

India's Government Health Expenditure as the Ratio to GDP Is It a Fallacy?

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The appropriateness of the criterion that pegs the ratio of public health expenditure to the gross domestic product—which is volatile—needs a re-examination. The targets for allocation and expenditure of financial resources for health need to be based on indicators that can be monitored.

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COVID-19 has put the nation's focus squarely on India's healthcare system. India's diverse and mixed healthcare system is burdened with the issues of quality, accountability, access, equity, affordability, and provision of services to its citizens. The COVID-19 pandemic has exposed these challenges highlighting an underfunded and inadequate public health system and a lack of accountability of the mostly unregulated private sector. One of the main reasons for the poor condition of public health system is due to a long history of underfunding by the central and state governments. The existing healthcare system and its infrastructure has not been able to adequately and efficiently respond to the COVID-19 pandemic.

Historically, budgetary allocations for health have always fallen short of requirements. The proportion of revenue expenditure on health in the total revenue expenditure of the government remained below 4% between the 1960s and the 1980s, which even declined to below 3% in the early 1990s (Duggal et al 1995). The share of the government health expenditure (GHE) in the total government expenditure (TGE) was below 3% in the early 2000s, which marginally increased to above 3% in 2005–06 (Berman and Ahuja 2008). Since then the GHE has hovered around 4.4% of the TGE (MOHFW 2019a). The ratio of health expenditure to

the gross domestic product (GDP) for the country was below 1% between 1975–76 and 2003–04 (Rao et al 2005) and since then it has been remained between 1.1% and 1.3% of the GDP (MOHFW 2019b).

Policy statements to increase the GHE to 2.5% to 3% of the GDP have been a mantra followed by the various governments in power, expert committees among others over the years. The National Health Policy (NHP) of 2002 sought to increase the share of GHE from 0.9% to 2% by 2010 (NHP 2002). The National Rural Health Mission also emphasised the need to raise public spending on health from 0.9% to 2%–3% of the GDP (GOI 2005). The NHP, 2017 envisages to increase health expenditure as a percentage of the GDP from the existing 1.15% to 2.5% by 2025 (GOI 2017). The Fifteenth Finance Commission has recommended increasing government spending on the health to 2.5% of the GDP in four years from 0.95% at present (GOI 2020). The *Economic Survey 2020–21* highlights that the share of out-of-pocket (OoP) expenditure in the total health expenditure in India will decline from 65% to 30% if there is an increase in the GHE from 1% to 2.5%–3% of the GDP (GOI 2021b). However, there has been no substantive evidence in policy documents on how the estimations have been arrived at of 2% to 3% of the GDP and who is going to fund it, whether the centre or states, and in what proportion.

The discussions, debates, and demands at the policy level have largely focused towards increasing the GHE as a proportion to the GDP to universalise access to healthcare services and reduce the high burden of OoP expenditures incurred by households. This article examines limitations in the use of GHE as ratio to GDP for setting targets for health spending in the country. It argues that this premise

may not be the correct way to determine the importance and sufficiency of funding to public health systems. It illustrates the need for alternative indicators to monitor allocation and expenditures on health. This article argues and suggests on the need for setting health expenditure targets in relation to the TGEs. It also examines the nature of increase that is required in annual budgetary allocation by the central and state governments in India in order to attain their health financing targets.

The National Health Accounts for 2016–17 estimates the GHE at 25.3% of the total health expenditure in India, out of which the state government

spending was 15.8%, the central government was only 8.7%, and the local governments accounting for 0.8%. The Oor expenditure by households accounted for 68.1%, external grants 0.6%, insurance contribution from employers for their employees 1.8%, revenues from corporations 2.8%, and non-governmental organisations 1.4% (MoHFW 2019a).

In this article, the TGE is the sum of revenue expenditure and capital disbursements in the budgets of the central and state governments in a financial year. The GHE is the sum of health expenditure incurred by the central and state governments. It excludes expenditure on water

supply, sanitation, and nutritional supplementation programmes carried out by ministries other than the Ministry of Health and Family Welfare (MoHFW). Here, the GHE constitutes the spending under all schemes and programmes funded and managed by the central and state governments, including quasi-governmental organisations and external donors in the case funds that are channelled through the government budgetary process. We have excluded the contribution of the local government in the GHE as data is not consolidated annually. The data on health sector financing by the centre and states prepared and released by the MoHFW between 2004–05 and 2017–18 was compiled and analysed.¹

GDP as a Denominator

At the global level, the expenditure on health as a proportion to the GDP² is used to facilitate a standardised international comparison of health expenditure across countries, time and space has been on comparative terms. Following global practices, Indian policy planners and researchers use this indicator to analyse public spending on health in the country. While it is believed that as the economy grows, the government spending also increases, which in turn impacts government spending on health. However, this does not get reflected in the Indian scenario. The annual rate of growth of the GDP has been highly fluctuating over the study period; it declined from 7.9% in 2004–05 to 3.4% in 2008–09 and suddenly increased to 8.7% in 2010–11 and reduced to 3.2% in 2011–12, again increased to 5.5% in 2012–13 (Figure 1, p 23). However, the growth in the GHE follows a completely different pattern and does not seem to be associated with the GDP growth rates (correlation coefficient 0.216 between changes in the GDP in a fiscal year and changes in the GHE between 2004–05 and 2017–18). Neither does the TGE growth rate seems to be following pace with the GDP growth rates.

The data (2004–05 to 2017–18) on the health expenditure incurred by the central and state governments and the GDP and TGE for corresponding years are presented in Table 1. The three-year average of the GHE, TGE, and GDP is presented

Table 1: Levels and Trends in the GDP, Total Government Expenditure, and Health Expenditure by the Central and State Governments

	2004–05 to 2006–07	2007–08 to 2009–10	2010–11 to 2012–13	2013–14 to 2015–16	2016–17 to 2017–18
	(₹ crore)				
GDP at market prices ¹					
Current prices	37,43,428	56,98,327	88,23,833	1,25,08,335	1,62,30,346
Constant prices (2011–12 base year)	60,14,138	73,44,237	88,06,598	1,05,81,134	1,27,40,364
Total government expenditure ²					
Current prices	9,79,595	15,89,026	24,20,616	33,48,707	43,90,958
Constant prices (2011–12 base year)	15,75,072	20,43,740	24,17,029	28,32,120	34,48,402
Government health expenditure (central + states) ³					
Current prices	34,374	56,956	95,852	1,40,031	2,18,697
Constant prices (2011–12 base year)	55,154	72,985	95,620	1,18,339	1,71,555
Health expenditure: central government					
Current prices	9,910	20,269	32,816	40,900	65,554
Constant prices (2011–12 base year)	15,852	25,952	32,802	34,619	51,296
Health expenditure: state governments					
Current prices	24,463	36,687	63,037	99,131	1,53,143
Constant prices (2011–12 base year)	39,302	47,033	62,817	83,720	1,20,259
	(figures in percentages)				
Average annual growth in constant prices					
GDP	NA	6.7	6.1	6.1	7.4
Total government expenditure	NA	8.7	5.6	5.3	7.9
Government health expenditure: centre + states	NA	9.3	9.0	7.1	14.9
Health expenditure: central government (CGHE)	NA	16.4	7.8	1.8	15.7
Health expenditure: state governments (SGHE)	NA	6.0	9.6	9.6	14.5
Expenditure as % of GDP					
Total government expenditure as % of GDP	26.17	27.89	27.43	26.77	27.05
Government health expenditure as % of GDP	0.92	0.99	1.09	1.12	1.35
Central government health expenditure as % of GDP	0.26	0.35	0.37	0.33	0.40
State governments health expenditure as % of GDP	0.65	0.64	0.71	0.79	0.94
Government health expenditure as % of total government expenditure	3.51	3.58	3.96	4.18	4.98
Distribution of health expenditure by central and state governments					
% central government	28.7	35.6	34.3	29.3	29.9
% state governments	71.3	64.4	65.7	70.7	70.1

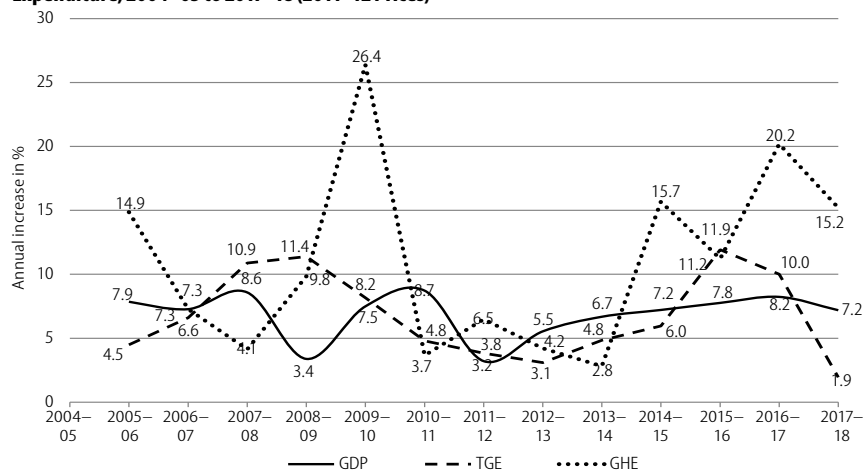
Sources and Notes:

1 GDP data from <https://databank.worldbank.org/source/world-development-indicators#>, viewed on 30 May 2021.

2 Total government expenditure sourced from *Handbook of Indian Economy* various years, available at <https://www.rbi.org.in/Scripts/AnnualPublications.aspx?head=Handbook+of+Statistics+on+Indian+Economy>.

3 Government health expenditure compiled from: (a) National Health Accounts: 2004–05, NHA Cell, MoHFW, Government of India, (b) Health Sector Financing by Centre and States/UTs in India (2011–12 to 2014–15), (2013–14 to 2015–16), (2014–15 to 2016–17), and (2015–16 to 2017–18), NHA Cell, MoHFW, GoI; GDP deflator used for converting budgetary expenditure data to constant prices.

Figure 1: Annual Rate of Increase in the GDP, Total Government Expenditure, and Government Health Expenditure, 2004–05 to 2017–18 (2011–12 Prices)



here to account for the observed annual-level fluctuations in the rate of change in these indicators seen in Figure 1. The average annual increase in the GDP measured in real terms (that is, after adjusting for price rise) during this period ranged between 6.7% and 7.4% and for the TGE, the average annual increase varied between 5.3% and 8.7%. The average annual increase in the GHE varied between 9.3% during 2004–07 and 2007–10 and 14.9% during 2013–16 and 2016–18. Hence, the rate of increase is faster for GHE followed by the TGE and the GDP.

Between 2004–05 and 2017–18, when there was a nominal increase in the TGE as a percentage of the GDP from 26% to 27%, the GHE as percentage of the GDP increased from 0.9% to 1.3%. The GHE as percentage of the TGE increased from 3.5% to 5% during the same period. Despite a substantial increase in the GHEs during this period, it is much below the targets set for the GHE in the country. Hence, allocation for health sector needs to be increased considerably in order to move closer to the targets mentioned in the health policy documents.

As seen above, the main issue of concern when the GDP is used as a denominator, while setting targets for the GHE is the paucity of evidence on the association between the GDP and allocation of financial resources for health sector in government budgets. Targeting expenditure based on the ratio of two indicators that are distinct is unrealistic. The fact that there is a lack of association between the GHE and GDP is probably due to the fiscal

federalism in the case of health sector in India where state governments contribute nearly 70% of the GHE as shown in Table 1, while the central government only accounts for 30%. The growth in the net state domestic product (NSDP) varies across states and will not be in line with growth in the national GDP. The GHE–GDP ratio that is often used for target setting for public spending on health is not sensitive to state-level variations in the NSDP.

The second issue in using the GHE–GDP ratio in setting health financing goals for the public sector arises out of the operational issues in implementing and monitoring such targets. The GDP/NSDP, as is known, gets estimated only after the end of the financial year, while financial allocation for health sector in government budgets is made before the start of the financial year. The governments at the central and state levels only have a forecasted estimate of the GDP/NSDP at the time of budgetary allocation for health sector nor is there a practice of referring to the GDP growth when the Ministry of Finance examines the proposal from the MoHFW for their share in the budgetary allocation. This nullifies any scope for using the GDP to monitor allocation for health sector in the central and state budgets.

There are other reasons; first, the GDP is seen as a measure of economic output and not of welfare, whereas health expenditures are aimed at improving the health and well-being of the population. In that sense, the GDP appears to be a broad concept wherein it accounts for the spending by different groups that participate in an

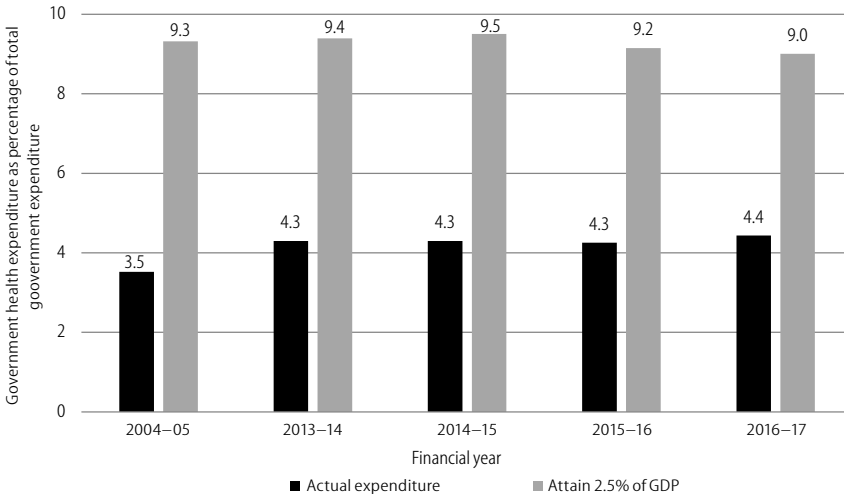
economy towards consumption, government spending, investments, and net exports, while the GHE is dependent on the revenues realised from governments' own taxes and not on the economic growth. Further, healthcare spending is sensitive to changes in prices, especially in low-income countries wherein a small cost variation for important healthcare products makes a vast difference in their demand (Esteban and Roser 2020). Moreover, the prices of healthcare are affected by productivity changes in other markets. Baumol's "cost disease" theory suggests that if the productivity of the healthcare industry increases slower than that of other industries, then prices in the healthcare sector are likely to grow faster than inflation and therefore, the share of health expenditure to GDP is likely to increase (Helland and Alex 2019).

TGE-based Targets for Health Expenditure

Planning and resource allocation and spending for health or any other sector requires an advanced foresight of the resources available for disposal at that particular point of time. In India, budgets get formulated towards the end of the third quarter and are finalised at the beginning of the fourth quarter. Although the growth in GHEs is not consistent with that for the TGE, it could be a better indicator for setting health financing targets. Here, we consider that the financial resources available with the government has a greater influence than the GDP during the annual budgeting for health sector in the country. This could enable timely monitoring of allocation as well as expenditures for health sector in the central and state government budgets. In addition, the replacement of the GHE–GDP target with the GHE–TGE target would streamline the government's accountability towards the GHE targets in the national health policies during pre- and post-budgetary discussions.

We examined the gap between the actual GHE and the national targets for the GHE reported in public policy documents mentioned earlier. We attempted to understand how much the governments—both centre and state—need to invest annually to attain the desired targets of GHEs. Figure 2 (p 24) represents

Figure 2: Share of the Government Health Expenditure Out of the Total Government Expenditure Required to Move Closer to the Policy Target of 2.5% of the GDP



the share of expenditure for health sector that is required from the central and state governments to adhere to the GHE targets. The five time point analysis from the different National Health Accounts estimates for India indicate that in the present scenario, the GHE as a percentage of the TGE needs to be increased to 9% (against 4.4% at the current levels) to reach up to the target level of 2.5% of the GDP mentioned in the NHP, 2017.

The above analysis highlights the fact that it is more realistic to monitor allocation of 9% in annual budget as against monitoring the allocation and expenditure of 2.5% GDP in the annual budget wherein the amount of the GDP remains undetermined at the point of decision-making for allocation to the MoHFW sector and is an abstract figure. The policy planners need to debate and demand, during budget process, a pathway for increased demand for investments in health that allows the government to allocate and spend 9% and determine the allocation ratios for the centre and states.

The debate on the GHE is incomplete until we highlight the changes in central and state governments' health expenditures. As per the Indian Constitution, health is a state subject where state governments are expected to implement healthcare programmes and services. The central government plays a key role in designing national policies and guidelines for healthcare and finance the centrally sponsored schemes. Constant price data indicate that there has been a

threefold increase in both the central and state governments' expenditures on health between 2004-05 and 2017-18 as shown in Table 1. The average annual change in the central government health expenditure (CGHE) varied between 1.8% during 2010-13 and 2013-16 and 16.4% during 2004-07 and 2007-10, and the state government health expenditure (SGHE) varied between 9.6% and 14.5%. Changes in the CGHE is observed to be more fluctuating than in the case of the SGHE. The share of the CGHE in the GHE varied between 36% during 2007-10 and 30% during 2016-18, while the SGHE in the GHE varied between 64% and 70% during

the respective time periods. Variations in the SGHE is less because most of it is spent on salaries, administration, and other recurring expenditure that are path-dependent and not flexible, while CGHE is more discretionary and is also linked to schemes that are being implemented.

In Conclusion

Evidence shows that the changes in the GHE and GDP are unrelated in the Indian context, and there is a need to use indicators that can be measured and monitored while setting targets for the GHE in the country. In fact, the GHE has grown at a much faster pace than the GDP growth rates in India over the last decade. Even the global data indicates that the health spending in the last two decades has been growing faster than the GDP across most countries (WHO 2019). Hence, we propose that health policy planners need to use an indicator that is measurable at the time of allocation of financial resources for the health sector in the national or state budgets for setting targets and monitoring expenditures over time. The proposed GHE-TGE-based indicator would assist in monitoring and tracking resource flows for health and that will enable central and state governments to identify additional resources and better operational mechanisms for increased health spending. The central and state



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governments needs to be held accountable for the allocation, disbursal, and non-utilisation of funds. Allocating increased resources needs to be coupled with building the capacities of governments at all levels to utilise the allocated funds for health efficiently and in time. The fact that the government has larger influence on the TGE than on the GDP level is the main reason for recommending it as an indicator on government's commitment to allocate financial resources for health in the country. Therefore, we cannot continue to randomly propose a target for government health spending. The future public policy statements and policies need to have the GHE targets that can be monitored effectively and bring in accountability as well as transparency in the government's commitments to respective health spending; it can only be effective when we have an estimate of what we need to address as a priority health concern and how much resources it takes to deliver the required services.

NOTES

1 It is to be noted that the GHE estimates presented in this article using the MoHFW data also includes the expenditure incurred by the central and state governments for their dependents of government employees and their

families and minor health expenditure incurred by central ministries and hence will be marginally higher compared to the estimates presented in other studies.

2 In India, contributions to the GDP are mainly divided into three broad sectors—agriculture, industry, and services. The GDP is measured over market prices, and there is a base year for the computation. The GDP growth rate is the most important indicator of economic health as it measures how fast the economy is growing. Nominal GDP is the value of all final goods and services that an economy produces during a given year; it is not adjusted for inflation. It is calculated using the prices that are current in the year in which the output is produced. Real GDP, in contrast, measures the total value of all final goods and services that the economy produced during a given year, after accounting for inflation. It is calculated using the prices of a selected base year. The GDP is calculated in India at factor cost and market prices. The GDP at factor cost assesses the performance of different industrial sectors in the economy, while the GDP at market prices encompasses all the domestic expenditures that are inclusive of the household consumption, net investments (that is capital formation), government costs, and net trade (exports minus imports).

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