

CHAPTER V

HEALTHCARE INFRASTRUCTURE

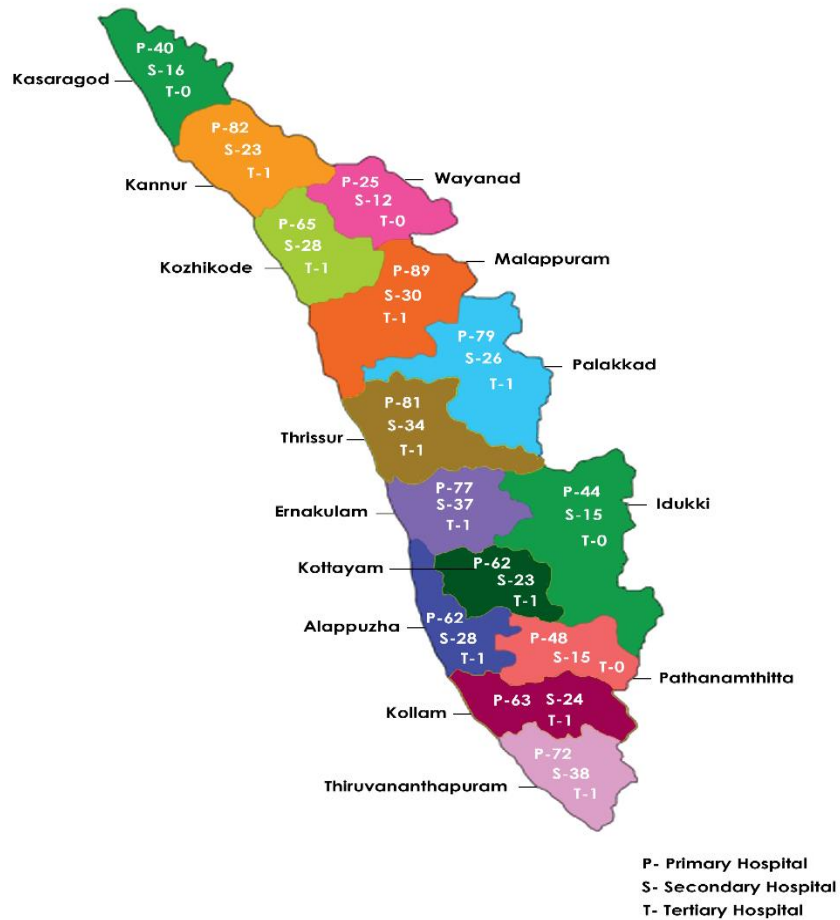
For strengthening the healthcare system in the State, creation of essential infrastructure and deployment of trained work force are essential. The shortage of PHCs and CHCs in the State when compared with IPHS was 14 and 35 *per cent* respectively. The progress in creation of planned infrastructure was slow. There was inordinate delay in commencement/ completion of infrastructure works mainly due to reasons such as delay in statutory clearances, defective planning, not identifying suitable sites, etc. Abandonment of works/ projects was also noticed due to lack of funds, change in plan, etc. The projects/ schemes meant to improve the tertiary care system in the State remained incomplete due to delay in issuing administrative sanction, release of funds, laxity in monitoring, etc., defeating the very objective of the projects/ schemes.

Health infrastructure is an important indicator for understanding the healthcare policy and welfare mechanism in a State. It signifies the investment priority with regard to the creation of healthcare facilities. Infrastructure has been described as the basic support for the delivery of public health activities. To deliver quality health services in the public health facilities, adequate and properly maintained building infrastructure is of critical importance. The focus of India's NHP, 2017 is to strengthen the trust of the common man in the public healthcare system by making it predictable, efficient, patient centric, affordable and effective with a comprehensive package of services and products that meet immediate healthcare needs of most people.

There are 6,662 public health institutions⁷¹ under the modern system of medicine. The geographical distribution of primary, secondary and tertiary level hospitals under the modern system of medicine is shown in **Figure 5.1**.

⁷¹ Excluding Dental Colleges, UPHCs and hospitals attached to Medical Colleges.

Figure 5.1: District-wise distribution of hospitals



(Source: Information furnished (2021-22) by DHS and DME)

The number of public healthcare facilities in the State as of 2021-22 (1,248)⁷² when compared with the position as of 2016-17 (1,241)⁷³ revealed that there has been only a negligible increase (seven)⁷³ in the number of public healthcare institutions. The sub-centres functioning under the PHC/ FHC increased from 5,408 (2016-17) to 5,414 (2021-22).

Examination of records disclosed inadequacies in infrastructure, as discussed in the succeeding paragraphs:

5.1. Inadequate availability of CHCs, PHCs, and SCs vis-à-vis prescribed norms

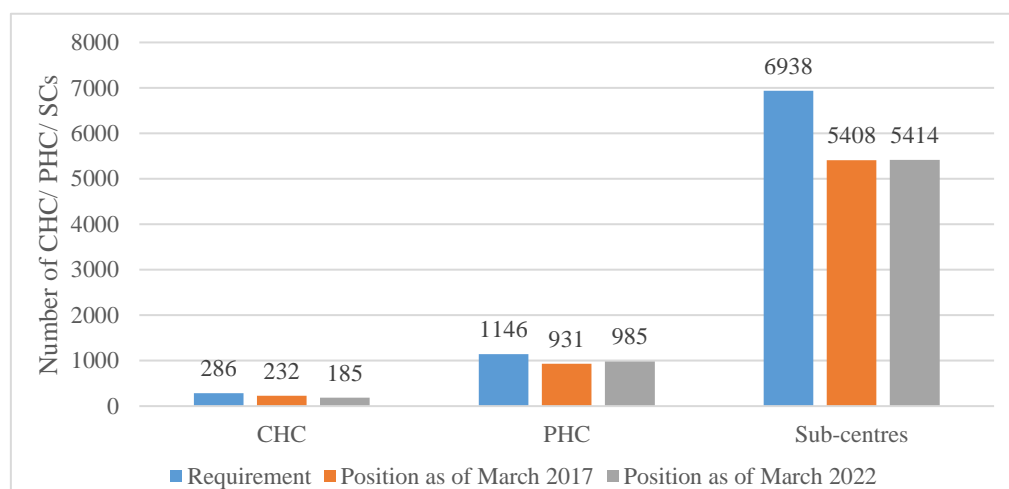
As per GoK Health Policy, 2019 and IPHS, there shall be one Sub-Centre (SC) for every 5,000 persons in plain areas and for every 3,000 persons in hilly and

⁷² DHS - 1,238 healthcare institutions and DME - 10 Medical Colleges

⁷³ Two new tertiary level hospitals and five new specialty hospitals at secondary level

tribal areas and a PHC was to cover a population of 20,000 in hilly, tribal, or difficult areas and 30,000 persons in plain areas. Similarly, four PHCs were to function under every CHC thus covering approximately 80,000 and 1,20,000 population in hilly/ tribal and plain areas respectively. The details of availability of CHCs, PHCs and SCs with reference to norms are shown in **Chart 5.1**.

Chart 5.1: Requirement and availability of CHCs, PHCs and SCs



Audit observed that against the requirement of 6,938 SCs in the State, there were only 5,414 SCs, resulting in shortfall of 1,524 SCs (22 per cent). None of the 14 districts⁷⁴ except Pathanamthitta had the prescribed number of SCs. Being the most peripheral and first point of contact between the primary health care system and the community, the shortage of SCs would affect patient care. In respect of PHCs, 985 PHCs⁷⁵ were available against the requirement of 1,146 PHCs with a shortfall of 14 per cent. The required number of PHCs were available only in Kannur and Pathanamthitta districts.

The CHCs, which constitute the secondary level of health care, were designed to provide referral as well as specialist healthcare. The shortage of CHCs in the State was more acute at 35 per cent. Shortage of CHCs was more severe in Kannur, Kollam, Kozhikode, Idukki, Malappuram and Kasaragod districts. The district-wise coverage of population by each CHC/ PHC/ SC is given in **Table 5.1** below.

Table 5.1: District-wise coverage of population per CHC/ PHC/ SC

Sl. No.	Name of the district	Population as per 2011 Census	No. of CHCs	Population per CHC	No. of PHCs	Population per PHC	No. of SCs	Population per SC
1	Thiruvananthapuram	3,301,427	20	165071	90	36683	487	6779
2	Kollam	2,635,375	11	239580	67	39334	421	6260
3	Pathanamthitta	1,197,412	7	171059	50	23948	261	4588
4	Alappuzha	2,127,789	15	141853	66	32239	366	5814
5	Kottayam	1,974,551	13	151889	65	30378	333	5930
6	Idukki	1,108,974	8	138622	46	24108	309	3589
7	Ernakulam	3,282,388	21	156304	92	35678	410	8006

⁷⁴ including the hilly districts of Idukki and Wayanad

⁷⁵ including 96 UPHCs under NHM

Sl. No.	Name of the district	Population as per 2011 Census	No. of CHCs	Population per CHC	No. of PHCs	Population per PHC	No. of SCs	Population per SC
8	Thrissur	3,121,200	22	141873	88	35468	471	6627
9	Palakkad	2,809,934	16	175621	84	33452	504	5575
10	Malappuram	4,112,920	16	257058	103	39931	588	6995
11	Kozhikode	3,086,293	15	205753	77	40082	401	7696
12	Wayanad	817,420	7	116774	26	31439	200	4087
13	Kannur	2,523,003	8	315375	88	28670	416	6065
14	Kasaragod	1,307,375	6	217896	43	30404	247	5293
TOTAL		33,406,061	185	180573	985	33,915	5,414	6,170

			Population per CHC	Population per PHC	Population per SC
Scales determined by Audit	Least shortage	Plain areas Tribal areas	120001 to 150000 80001 to 100000	30001 to 32000 20001 to 23000	5001 to 5500 3001 to 3600
	Moderate shortage	Plain areas Tribal areas	150001 to 200000 100001 to 120000	32001 to 35000 23001 to 28000	5501 to 6000 3601 to 4200
	Severe shortage	Plain areas Tribal areas	>200000 >120000	>35000 >28000	> 6000 > 4200

(Source: Data obtained from DHS (2021-22) and Census 2011)

The shortfall would be more severe, if the analysis was carried out on the basis of the population for 2021.

No remarks were furnished by GoK (November 2023).

5.2. Availability of beds in the health institutions

5.2.1. Availability of beds in DHs/ THs across the State

The IPHS stipulates that the number of beds required for a sub-district (Taluk) having a population of five lakh was between 100 to 150 and for a district having a population of ten lakh was around 300 beds.

Audit scrutiny revealed that Taluk hospitals in Malappuram, Kozhikode and Kasaragod districts⁷⁶ and District hospitals in Malappuram, Kozhikode, Idukki, Kollam, Palakkad and Thrissur districts⁷⁷ did not have the required number of beds as detailed in the **Table 5.2** below.

Table 5.2 District-wise availability of beds in DHs/ THs

Sl. No.	District	Population as per 2011 Census	Beds required for DH as per IPHS	Total beds in DH/ GHs	Shortfall (-)/ Excess (+)	Beds required for TH as per IPHS	Total beds in TH/ THQs	Shortfall (-)/ Excess (+)
1	Alappuzha	2,127,789	638	887	249	426	674	248
2	Ernakulam	3,282,388	985	1266	281	656	1453	797
3	Idukki	1,108,974	333	274	-59	222	290	68
4	Kannur	2,523,003	757	1157	400	505	744	239
5	Kasaragod	1,307,375	392	612	220	261	179	-82
6	Kollam	2,635,375	791	537	-254	527	972	445

⁷⁶ Shortage of beds in taluk level hospitals was 302, 40 and 82 respectively in Malappuram, Kozhikode and Kasaragod

⁷⁷ Shortage of beds in district level hospitals was 250, 166, 59, 254, 299 and 363 respectively in Malappuram, Kozhikode, Idukki, Kollam, Palakkad and Thrissur districts

Sl. No.	District	Population as per 2011 Census	Beds required for DH as per IPHS	Total beds in DH/ GHs	Shortfall (-)/ Excess (+)	Beds required for TH as per IPHS	Total beds in TH/ THQs	Shortfall (-)/ Excess (+)
7	Kottayam	1,974,551	592	1064	472	395	551	156
8	Kozhikode	3,086,293	926	760	-166	617	577	-40
9	Malappuram	4,112,920	1234	984	-250	823	521	-302
10	Palakkad	2,809,934	843	544	-299	562	672	110
11	Pathanamthitta	1,197,412	359	948	589	239	431	192
12	Thiruvananthapuram	3,301,427	990	1767	777	660	746	86
13	Thrissur	3,121,200	936	573	-363	624	691	67
14	Wayanad	817,420	245	750	505	163	186	23
TOTAL		33,406,061	10021	12123	2102	6680	8687	2007

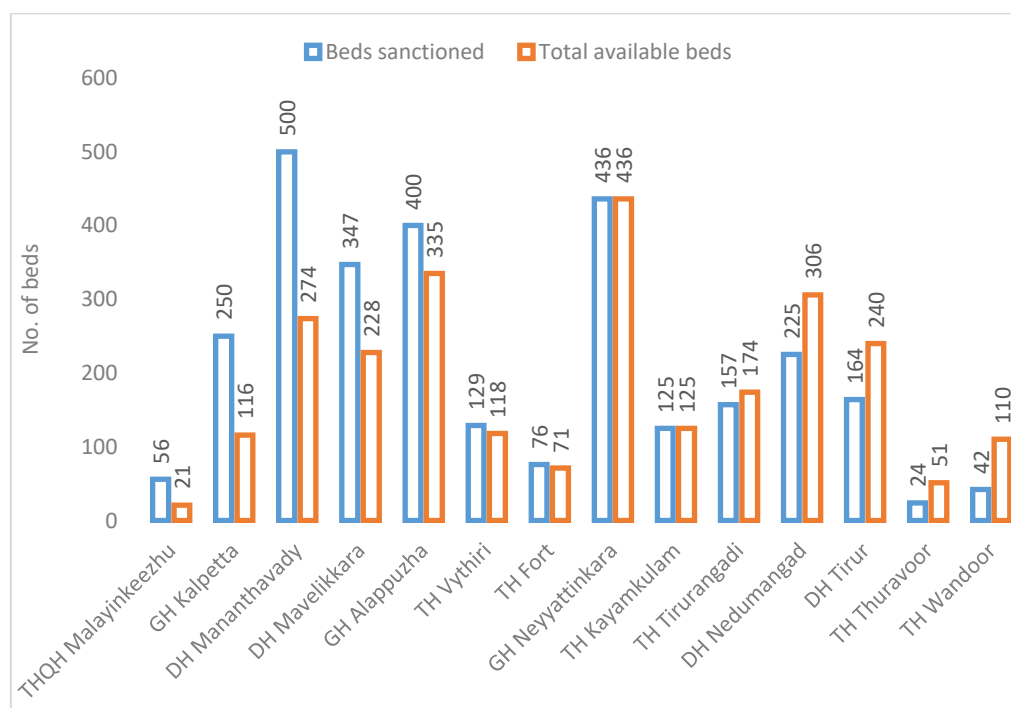
Scales determined by Audit	Good (>-10)	Moderate (Between - 10 and - 50)	Poor (< -50)

(Source: Data obtained from DHS (2021-22) and Census 2011)

5.2.2. Availability of beds in test-checked DH/ GH/ TH/ CHCs

The availability of sanctioned and functional bed strength in the test-checked DH/ GH/ THQH/ THs (14 hospitals) is as detailed in **Chart 5.2**.

Chart 5.2: Availability of beds in hospitals⁷⁸



(Source: Records in test-checked hospitals)

Audit noticed that all the sanctioned beds were not available in seven hospitals. In THQH Malayinkeezhu and GH Kalpetta, the available beds were below 50 per cent of the sanctioned beds. At the same time, in five hospitals, the available

⁷⁸ As per reply of DHS (November 2022), at present the number of functional beds in DH Mananthavady is 346 and GH Kalpetta is 119.

beds were much higher than the sanctioned beds. In TH Thuravoor and TH Wandoor, the functional beds were more than 200 *per cent* of the sanctioned beds, indicating more pressure on the available resources.

The IPHS prescribes CHC to be a 30 bedded hospital. Audit noticed that this stipulation was met only in three CHCs⁷⁹ out of the seven test-checked hospitals. The bed availability in the remaining four CHCs⁸⁰ ranged from 12 to 25.

Facilities in hospitals are fixed based on sanctioned bed strength. As such variation in availability of functional beds results in underutilisation of services or overburdening of facilities.

DHS stated (November 2022) that the hospitals were constrained in providing the requisite IP services due to lack of sufficient infrastructure like space, manpower, equipment, etc.

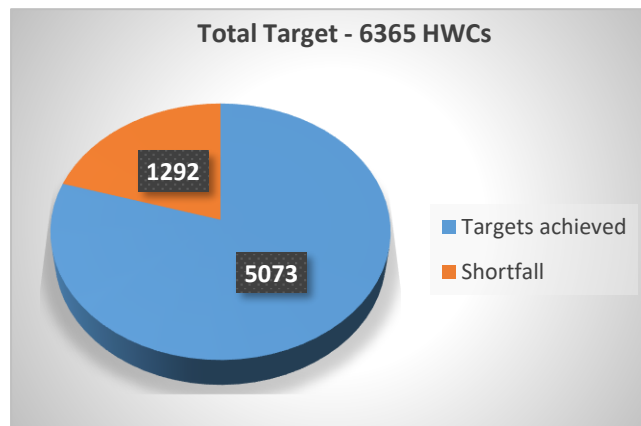
5.3. Health and Wellness Centres

Under Ayushman Bharat Scheme, HWCs are to be established by transforming the existing PHCs, UPHCs and SCs to ensure universal access to an expanded range of comprehensive primary health care services. The HWCs at SC level were to be equipped and staffed by an appropriately trained primary health care team led by a Community Health Officer (CHO) and comprising of multi-purpose workers (male and female) and Accredited Social Health Activists (ASHA). Scrutiny of establishment of HWCs in the State under Modern System of Medicine revealed the following:

5.3.1. Non-achievement of targets for HWCs

Against sanctioned 6,365 HWCs during the period 2019-20 to 2023-24, 1,292 (20 *per cent*) health institutions were not transformed into HWCs (May 2023) as shown in **Chart 5.3**.

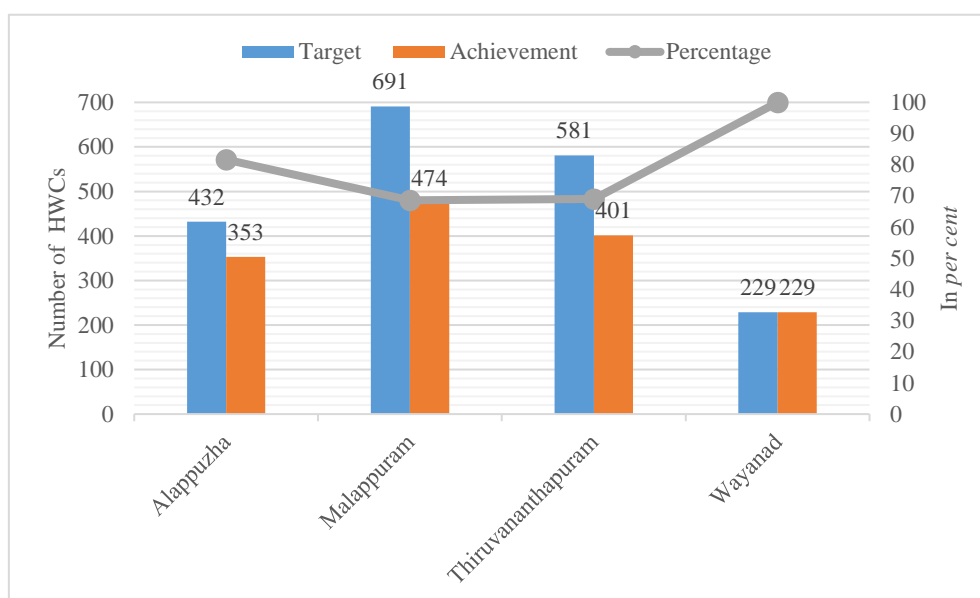
Chart 5.3: Target and achievement for HWCs



(Source: NHM, May 2023)

⁷⁹ Edappal, Tanur and Anchuthengu

⁸⁰ Muhamma, Chunakkara, Manamboor and Nalloor nad

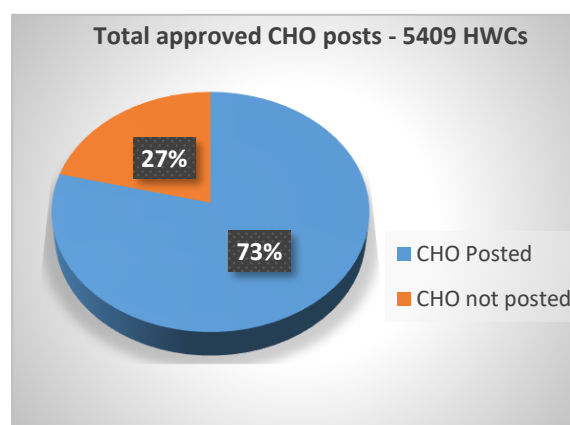
Chart 5.4: Status of HWCs in test-checked districts

(Source: NHM, May 2023)

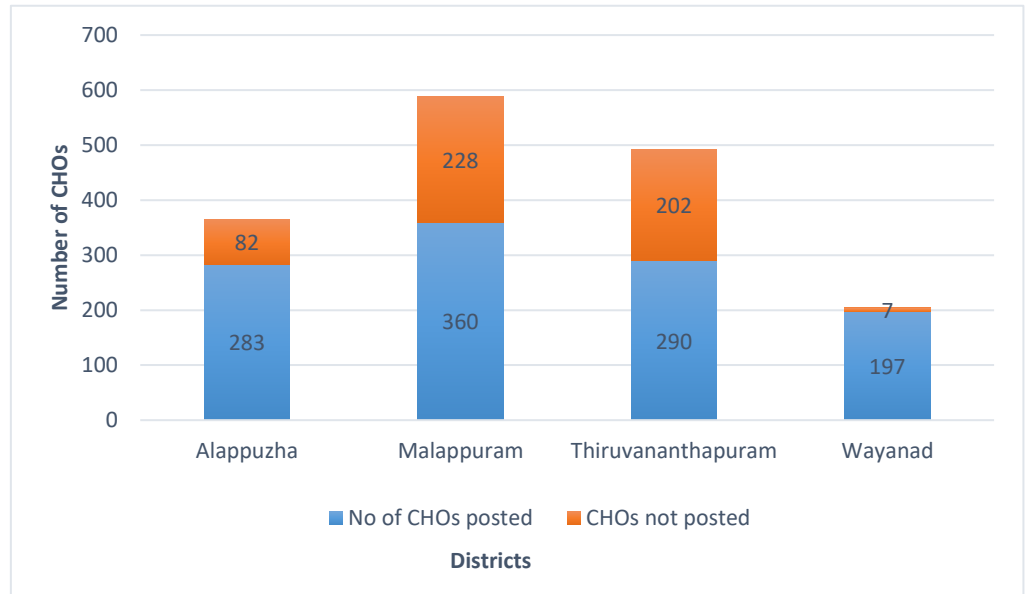
Among the test-checked districts, only Wayanad had upgraded all the targeted healthcare facilities to HWCs.

5.3.2. Operationalisation of HWCs

Against 5,409 posts of CHO sanctioned for operationalisation of HWCs, 3,964 postings, constituting 73 per cent of the total sanctioned posts, have been effected as of May 2023 and 1,445 posts (27 per cent) remained unfilled as shown in **Chart 5.5**.

Chart 5.5: Status of operationalisation of HWCs

(Source: NHM, May 2023)

Chart 5.6: Availability of CHOs in test-checked districts

(Source: NHM, May 2023)

It could be seen from the above that number of CHOs not posted ranged between 3.43 to 41.06 *per cent* in the test-checked districts. NHM stated (May 2023) that 1,148 SCs and posts of CHOs were sanctioned for the year 2023-24 and the recruitment was under process.

5.4. AYUSH Health and Wellness Centres

Under National AYUSH Mission, 334 out of 520 HWCs sanctioned during the period 2019-20 to 2022-23 became operational. The remaining 186 are yet to be operationalised (May 2023).

5.5. Status of new construction and upgradation works

Audit observed that out of 192 new constructions sanctioned during 2016-17 to 2020-21 in 40 test-checked hospitals, 121 works were completed at a cost of ₹29.39 crore and 71 works worth ₹1,081.53 crore were incomplete in different stages of execution. The incomplete construction works include renovation works, new building, Oxygen plant, establishment of Trauma care centre, Cath Lab etc. Summary of delay in completed works is given in **Table 5.3**.

Table 5.3: Summary of delay in completed works

Period of delay	No. of civil works	Expenditure incurred (₹ in crore)
No. of works completed in time	43	7.28
No. of works completed with a delay of one year	29	4.08
No. of works completed with a delay beyond one year but upto two years	9	4.72
No. of works completed with a delay beyond two years	1	1.07
Data not available	39	12.24
Total	121	29.39

(Source: Data obtained from test-checked hospitals)

5.6. Non-creation/ non-utilisation of infrastructure in test-checked health institutions

Government of Kerala provided funds for hospital infrastructure through the State budget. In addition, hospital infrastructure is also created utilising development funds of Local Self-Government Institutions (LSGIs), MP/ MLA Local Area development funds, CSR Funds, KIIFB, etc. The infrastructure works which included construction of new buildings, additional wards, renovation of existing buildings, improving facilities for installation of new equipment etc. were implemented through Public Works Department (PWD), NHM, NAM, etc.

One hundred and ninety-nine major works valued at ₹1,219.34 crore were ongoing/ sanctioned during the period 2016-17 to 2020-21 in the test-checked institutions under HFWD. Audit scrutinised 45 out of 199 works involving major construction activities estimated above ₹30 lakh. During scrutiny of records/ joint inspections in the hospitals, deficiencies were found in 10 works implemented in nine hospitals (**Appendix 5.1**).

- Civil works worth ₹44.15 crore meant to improve infrastructure by construction of new buildings in five hospitals had not commenced even after two to eight years from the date of sanction due to delay in site clearance, plan and estimate preparation, delay in statutory clearances, etc.
- The progress of implementation of civil works (₹72.37 crore) was very tardy in three hospitals. The works were found to be ongoing for periods up to eight years due to defective planning, shortage of funds, etc.
- On scrutiny of records/ joint inspection in test-checked hospitals, Audit noticed that two works sanctioned to two hospitals were abandoned. In Government Mental Health Centre, Thiruvananthapuram, the construction of a building was abandoned after incurring an amount of ₹1.26 crore due to lack of funds and change in plan. Thus, the entire amount of ₹1.26 crore expended on the work became infructuous. At DH Nedumangad, the sanctioned work (₹3.46 crore) was abandoned due to its non-commencement by the entrusted agency.



*Figure 5.2: Abandoned Male Forensic Ward in GMHC, Thiruvananthapuram
Photograph taken on 08 February 2022*

5.6.1. AYUSH Institutions

Under the AYUSH Department, 168 works valued at ₹83.72 crore were sanctioned to 18 test-checked hospitals. Of this, 48 works (29 per cent) with estimated value above ₹20 lakh were scrutinised and deficiencies were noticed in implementation and utilisation of infrastructure sanctioned under three works (₹564.10 lakh).

In one instance, GoI sanctioned grant-in-aid of ₹ five crore (January 2012) for developing Government Ayurveda Panchakarma Hospital, Alappuzha into a Centre of Excellence (CoE) with referral hospital and Advanced Research and Teaching facilities. As per GoI directions, Alappuzha Ayurveda Panchakarma Hospital Society (AAPHS) was formed (September 2010) for the construction of a hospital building. Funds were released through NHM in two instalments (₹ two crore each in January 2012 and January 2016). The work was awarded (May 2012) to a consultancy firm Hindustan Prefabs Limited, a GoI undertaking and was to be completed by March 2014. First instalment of ₹ two crore was transferred to Hindustan Prefabs Limited in January and May 2013⁸¹. Based on complaints received on poor quality of structural works, GoK conducted inspection and the complaint was found to be true. After completion of the first phase of construction, further works were stopped due to technical problems in construction and non-availability of second phase funds in time. GoK entrusted (November 2018) the balance work to the same consultant for ₹5.34 crore under the condition that the expenditure for strengthening the structural component would be met by the contractor/ consultant. Further, as per agreement, the consultant was liable to rectify the defects without any additional cost and was to be penalised for non-completion of the work as per the agreed specification and time schedule. However, the consultant did not take up the work and there has been no progress since then (February 2022).

⁸¹ On 01.01.2013, 22.01.2013 and 29.05.2013.



Figure 5.3: Abandoned building at Government Ayurveda Panchakarma Hospital, Alappuzha. Photograph taken on 16 February 2022

No action has been initiated by the AAPHS as per the terms of the agreement with the consultant and the Department has taken no action on the GoI (January 2021) directions to refund the entire funds with interest (10 per cent per annum). The lapse on the part of consultant/ NHM/ AAPHS/ Department has resulted in wasteful expenditure

and probable loss of central assistance of ₹ five crore to the State and non-upgradation of the hospital. The hospital is functioning in a rented building in a congested manner without sufficient infrastructure.

GoK replied (October 2023) that a governing body meeting was conducted (March 2022) under the chairmanship of Hon'ble Minister of Health and Women and Child Development and a notice was issued (July 2022) to Hindustan Prefabs Limited. Ministry of AYUSH was informed that the change in the scope of work was necessitated due to the nature of soil at the site and as a result, the works needed to be limited to construction of a single floor and requested to approve the change in the scope of the work.

Further, instances including idling of a building for 10 years (Siddha dispensary, Mannanchery) and non-functioning of a solar power plant in Government Homoeopathy Medical College Hospital, Thiruvananthapuram are given in **Appendix 5.1**.

5.6.2. Deficiencies in utilisation/construction of buildings

Instances of non-utilisation of buildings constructed for providing maternity, laboratory and canteen services, and defective constructions noticed in Audit are detailed in **Table 5.4**.

Table 5.4: Non-utilisation of constructed building/ improper construction

Details of work	Present status
NHM constructed a Women and Child Block at CHC Edappal and provided equipment for it. The construction of the building was completed for ₹1.12 crore in June 2015.	An Assistant Surgeon specialised in Obstetrics and Gynaecology was available from April 2016 to May 2018 and was attending to patients. The W and C Block constructed for improved maternity services has not been utilized for the purpose after May 2018 for want of Gynaecologist and supporting staff (November 2021).
A new building (Ground plus one floor) was constructed by NHM in the SAT Hospital, Thiruvananthapuram (sanctioned amount	Audit noticed that the first floor of the building remains unutilised for the last five years (December 2021) as the envisaged labour rooms, emergency operation theatre, etc. were not set up. Further, it was

Details of work	Present status
₹21.80 crore). The work was completed in April 2016.	noticed that though this floor remained unutilised, a new work for vertical extension of the building with two floors was sanctioned in January 2019 and the work was in progress. GoK stated (October 2022) that NHM had stopped funding the project. Therefore, a proposal for the remaining works submitted by College authorities to DME was under process.
A building was constructed (October 2020) by LSGI for housing the laboratory of PHC Perumpazhuthoor.	The building has not been put to use even after a period of 20 months (June 2022) due to non-posting of laboratory staff.
A canteen building was constructed (August 2021) in MCH Manjeri incurring an expenditure of ₹39 lakh.	As no service provider has responded to offer services to run the canteen, the building remained unutilised (February 2022). GoK stated (October 2022) that the possibility of starting the canteen as per prevailing Government orders was being explored.
MCH block constructed (2017) by NHM at a cost of ₹ five crore in Taluk Hospital, Fort Thiruvananthapuram.	Construction of building in deviation from approved plan (constructed flat roof against the approved slanting roof) resulted in building remaining as unauthorised construction.
Non-construction of ramps in five newly constructed hospital buildings	Ramp facility which is an essential requirement for hospitals was not constructed in the newly built hospital buildings in SAT Hospital, Thiruvananthapuram, CHC Manamboor, GH Neyyattinkara, TH Wandoor and CHC Muhamma.

(Source: Records of test-checked hospitals)

The fact that anomalies ranging from not commencing the work to abandoning of the projects after incurring expenditure on works indicate that the hospital infrastructure improvement projects were being undertaken without proper planning. Failure to commence planned projects, delay in completion of works and inability to put to use available infrastructure created hurdles in enhancing the facilities in Government hospitals. Further, incomplete projects were not just a drain of public exchequer, but also deprived the end user of the benefits that would have accrued had the project been completed.

5.7. General appearance and upkeep

In test-checked hospitals, Audit observed inadequacy of infrastructure facilities as follows:

- Inadequate number of beds for accommodating inpatients
- Shortage of storage facilities in drug stores
- Clogging up of wastewater in hospital premises
- Dampness and crack on walls
- Presence of stray dogs in the hospital premises

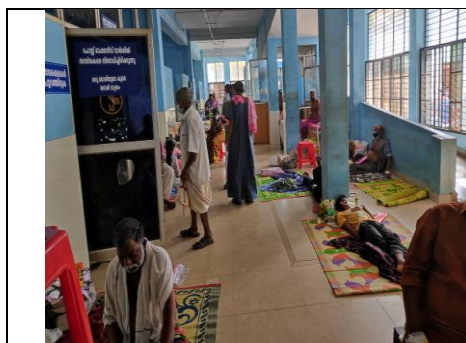


Figure 5.4: Patients lying on floor of the Ward – GH Neyyattinkara (04 January 2022)



Figure 5.5: Clogging of waste water in DH Tirur (25 November 2021)



Figure 5.6: Dampness in walls in the Labour room at THQH Vythiri (29 November 2022)



Figure 5.7: Stray dogs in DH Nedumangad (29 November 2021)

5.8. Establishment of Medical Colleges

Medical Colleges play a pivotal role in developing medical and para-medical personnel to cater to the health needs of the State and serve as the referral centres providing tertiary care to the patients with research and surveillance activities. In Kerala, 10 Medical Colleges⁸² are functioning under the Modern System of Medicine. In addition, there are three Medical Colleges under ISM and two under the system of Homoeopathy (March 2022). The details of bed strength and annual student intake of the Medical Colleges are furnished in **Table 5.5**.

Table 5.5: Details of bed strength and annual student intake of the Medical Colleges under HFWD and AYUSH Department

System of Medicine	No. of Medical Colleges functioning (2021-22)	Annual student intake	Bed strength of Medical Colleges and attached hospitals
Modern Medicine	9	1455	14385
ISM	3	226	1363
Homoeopathy	2	126	214

(Source: Economic Review 2021, data furnished by DAME, P and CO)

On scrutiny of the records in the departments/ joint inspection in the test-checked Medical Colleges, Audit observed shortfall in availability of manpower in different cadres as per norms as well as sanctioned strength which is detailed in Paragraphs 2.3, 2.4.1 and 2.4.2 in Chapter II of this Report. Further,

⁸² Nine colleges under HFWD and one under SC/ ST Department.

deficiencies were noticed in creation of infrastructure and sanctioning of manpower under schemes aimed at improving the tertiary care facilities, as detailed in the following paragraphs:

5.8.1. Non-establishment of a sanctioned Medical College due to abandonment of the project

In tune with the policy of GoI to convert district level hospitals to Medical Colleges, GoK announced in the budget speech (2013-14) the setting up of a new Medical College (Indira Gandhi Medical College) by converting the GH, Thiruvananthapuram and attaching the Women and Child Hospital at Thycaud, Thiruvananthapuram. AS was accorded (June 2013) for setting up the new GMC at an estimated cost of ₹190.54 crore which included construction of Academic Blocks I and II, lecture hall and library, hostel block, staff quarters block, auditorium and dining block in the existing GH.

The work of construction of academic block I was completed in June 2017 incurring an amount of ₹30.27 crore. GoK also paid ₹9.85 crore to the staff (108 posts) who were posted for the establishment of the college. Despite all these arrangements, GoK decided to close down the college indefinitely thereby shifting all the posts created and transferring the equipment purchased in this regard. At present, the constructed academic block is being used partially for training purpose.

5.8.2. Delay in establishment of new Medical Colleges

GoK sanctioned three Medical Colleges at Kasaragod, Idukki and Pathanamthitta in March 2012 and one at Wayanad in February 2021.

Academic activities were started in Idukki in 2014 and students for MBBS course were admitted in 2014 and 2015. However, the admissions were not allowed from 2017 by Medical Council of India⁸³ due to lack of required infrastructure. For the year 2022-23, National Medical Commission (NMC) granted approval for academic activities for GMC Idukki and GMC Pathanamthitta and admissions commenced in November 2022.

In Kasaragod and Wayanad, academic activities are yet to commence. The status of creation of infrastructure in these GMCs are detailed in **Table 5.6**.

Table 5.6: Status of infrastructure as of July 2023

Name of GMC	Status of infrastructure
GMC Idukki	78 per cent of infrastructural works of hospital block and 60 per cent of residential facilities were completed. The road and protection works were not started.
GMC Pathanamthitta	Additional works under Phase-I (internal roads, fire water sump and pump room, entrance gate, etc.) were not started and Phase-II infrastructure works (hospital block, hostels, quarters, etc) were in progress.

⁸³ A statutory body with the responsibility of establishing and maintaining high standards of medical education and recognition of medical qualifications in India. Medical Council of India was dissolved when NMC was constituted in September 2020.

Name of GMC	Status of infrastructure
GMC Kasaragod	58 per cent of construction works of hospital block, 60 per cent of residential facilities etc. were completed. DME stated that works are expected to be completed by December 2024.
GMC Wayanad	The work has not started. The land proposed for the GMC Wayanad was under court litigation. The construction can be started only after the final verdict of the court.

(Source: Details furnished by DME)

Audit noticed that the establishment of sanctioned GMCs has been impacted adversely due to delay in creation of infrastructure facilities. Even though the academic activities commenced in two GMCs, the civil and infrastructural works were pending at different stages. As NMC grants permission⁸⁴ to establish a Medical College and admits students initially for a period of one year and renewal is given after physical verification of infrastructure, human resources and other facilities, delay in creation of required infrastructure may lead to discontinuance of approval and could impact the future of medical aspirants.

5.8.3. Establishment of Burns Unit under National Programme for Prevention and Management of Burn Injuries - GMC Thiruvananthapuram

Government of India sanctioned (November 2017) a Burns Unit for GMC Thiruvananthapuram. The objective of the scheme was to reduce incidence of mortality, morbidity and disability due to burn injuries and to establish adequate infrastructural facilities along with trained manpower for burn management and rehabilitation and the fund sharing was in the ratio of 60:40 between GoI and GoK. The first instalment amounting to ₹207.90 lakh was released (November 2017) by GoI. The proposal for AS was submitted by the hospital authorities to GoK after seven months (June 2018) and AS was issued in November 2018. However, Audit noticed that the GoI and GoK share amounting to ₹3.47 crore for the components of civil works and procurement of equipment was released by GoK only after 19 months (June 2019) from the date of GoI release. As the site identified for the construction was found to be not suitable, new site was identified (July 2019) and a revised AS for ₹90 lakh for Burns unit and ₹127.50 lakh for equipment was issued (January 2020) by GoK. Audit observed that only 50 per cent of civil works were completed and electrical works were in progress (September 2021). GoK attributed the delay in tendering process, civil works, equipment procurement, etc. to the pandemic situation and stated (October 2022) that 90 per cent of the civil works were completed and equipment procurement was in progress.

Burns unit was not set up even after a lapse of four years from the date of its sanction. The delay in turn leads to denying proper care to burn patients who are prone to quick infections, due to which isolation from other patients and utmost care is needed for their survival.

⁸⁴ As per Establishment of Medical College Regulations, (Amendment), 2020

5.8.4. Establishment of State Organ and Tissue Transplant Organisation

GoI formulated a programme ‘National Organ Transplant Programme (NOTP)’ under Transplantation of Human Organs and Tissues Act, 1994 as a 100 *per cent* CSS in which a provision was made to set up State Organ and Tissue Transplant Organization (SOTTO). One of the objectives of the programme was to establish new and strengthen the existing organ and tissue retrieval and transplant infrastructure facilities in the State. Grant-in-aid amounting ₹59.60 lakh towards infrastructure support (₹33 lakh), manpower and other requirements (₹26.60 lakh) was sanctioned and released by GoI (November 2018) and an MoU was signed (February 2019) between GoI and GoK for setting up of SOTTO. The AS was issued (August 2020) only after 20 months from the date of sanction of funds by GoI.

The organ donation and transplantation process was being executed in the State by Kerala Network for Organ Sharing (KNOS). A high-level meeting on organ donation and transplantation observed (November 2020) that the administration of organ donation and transplantation was in a fragmented state and hence a decision was arrived at to have a single organisation to cater to all the requirements of organ transplant in the State.

Audit noticed that of the ₹59.60 lakh released, an amount of ₹11.37 lakh only (19 *per cent*) was expended (September 2021).

GoK stated (October 2022) that the K-SOTTO was registered under the Charitable Societies Act, 1955 by merging the existing KNOS office and its personnel into K-SOTTO. However, the reply is silent about the establishment or strengthening of organ and tissue retrieval and transplant infrastructure facilities.

5.8.5. Setting up of four station Temporal Bone Lab under National Programme for Prevention and Control of Deafness – GMC Thiruvananthapuram

Government Medical College (GMC) Thiruvananthapuram was selected (October 2014) for upgradation/ establishment of a four station Temporal Bone Lab with the objectives to strengthen Ear, Nose and Throat (ENT) department of GMC and designate it as State Training Centre for providing training to trainers of ENT surgeons.

An MoU was signed between GoI and GoK (February 2015) and ₹27.50 lakh (100 *per cent* CSS) was sanctioned and released by GoI in October 2015. The proposal for AS was submitted to GoK by DME (May 2018) for which AS was issued by GoK only after two years (June 2020) and the release of funds by GoK to college authorities were made after five years (January 2021) from the date of release by GoI. As such a State Training Centre for providing training to trainers was not fulfilled even after a lapse of more than six years. The audit observation has been accepted (April 2022) by the college authorities and it was stated that the procedures were in full swing. If the assistance received (2015) was timely utilised, the offer of GoI (March 2017) to submit proposals for

additional central assistance, if required, could have been availed. GoK stated (October 2022) that the procedures including procurement of equipment was going on in full swing and special care would be taken to achieve the declared objectives.

5.8.6. Implementation of National Mental Health Programme - GMC Thiruvananthapuram

GoI identified (June 2009) the GMC Thiruvananthapuram for upgradation under the Centre of Excellence (CoE) scheme of National Mental Health Programme (NMHP) and sanctioned an amount of ₹173.66 lakh as grant for enhancing seats/ starting new PG courses in Mental Health in Medical College. The first and second instalments of ₹56 lakh and ₹117.66 lakh were released by GoI (November 2010, January 2011), of which NHM transferred ₹56 lakh to the GMC (September 2011). The college authorities did not utilise the funds and refunded the amount to GoI after two years (September 2013). Subsequently, GoI returned (November 2013) the amount to NHM with directions to utilise the amount for the sanctioned purpose. NHM requested (December 2014) the Principal to submit a proposal for the utilisation of the amount which was submitted by the Principal after one year to NHM (January 2016). The funds, including the interest accrued thereon amounting to ₹176.28 lakh was released by the NHM to the Principal after five months (June 2016). As per the progress statement (October 2021), only 75 per cent of the capital works were completed and out of seven posts only two posts were created. The PG/ diploma courses had not commenced (December 2021).

In the absence of timely utilization of fund and lack of follow up from the side of the college authorities the envisaged benefit as per the scheme has not been attained even after 12 years.

GoK stated (October 2022) that the civil works were completed and the procedure for starting new courses was underway.

5.8.7. Establishment and infrastructure of medical education institutions

The Minimum Requirements for Annual MBBS Admissions Regulations, 2020 prescribe minimum requirement of accommodation in the Medical Colleges and its associated hospitals, staff and equipment in the College departments and hospitals. Audit noticed deficiencies in availability of facilities in test-checked GMCs as shown in **Table 5.7**.

Table 5.7: Non-availability of facilities in test-checked colleges

Facilities required	GMC Thiruvananthapuram		GMC Alappuzha		GMC Manjeri	
	Required	Available	Required	Available	Required	Available
Skill Lab	1	Not Available	1	Available	1	Available
Hostels	As per norms	Yes	As per norms	Yes	As per norms	Not Available. Construction of Hostel buildings in progress
Gymnasium	As per norms	Available. However, out of six equipment only three are working	As per norms	Yes	As per norms	No

(Source: Joint physical verification reports by Audit)

Thus, it could be seen that Skill Lab was not setup in one of the three test-checked Medical Colleges. Hostel facilities were not available in GMC Manjeri.

5.9. Recommendations

- Government should ensure that PHCs and CHCs proportional to population, required as per IPHS norms, are available in all districts.
- Government should identify and analyse the infrastructure works which are pending completion and take remedial action for their expeditious completion. Government should also ensure that only those works which satisfy conditions like availability of unhindered land, etc. are sanctioned and there is no delay in the process of issuing requisite sanctions and release of funds.