# CHAPTER V
## HEALTHCARE INFRASTRUCTURE

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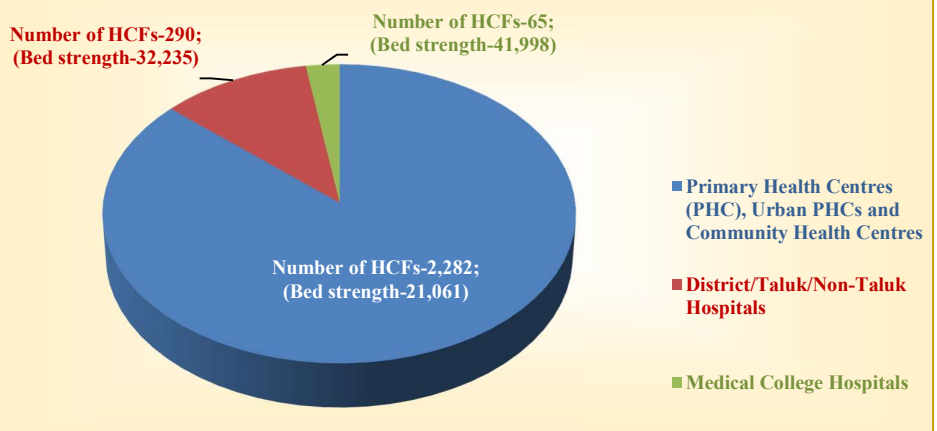
**Primary healthcare in urban areas suffered for want of adequate number of urban PHCs. Despite an accelerated effort to increase the number of urban PHCs during 2016-22, against the requirement of 810 urban PHCs, the State had only 463. Thus, the primary healthcare in urban area was a matter of concern. Secondary and tertiary healthcare facilities did not have adequate ICU beds and operation theatres. Availability of hospital beds in Government HCFs was skewed across different districts of the State, with higher bed-population ratio in urban districts and lower in predominantly rural districts. Poor quality of buildings and non-availability of ramps in the PHCs of the sampled districts and non-availability of functional lifts in bigger hospitals were matters of concern. Over 50 *per cent* of the HCFs did not have structural stability certificates nor did they have the mandatory Disaster Management Plan. Abnormal delays in delivery and implementation of HMIS 2.0, the IT backbone of HCFs and poor response of doctors and staff for automation, had resulted in non-achievement of the objectives of computerisation.**

## 5.1 Government Healthcare facilities in the State

### 5.1.1 Availability of hospitals and PHCs

The number of Government HCFs and their bed strength available in the State is given in **Exhibit 5.1**. The district wise requirement and availability of PHCs as per prescribed IPHS norms, are given in **Appendix 5.1**. The geographical distribution on rural PHCs and secondary care hospitals in the State map is given in **Exhibits 5.2** and **5.3** respectively.

**Exhibit 5.1: Number of Government HCFs in the State**




(Source: Performance Budget, 2021-22)

**Exhibit 5.2: Geographical distribution of Rural PHCs**

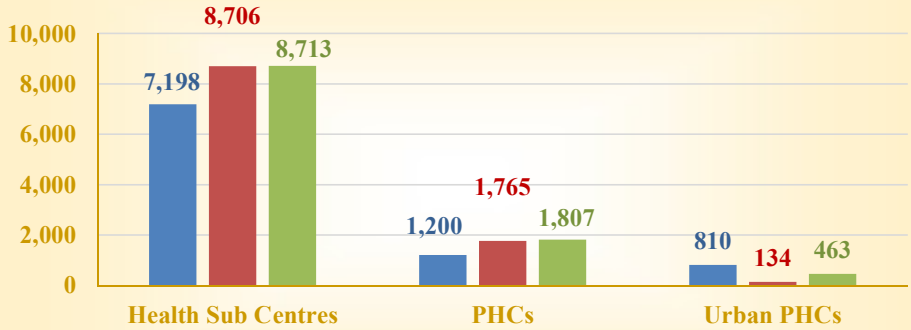

* Urban PHCs

(Figures in bracket indicate Required/Actual PHCs.)

**Exhibit 5.3: Geographical distribution of Secondary care Hospitals**

IPHS prescribed a norm of one Health Sub Centre for every 5,000 population, one PHC for every 30,000 population in rural areas and one urban PHC for every 50,000 population in urban areas. The requirement and availability of these Healthcare facilities in the State during the Audit period is given in **Exhibit 5.4**.

**Exhibit 5.4: Requirement and availability of Health Sub Centres, PHCs and Urban PHCs**




(Source: Data furnished by DPH)

Audit found that the number of PHCs in rural areas were more than the prescribed IPHS norms and 42 new PHCs[1] and 326 new Urban PHCs were added during the Audit period. However, the number of Urban PHCs as of March 2022 was only 463, against the requirement of 810 for the total population of 4.05 crore in the urban areas of the State.

Audit also found that the seven sampled Urban PHCs referred 3,763 patients to higher medical institutions due to lack of basic facilities to treat them. Audit observed that as per a survey[2] by the Ministry of Health and Family Welfare, the out-of-pocket expenditure by patients on two crucial services of PHCs *viz*., antenatal care and childbirth was higher in the State compared to national average[3]. The shortfall in Urban PHCs could be the reason for the higher than national average 'out-of-pocket' expenses on medical care in urban areas.

### 5.1.2 Government Medical Colleges

The Government Medical Colleges (GMC) in the State function under the Directorate of Medical Education. The Director of Medical Education is also responsible for the administration of the Government Medical Colleges, the Tertiary care hospitals and Super Speciality Hospitals attached to the Directorate.

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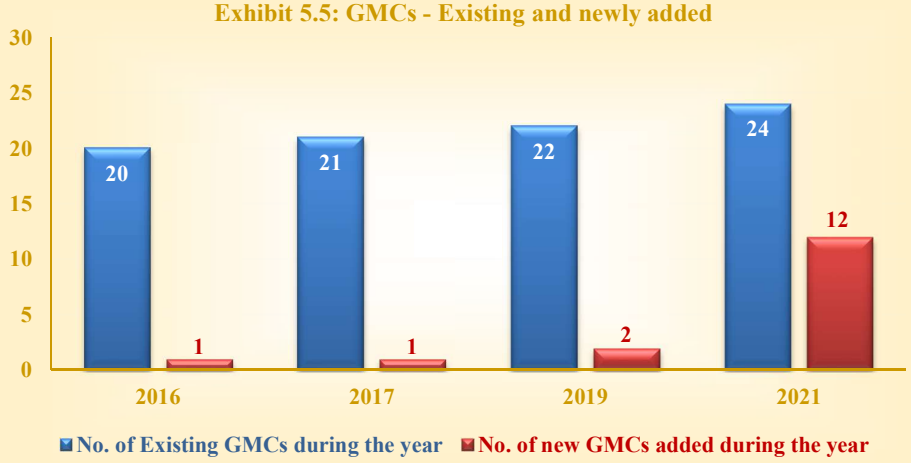
1 The number of PHCs during 2022-23 is 1,807 as compared with 1,765 PHCs during 2016-17.

2 Published in 2014 by the 'National Health Systems Resource Centre' from a state wise analysis of the data collected in the Health and Morbidity Survey 2014, Health and Morbidity Survey 2004 and Consumer Expenditure Survey 2011 by the National Sample Survey Office (NSSO).

3 ₹14,213 in the State against all India average of ₹11,093 for childbirth and ₹6,901 in the State against ₹5,727 at all India level for antenatal care.

As of March 2022, there are 36 GMCs in the State with an annual intake capacity of 5,050 of MBBS seats, the details of which are given in **Appendix 2.1**. During the period 2016-22, 16 GMCs were added[4] to the existing GMCs as given in **Exhibit 5.5**.

**Exhibit 5.5: GMCs - Existing and newly added**



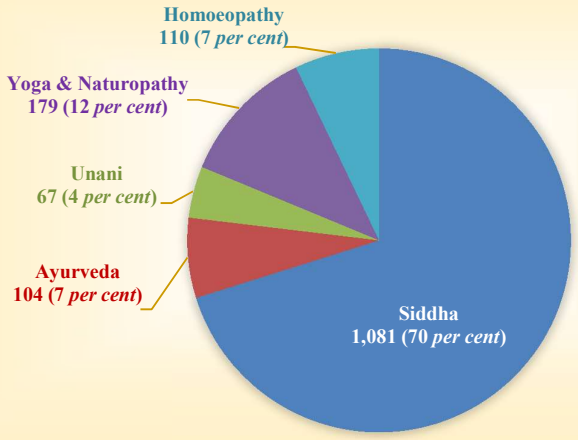

(Source: Details furnished by DME)

## 5.2 Government Healthcare facilities under AYUSH

### 5.2.1 Directorate of Indian Medicine and Homoeopathy

The Directorate of Indian Medicine and Homoeopathy (DIMH) provides healthcare services through the Indian Systems of Medicine and Homeopathy (ISMH)[5] through its 1,541 medical centres, as given in **Exhibit 5.6** and **Appendix 5.2**.

**Exhibit 5.6: Number of ISMH medical centres in the state**




(Source: Policy Note 2023-24)

4 IRT Perundurai and Raja Muthaiah Medical College, Chidambaram was taken over by the Government in 2019 and 2021 respectively.

5 The systems of traditional medicine such as Siddha, Ayurveda, Unani, Yoga and Naturopathy and Homoeopathy.

A Performance Audit on 'Provision of Healthcare Services and Medical Education through Indian Systems of Medicine' was included in the CAG's Audit Report[6] (General and Social Sector) for the year ended March 2018. The significant audit observations were related to delays in procurement of equipment by TAMPCOL and State AYUSH Society; shortage of manpower in ISM wings; short production of ISM medicines by TAMPCOL due to inadequate provision of funds; shortage of staff in drug testing laboratory and non-commencement of Post Graduate courses in ISM by the Ayurveda, Unani and Homoeopathy colleges of GoTN.

#### *5.2.1.1 ISM Medical Colleges*

As of March 2023, there are seven Government ISM Colleges and 44 Self-financing colleges in Tamil Nadu (**Table 5.1**). The details of Government ISM colleges are given in **Appendix 5.3**.

**Table 5.1: Details of ISM colleges in the State**

| Number of ISM colleges | Siddha | Ayurveda | Unani | Yoga and Naturopathy | Homoeo-pathy | Total |
|---|---|---|---|---|---|---|
| Government | 2 | 1 | 1 | 2 | 1 | 7 |
| Self-financing | 11 | 6 | 0 | 16 | 11 | 44 |
| **Total** | **13** | **7** | **1** | **18** | **12** | **51** |

(Source: Policy Note 2023-24)

#### *5.2.1.2 Inpatient facilities in ISM and Homoeopathy Hospitals*

As of March 2023, inpatient services are provided in the following HCFs:

- A total of 1,210 beds in the hospitals attached to the Government ISM Medical Colleges (**Appendix 5.3**).
- Twenty five bedded Siddha wards in six[7] HCFs; sixteen bedded and fifteen bedded Siddha wards in ten[8] HCFs and six[9] HCFs respectively.
- Fifty bedded (Siddha-25 and Yoga and Naturopathy-25 each) integrated Hospitals in Theni and Tiruvannamalai districts. But these integrated hospitals have not been commissioned, as commented in **Paragraph 5.3.1.1**.
- Further, in view of the co-location policy of GoTN, ISMH treatment facilities are also made available in Allopathic Medical College Hospitals[10], DHQHs, TKHs, NTKHs and PHCs.

6 Paragraph 2.2 of Report No. 1 of 2020 - Government of Tamil Nadu.
7 Government Pentland Hospital, Vellore and in DHQHs at Dindigul, Erode, Kancheepuram, Nagapattinam and Tiruppur.
8 DHQHs at Mettur, Namakkal, Nagercoil, Karur, Kumbakonam, Thiruvarur, Tiruchirappalli, Sivagangai, Villupuram and Virudhunagar.
9 DHQHs at Cuddalore, Pennagaram, Ramanathapuram and Thoothukudi; TKHs in Chidambaram, Cuddalore District and Kadayanallur, Tenkasi District.
10 Including Coimbatore Medical College and ESI Hospital, Multi Super Specialty Hospital, Omandurar, Government Estate, Chennai.

- In the State, a total of 1,541 ISMH centres are operational which are funded by the State, NHM and AYUSH schemes, the details of which are given in **Appendix 5.2**.

## 5.3 Infrastructure availability

### 5.3.1 Building Infrastructure

#### *5.3.1.1 Non-commissioning of buildings*

- GoTN issued (February 2018) orders for setting up of integrated 50 bedded Siddha hospitals at a total cost of ₹13.83 crore in Theni and Tiruvannamalai. The constructions were completed in September 2020 and February 2020 respectively. However, as of December 2021, the buildings were not put to use due to non-availability of equipment and manpower. Failure to take effective action to commission the buildings by sanctioning medical officers, staff and required equipment resulted in idling of the buildings, constructed at a cost of ₹13.83 crore, for more than two years[11].

- In UPHC, Kadamalaigundu, a 'Birth Waiting Room' constructed at a cost of ₹20 lakh and inaugurated in August 2016, for antenatal mothers from hilly areas, especially the high-risk cases brought prior to the expected date of delivery, is not functioning. As of January 2024, the building is being used as storage room for medical/cleaning materials.

#### *5.3.1.2 Hospital functioning in dilapidated buildings*

Proper upkeep of hospital buildings is critical to ensure availability of a safe, clean and conducive environment to the patients, public and hospital staff. It was noticed that hospitals/PHC were functioning in dilapidated buildings endangering the life of patients. The deficiencies are given in **Table 5.2** and illustrated in **Exhibits 5.7** and **5.8**.

**Table 5.2: Deficiencies in sampled hospital/PHC buildings**

| District | Hospital/PHC | Deficiency |
|---|---|---|
| Erode | UPHC, Chennimalai | In Ophthalmic room of the PHC, the roof was in a damaged condition. |
| Tiruvannamalai | NTKH, Thanipadi | There were cracks in the 46 year old building. Water seepage on the walls and in roof. Structural stability certificate was not obtained for the building. |
| | UPHC, Karapattu | Water leakage in the building accommodating Injection room, OPD, Pharmacy, Laboratory. |

(Source: Joint Physical Verification)

[11] During JPV in January 2024, it was seen that the building in Tiruvannamalai, now called as 'Integrated AYUSH Hospital' was inaugurated by the Hon'ble Chief Minister in August 2023. The Siddha and Yoga and Naturopathy Wings, which were functioning at GMCH, Tiruvannamalai, were shifted to the new building and OPD services are being offered since its inauguration.

**Exhibit 5.7: Water seepage at non-Taluk hospital, Thanipadi**


**Exhibit 5.8: Damaged Roof at UPHC, Chennimalai**

(Source: Joint Physical Verification)

The buildings of HCFs with seepage/leakage/roof damaged carried the risk of contamination of the physical environment and endangered safety of patients and staff.

#### *5.3.1.3 Hospital buildings without compound wall*

Peripheral walls are required for HCFs for physical protection of buildings, land, patients and staff. It was, however, seen that there were no compound walls in one hospital[12] and eight PHC[13] out of the sampled 47 HCFs.

Thus, the safety and security of the patients' belongings and the assets were not ensured in the above hospitals/PHCs.

#### *5.3.1.4 Buildings without ramp facility*

As per IPHS norms and NHM Assessor's Guide Book, ramp facility should be provided in the HCFs for easy access to the aged and physically challenged patients. It was noticed that ramp facilities were not provided in two hospitals[14] out of 21 sampled hospitals and in three PHCs[15] out of 29 sampled PHCs resulting in possible hardship to the aged/physically challenged patients.

#### *5.3.1.5 Lifts in hospital buildings*

Lifts are essential in hospital for secure movement of patients, patient beds, equipment and for medical staff. Audit observed the following deficiencies in the three out of five sampled GMCHs, as shown in **Table 5.3**.

12 TKH, Thandarampattu.
13 BPHCs at Nammiyampattu and Sivagiri; UPHCs at Ammapalayam and Janumamarathur; PHCs at Chakkarapalli, Poondi and Santhavasal; APHC Kadavur.
14 GMCH Thanjavur (Pediatrics building) and TKH, Thandarampattu (Siddha Wing).
15 BPHCs at Modakuruchi (Siddha Wing) and Sivagiri; PHC, Poondi.

**Table 5.3: Deficiencies noticed in functioning of lifts in sampled hospitals**

| Name of the GMCH | Available/Not available | Deficiency noticed | Impact |
|---|---|---|---|
| GMCH, Erode | Available, but not functioning from December 2021. | AMC was not renewed from July 2020 and no action taken to repair the lifts. | Patients and hospital staff were forced to use the stairs. |
| GMCH, Thanjavur | Not available | Due to non-allotment of funds. | |
| GMCH, Theni | Available, but not functioning at Central Sterile Supply Department (CSSD) | Due to damaged condition | |
| | Available | Out of 8 lifts, 6 lifts are operated without a valid license. | Safety of the patients and others are compromised. |

(Source: Joint Physical Verification)

#### *5.3.1.6 Structural stability certificate and Disaster Management Plan*

Structural stability certificate, issued by Public Works Department (PWD), confirms the stability and fitness of the building for occupation and compliance with the provisions of National Building Code, 2016. The structural stability certificate so obtained should be renewed every three years.

NHM Assessor's Guidebook envisages that in each hospital, Standard Operating Procedure (SOP) for disaster management should be available and disaster management committee should be constituted to review the plan periodically.

Audit noticed that:

- Fourteen sampled hospitals (67 *per cent*) and 14 sampled PHCs (54 *per cent*) did not have structural stability certificate.
- None[16] of the sampled HCFs had a Disaster Management Plan, which would affect their preparedness to impacts of disasters.
- Six sampled hospitals (29 *per cent*) and 11 sampled PHCs (42 *per cent*) did not have fire safety certificate for their buildings.

The HCFs without structural stability certificate, disaster management plan and fire safety certificate may endanger the life of the patients and staff.

#### *5.3.1.7 Appearance and upkeep of sampled health institutions*

The IPHS guidelines for District/Sub-District/Sub-Divisional hospitals provides for availability and maintenance of adequate physical infrastructure. The availability of certain key aspects of physical infrastructure as per IPHS norms, in the sampled DHQHs/TKHs are given in **Table 5.4**.

[16] Except MCH Tiruvannamalai and TKH, Bhavani.

**Table 5.4: Appearance and up-keep in sampled Health institutions**

| Required (IPHS norms) | Erode | | Ka-rur | Perambalur | | Thanjavur | | Theni | | Tiruvanna-malai | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | DH QH | TKH | TKH | DH QH | TKH | DH QH | TKH | DH QH | TKH | DH QH | TKH |
| Environmental friendly features[17] | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Circulation areas[18] | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Disaster prevention measures[19] | Yes | No | No | Yes | No | Yes | No | No | No | Yes | No |
| Firefighting equipment | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

(Source: Details furnished by the sampled hospitals)

Thus, the availability of physical infrastructure in the District/Sub-District/ Sub-Divisional hospitals was quite satisfactory with reference to IPHS norms.

### 5.3.2 Availability and maintenance of residential accommodation in sampled HCFs

In the sampled 47 HCFs, the residential accommodation/quarters were available only in 26 (55 *per cent*) HCFs. The availability and maintenance of residential accommodation/quarters in the sampled districts is given in **Table 5.5**.

**Table 5.5: Availability and maintenance of residential accommodation in sampled Districts**

| Sl. No. | District | Number of sampled HCFs | Residential accommodation/Quarters | | | |
|---|---|---|---|---|---|---|
| | | | Available | Occupied | Under repair | Vacant |
| 1 | Erode | 6 | 197 | 100 | 71 | 26 |
| 2 | Karur | 3 | 82 | 72 | 3 | 7 |
| 3 | Perambalur | 1 | 10 | 7 | 3 | 0 |
| 4 | Thanjavur | 4 | 64 | 29 | 8 | 27 |
| 5 | Theni | 6 | 114 | 103 | 5 | 6 |
| 6 | Tiruvannamalai | 6 | 21 | 10 | 2 | 9 |
| **Total** | | **26** | **488** | **321** | **92** | **75** |
| **Percentage of Occupancy/Repair and Vacancy** | | | | ***66*** | ***19*** | ***15*** |

(Source: Details furnished by the respective HCFs)

Audit observed the following:

- In TKH, Manmangalam, the residential quarters were used for Office purposes without obtaining any orders from the competent authority.

17 Rain water harvesting, solar energy use and use of energy-efficient bulbs/ equipment should be encouraged. Provision for horticulture services including herbal garden.

18 Corridors, lifts, ramps, staircase and other common spaces etc. The flooring should be anti-skid and non-slippery.

19 Earthquake proof measures - structural and non-structural, firefighting equipment-fire extinguishers, sand buckets, etc., to be available and maintained to be readily available.

- In NTKH, Thanipadi, one quarter has been under repair for around three years.
- In BPHC, Chennimalai, all the four quarters which are shown as 'under repair', are beyond any economical repair. Hence, proposals have been sent to the competent authority for their condemnation.
- In BPHC, Vallam, all the seven quarters which are shown as 'under repair', are completely damaged.
- In PHC, Kurangani, a residential quarter has been unoccupied since its completion in 2020-21.

## 5.4 Availability of beds in the Healthcare Facilities

### 5.4.1 Availability of beds in the sampled Healthcare Facilities

The authorized bed strength and the available beds in all the sampled HCFs during the year 2021-22 is given in **Appendix 5.4**. Out of the 47 sampled HCFs, only three HCFs have a bed strength less than that of the sanctioned bed strength, as shown in **Table 5.6**.

**Table 5.6: Sampled HCFs having deficient beds**

| Name of the sampled HCF | Authorised Bed Strength | Beds available | Deficit | |
|---|---|---|---|---|
| | | | In number | In *per cent* |
| TKH, Karai | 60 | 36 | 24 | *40* |
| Block PHC, Naducauvery | 30 | 23 | 7 | *23* |
| PHC, Kurangani | 6 | 4 | 2 | *33* |

(Source: Details furnished by the respective HCFs)

Audit observed the following:

- All the sampled MCHs have beds in excess to that of the sanctioned bed strength, the excess ranging from 12 beds in Thanjavur to 570 beds in Erode.
- In TKH, Karai, the deficit in bed strength is due to lack of space to accommodate the authorized bed strength of 60 beds.
- In BPHC, Naducauvery, the deficit of seven beds is due to damaged beds.
- In PHC, Kaikalathur, although six beds are available, only two are being used due to insufficient space.

### 5.4.2 Skewed availability of inpatient beds

Government HCFs in the State had a total of 95,294 beds, which worked out to 1.32 beds per 1,000 population[20]. Analysis of inpatient bed availability in different districts revealed that the availability was not uniform throughout the State; it ranged from 0.5 beds per 1,000 population in Tiruvallur District to

[20] The Bhore Committee Report, 1946 recommended one bed for every 1,000 population which was to be increased incrementally. The National Health Policy, 2017 recommends two beds per 1,000 population.

3.3 beds per 1,000 population in Chennai District. While 12 districts had less than one bed per 1,000 population in Government HCFs, 26 others had more than one bed per 1,000 population as shown in **Exhibit 5.9**. The availability of beds in all the DHQHs in the State, for the period 2016-22, is given in **Appendix 5.5**.

**Exhibit 5.9: District-wise availability of beds with population**


* Chart depicts all districts excluding Chennai

(Source: Data furnished by DME, DPH and DMRHS)

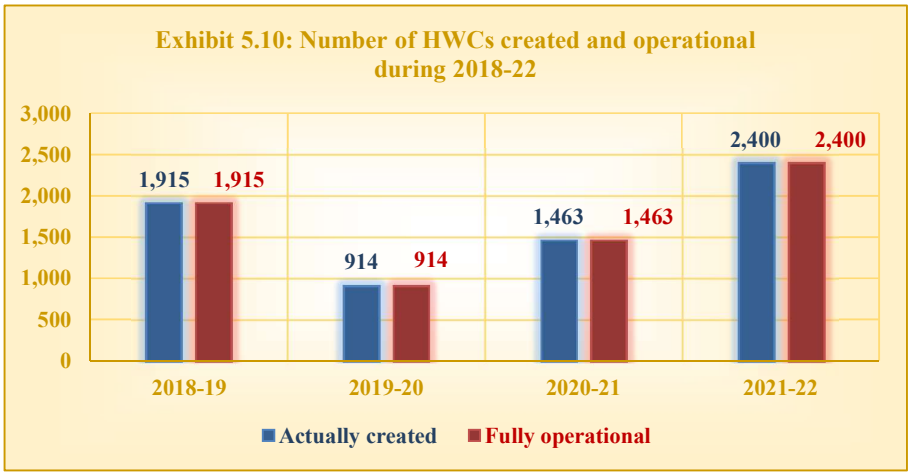
The disparity in bed strength was a matter of concern as the local population would be forced to travel to distant places or approach private HCFs for medical treatment.

## 5.5 Operationalisation of Health and Wellness Centres

To ensure delivery of Comprehensive Primary Healthcare services, GoI envisaged conversion of existing Sub Health Centres covering a population of 3,000 to 5,000, to Health and Wellness Centres (HWC), with the principle being 'time to care'- to be no more than 30 minutes.

As per the GoI's orders (2018-19), GoTN has been transforming the existing Health Sub-centres (HSCs) and Primary Health Centres (PHCs) as Health and Wellness Centres (HWCs) with the support of GoI through NHM-TN. Accordingly, as of March 2022, a total of 6,692 HWCs, providing 12 comprehensive package of services[21], have been created and are fully operational, the details of which are given in **Exhibit 5.10**.

[21] Preventive, Promotive, Curative, Rehabilitative and Palliative care related to RMNCH+A, Communicable diseases, Non-communicable diseases, Ophthalmology, ENT, Dental, Mental, Geriatric care, treatment for acute simple medical conditions and emergency and trauma services.




(Source: Details furnished by DPH)

In the sampled districts, a total of 1,089 HWCs have been created during 2018-22 and are fully operational. Out of these HWCs, 41 Medical Officers (MOs) have been posted in 41 Urban HWCs. The details of HWCs created and MOs posted are given in **Table 5.7**.

**Table 5.7: Creation of HWCs in sampled districts during 2018-22**

| Name of the District | Target | Fully operational | Whether MOs posted (UHWC) |
|---|---|---|---|
| Erode | 213 | 213 | 18 |
| Karur | 141 | 141 | 4 |
| Perambalur | 95 | 95 | 1 |
| Thanjavur | 208 | 208 | 10 |
| Theni | 135 | 135 | 4 |
| Tiruvannamalai | 297 | 297 | 4 |
| **Total** | **1,089** | **1,089** | **41** |

(Source: Details furnished by DPH)

## 5.6 Status of new construction and upgradation works

The funds from the State Budget for undertaking new constructions and upgradation of all existing works in the HFW Department are allocated towards civil works being undertaken by PWD. The details of works carried out in the HFW Department during the period 2016-22 is given in **Table 5.8**.

**Table 5.8: Details of Works carried out during 2016-22**

| Sl. No. | Directorate | Number of Works | | | | | |
|---|---|---|---|---|---|---|---|
| | | Sanctioned | Total Estimated cost (₹ in crore) | Completed | In progress | Yet to be taken up | Abandoned |
| 1 | Directorate of Medical Education | 60 | 5,610.52 | 46 | 14 | - | - |
| 2 | Directorate of Medical and Rural Health Services | 9 | 132.96 | 8 | 1 | - | - |
| 3 | Directorate of Public Health and Preventive Medicine | 846 | 246.23 | 699 | 98 | 36 | 13 |
| 4 | State AYUSH Society | 335 | NA | 293 | 42 | - | - |
| | **Total** | **1,250** | **5,989.71** | **1,046** | **155** | **36** | **13** |

(Source: Details furnished by the respective Directorates)

As seen from **Table 5.8**, out of a total of 1,250 sanctioned works during 2016-22, 1,046 works (84 *per cent*) have been completed as of January 2024.

## 5.7 Unfruitful expenditure on salaries paid to Dean of a non-existent college/hospital

In June 2008, GoTN issued orders for starting a new Government Medical College at Perambalur with an annual intake of 100 MBBS Students. Administrative sanction was accorded in July 2010 for construction of buildings at a cost of ₹82.34 crore. GoTN also approved the estimates for construction of buildings for the proposed college. One post of Dean was also created and filled up in 2010 to oversee the establishment of the proposed new Medical College at Perambalur.

Government, however, decided (November 2011) to drop construction of the new Medical College at Perambalur in the existing site, as the land was under certain legal issues. It was also seen that GoTN had not issued any clear direction on finding an alternate site for the proposed Medical College.

Although the proposal to establish a Medical College at Perambalur was shelved in 2011 itself, the post of Dean of the non-existent Medical College was continued since 2010 to till date (December 2021). A total of eight persons had held the post of Dean during 2010-21, and ₹1.42 crore was incurred on the pay and allowances of Deans who supposedly worked for establishing the Medical College during this period.

In September 2022, GoTN issued orders for creating a post of Special Officer-cum-Dean to the Government Medical College, Cuddalore district by surrendering the post of Special Officer-cum-Dean sanctioned to the Government Perambalur Medical College, Perambalur.

Audit observed that failure of DME and GoTN to take a final call on the proposed new Medical College and the attached tertiary hospital had resulted in an unfruitful expenditure of ₹1.42 crore on salaries alone.

## 5.8 Non-implementation of HMIS

In August 2005, GoTN decided to implement the Health Management Information System (HMIS) at a cost of ₹114.35 crore to deliver evidence-based healthcare to the public. CAG's Audit Report (General and Social Sector) for the year ending 31 March 2012, brought out several deficiencies in the system. However, the deficiencies pointed out were not rectified and HMIS was not implemented in all HCFs as of March 2022.

In 2017, GoTN proposed to revamp the system as HMIS 2.0 and the project was awarded (December 2017) to Oasis Cybernetics Pvt. Ltd. (System Integrator) at a cost of ₹17.36 crore with targeted implementation by August 2018. Due to slow progress of work, the contract was terminated in December 2019, and

restarted with the same firm in May 2020. The work was to be completed in six months.

Out of 71 modules proposed in HMIS 2.0, 67 modules (94 *per cent*) like patient registration module, clinical module, prescription module etc., were not completed. Due to this, HMIS 2.0 is not fully functional as of August 2022. GoTN had incurred a total expenditure of ₹20.61 crore towards various activities like server hosting charges, AMC for hardware, etc.

Audit scrutiny of some of the modules in HMIS 2.0 revealed the following:

### 5.8.1 Biomedical Waste Management Module

Data entry was incomplete. No data was entered after April 2021. The data on biomedical waste disposal relating to 36 medical institutions was not captured.

### 5.8.2 Blood Bank Module

Twenty eight out of 380 records containing the details of blood donation showed that the expiry date was earlier than the blood donation date.

A total of 7,820 records relating to five medical institutions only have been captured in the system. It was, however, seen that vital details of the blood stored in blood bank such as type, and results of mandatory tests were not captured.

### 5.8.3 Ward Module

A total of 10,47,124 records relating to ward discharge had been captured.

Data pertaining to the details of the doctor, status and case type were not captured in 7,99,140 records, 10,47,127 records and 1,405 records respectively.

- Number of patients discharged was captured incorrectly in two different tables of the system.
- Discharge Remarks were not captured, or invalid data was captured in 7,25,733 records.
- Data on surgery done date, Anesthesia code, post-operative instructions etc., was not available.

While the implementation of all modules of HIMS 2.0 was delayed and as only six *per cent* of the modules were functional, Audit observed that details, even if filled up by the doctors and staff, would not be complete and fulfil the objective. Thus, the expenditure of ₹20.61 crore on HMIS 2.0 implementation was rendered wasteful as the objectives of computerisation were not achieved.

Government replied (August 2022) that TNeGA[22] has been asked to evaluate the work done by the System Integrator. Further action taken by Government is awaited (September 2022).

[22] Tamil Nadu e-Governance Agency.