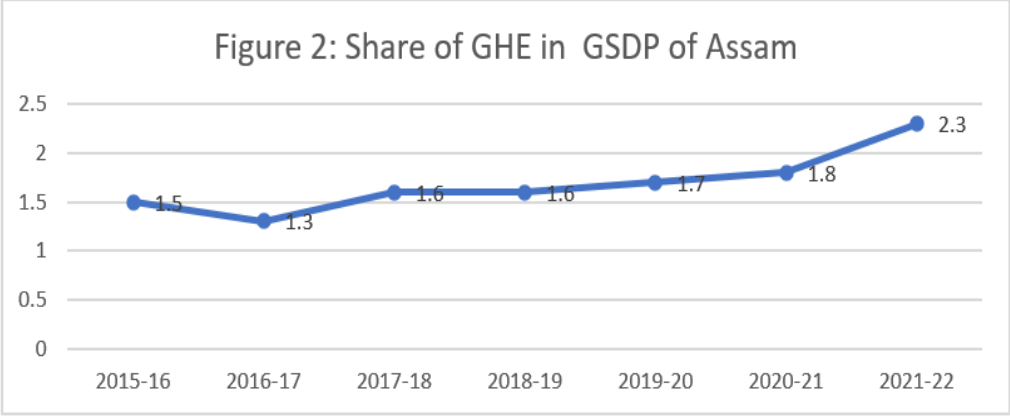
| Years | THE% of GSDP in Assam | THE % of GDP in India | GHE % of THE in Assam | GHE % of THE in India | GHE% of GSDP in Assam | GHE % of GDP in India |
|---|---|---|---|---|---|---|
| 2015-16 | 4.0 | 3.8 | 38.0 | 30.6 | 1.5 | 1.18 |
| 2016-17 | 3.3 | 3.8 | 39 | 32.4 | 1.3 | 1.2 |
| 2017-18 | 2.9 | 3.3 | 56.6 | 40.8 | 1.6 | 1.35 |
| 2018-19 | 2.8 | 3.16 | 55.2 | 40.6 | 1.6 | 1.28 |
| 2019-20 | 2.9 | 3.3 | 57.9 | 41.4 | 1.7 | 1.35 |
| 2020-21 | 3.2 | 3.73 | 58.0 | 42.8 | 1.8 | 1.6 |
| 2021-22 | 3.6 | 3.8 | 64.4 | 48.0 | 2.3 | 1.84 |

*Source: National Health Account Estimates for India 2015-16, 2016,17, 2017-18, 2018-19, 2019-20, 2020-21, 2021-22*

*Where, THE: Total Health Expenditure, GHE: Government Health Expenditure, OOPE : Out- of-Pocket Expenditure, GSDP: Gross State Domestic Product, GDP: Gross Domestic Product*

If we see the trend of government health expenditure in Total Health Expenditure then there is positive trend. Similarly, Government health expenditure in GSDP of Assam is also in an increasing trend. That means state government investment in health sector is increasing than before. This is shown in the following graphs.



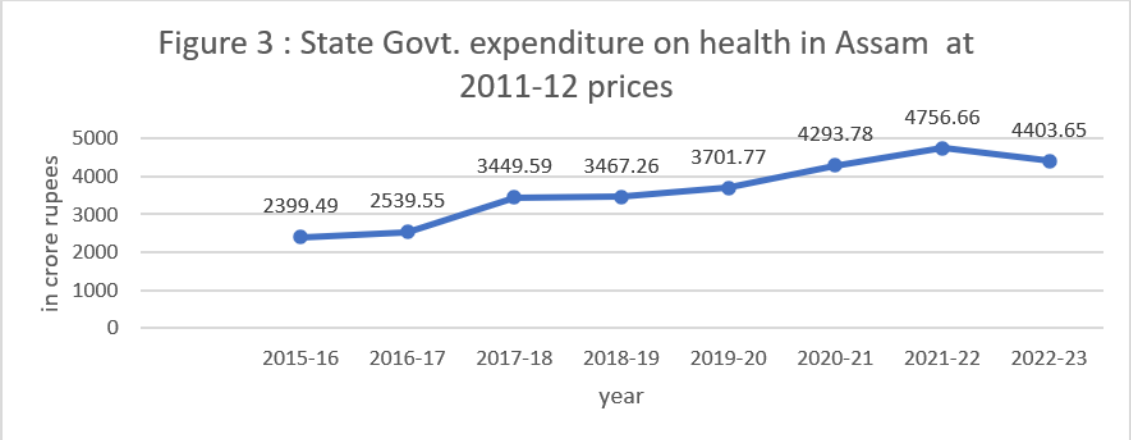



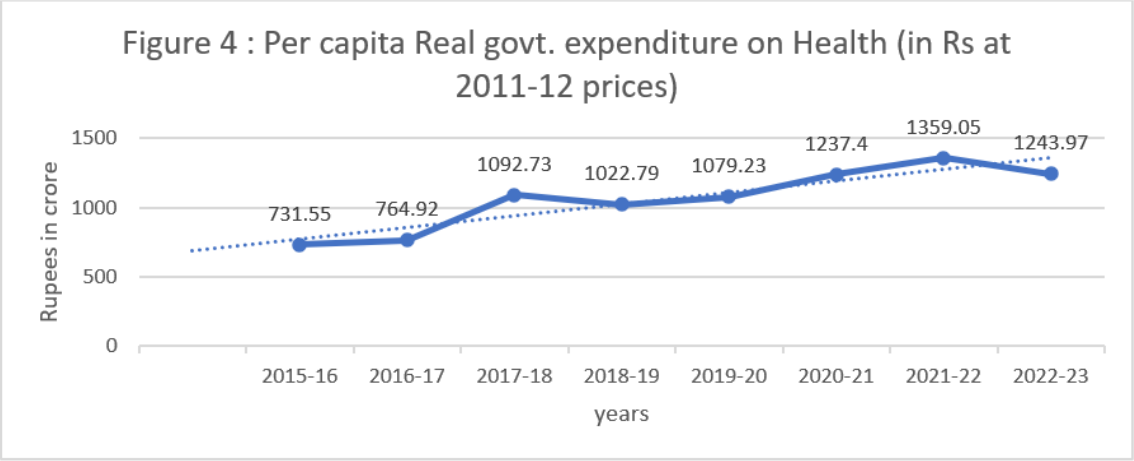
Government expenditure plays vital role in healthcare access. As it reduces out-of pocket expenditure of people. State government health expenditure can be divided into two parts- Medical and Public Health; and Family Welfare. if we see the data there is increasing trend of both medical & public health and family welfare expenditure. If we look into the share of health expenditure in total government expenditure. then it seems increase in some year and decrease in some years and lies around 5 to 7% in between the years 2015 to 2022. Similarly, the trend of govt health expenditure in NSDP is also following same trend as in some years increasing and then decreasing. it was increased from 1.42% in 2015-16 to 1.75% in 2017-18 and then decreased to 1.68 in 2018-19 and further continuously increased from 2018-19 to 2021-22 and then decreased to 1.62 in 2022-23. It follows same trend in case of Government Health Expenditure in real term (at 2011 prices) and Per Capita Real Government Expenditure in real term (at 2011-12 prices) as it decreased slight in some year and increased in some year is sown in the following table.

***Table 3: Trends in State Government Expenditure on health in Assam (from 2015-16 to 2022-23)***

| **Year** | **State government Expenditure on Health (in crore Rs.)** | | | **Share of Expenditure on Health in Total Government Expenditure (as %)** | **Ratio of Govt. Expenditure on Health to NSDP (as%)** | **Govt expenditure on health at 2011-12 prices** | **Per capita Real govt. expenditure on Health (in Rs at 2011-12 prices)** |
|---|---|---|---|---|---|---|---|
| | **Medical and public health** | **Family Welfare** | **Total** | | | | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| 2015-16 | 2638.24 | 223.87 | 2862.11 | 7.16 | 1.42 | 2399.49 | 731.55 |
| 2016-17 | 2938.77 | 258.02 | 3196.79 | 5.77 | 1.44 | 2539.55 | 764.92 |
| 2017-18 | 4139.3 | 302.39 | 4441.69 | 7.03 | 1.75 | 3449.59 | 1092.73 |
| 2018-19 | 4328.95 | 313.36 | 4642.31 | 6.83 | 1.68 | 3467.26 | 1022.79 |
| 2019-20 | 5007.13 | 327.12 | 5334.25 | 6.73 | 1.72 | 3701.77 | 1079.23 |
| 2020-21 | 5916.83 | 332.77 | 6249.59 | 8.12 | 1.98 | 4293.78 | 1237.40 |
| 2021-22 | 7114.8 | 361.25 | 7476.05 | 7.27 | 2.06 | 4756.66 | 1359.05 |
| 2022-23 | 6506.14 | 369.72 | 6875.86 | 5.73 | 1.62 | 4403.65 | 1243.97 |

*Source: Author's calculation from the data of state finance accounts, Assam*
*Sources of NSDP: State Profile of Assam, Directorate of Economics and Statistics*
*https://databank.nedfi.com*



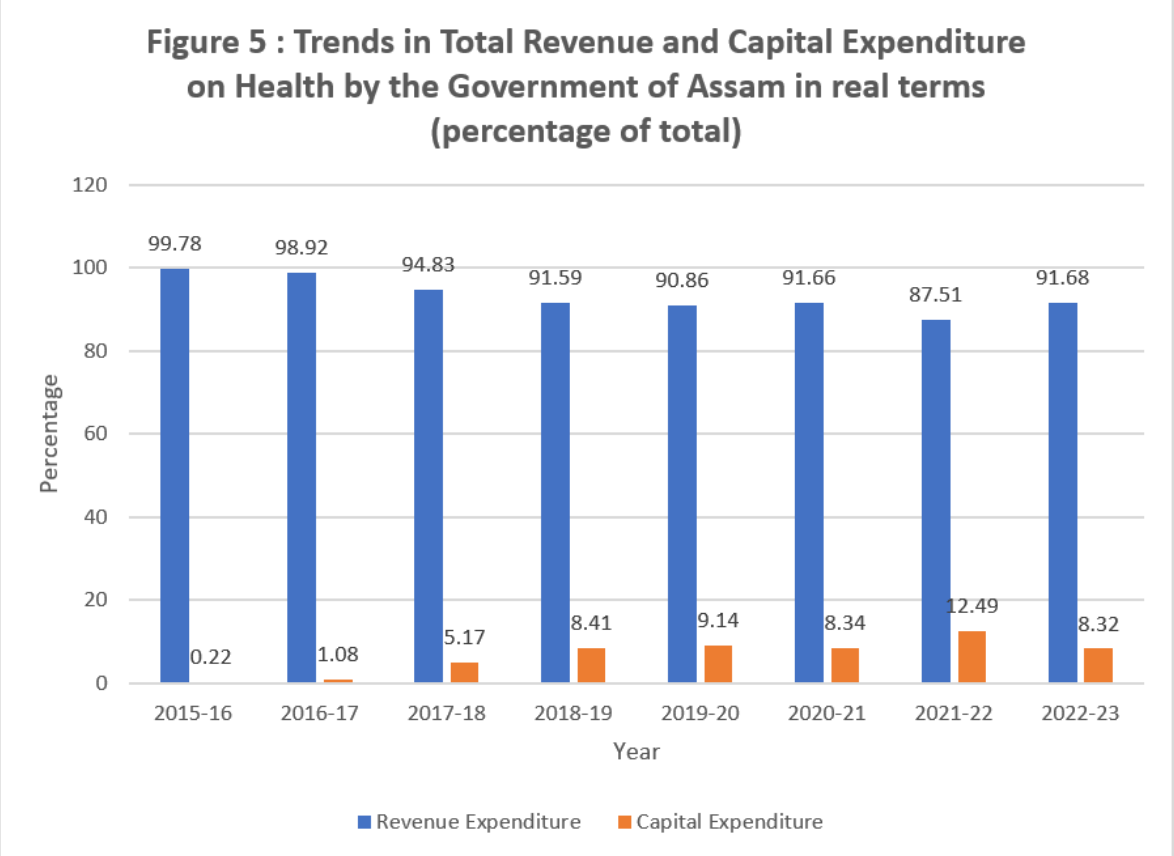



Government Health Expenditure is divided in two accounts -Revenue Account and Capital Account. Revenue Account includes all the expenditure receipts that are recuring basis or regular basis of maintenance and operation. Revenue Expenditure is basically day to day expenses in healthcare sector for routine operation. It covers the costs such as salaries and wages of doctors, nurses and staff; costs on medicines, vaccines and other consumables, maintenance of hospitals and health centres; training and administrative costs, implementation of public health programmes such as family welfare, immunization etc. These types of expenditures do not create any new assets but supports the delivery of healthcare services functioning. (Government of India, 2025; Ministry of Health and Family Welfare ,2023). Capital expenditure in contrast, non-recurring type of expenditure or investment that creates or strengthen long term infrastructure or asset or long- term capacity of the healthcare system. This covers construction of new hospitals, medical colleges and health centres; purchase of medical equipment and technology, upgradation or expansion of existing facilities, investment in research and development etc. (Ministry of Finance,2025; World Health Organization, 2010). If we compare these two expenditures by taking 2011-12 as the base year then data of revenue and capital expenditure then there is dominance of revenue expenditure and it is around 87% to 99% in the years between 2015-16 to 2022-23. Trend of Revenue expenditure is continuously decreasing from 2015-16 to 2019-20 (from 99.97% to 90.86) and in these years trend of capital expenditure in healthcare services of Assam is increasing from 0.22% to 9.14 %. This reflects increase of healthcare expenditure which will return the state in coming future. In 2020-21 trend of Revenue expenditure in percentage of total health expenditure increased and capital expenses decreased. After that, in 2021-21 share of revenue expenditure decreased than before and capital expenditure increased. But in 20222-23, share of capital expenditure in total health expenditure decreased than previous year and share of revenue expenditure in total health expenditure increased than previous year. This is shown by the following table and graphs.

*Table 4: Trends in Total Revenue and Capital Expenditure on Health by the Government of Assam (from 2015-16 to 2022-23)*

| Year | Total Revenue Expenditure | | Total Capital Expenditure | | Total Expenditure in real terms |
|---|---|---|---|---|---|
| | In Real terms at 2011-12 prices (in Crore Rs) | Percentage of total | In Real terms at 2011-12 prices (in Crore Rs) | Percentage of total | |
| 2015-16 | 2394.19 | 99.78 | 5.3 | 0.22 | 2399.49 |
| 2016-17 | 2512.19 | 98.92 | 27.36 | 1.08 | 2539.55 |
| 2017-18 | 3271.38 | 94.83 | 178.21 | 5.17 | 3449.59 |
| 2018-19 | 3175.56 | 91.59 | 291.70 | 8.41 | 3467.26 |
| 2019-20 | 3363.56 | 90.86 | 338.21 | 9.14 | 3701.77 |
| 2020-21 | 3935.60 | 91.66 | 358.18 | 8.34 | 4293.78 |
| 2021-22 | 4162.57 | 87.51 | 594.09 | 12.49 | 4756.66 |
| 2022-23 | 4037.32 | 91.68 | 366.33 | 8.32 | 4403.65 |

***Source: Author's own calculation***




From the above figure, we see that Capital expenditure in healthcare sector increased between 2015-16 and 2022-23. This reflects health infrastructure in Assam increased which is shown by the following table.

***Table 5: Comparison of Health Infrastructure in Assam***

| Health infrastructure | Years | |
|---|---|---|
| | 2015 | 2022 |
| Sub-center | 4621 | 4701 |
| PHC | 1014 | 1010 |
| CHC | 151 | 201 |
| Sub-divisional hospital | 13 | 14 |
| District hospital | 25 | 25 |
| Medical colleges | 6 | |
| Govt hospital bed | 13381 | 23185 |
| Average number of people per govt. hospital bed | 1888 | 1550 |

*Source: CBHI, National Health Profile 2023; Rural health statistics bulletin, 2015; Author's calculation based on CEIC data of govt bed and projected population for 2015 and 2022*

From the above table we can say that between 2015 to 2022, Assam witnessed improvement in health infrastructure. Whereas average number of people can have government hospital bed is reduced from 1888 to 1550 between the year of 2015 and 2022 indicating better availability of government health facilities.

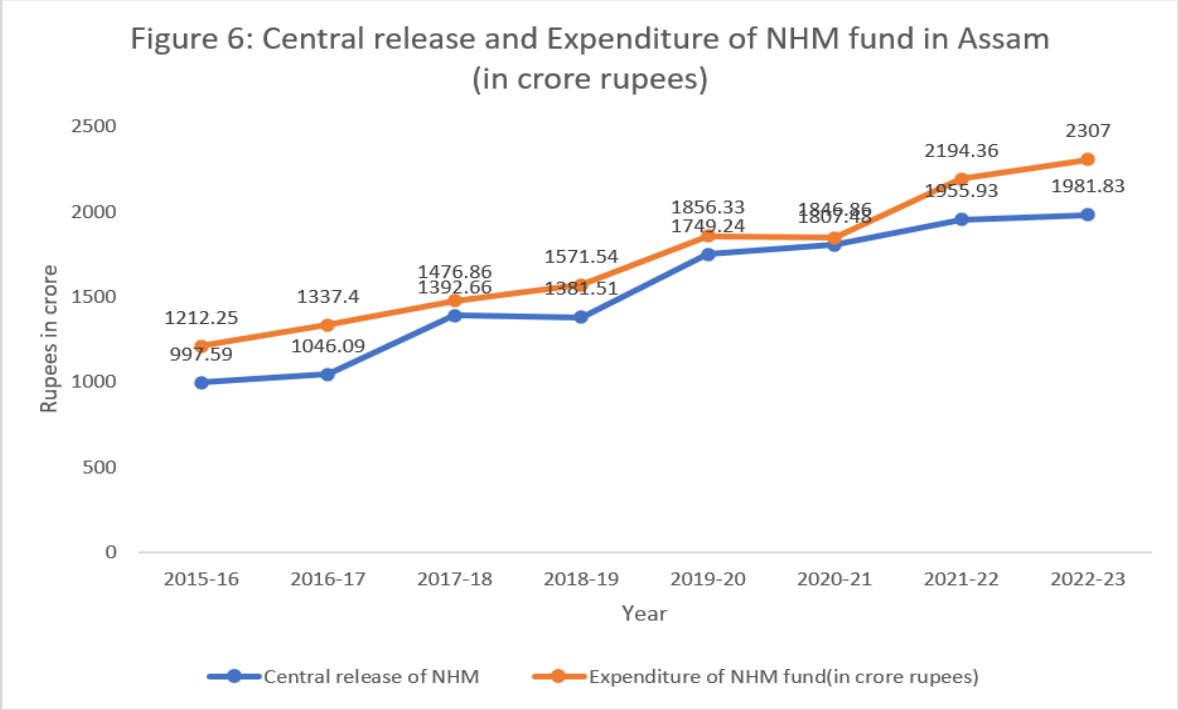
**Financial Assistance Received from National Health Mission (NHM)**

Besides these investments by the state government, it receives central financial assistance from NHM for implementing health programs. For most of the state share of NHM fund between central and state is 60:40 but for North-Eastern states and hilly states this ratio is 90:10. This fund from NHM supports activities such as maternal and child health, disease control, immunization and infrastructure development. Following table shows central release of NHM and Expenditure or utilization of NHM fund in Assam. Here expenditure or utilization under NHM is greater than central release because it includes state share, previous year's unspent balances, interest earned etc with central release of fund under NHM.

***Table 6: Utilization of NHM fund in Assam***

| Year | Central release of NHM | Expenditure of NHM fund(in crore rupees) |
|---|---|---|
| 2015-16 | 997.59 | 1212.25 |
| 2016-17 | 1046.09 | 1337.40 |
| 2017-18 | 1392.66 | 1476.86 |
| 2018-19 | 1381.51 | 1571.54 |
| 2019-20 | 1749.24 | 1856.33 |
| 2020-21 | 1807.48 | 1846.86 |
| 2021-22 | 1955.93 | 2194.36 |
| 2022-23 | 1981.83 | 2307.00 |

*Data from Annexure to Unstarred Question No. 1086, answered in Lok Sabha — State/UT-wise details of central release and expenditure under National Health Mission (NHM) during 2021–22 (Government of India, Ministry of Health and Family Welfare, 2022), Lok Sabha Secretariat. https://sansad.in/getFile/loksabhaquestions/annex/1714/AU1086.pdf*



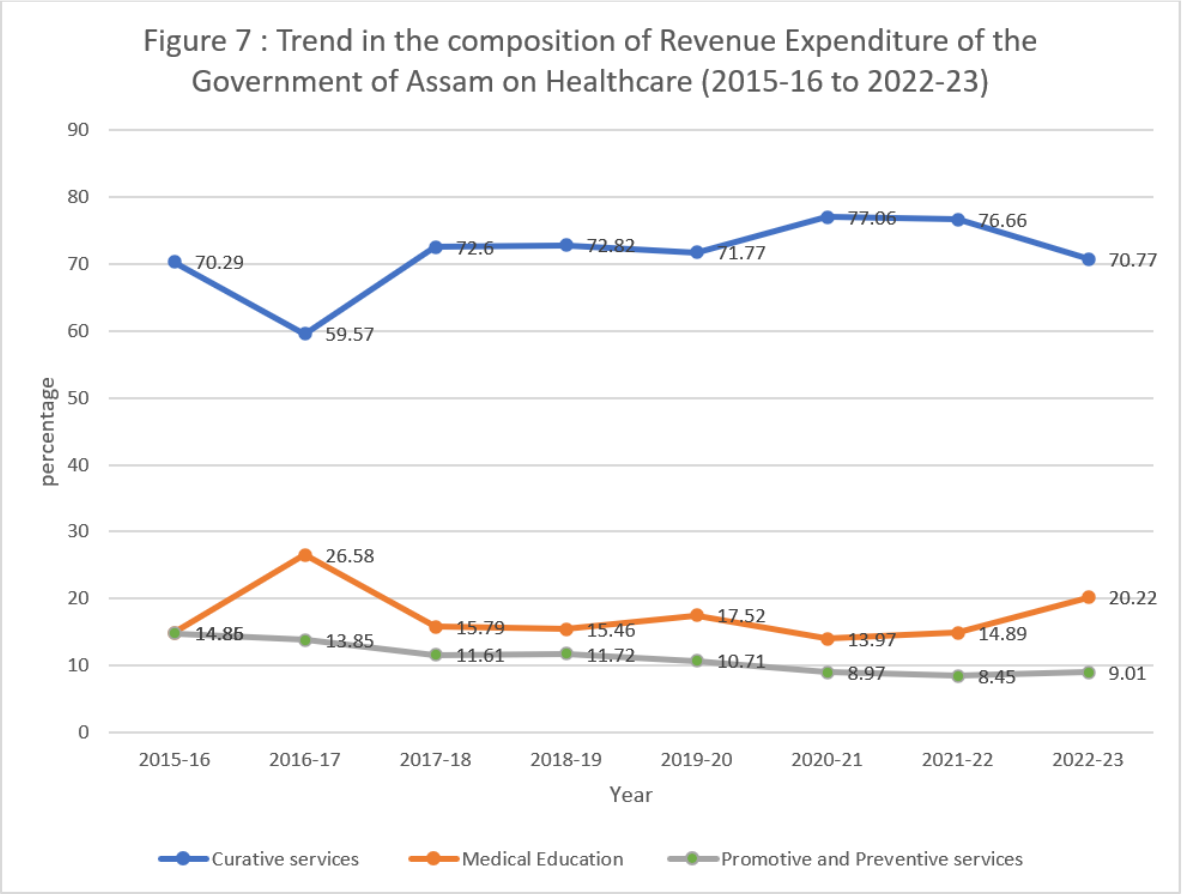

## Composition of Revenue Expenditure

Revenue expenditure can be categorized into Curative care, Medical Education, promotive and preventive services as they involve recurring cost of providing health services as well as training to personnels. If we compare these services then almost 60 to 70 percent expenses borne on Curative services, around 13 to 26 percent is invested in Medical Expenditure and approx. 8 to 14 percent is invested in Promotive and preventive care. In 2015-16 Assam government spent 2007.22 crore in Curative services which is decreased to 1883.72crore in 2016-17. After that it increased to 3058.2 crore in 2017-18, 3096.26 in 2018-19, 3478.59crore in 2019-20, 4414.51 crore in 2020-21, 5015.42crore in 2021-22. Since there was covid pandemic in the years 2020-21, 2021-22, government invest most on curative care share of curative care on total healthcare expenditure increased than previous years and share of medical education, promotive preventive care decreased than previous years.

***Table 7: Composition of Revenue Expenditure of the Govt. Of Assam on health for the period 2015-16 to 2022-23 (Current prices)***

| Year | Curative services | | Medical Education | | Promotive and Preventive services | | Total Revenue Expenditure | |
|---|---|---|---|---|---|---|---|---|
| | In crore Rs | As % of total | In crore Rs | As % of total | In crore Rs | As % of total | In crore Rs | As % of total |
| **2015-16** | 2007.22 | 70.29 | 424.44 | 14.86 | 424.13 | 14.85 | 2855.79 | 100 |
| **2016-17** | 1883.72 | 59.57 | 840.48 | 26.58 | 438.14 | 13.85 | 3162.34 | 100 |
| **2017-18** | 3058.2 | 72.60 | 664.85 | 15.79 | 489.18 | 11.61 | 4212.23 | 100 |
| **2018-19** | 3096.26 | 72.82 | 657.36 | 15.46 | 498.14 | 11.72 | 4251.76 | 100 |
| **2019-20** | 3478.59 | 71.77 | 849.32 | 17.52 | 518.98 | 10.71 | 4846.89 | 100 |
| **2020-21** | 4414.51 | 77.06 | 800.19 | 13.97 | 513.57 | 8.97 | 5728.27 | 100 |
| **2021-22** | 5015.42 | 76.66 | 973.98 | 14.89 | 552.91 | 8.45 | 6542.31 | 100 |
| **2022-23** | 4461.54 | 70.77 | 1274.62 | 20.22 | 567.71 | 9.01 | 6303.87 | 100 |

*Source: Finance Accounts, Govt. of Assam*




**Objective 2: To assess the out-of-pocket health expenditure burden on households in Assam**.

Out-of-Pocket Expenditure in healthcare is an important factor because increase of out-of-pocket expenditure in healthcare can lead to poverty. Following table compares Out-of-Pocket Expenditure in receiving healthcare in Assam and national average.

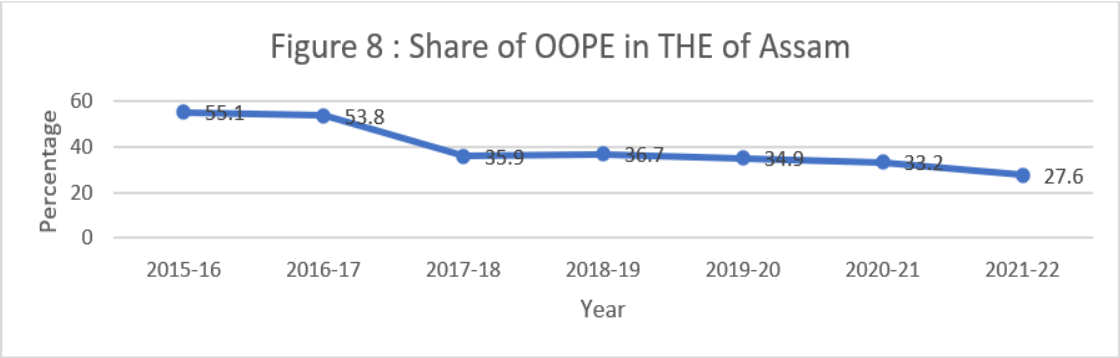
***Table 8: Trend of Out-of-Pocket Expenditure in healthcare in Assam and India***

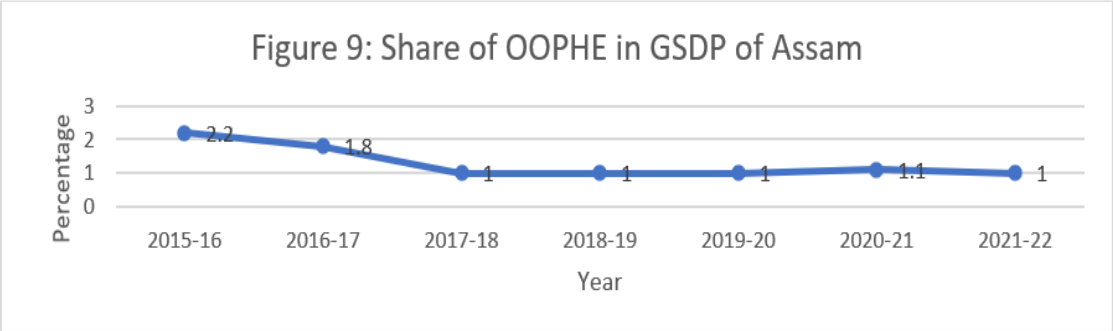
| Year | Share of OOPE in THE of Assam | Share of OOPE in THE of India | Share of OOPHE in GSDP of Assam | Share of OOPHE in GSDP of India |
|---|---|---|---|---|
| 2015-16 | 55.1 | 60.6 | 2.2 | 2.33 |
| 2016-17 | 53.8 | 58.7 | 1.8 | 2.22 |
| 2017-18 | 35.9 | 48.8 | 1 | 1.62 |
| 2018-19 | 36.7 | 48.2 | 1 | 1.52 |
| 2019-20 | 34.9 | 47.1 | 1 | 1.54 |
| 2020-21 | 33.2 | 44.4 | 1.1 | 1.66 |
| 2021-22 | 27.6 | 39.4 | 1.0 | 1.51 |

*Source: National Health Account Estimates for India 2015-16, 2016,17, 2017-18, 2018-19, 2019-20, 2020-21, 2021-22*

*Where, THE: Total Health Expenditure, OOPE : Out- of-Pocket Expenditure, OOPHE: Out-of-Pocket Health Expenditure, GSDP: Gross State Domestic Product, GDP: Gross Domestic Product*

From the table we see that in Assam, Out-of-Pocket Health Expenditure as a percentage of Total Health Expenditure (THE) is lower than the national average. Similarly, the share of Out-of-Pocket Expenditure in healthcare in Assam as a percentage of GSDP is also less than the national average. Here, we see a decreasing trend of Out-of-Pocket Expenditure in Total health expenditure and in GSDP of Assam. The declining trend of OOPE in healthcare sector in Assam coincides with the expansion of health insurance coverage, improvement in health infrastructure, and increased public investment in the health sector. These developments may have contributed to reducing the financial burden on households by improving access to affordable and financially protected healthcare services (Neog & Buragohain, 2020).




## FINDINGS AND DISCUSSION

The analysis of Government Health expenditure between 2015-16 and 2022-23 reveals significant changes in the composition and growth pattern of government spending. Over the years total health expenditure has increased consistently indicating the Assam government's growing commitment to strengthening the healthcare system. The study shows that a major portion of expenditure is continuously incurred under revenue expenditure including spending on salaries of doctors, nurses, and supporting staff; medicines, promotive, preventive and curative health services. The dominance of revenue expenditure indicates that the state government of Assam prioritize operational and service delivery needs over capital expenditure which shows moderate growth. In case of revenue expenditure, curative care dominance the resource allocation followed by promotive and preventive care; and medical education. Overall, the state is moving towards better resource allocation but the persistence dominance of revenue expenditure over capital expenditure indicates that more attention is needed towards creating durable health assets or physical infrastructure like hospitals, medical college, equipment etc. to ensure long-term sustainability of health services.

## CONCLUSION

From the above table and figure we have seen that in Assam invests in health sectors out of its GSDP is higher than national average. The comparative analysis of Assam state government's expenditure from 2015-16 to 2022-23 highlights a steady expansion of fiscal commitment to the healthcare sector. While the revenue expenditure continues to dominate, both revenue and capital expenditures have grown in absolute terms. The gradual improvement in health infrastructure indicators such as declining population to government hospital bed ratio reflects positive sign in healthcare service delivery. On the other side Out-of-Pocket expenditure in healthcare in Assam has declined over the years and remain lower than the national average. However, households still bear about 30% of total healthcare costs posing a heavy burden on poorer families. The study suggests enhancing government spending and expanding health insurance to further reduce the financial burden and improve healthcare access in Assam.

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