Demand for Grants 2022-23 Analysis

Health and Family Welfare

In the last two years, the COVID-19 pandemic and its aftermath has highlighted the importance of a robust public health system. In India, states have the primary responsibility of managing the public health system. The Ministry of Health and Family Welfare sets the overall policy and regulatory framework of the health sector. It also implements the National Health Mission and various other schemes which deal with all levels of healthcare systems in the country.

Last year, one of the focus areas in the union budget was health and well-being. This translated into announcement of the PM AtmaNirbhar Swasth Bharat Yojana which seeks to improve healthcare systems at the primary, secondary and tertiary levels; allocating Rs 35,000 crore towards the COVID-19 vaccination programme; and allocating additional grants to states for health, water and sanitation.

While these programmes and schemes have helped in improving the status of the public health system in the country, there is still a long way to go. India's overall investment in its public health system is one of the lowest in the world. The physical infrastructure of health systems is still fairly poor, especially in rural areas. There is shortage of human resources (both doctors and support staff). People continue paying high amounts out of their own pocket implying that access to public health care, quality of public health care and overall insurance coverage needs to improve. The National Health Profile (2020) recognises that health financing is one the key ways to achieve universal health coverage, which is one of the goals under the National Health Policy, 2017.[1] Appropriate health financing will also help ensure adequate funds for health care, provide equitable access to all population groups and reduce barriers to utilise health services.

In this note we examine the trends in the financial allocation towards the Ministry of Health and Family Welfare, issues with health financing and key issues with the health sector.

Overview of finances

In 2022-23, the Ministry of Health and Family Welfare has been allocated Rs 86,201 crore.[2] This is a marginal 0.2% increase over the revised estimates of 2021-22. The **Department of Health and Family Welfare** accounts for 96% of the Ministry's allocation at Rs 83,000 crore, while the **Department of Health Research** has been allocated Rs 3,201 crore (4% of the allocation).

Highlights of the Budget speech 2022-23

An open platform will be rolled out for the National Digital Health Ecosystem. It will consist of digital registries of health providers and health facilities, unique health identity, consent framework, and universal access to health facilities.

To improve access to quality mental health counselling and care services, a 'National Tele Mental Health Programme' will be launched. This will include a network of 23 tele-mental health centres of excellence, with NIMHANS as the nodal centre and International Institute of Information Technology, Bangalore providing technology support.

The Department of Health and Family Welfare is broadly responsible for: (i) implementing health schemes, and (ii) regulating medical education and training. The Department of Health Research is broadly responsible for conducting medical research.

Table 1: Budget allocation for the Ministry of Health and Family Welfare (in Rs crore)

Item	2020-21 Actuals	2021-22 RE	2022-23 BE	% Change (RE 2021-22 to BE 2022-23)
Health & Family Welfare	77,569	82,921	83,000	0.1%
Health Research	3,125	3,080	3,201	3.9%
Total	**80,694**	**86,001**	**86,201**	**0.2%**

Note: BE – Budget Estimate; RE – Revised Estimates.
Sources: Demand Number 46 and 47, Expenditure Budget 2022-23; PRS.

COVID-19 related expenditure: In 2022-23, the only COVID-19 specific allocation under this Ministry is Rs 226 crore allocated towards the Insurance Scheme for Health Care Workers fighting COVID-19. In addition, the Ministry of Finance has allocated Rs 5,000 crore towards COVID-19 vaccination.

As per the revised estimates of 2021-22, the Ministry of Health and Family Welfare has allocated Rs 16,545 crore towards COVID-19 related expenditure. This includes Rs 14,567 crore allocated towards the second phase of the COVID-19 Emergency Response and Health System Preparedness Package, and Rs 1,165 crore towards phase I (includes Rs 526 crore allocated to the Indian Council of Medical Research (ICMR) for procurement of testing kits, equipment). In 2020-21, the Ministry of Finance had estimated expenditure of Rs 35,000 crore towards COVID-19 vaccination. As per the revised estimates of 2021-22, this amount is estimated to increase to Rs 39,000 crore.

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In 2020-21 (actuals), the Ministry spent Rs 11,941 crore on COVID-19 which includes expenditure towards the Emergency Response and Health System Preparedness Package (Rs 10,529 crore), allocation to ICMR (Rs 1,275 crore), and vaccination for healthcare workers and frontline workers (Rs 137 crore). Table 2 details the main heads of expenditure under the Ministry allocated for the year 2022-23.

Table 2: Main heads of expenditure (in Rs crore)

Major Heads	2020-21 Actuals	2021-22 RE	2022-23 BE	% Change (RE 2021-22 to BE 2022-23)
National Health Mission (total)	37,080	34,447	37,000	7.4%
AIIMS, ICMR, CGHS and other autonomous and statutory bodies	12,197	13,979	15,200	9%
PMSSY	6,840	7,400	10,000	35.1%
PMJAY	2,681	3,199	6,412	100.4%
PM ABHIM		1,040	5,846	462.0%
National AIDS & STD Control Programme	2,815	2,350	2,623	11.6%
Family Welfare Schemes	462	306	484	58.2%
COVID-19	11,941	16,545	226	-98.6%
Others	6,679	6,735	8,409	25%
Total	**80,694**	**86,001**	**86,201**	**0.2%**

Note: Expenditure on COVID includes allocation towards both phases of COVID-19 emergency response, vaccination of healthcare and frontline workers, insurance for healthcare workers, and procurement of COVID-19 testing kits; BE - Budget Estimate; RE - Revised Estimates; AIIMS – All India Institute of Medical Sciences (New Delhi); ICMR – Indian Council of Medical Research; CGHS - Medical Treatment of CGHS Pensioners; PMJAY - Pradhan Mantri Jan Arogya Yojana; PMSSY - Pradhan Mantri Swasthya Suraksha Yojana; PM ABHIM - Pradhan Mantri Ayushman Bharat Health Infrastructure Mission.
Sources: Expenditure Budget 2022-23; PRS.

Issues to consider

Investment in public health has been low

India's public health expenditure (centre and states) was 1.8% of the GDP in 2020-21.[3] This is higher than the trend in the last decade when public health expenditure as percentage of GDP was between 1.1% - 1.5%.[4,5] However, this allocation is much lower as compared to other countries.[4,6,7,8] The Economic Survey 2020-21 observed that India ranks 179th among 189 countries in prioritising healthcare in the government budget.[4] The National Health Policy, 2017 aims to increase public health expenditure to 2.5% of the GDP by 2025.[1]

The National Health Policy, 2017 noted that while general taxation would remain the largest means for financing health care, the government could consider imposing taxes on specific commodities such as tobacco, alcohol and foods having negative impact on health, and also levy taxes on extractive industries and pollution cess.[1] In 2018-19, the central government announced a 4% Health and Education Cess in place of the 3% Education Cess on Income Tax and Corporation Tax, to cater to the education and health needs of the poor and rural families.[9] In 2022-23, Rs 53,846 crore is estimated to be collected through the health and education cess, which is an 14% increase over the amount collected in 2021-22 (RE).[10]

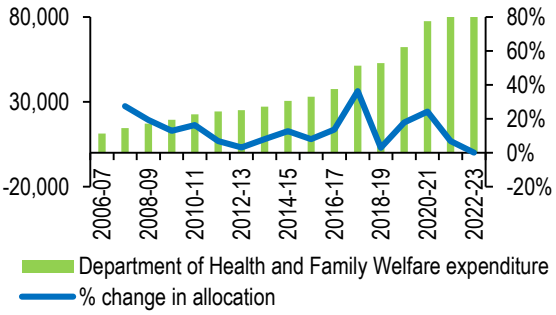
In 2020-21, the central government introduced a 5% health cess which is imposed as customs duty on certain medical equipment.[11] This was to be utilised for financing health infrastructure and services in aspirational districts. In 2022-23, Rs 870 crore is estimated to be collected under this health cess (customs), which is a 12% increase over the amount collected in 2021-22 (RE).[10]

The 15th Finance Commission noted that the health sector faces multiple challenges such as low investment, inter-regional disparities especially in nutrition levels and hunger, shortage of doctors, paramedics, hospitals, and inadequate numbers of primary healthcare centres.[12] It recommended unconditional grants amounting to one lakh crore rupees for the health sector (for the time period 2021-26). In addition, it suggested that by 2022, states should spend more than 8% of their budget on health. In 2021-22, as per budget estimates, states have allocated only 6% of their budget towards health.

Allocation towards the Department of Health and Family Welfare has been low despite high utilisation

Between 2006 and 2022, the allocation to the Department of Health and Family Welfare has increased at a CAGR of 13%. (Compound Annual Growth Rate (CAGR) is the annual growth rate over a certain period of time.) Over the past few years, the Standing Committee on Health and Family Welfare has noted that the allocation towards the Department has been lower than the amount sought by the Department. This is despite budget utilisation being 100% or higher (post 2015-16). In 2020-21, the Department spent Rs 77,569 crore which was 19% more than what was estimated at the budget stage. In 2021-22 also, the Department is expected to exceed the budget estimate by 16%.

Figure 1: Allocation to the Department of Health and Family Welfare (2006-22) (in Rs crore)



Note: For 2021-22, % change in allocation is 2021-22 RE over 2021-22 BE; BE – Budget Estimate; RE – Revised Estimate.
Sources: Expenditure Budgets, 2006-07 to 2022-23; PRS.

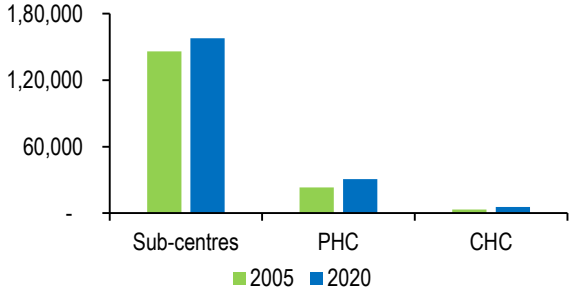
Primary healthcare is lacking and requires more investment

Depending on the level of care required, healthcare in India is broadly classified into three types: primary care (provided at primary health centres), secondary care (provided at district hospitals), and tertiary care institutions (provided at specialised hospitals like AIIMS). Primary health care infrastructure provides the first level of contact between health professionals and the population.[13]

Based on the population served and the type of services provided, primary health infrastructure in rural areas consists of a three-tier system. This includes Sub-Centres (SCs), Primary Health Centres (PHCs), and Community Health Centres (CHCs).[14] Primary healthcare systems are managed and administered by states (since public health is a state subject). The Ministry provides states with technical and financial assistance to help improve their public healthcare delivery systems. In the union budget 2017-18, it was announced that 1.5 lakh SCs and PHCs will be transformed into Health and Wellness Centres (HWCs) by December, 2022.[15]

Primary healthcare system: As on March 31, 2020, 1,55,404 SCs, 24,918 PHCs and 5,183 CHCs were functioning in rural areas.[16] In urban areas, there were 2,517 SCs, 5,895 PHCs, and 466 CHCs.[16]

Figure 2: Number of Sub Centres, PHCs, and CHCs (2005 and 2020)



Note: PHC – Primary Health Centre; CHC: Community Health Centre.
Sources: Rural Health Statistics 2017-19; PRS.

Ayushman Bharat- Health and Wellness Centres Scheme (AB-HWC): HWCs provide a range of services beyond maternal and child healthcare services. These include: (i) care for non - communicable diseases, (ii) rehabilitative care, (iii) mental health services, (iv) first level care for emergencies and trauma, and (v) free essential drugs and diagnostic services.[17] As on February 6, 2022, 90,030 HWCs were operational across the country.[18] Note that the target is to create 1.5 lakh HWCs by December 2022.

The number and distribution of SCs, PHCs and CHCs in rural areas is based on population norms. However, the Standing Committee on Health (2021) had noted that there are shortfalls of 23% in SCs, 28% in PHCs, and 37% in CHCs.[19] The 15th Finance Commission also noted that there are critical gaps with respect to sub centres, PHCs, CHCs and wellness centres in some states.[20] It noted that as of March 31, 2020, 885 PHCs and 33,886 SCs did not have the necessary infrastructure to meet the targets of the National Health Policy, 2017.[12]

As per the Rural Health Statistics 2019, SCs, PHCs, and CHCs still do not meet the required coverage targets (see Table 3).

Table 3:Average rural population covered by health facility (based on the mid-year population as on July 1, 2020)

Health Facility	Norm	Average rural population covered
SC	300 – 5,000	5,729
PHC	20,000 – 30,000	35,730
CHC	80,000 – 1,20,000	1,71,779

Source: Rural Health Statistics 2019; PRS.

The Standing Committee on Health (2021) also noted that inadequate primary health infrastructure in several areas and absence of an organised primary healthcare system in urban areas were some of the issues that led to poor management of the COVID-19 outbreak.[21] The 15th Finance Commission observed that prevention and early management of health problems can reduce the need for complicated specialist care provided at the tertiary level.[12] It recommended that the focus of healthcare provision in the country should be towards providing primary healthcare.

The 15th Finance Commission noted that India is estimated to have 1.4 hospital beds per 1,000 people, which is half the global average of 2.9 beds (World Bank estimate in 2017).[22] Over 60% of these beds are in the private sector.[12] In comparison, China has over four beds per 1,000 people, Sri Lanka, the United Kingdom and the United States all have around three beds per 1,000 people, while Thailand and Brazil have more than two beds per 1,000 persons.[12] The National Health Policy, 2017 aims to increase the availability to two beds per 1,000 people. This could be achieved by creating 3,000 to 5,000 hospitals with 200 beds each by 2025.[12]

National Health Mission: The National Health Mission (NHM) provides states with financial assistance towards interventions focused on strengthening primary and secondary healthcare. It comprises of a rural sub mission, the National Rural Health Mission (NRHM) and an urban sub-mission, National Urban Health Mission (NUHM). Key program components of the NHM include health system strengthening in rural and urban areas, Reproductive-Maternal- Neonatal-Child and Adolescent Health (RMNCH+A), and Communicable and Non-Communicable Diseases. States have the flexibility to plan and implement state specific action plans within these broad national parameters and priorities. They are provided with technical and

financial assistance based on these plans, subject to availability of resources.

In 2022-23, NHM has been allocated Rs 37,000 crore. Of this, Rs 22,317 crore has been allocated towards the Flexible Pool for RCH and Health System Strengthening, National Health programme and NUHM. Rs 6,343 crore has been allocated towards infrastructure maintenance. The allocation for NHM in 2022-23 is 7.4% higher than the revised estimates of 2021-22.

Pradhan Mantri Ayushman Bharat Health Infrastructure Mission (PM ABHIM): PM ABHIM was launched in October 2021 (renaming the Prime Minister Atmanirbhar Swasth Bharat Yojana that was announced in Budget 2021).[23] It is a Centrally Sponsored Scheme (with some Central Sector component) spread over five years from 2021-22 to 2025-26. The Mission focuses on developing capacities of health systems and institutions across primary, secondary and tertiary healthcare levels, to prepare health systems in responding effectively to the current and future pandemics.

One of the components seeks to enable early detection of diseases through HWCs. These HWCs will also provide medical consultation, test facilities and medicine free of cost. Further, 35,000 new critical care beds will be added in 600 districts, and referral facilities (transferring patients from one health care facility to other) will be provided in 125 districts.

Under the second component, integrated public health laboratories will be created in 730 districts. Block level public health units will be created in 3,000 blocks. The network for diagnostic facilities will be strengthened by using five regional national centres for disease control, 20 metropolitan units, and 15 bio-safety level labs.

The Mission has been allocated Rs 5,846 crore in 2022-23. In 2021-22 (RE), the Mission was allocated Rs 1,040 crore.

Poor investment in primary health care

Allocation towards NHM and PM ABHIM form just about half of the Ministry's budget. The National Health Policy, 2017 suggests allocating up to two-thirds or more of the budget to primary care, followed by secondary and tertiary care. The 15th Finance Commission also recommended that by 2022, two-thirds of the total health expenditure should be on primary healthcare.

Low investment in public health impacts the ability of the government to invest in primary health infrastructure, in increasing the human resources available, and ensuring that all citizens have access to basic health care. It has also resulted in citizens preferring to use private health facilities over government ones, and spending more from their pocket on basic health care.

As per the 75th NSS survey (July 2017 and June 2018), about 33% ailments in rural areas and 26% in urban areas were treated in government hospitals.[24] The remaining were treated in private hospitals (21% in rural, 27% in urban), or by private doctors/clinics (41% in rural, 44% in urban), and the rest with informal health care providers and charitable hospitals.[24] This is despite higher average expense for treatment (without hospitalisation) in private hospitals (Rs 1,062) as compared to government hospitals (Rs 331).[25] The 15th Finance Commission noted that private health care in India is expensive, and also lacks trained and skilled manpower.

The 15th Finance Commission has recommended grants of Rs 70,051 crore, over the period of five years (2021-2026) through local governments, for strengthening the primary healthcare system. These grants will provide for: (i) conversion of rural SCs and PHCs to HWCs, (ii) support for diagnostic infrastructure for primary healthcare activities, and (iii) support for urban HWCs, SCs, PHCs, and public health units at the block level. The Commission also recommended that centrally sponsored schemes (CSS) in health should be flexible enough to allow states to adapt and innovate, and the focus of these schemes should shift from inputs to outcome. It also recommended strengthening local governments in terms of resources, health infrastructure and capacity building which would enable them to play an enhanced role in health care delivery, including in crisis times.

Out-of-pocket spending by individuals is high

Poor public spending, and poor public health infrastructure has led to individuals spending higher amounts on healthcare services. Out-of-pocket expenditure is the payment made directly by individuals at the point of service where the entire cost of the health service is not covered under any financial protection scheme. The Economic Survey 2020-21 noted that in India out-of-pocket expenditure by households is one of the highest in the world.[4]

According to the National Health Accounts estimates, in 2017-18, out-of-pocket expenditure on health as a percentage of total health expenditure in the country was 48.8%.[26] This has reduced from 69.4% in 2004-05.[26] In several cases, this expenditure is paid out through borrowings. As per the NSS Survey on Health in India (2018), in rural areas, 13.4% of the hospitalisation cases were financed by individuals through borrowings. In urban areas, this share was at 8.5%.[27] Between 3-4% people in both rural and urban areas required support from friends and relatives.[27] In 2017-18, private sector health expenditure was 5.8% of the total health expenditure. Government health expenditure (both centre and states) including capital expenditure was 40.8 % of the total health expenditure.

The Ministry introduced the Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (PMJAY) to provide health insurance coverage to poor and vulnerable families, for accessing secondary and tertiary healthcare services through empanelled public and private healthcare facilities.[28] While PMJAY provides coverage for secondary and tertiary levels of healthcare. Of the health expenditure in 2017-18, 47% was towards primary care, 34% towards secondary care, and 14% towards tertiary care (the remaining is towards governance and supervision).[26]

The 15th Finance Commission noted that about 60 million Indians are pushed into poverty each year due to out-of-pocket payments for health. This implies that health insurance or any kind of financial protection measures must cover expenses at all levels of healthcare. The Economic Survey 2020-21 noted that increasing government spending on public health from 1% of the GDP to 2.5-3% of GDP will help in reducing out-of-pocket expenditure from 60% to 30%.[3,4] It also noted that Indian states that have higher per capita spending on health have lower out-of-pocket expenditure, which is also true at global level.

Insurance schemes to help reduce out of pocket spending

Under PMJAY, insurance cover up to five lakh rupees per family per annum is provided to around 10.74 crore poor and vulnerable families, whose eligibility is determined as per the Socio-Economic Caste Census (2011).[28] The insured families can access secondary and tertiary healthcare services through empanelled public and private facilities. The scheme subsumed two centrally sponsored schemes, namely, Rashtriya Swasthya Bima Yojana (RSBY) and the Senior Citizen Health Insurance Scheme. The scheme provides coverage for 1,573 procedures, and pre and post-hospitalisation expenses as well.

Allocation: In 2022-23, PMJAY has been allocated Rs 6,412 crore, which is double the revised estimates of 2021-22 (Rs 3,199 crore). Experts have noted that this amount may be low considering the expenditure required on PMJAY.

A study by the 15th Finance Commission on Ayushman Bharat (2019) estimated the demand and expenditure on PMJAY for the next five years.[20] It stated that the total costs (centre and states) of PMJAY for 2019 could range from Rs 28,000 crore to Rs 74,000 crore. This estimate considers: (i) the assumption that all targeted beneficiaries will be covered (approximately 50 crore people), (ii) hospitalisation rates over time, and (iii) average expenditure on hospitalisation. These costs could go up to between Rs 66,000 crore and Rs 1,60,089 crore in 2023 (accounting for inflation).

Implementation: The Economic Survey 2020-21 noted that PMJAY enhanced health insurance coverage. The proportion of health insured households increased by 54% in states that implemented PMJAY and decreased by 10% for states which did not implement it.[4]

However, utilisation of the amount allocated to the scheme has also been poor. While 83% of budget allocation was utilised in 2018-19, the utilisation decreased to 50% in 2019-20, and to 42% in 2020-21. In 2021-22, the allocation towards the scheme has been halved at the revised stage. This could imply gaps in implementation of the scheme.

Table 4 shows details regarding the implementation of the Ayushman Bharat programme which includes PMJAY and Health and Wellness Centres.

Table 4: Status of implementation of PMJAY (April 1, 2021 to November 28, 2021)

Indicators	All India
Total footfalls	82.6 crore*
Ayushman cards issued	17.2 crore
Funds disbursed to states/UTs for implementation	Rs 2,544 crore
Total hospital admissions authorised	74.7 lakh
Claims paid towards authorised hospital admissions (COVID-19 and Non-COVID-19 treatment)	Rs 2,450 crore*
Claims paid for authorised hospital admissions for COVID-19 treatment	Rs 1,056 crore*
Health and Wellness Centres	90,030*

Note: *As on February 6, 2022.
Sources: Lok Sabha Starred Question No. 95, Ministry of Health and Family Welfare, answered on December 3, 2021; HWC Portal, Ayushman Bharat; PRS.

The Standing Committee on Health and Family Welfare (2020) noted that PMJAY faces various implementation challenges.[29] One of the key issues is identification of beneficiaries. The scheme allows only those persons to avail insurance who have been included in the SECC 2011. This database is more than a decade old and hence may not capture the entire population in need of such insurance. The Standing Committee on Health (2021) had recommended that the Ministry should expand the list of beneficiaries under PMJAY.[19] The Committee (2021) also noted that the utilisation of PMJAY was also adversely impacted due to COVID-19.

Note that, the Standing Committee on Health (2018) and a study report of the 15th Finance Commission (2019) had noted that PMJAY is just an extension of RSBY which provided for coverage of up to Rs 30,000 per family per annum.[20,30] Hence, to ensure proper implementation of the scheme, an analysis of the failures and inadequacies of RSBY should be done. This would look at whether: (i) RSBY covered all potential beneficiaries, (ii) hospitalisation rates increased under the scheme, and (iii) insurance companies were profitable under the scheme. The key challenges identified in the implementation of RSBY include: (i) low rate of enrolment of beneficiaries, (ii) increase in out-of-pocket expenditure, and (iii) issues in empanelment of healthcare service providers.[31]

Shortfall in human resources

The Economic Survey 2020-21 observed that the aggregate density of health workers is closer to 23 per 10,000 population, which is the lower threshold recommended by the World Health Organisation (WHO).[4] This is significantly lower than the adequate density of 44.5 health workers per 10,000 population, recommended by WHO to achieve the Sustainable Development Goals (SDG) targets by 2030. As of 2019, there is one doctor per 1,511 people, which is lower than the WHO standard of one doctor per 1,000 people.[12] There is one nurse per 670 people, which is lower than the WHO standard of one nurse per 300 people.[12] In December 2021, in response to a question on shortage of doctors, the Minister had replied that as of November 2021, the doctor-population ratio in the country is 1:834.[32] This is assuming 80% availability of registered allopathic doctors and 5.65 lakh AYUSH doctors.

As on March 31, 2020, there was a 2% shortage (based on the minimum requirement as per the norms) in the sanctioned posts of female health workers/ ANMs, and a 65.5% shortage of male health workers/ ANMs (at SCs and PHCs).[16] With regard to allopathic doctors at PHCs, there was a shortfall of 6.8% of the total requirement for existing infrastructure.[16] Further, there were vacancies even in these sanctioned posts. Vacancies for female health workers/ ANMs were at 14.1%, for of male health workers/ ANMs at 37% (at SCs and PHCs), and for doctors at PHCs at 24.1%.[16]

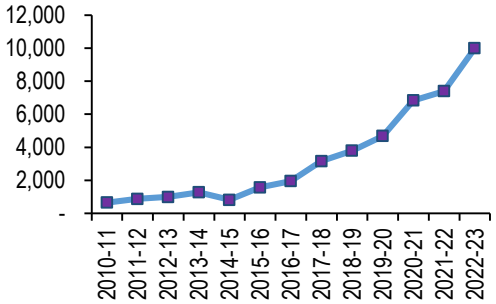
The 15th Finance Commission noted that there is regional and state-wide disparity in the availability of doctors. It recommended that an All India Medical and Health Service must be constituted under the All-India Services Act, 1951.

Medical and Allied Healthcare education: In the last three years Parliament has passed various laws which seek to improve the regulation of medical education and profession in India. The National Medical Commission Act, 2019 sets up the NMC and replaces the Medical Council of India (MCI).[33] The NMC will oversee medical education and practice in India. The National Commission for Allied and Healthcare Professions Act, 2021 seeks to regulate and standardise the education and practice of allied and healthcare professionals.[34]

Pradhan Mantri Swasthya Suraksha Yojana (PMSSY): PMSSY was introduced in 2003 with the objective of: (i) correcting regional imbalances in the availability of affordable and reliable tertiary healthcare services, and (ii) augmenting facilities for quality medical education in the country.[35] This included establishing institutions like AIIMS and upgrading certain state government hospitals. The scheme covers 20 new AIIMS and 71 state government hospitals.[35]

In 2018, the Comptroller and Auditor General (CAG) noted that all new AIIMs overshot their completion time by almost five years.[36] There were similar delays observed in the upgradation of state government hospitals. Further, it was found that the Ministry had estimated the capital cost for setting up six new AIIMS in Phase 1 to be Rs 332 crore per institute. After four years, this cost was revised to Rs 820 crore per institute, on account of shortcomings in planning and assessment of requirements. The Standing Committee on Health and Family Welfare (2017 and 2018) noted that this indicates poor assessment of time and cost which have left the allocated funds unused.[30,37]

Figure 3: Yearly allocation to PMSSY (2010-22) (in Rs crore)



Notes: Values for 2021-22 and 2022-23 are revised estimate and budget estimate respectively
Sources: Union Budget 2010-11 to 2022-23; PRS.

In 2022-23, PMSSY has been allocated Rs 10,000 crore. This is an increase of 35% over the revised estimates of 2021-22 (Rs 7,400 crore). The central government also provides grants to autonomous bodies such as AIIMS, New Delhi, Post Graduate Institute of Medical Education and Research, Chandigarh, and Jawaharlal Institute of Post Graduate Medical Education and Research, Puducherry. In 2022-23, these autonomous bodies have been allocated Rs 10,022 crore, which is an increase of 14% over the revised estimates of 2021-22.

Key health indicators have improved but still far from ensuring overall better health of citizens

While health financing as a percentage of GDP is a good metric to understand how much is a country investing in its health infrastructure, performance across certain key indicators is a reflection of how healthy the overall population is, and whether health services are accessible to all citizens.

The results of National Family Health Survey-5 (NFHS-5) (2019-20) indicate several improvements in health indicators as compared to NHFS-4 (2015-16).[38] These include: (i) reduction in infant mortality rate, (ii) improvement in immunisation coverage, (iii) increase in households with improved sanitation facility and clean cooking fuel, and (iv) increase in institutional births.[39]

Table 5 shows the status of some key targets under the NHM framework.

Table 5: Status of some key targets of NHM

Indicator	Target (2012-20)	Latest Status
IMR	25	35 (2019-21)
MMR	100 per 1,00,000 live births	113 (2016-18)
TFR	2.1	2.0 (2019-21)
Annual Malaria incidence	< .001	0.02 (2019)
Annual prevalence and mortality from Tuberculosis	Reduce by half	Incidence reduced from 300 per lakh in 1990 to 204 per lakh in 2017.

Note: IMR-Infant Mortality Rate; MMR-Maternal Mortality Rate; TFR-Total Fertility Rate.
Sources: Health and Family Welfare Statistics 2019-20; Special Bulletin on maternal Mortality in India 2016-18; National Family Health Survey-5 (2019-21); Unstarred Question No.711, Ministry of Health and Family Welfare, Lok Sabha, July 23, 2021; PRS.

The Economic Survey 2020-21 noted that information asymmetry is one of the key reasons which exposes the healthcare sector to market failures. It noted that patients in India rarely know the value of information they receive in the healthcare sector. For example, in case of certain medical services such as preventive care or mental health, patients may never know about the quality of the services they received. The Survey recommended setting up a sectoral regulator (in private healthcare): (i) for supervision and regulation of the healthcare sector, and (ii) to prevent information asymmetry in the sector. Further, the Survey noted that mitigating information asymmetry in the healthcare sector will help achieve lower insurance premiums and better welfare of people.

Health research is still lagging

In 2021-22, the Department of Health Research has been allocated Rs 3,201 crore, which is a 4% increase over the revised estimates of 2021-22, and a 2% increase over the actual expenditure in 2020-21.

The Standing Committee on Health and Family Welfare (2020) noted that the allocation to Department of Health Research is low compared to the requirement of funds needed for health research.[39] It recommended that at least 10% of the budget for the Ministry of Health and Family Welfare should be earmarked towards health research. However, in 2021, the Committee recommended that the allocation towards the health research should be 5% of the total expenditure of the Ministry.[40] As per the budget estimates of 2022-23, allocation towards the Department of Health Research is 4% of the total allocation of the Ministry.

The Standing Committee on Health and Family Welfare (November 2020) noted that the allocation to Department of Health Research was one of the lowest in 2019-20 (Rs 1,861 crore) as compared to the allocation of other departments involved in scientific research.[21] The Committee reiterated its recommendations to increase the budgetary outcomes of the Department of Health Research. The Committee noted that shortfall of funds may adversely impact the establishment of new Viral Research and Diagnostic Laboratories; Multi-Disciplinary Research Units in Medical Colleges, and Model Rural Health Research Units in states.

Further, the Committee noted that there is inadequate investment on public health research, as India invests only 0.65% of GDP on overall research and development activities in the country across various sectors.[21] It recommended that the Ministry of Health and Family Welfare should at least increase its spending on health research to the world average of 1.72% of GDP within two years.

The Standing Committee on Health and Family Welfare (2017, 2018, 2021) had noted the persistent recurring mismatch between the projected demand for funds and actual allocation to the Department of Health Research.[40,41,42] The Committee (2018) also noted that the Department had reported shortfall of funds for implementation of projects and on the other hand, there was underutilisation of funds released.

This mismatch between demand and allocation has led to impact in terms of restrictions in the sanctioning of new labs, providing recurring grants to the ongoing projects, and upgradation of health research infrastructure.[41] This also led to repercussions in the medical research output. For example, in 2019, only 799 research papers have been published by the ICMR and 25 patents have been filed.[40]

Under PM ABHIM, a national institution for One Health, four new National Institutes for Virology, a Regional Research Platform for WHO South East Asia Region, nine Biosafety Level III laboratories, five new Regional National Centre for Disease Control will be set up.[43] Further, Integrated Public Health Labs will be set up in all districts.

Digital health ecosystem

The National Health Policy, 2017 had proposed setting up a National Digital Health Authority (NDHA) to regulate, develop and deploy digital health across the healthcare systems. The Policy suggested using digital tools extensively to improve the efficiency and outcomes of the healthcare system. It proposed an integrated health information system which serves the needs of all stake-holders and improves efficiency, transparency, and citizen experience.

Ayushman Bharat Digital Mission: The Mission was launched in September 2021.[44] It seeks to create a system of personal health records and ensure national portability in provision of health services. Under the Mission, every citizen will be provided with a digital health identity. Health records of citizens will be stored digitally to avoid the loss of any health records. Citizens will have an option to give their

consent for sharing their health records with medical practitioners.

In July 2021, the National Health Authority (NHA) had published a consultation paper to invite comments on the design and functionality of the Unified Health Interface (UHI).[45] UHI is proposed to be a foundational layer of the National Digital Health Mission (NDHM) and is envisioned to expand interoperability of health services in India through open protocols. UHI aims at streamlining the digital health service experience by technology pathways that enable such services.

The National Digital Health Mission has been allocated Rs 200 crore in 2022-23. As per the revised estimates of 2021-22, the Mission had been allocated Rs 75 crore.

COVID-19: Financing the additional expenditure and vaccination

Developing infrastructure to manage COVID-19

In April 2020, the central government announced an investment of Rs 15,000 crore as COVID-19 Emergency Response and Health System Preparedness Package.[46] The funds will be utilised over next four years for strengthening health system in the country. This includes: (i) setting up of diagnostic laboratories, (ii) strengthening existing health facilities (such as hospitals), and (iii) welfare of health workers (such as insurance for health workers).

As on February 3, 2022, 3,249 operational laboratories (1,411 government, and 1,838 private) were reporting to ICMR.[47] This is significantly higher than that in March 2020 (79).[48] ICMR has setup 12 mentor institutes to expedite the approval process for labs applying for COVID-19 testing.[49] The central government has also established an Indian SARS-CoV-2 Genomic Surveillance Consortium (INSACOG) for genomic sequencing and tracking the evolution of variant strains of SARS-CoV-2.[50] As of December 21, 2021, INSACOG has 38 Genome Sequencing Laboratories across the country.[50]

The Standing Committee on Home Affairs (2020) noted that there is huge disparity in the infrastructure and services in public and private hospitals.[51] This includes disproportionate availability of ICU beds in both public and private hospitals. It further noted that during the pandemic the largest share of burden was on government hospitals as private hospitals are either inaccessible or unaffordable for everyone. The Committee recommended that more funds should be allocated to public hospitals to strengthen the public health infrastructure. This will help the public hospitals to prepare appropriately for such pandemics in future.

The Standing Committee on Health and Family Welfare (2020) on the outbreak of pandemic COVID-19 and its management noted that there is shortage of healthcare providers in state run hospitals.[21] Further, it noted that many hospitals and medical colleges across India are functioning below the sanctioned strength of faculty and speciality Departments are non-functional due to lack of required faculty. The Committee recommended the central and state governments to fill up the vacancies at the earliest.

Table 6: Allocation for COVID-19 related expenditure

Major Heads	2020-21 Actuals	2021-22 RE	2022-23 BE
COVID-19 Emergency Response and Health System Preparedness Package	13,079	1,691	
COVID-19 Emergency Response and Health System Preparedness Package (Phase-II)		14,567	
PM Garib Kalyan Package - Insurance Scheme for Health Care Workers fighting COVID-19		814	226
COVID-19 vaccination for healthcare workers and frontline workers	137		
Support for COVID Vaccination *		39,000	5,000

Note: * Allocation under Demand No. 42 (Transfer to states) of Ministry of Finance.
Sources: Demand Numbers 42, 46, 47, Expenditure Budget 2022-23; PRS.

COVID-19 Vaccination

Currently three vaccines are being administered in India – (i) Covishield, developed by the Serum Institute of India, (ii) Covaxin, developed by Bharat Biotech and (iii) Sputnik V, developed by Dr Reddy's Laboratories and Sputnik LLC. Covaxin was given emergency use authorisation (EUA) for children aged between 12-18 years in December 2021 and is being administered in the age group of 15-18 years since January 3, 2022.[52,53,54,55] Further, priority groups who have already received two doses of vaccines will be given another precautionary dose from January 10, 2022. EUA refers to: (i) approving the use of unapproved medical products, or (ii) unapproved uses of approved medical products during public health emergencies (such as the COVID-19 pandemic).[52] As of February 5, 2022, about 95 crore people had received the first dose of a vaccine, of which 73 crore people had been fully vaccinated.[56] 1.47 crore people have received a precautionary dose.

The Drug Controller General of India (DCGI) has approved more vaccines for restricted emergency use in India. These include: (i) Moderna COVID-19 vaccine, (ii) Janssen (developed by Johnson and Johnson), (iii) ZyCov-D (developed by Zydus Cadila), (iv) Corbovax (developed by Biological E) and (v) Covovax developed by Serum Institute of India and ICMR).[57,58,59,60] All these vaccines may be administered to all persons of 18 years of age and

above. ZyCov-D may be administered to all persons of 12 years of age and above.[59] In December 2021, DCGI granted emergency use authorisation to an anti-viral drug, Molnupiravir.

Table 7: Phases of vaccination drive (as on January 2022)[61]

Date	Group
January 16, 2021	Priority group including healthcare and frontline workers
March 1, 2021	(i) People over the age of 60, and (ii) people older than 45 with co-morbidities*
April 1, 2021	People over the age of 45
May 1, 2021	People over the age of 18
January 3, 2022	Children aged 15 to 18 years; precautionary dose for priority groups

Note: *Co-morbidities include heart failures, respiratory ailments, and lymphoma
Sources: Ministry of Health and Family Welfare; PRS.

Administration of vaccines: The central government constituted the National Expert Group on the COVID-19 vaccine (NEGVAC) in August 2020 to advise on strategies to develop and distribute COVID-19 vaccine in India.[62] The group is responsible for advising the government on matters such as: (i) prioritisation of population groups for vaccination, (ii) selection of vaccine candidates, (iii) inventory management and delivery, (iv) vaccine manufacturing, and (v) cold chain storage and associated infrastructure.[62]

For efficient and transparent administration of vaccine, the government: (i) prepared a database of healthcare and frontline workers, (ii) augmented cold chains, and (iii) procured syringes and needles.[63] Further, the central government, in collaboration with state and district level authorities, developed a digital platform, COVID-19 Vaccine Information Network Co-WIN for vaccine administration and distribution.[63]

Production, procurement and pricing of vaccines: In January 2021, the government began procuring vaccines from manufacturers of Covishield and Covaxin (Serum Institute of India and Bharat Biotech).[64] The central government procured 50% of total vaccines to vaccinate: (i) healthcare and frontline workers, and (ii) people over the age of 45 free of cost.[65] . The government allocated vaccines to states from its share, based on certain criteria (such as number of cases and wastage of vaccine). The remaining 50% of doses could be procured by state governments and the open market (25% each). In May 2021, the Ministry of Health and Family Welfare announced that 51 crore vaccine doses will be procured between May-July 2021.[66]

A new policy was operationalised on June 21, 2021, under which centralised procurement of vaccines was established.[67] Under the revised policy, 75% of procurement is conducted by the central government, and the remaining 25% is open for the private sector (with a cap on pricing).[68] Prices for procurement by the government are periodically negotiated with manufacturers. The central government provides vaccines to states free of cost. Private hospitals can charge up to Rs 150 over the price of a vaccine.[67] Note that in the United States and United Kingdom all vaccines are administered free of cost.[69,70]

In 2020-21, the Ministry of Finance had estimated expenditure of Rs 35,000 crore towards COVID-19 vaccination. As per the revised estimates of 2021-22, this amount is estimated to increase to Rs 39,000 crore. In 2022-23, the Ministry has allocated Rs 5,000 crore towards COVID-19 vaccination. The Standing Committee on Chemicals and Fertilisers (March 2021) noted that 276 crore doses of vaccine would be required to vaccinate all adults in India.[71] It estimated that this would cost approximately Rs 68,310 crore.

As on December 9, 2021, the central government had incurred an expenditure of Rs 19,675 crore for procurement of COVID-19 vaccines to supply them free of cost to states/UTs.[72]

The Standing Committee on Health and Family Welfare (2020) noted that India lacks cold-chain storage infrastructure required for such a large vaccination programme. It recommended the Ministry of Health and Family Welfare to upgrade its cold-chain storage system to facilitate easy distribution of vaccine across the country.[73] It further recommended the central government to ensure development of cold storage infrastructure across the country to ensure efficient administration of vaccines.

Table 8: Pricing of vaccines for government procurement and private administration

Name		Covishield	Covaxin	Sputnik V
Price/dose for government procurement*		200	250***	995
Price for private hospitals	Price/dose declared by manufacturer	600	1,200	948
	GST and service charge**	180	210	197
	Maximum price of the vaccine	780	1,410	1,415

Note: *Prices established for government procurement have changed over the months, according to several news reports.[74,75] The price/ dose here is based on guidelines from January 2021.
** This includes a levy of 5% GST and a service charge of up to Rs 150 that private hospitals may charge for administering vaccines.
*** Note that Bharat Biotech, the manufacturer of Covaxin provided 16.5 lakh doses free of cost to the central government in January 2021.
Sources: Letter No. 2079203/2021/Immunisation, Ministry of Health and Family Welfare, June 8, 2021; Press Information Bureau; PRS.

Annexure

Table 9: Allocations to the Ministry of Health and Family Welfare for 2022-23 (in Rs crore)

Major Heads	2020-21 Actuals	2021-22 BE	2021-22 RE	2022-23 BE	% Change between 2021-22 RE and 2022-23 BE
Department of Health and Family Welfare	**77,569**	**71,269**	**82,921**	**83,000**	**0.1%**
Department of Health Research	**3,125**	**2,663**	**3,080**	**3,201**	**3.9%**
Pradhan Mantri Swasthya Suraksha Yojana (PMSSY)	6,840	7,000	7,400	10,000	35.1%
National AIDS and STD Control Programme	2,815	2,900	2,350	2,623	11.6%
Family Welfare Schemes	462	387	306	484	58.2%
National Health Mission	**37,080**	**36,577**	**34,447**	**37,000**	**7.4%**
National Rural Health Mission	30,329	30,100	27,850		
National Urban Health Mission	950	1,000	500		
Flexible Pool for RCH and Health System Strengthening, National Health programme and National Urban Health Mission				22,317	
Infrastructure Maintenance				6,343	
Strengthening national Programme Management of the NRHM				200	
Tertiary Care Programs	301	501	431	501	16.1%
Strengthening of State Drug Regulatory System	*115*	175	65	100	53.8%
Human Resources for Health and Medical Education	5,386	4,800	5,600	7,500	33.9%
Autonomous Bodies (includes AIIMS, ICMR)	9,177	10,924	10,916	12,220	11.9%
Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (PMJAY)	3,200	6,400	3,100	6,400	41%
Pradhan Mantri Ayushman Bharat Health Infrastructure Mission (PMABHIM)			1,040	5,846	462.1%
Medical Treatment of CGHS Pensioners (PORB)	2,794	2,300	2,750	2,645	-3.8%
Statutory and Regulatory bodies	226	316	314	335	6.9%
Infrastructure Development for Health Research	148		177	0	9%
Rashtriya Swasthya Bima Yojana (RSBY)	0	1	1	45	4400%
Others	6,011	7,127	6,654	8,377	26%
COVID-19 Emergency Response and Health System Preparedness Package	11,804		1,165		
India COVID-19 Emergency Response and Health System Preparedness Package (Phase-II)			14,567		
PM Garib Kalyan Package - Insurance Scheme for Health Care Workers fighting COVID-19			814	226	-72.2%
COVID-19 vaccination for healthcare workers and frontline workers	137				
Total	**80,694**	**73,932**	**86,001**	**86,201**	**0.2%**

Sources: Demand Numbers 46 and 47, Demand for Grants, Ministry of Health and Family Welfare, Union Budget, 2022-23; PRS.

State-wise numbers on the health sector

Table 10: Comparison of key health indicators across states

State	Population (Million) 2011	Crude Birth Rate 2017	Total Fertility Rate, 2019-21	Under 5 mortality rate, 2010-15	Infant Mortality Rate (per 1000 live Births) 2020	Underweight children (%) 2015-16	Life Expectancy at Birth (Years) 2014-18	Maternal Mortality Ratio 2016-18
		Number of live births per 1,000 in a population.	Number of children born to a woman in her lifetime	Death between 0-5 years, per 1,000 live births	Number of infants who die before reaching one, per 1,000 live births	% Children below 5 years of age who are underweight	How long a new-born can expect to live, on existing death rate	Number of maternal deaths, per 1,00,000 live births
Andhra Pradesh	49	16	1.7	41	30.3	32%	70	65
Assam	31	21	1.9	57	31.9	30%	67	215
Bihar	104	26	3.0	58	46.8	44%	69	149
Chhattisgarh	26	23	1.8	64	44.3	38%	65	159
Gujarat	60	20	1.9	44	31.2	39%	70	75
Haryana	25	21	1.9	41	33.3	29%	70	91
Jharkhand	33	23	2.3	54	37.9	48%	69	71
Karnataka	61	17	1.7	32	25.4	35%	69	92
Kerala	33	14	1.8	7	4.4	16%	75	43
Madhya Pradesh	73	25	2.0	65	41.3	43%	67	173
Maharashtra	112	16	1.7	29	23.2	36%	73	46
Odisha	42	18	1.8	48	36.3	34%	69	150
Punjab	28	15	1.6	33	20	22%	73	129
Rajasthan	69	24	2.0	51	30.3	37%	69	164
Tamil Nadu	72	15	1.8	27	18.6	19%	72	60
Telangana	35	17	1.8	32	26.4	29%	70	63
Uttar Pradesh	200	26	2.4	78	50.4	40%	65	197
West Bengal	91	15	1.6	32	22	32%	72	98
Arunachal Pradesh	1	18	1.8	33	12.9	19%		
Delhi	17	15	1.6	42	24.5	27%	74	
Goa	1	13	1.3	13	5.6	24%		
Himachal Pradesh	7	16	1.7	38	25.6	21%	73	
Jammu & Kashmir	13	15	1.4	38	16.3	17%	74	
Manipur	3	15	2.2	26	25	14%		
Meghalaya	3	23	2.9	40	32.3	29%		
Mizoram	1	15	1.9	46	21.3	12%		
Nagaland	2	14	1.7	37	23.4	17%		
Sikkim	1	16	1.1	32	11.2	14%		
Tripura	4	13	1.7	33	37.6	24%		
Uttarakhand	10	17	1.9	47	39.1	27%	71	99
Andaman & Nicobar Islands	0	11	1.3	13	20.6	22%		
Chandigarh	1	14	1.4	38	NA	25%		
Dadra & Nagar Haveli	0	24	1.8	42	31.8	39%		
Daman & Diu	0	20	1.8	34	31.8	27%		
Lakshadweep	0	15	1.4	30	0	23%		
Puducherry	1	13	1.5	16	2.9	22%		
All India	**1,211**	**20**	**2.0**	**50**	**35.2**	**36%**	**69**	**113**

Sources: Census Data 2011; Sample Registration System 2019; Health and Family Welfare Statistics 2017; Special Bulletin on maternal Mortality in India 2016-18; National Family Health Survey-5 (2019-21); PRS.

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