

CHAPTER-II

This chapter contains findings of Performance Audits on “Delivery of Healthcare Services in Government Hospitals at District Level”, “Skill Development in Gujarat” and “Functioning of Vadodara Urban Development Authority”.

HEALTH AND FAMILY WELFARE DEPARTMENT

2.1 Delivery of Healthcare Services in Government Hospitals at District Level

Executive Summary

Health is one of the most important parameters for ascertaining the quality of human life. Availability, accessibility and usability of sound healthcare system are essential requirements to meet the challenges in the field of Health. In Gujarat, 21 District Hospitals (DHs), a secondary level hospital and 13 hospitals attached with medical colleges, and one tertiary care hospital on Public Private Partnership (PPP) mode, are functioning at district level to provide preventive, promotive and curative healthcare services to the population. The performance audit on “Delivery of Healthcare Services in Government Hospitals at District Level” was conducted for the period 2010-15 during April and August 2015 and the following deficiencies were noticed -

- Department had prepared a Five Year Plan for betterment of healthcare services in district level hospitals, however, the plan was not comprehensive as the current status of healthcare services of the hospitals vis-a-vis the requirement as per Indian Public Health (IPH) Standards was not identified. Further, the plan had no specific targets and enshrined timeframe to achieve the targets.*
- The sanctioned strength of all cadres of staff including doctors and nurses remained much below the IPH Standards in some test-checked DHs. The shortfall in the cadres of Specialist Doctors ranged between 29 and 77 per cent, and that of Medical Officers ranged between seven and 69 per cent vis-a-vis IPH Standards. The situation was alarming in DH Surendranagar, DH Godhra, DH Petlad and DH Vadodara where shortage in the cadre of Specialist Doctors was more than 60 per cent as compared with IPH Standards.*
- Availability of beds in DHs was neither as per IPH Standards nor in consonance with the requirements. Out of 13,833 beds available in district level hospitals, 10,645 beds were available in 11 districts to cater to a population of 3.55 crore and only 3,188 beds were available in remaining 22 districts to cater to a population of 2.49 crore. Shortage of beds in test-checked DHs ranged between 52 and 73 per cent. Audit observed instances of highly congested wards and patients lying on the floor; two patients were accommodated on one bed for transfusion of iron sucrose, and patients accommodated in the passageway due to non-availability of vacant beds.*

- *Number of essential drugs viz. Amoxycilin, Diclofenac Sodium, Hepatitis B Vaccine, Injection Ceftazimide, Insulin, etc. were not available in the stock for more than four months in all test-checked hospitals. Resultantly, patients were forced to purchase medicines from the open market.*
- *Instances of supply of Not of Standard Quality (NSQ) medicines by Gujarat Medical Services Corporation Limited (GMSCL) were noticed in test-checked hospitals. Most of the NSQ medicines were issued to the patients due to delay in receipt of sample testing reports.*
- *Essential specialist services of General Medicines, Obstetrics and Gynaecology, Paediatrics, Orthopaedics, Radiology, etc. were either not available or partially available in all test-checked DHs except in DH Palanpur, due to vacant posts of Specialist Doctors.*
- *Accident, Emergency and Trauma care services were either not available or were not equipped with essential equipment in test-checked DHs.*
- *Intensive Care Units (ICU) meant to attend critically ill patients, were not available in DH Petlad, DH Surendranagar and DH Vadodara. In other test-checked DHs, only one or two ICU beds were fully equipped with life saving equipment to handle critical cases. The situation in test-checked Civil Hospitals (CHs) was also deplorable, as only five and nine ICU beds were fully equipped with life saving equipment as against 11 and 36 available beds in CH Bhavnagar and CH Vadodara respectively.*
- *Availability of Gynaecologists, Paediatricians and life saving equipment are essential for delivery of maternal and child healthcare services. Audit observed instances of higher neo-natal and maternal deaths, vacant posts of Gynaecologists and Paediatricians, and lack of life saving equipment and beds in the maternity ward of test-checked DHs. Instances of patients accommodated on the floor were noticed in test-checked DHs.*
- *The departments of diagnosis, imaging and blood banks are integral components of a hospital to provide healthcare services. Audit observed that equipment for conducting various tests were not available in the diagnosis and imaging departments in test-checked DHs. Blood bank/blood storage centres were either not established or remained non-functional in test-checked DHs except in DH Godhra, DH Surendranagar and DH Himatnagar.*
- *Referral management and infection control were not upto the mark in any of the test-checked DHs.*
- *IPH Standards prescribed for quality assurance was either not followed or partially followed by the test-checked DHs.*

2.1.1 Introduction

Health is one of the definite facilitators for ascertaining the quality of human life. Availability, accessibility and usability of sound healthcare system are essential requirements to meet the challenges in the field of Health. The Sub-Centres (SCs), Primary Health Centres (PHCs) and Community Health Centres (CHCs) are primary level healthcare units which provide preventive and promotive healthcare services to rural populace. District Hospitals (DHs) are

secondary level hospitals, being an essential component of the district healthcare system which provides preventive, promotive and curative healthcare services to the people in the districts. Hospitals attached with Medical Colleges, commonly known as Civil Hospitals (CHs) are tertiary level healthcare units, which provide all services including super specialised services.

As of March 2015, the health needs of the people of Gujarat are catered by the State Government through 34 District level Hospitals¹ at district level, 42 sub-DHs and 321 Community Health Centres (CHCs) at taluka level and 1,265 Primary Health Centres (PHCs) and 8,121 Sub-Centres (SCs) at village level.

The healthcare services in a State can be evaluated on the basis of the achievement against benchmark of health indicators. The status of few important health indicators of Gujarat *vis-a-vis* National average are shown in **Table 1** below -

Table 1: Status of health indicators of Gujarat *vis-a-vis* National average

Sr. No.	Health Indicators	Gujarat	National	Ranking of Gujarat among 19 big States
		2011	2011	
1	Crude Birth Rate (CBR) (per 1000 population)	21.30	21.80	11
2	Crude Death Rate (CDR) (per 1000 population)	6.70	7.10	07
3	Total Fertility Rate (TFR)	2.40	2.40	12
4	Maternal Mortality Ratio (MMR) (per lakh live births)	122	178	06
5	Infant Mortality Ratio (IMR) (per 1000 live births)	41	44	09

(Source: GoI website – www.censusindia.gov.in)

The table above shows that though Gujarat's position is better than national average, yet it is not among the front ranking States of the country in terms of health indices. The situation demands for better healthcare services at all levels. This performance audit report covers status of delivery of healthcare services in Government Hospitals at District level.

2.1.2 Organisational set-up

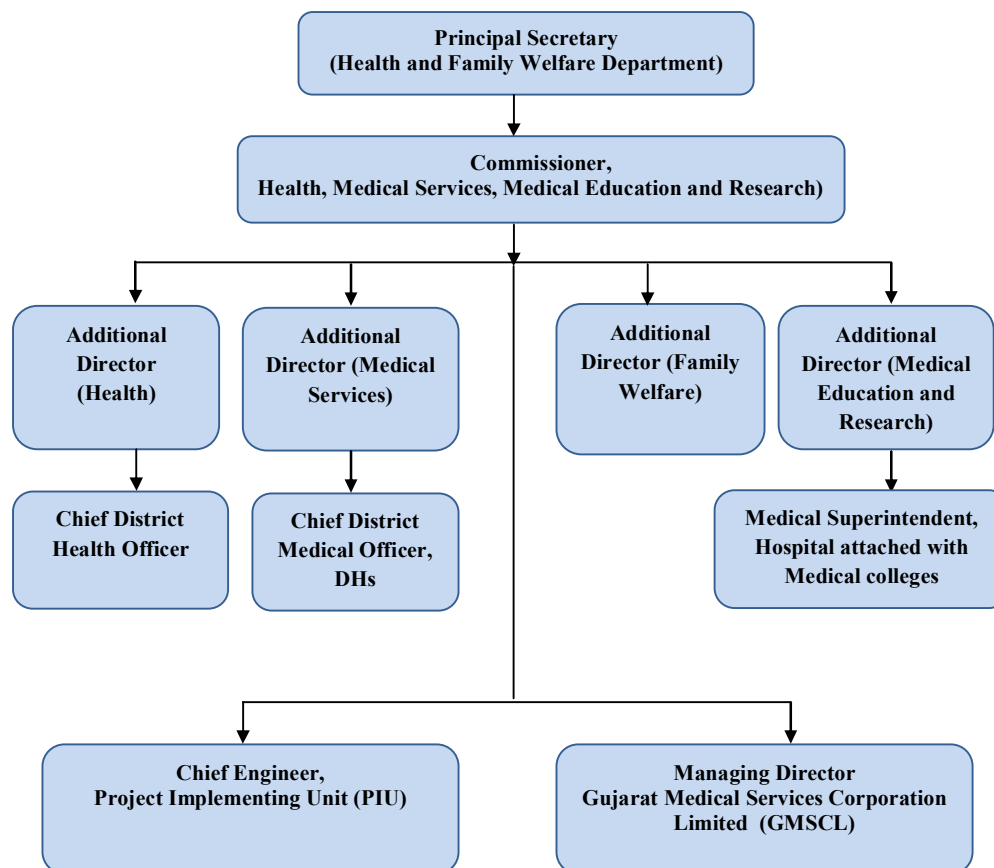
The Principal Secretary, Health and Family Welfare Department (H&FWD) is the Administrative Head of the Department. He is assisted by the Commissioner, Health, Medical services and Medical Education and Research, who in turn is assisted by four Additional Directors². Additional Director, Medical Services is responsible for overall supervision of district hospitals (DHs) and sub-DHs in the State. Additional Director, Medical Education and Research is responsible for overall supervision of Civil Hospitals (CHs) attached with Medical College. The Chief District Medical Officer (CDMO) is responsible for supervision of medical services in the respective District Hospitals whereas Medical Superintendent of the hospital is responsible for supervision of delivery of healthcare services in the respective Civil Hospital.

¹ 21 District Hospitals, six hospitals attached with Government Medical College, six hospitals attached with Government Medical Education and Research Society and a hospital attached with private medical college on PPP mode

² Health (CHCs and PHCs), Medical Service (DHs and Sub-DHs), Medical Education & Research and Family Welfare

The organisational chart is depicted below –

Organisational Chart



2.1.3 Audit Objectives

The broad objectives of the performance audit were to assess whether -

- the planning process was proper and robust to improve the quality of healthcare services at district level hospitals;
- adequate infrastructure, manpower, drugs and equipment, and treatment supporting units were available at district level hospitals to deliver the healthcare and ancillary services effectively and efficiently; and
- a proper system existed for quality assurance and monitoring of service delivery at district level hospitals.

2.1.4 Audit Criteria

In order to achieve the audit objectives, the following audit criteria were adopted -

- Guidelines of Indian Public Health (IPH) Standards for District Hospitals;
- Quality Assurance Guidelines issued by GoI;
- Policies/strategies of the State Government relating to Healthcare with special focus in respect of the District Level Hospitals;
- Guidelines for Rogi Kalyan Samiti issued by the State Government; and

- GoI and State Government Resolutions and Circulars.

2.1.5 Audit scope and methodology

The performance audit commenced with an ‘entry conference’ (10 April 2015) with the Principal Secretary and other officers wherein the audit objective, scope and audit criteria were discussed and the inputs of the department were obtained. The audit involved scrutiny of records for the period 2010-15 maintained at the office of the Commissioner of Health, District Hospitals and Civil Hospitals attached with Medical Colleges in nine test-checked districts to evaluate the status and standards of delivery of healthcare services to the population. Joint visit³ of various departments of test-checked hospitals was also undertaken to observe the standard of delivery of healthcare services. Out of 30 districts level hospitals in 26 districts⁴, 10 Government hospitals⁵ situated at district level in nine districts⁶ were selected by adopting Simple Random Sampling without Replacement Method for detailed audit scrutiny. The scope of Audit was also extended to test-checked 18 Community Health Centres (CHCs)⁷ to ascertain the efficacy of these centres and referral system.

An exit conference was held (13 January 2016) with Additional Chief Secretary (ACS) of Health and Family Welfare Department (H&FWD). The views of the State Government and the replies received from the department have been considered and incorporated in the report.

Audit Findings

2.1.6 Planning

2.1.6.1 Comprehensive Plan for up-gradation of district level hospitals

The State Government had prepared a Five Year Plan (FYP) (2012-17) for medical services and medical education for up-gradation of standards of healthcare services in district level hospitals. However, Audit observed that no appraisal was conducted by the department to identify the current status of healthcare services of the hospitals *vis-a-vis* the requirement as per IPH Standards. While the department had an Annual Plan as part of the FYP, it did not prescribe methodologies or lay a timeline to achieve the standardised norms.

The status of implementation of FYP in respect of district level hospitals as on March 2015 are shown in **Table 2** as follows –

³ Audit team alongwith officials of test-checked hospitals

⁴ Seven newly constituted (August 2013) districts were not considered as element of universe for sampling *i.e.* Aravali, Botad, Chhota-udepur, Devbhumi Dwarka, Gir Somnath, Mahisagar and Morbi. Out of 34 District level hospitals, four hospitals functioning in these districts were not considered for audit sampling.

⁵ Seven DHs – (Dahod, Godhra, Himatnagar, Palanpur, Petlad, Surendranagar and Vadodara) and three Civil Hospitals – (Bhavnagar, Surat and Vadodara)

⁶ Anand, Banaskantha (Palanpur), Bhavnagar, Dahod, Panchmahal (Godhra), Sabarkantha (Himatnagar), Surat, Surendranagar and Vadodara

⁷ Anand (Dharmaj and Tarapur), Banaskantha (Piluda and Suigam), Bhavnagar (Ghogha and Sihor), Dahod (Limkheda and Singwad), Panchmahal (Ghoghamba and Sahera), Sabarkantha (Prantij and Rupal), Surat (Kathor and Sayan), Surendranagar (Ranagadh and Thangadh) and Vadodara (Padra and Savli)

Table 2: Status of Implementation of Five Year Plan (2012-17) as on 31 March 2015

Sr. No.	Plan	Status of Implementation	Government reply
1.	Strengthening of manpower as per IPH Standards in DHs.	No change was made in the sanctioned strength.	The idea has been dropped.
2.	Appointment of specialist doctors.	194 Specialist doctors appointed during 2012-15 under Medical Services.	Efforts are being made to fill the gaps.
3.	Appointment of Cardiologist in district hospital to provide intensive cardiac care treatment.	Neither any Cardiologists were appointed nor was any training imparted to MBBS doctors though it was envisaged in the five year plan.	Training of MBBS doctors for cardiac care treatment would be provided.
4.	Increase in bed capacity of DHs.	Bed capacity of only two DHs has been increased.	Efforts are being made to increase the bed capacity.
5.	Setting-up of Non-communicable Disease (NCD) Clinics in all districts.	No new NCD clinics have been set-up during the period 2012-15.	Efforts are being made for setting-up NCD clinics.

The above table shows that the plan had no specific targets and was without timeframe to achieve the targets.

The Additional Chief Secretary (ACS), Health and Family Welfare Department (H&FWD) in the exit conference stated (January 2016) that comprehensive perspective plan would be prepared with time frame and would be followed through annual plan.

The timelines for all activities enshrined in the Five Year Plan prepared by the State may be fixed and progress against these be watched on a regular basis for ensuring that the targets set are achieved.

Delivery of Healthcare Services

The district level hospitals are expected to meet the requirements of patients referred from primary level healthcare institutions as well as patients directly approaching the hospital. The guidelines of IPH Standards envisage that each DH should deliver essential services (minimum assured services) and also aspire to deliver specialised services to address the needs of patients. A conceptualized frame-work of district level hospital is shown in **Table 3** below—

Table 3: A conceptualized frame-work of district level hospitals

Driving forces	Core Services	Essential component to complement Core Services	Auxillary and supporting service/unit	Patient amenities and citizen charter
Adequate manpower in the cadres of doctors, para-medical, Nursing and supportive staff	Out Patient Department (OPD) Services	Diagnostic	Dietary	Sanitation and drinking facilities
Adequate Infrastructure	In Patient Department (IPD) Services	Imaging	Rogi Kalyan Samiti	Information to Public
Availability of Drugs and Equipment	Accident, Emergency and Trauma care service	Blood Bank	Referral Services	
	Intensive Care Unit Special Newborn Care Unit	Operation Theatre	Infection Control	

The efficacy of these frame-work and its impact on delivery of healthcare services in test-checked district level hospitals are discussed in the succeeding paragraphs -

2.1.7 Driving Forces of Hospitals

To run healthcare set-up efficiently and effectively, availability of adequate manpower, infrastructure and equipment are pre-requisites and act as driving forces. Shortfall or absence of these forces would have an adverse impact on quality and quantity of essential services. The efficacy of these driving forces and impact on delivery of healthcare services in test-checked district level hospitals are discussed as under –

2.1.7.1 Human Resource Management

The delivery of quality healthcare services in hospitals largely depends on the adequate availability of manpower especially in the cadres of doctors, staff nurses, para-medical and other supporting staff. The details of men-in-position *vis-a-vis* sanctioned strength in the DHs and CHs in the State as on 31 March 2015 is shown in **Table 4** below –

Table 4: Men-in-position as on 31 March 2015 *vis-a-vis* sanctioned strength

Particulars	Manpower in DHs				Manpower in CHs			
	Sanctioned post	Men-in-position	Vacancy	Percentage of vacancy	Sanctioned Post	Men-in-position	Vacancy	Percentage of vacancy
Medical Officers	270	183	87	32	195	149	46	24
Specialist Doctors/ Professors	390	176	214	55	1,411	1,158	253	18
Staff Nurses	1,260	965	295	23	3,366	2,846	520	15
Para-medical staff	370	220	150	41	1,048	893	155	15
Administrative and other staff	263	111	152	58	432	309	123	28
Total	2,553	1,655	898	35	6,452	5,355	1,097	17

(Source: Information furnished by the office of the Commissioner of Health, Gandhinagar)

The table above shows that the availability of manpower as against the sanctioned strength was better in CHs as compared to DHs. The shortage of Medical Officers especially Specialist Doctors, nurses and para-medical staff in DHs is an area of concern as the patients are deprived of quality treatment.

Further, the guidelines of IPH Standards for DHs envisage a minimum essential manpower in DHs based on the bed strengths. However, the availability of manpower in test-checked DHs was not in consonance with IPH Standards (**Appendix-IV**) as discussed below -

- The sanctioned strength of the DHs in some test-checked districts was much less than that stipulated in the guidelines of IPH Standards. This indicated that adequate efforts were not made by the State Government even to fill the existing vacancies against the sanctioned strength, leaving aside to increase the strength as required in accordance with the IPH Standards.
- The vacancies in the cadres of Specialist Doctors ranged between 29 and 77 *per cent*, and Medical Officers ranged between seven and 69 *per cent vis-a-vis* IPH Standards. The situation was alarming in DH Surendranagar, DH Godhra, DH Petlad and DH Vadodara where

shortage of Specialist Doctors as compared with IPH Standards was more than 60 *per cent*. Vacancies in the cadres of Specialist Doctors and Medical Officers had resulted in non-availability of specialist services in test-checked DHs as discussed in Paragraph 2.1.8.1 (2).

- Similarly, the vacancies in the cadres of staff nurses ranged between seven and 72 *per cent*, and para-medical & other staff ranged between 31 and 89 *per cent vis-a-vis* IPH Standards.
- Bed capacity of DH Dahod and DH Surendranagar was 150 each. Average IPD patient per year in DH Dahod and DH Surendranagar was 59,634 and 21,784 respectively during the period 2010-15. However, the sanctioned strength of staff nurses in DH Dahod was only 33 as compared to 90 in DH Surendranagar. This indicated that the sanctioned strength approved by the State Government for the DHs was not based on adequate study, as it was neither linked to bed capacity nor with inflow of patients.

The ACS H&FWD in the exit conference stated (January 2016) that despite making best efforts, gaps remained between sanctioned strength and men-in-position particularly in the cadre of doctors. It was further stated that efforts were being made to fill the vacant posts on priority basis and thereafter steps would be taken to provide manpower as per IPH Standards.

The Government may revise the sanctioned strength of DHs in the State as envisaged in the guidelines of IPH Standards and fill up the vacancies gradually, over a timely manner (say two-three years) to provide quality healthcare facilities to the public. At least one specialist doctor for each department may be posted to all DHs to facilitate specialist services to the patients.

2.1.7.2 Availability of Infrastructure

• Availability of District Level Hospitals

Guidelines of IPH Standards envisage a DH in every district, a hospital at the secondary referral level, to cater to the needs of people living in district headquarters, town and the rural populace in the district. In the State, there are 21 DHs and 13 tertiary care hospitals⁸ to cater to the needs of the population (Appendix-V).

Audit observed that except for four districts (Anand, Aravali, Morbi and Veraval), all districts in the State were having either DHs and/or CHs. While Aravali, Morbi and Veraval districts are newly formed (August 2013), Anand district which was formed in October 1997 and was having a population of 20.93 lakh as per Census 2011, was without any district level hospital. In contrast, Vadodara, a neighbouring district of Anand was having one DH and two tertiary care hospitals⁹.

The ACS H&FWD in the exit conference stated (January 2016) that the process for acquisition of land for construction of a DH at Anand was in progress.

The Government may take steps to establish DH in these districts to cater to the needs of the population.

⁸ Hospitals attached with Medical Colleges which provides secondary as well as tertiary care

⁹ CH Vadodara and Hospital managed by Gujarat Medical Education and Research Society (GMERS)

- *Availability of Beds in DHs*

Guidelines of IPH Standards provide that there should be 220 beds in a DH for a district having a population of 10 lakh. As of March 2015, the number of beds available in the district level hospitals was 13,833 to cater to a population of 6.04 crore in the State.

Audit observed that though the flow of OPD and IPD patients to district level hospitals increased by 19 and 22 *per cent* during 2010-15 respectively, the number of beds increased only by 12 *per cent* during that period. Audit further observed that out of 13,833 beds, 10,645 beds were available in 11 districts¹⁰ to cater to a population of 3.55 crore. In remaining 22 districts, only 3,188 beds are available to cater to a population of 2.49 crore.

The guidelines of IPH Standards also provide that the requirement of beds in a DH would depend on nearest tertiary care hospitals and its distance and travel time. Audit observed that in three out of nine test-checked districts, tertiary care hospitals were functioning with adequate number of beds as per IPH Standards. However, in the remaining six test-checked districts, the availability of beds in the DHs was less than the number of beds prescribed as per IPH Standards as shown in **Table 5** below –

Table 5: Availability of beds in six test-checked DHs as on 31 March 2015

DH	Population of the district as per census 2011 (in lakh)	Number of beds required as per IPH Standards	Actual number of beds available	Shortage of beds (in <i>per cent</i>)	Nearest district with tertiary care facility	Approximate distance to district with tertiary care facility (in kilometer)
Petlad	20.93	440	119	321(73)	Vadodara	35
Palanpur	31.21	660	225	435(66)	Ahmedabad	145
Dahod	21.27	440	150	290(66)	Vadodara Ahmedabad	151 202
Godhra	23.91	440	210	230(52)	Vadodara	80
Himatnagar	24.29	440	200	240(55)	Ahmedabad	75
Surendranagar	17.56	440	150	290(66)	Ahmedabad Rajkot	126 106

The table above shows that the availability of beds in DH Palanpur, DH Dahod and DH Surendranagar was less than 40 *per cent* of the IPH Standards. Even the tertiary care hospitals which were nearest to these DHs, were at a distance of more than 100 Kilometres. Thus, the people of these districts were deprived of adequate healthcare facilities that may force them to either opt for private hospitals for treatment or to obtain treatment in congested facilities. Moving to private hospitals is a financial burden for the poor patients.

During joint visit of these DHs, Audit observed instances of highly congested wards and found patients accommodated on floor bed, two patients accommodated on one bed for transfusion of iron sucrose, as well as patients being accommodated in passage as shown in **Picture 1**, **Picture 2** and **Picture 3**.

¹⁰ Ahmedabad-2,530, Bhavnagar-709, Gandhinagar-415, Jamnagar-1,263, Junagadh-327, Kachchh-300, Patan-415, Rajkot-965, Surat-1,050, Vadodara-2,256 and Valsad-415



Picture 1: Two patients accommodated on one bed for transfusion of iron sucrose at DH Dahod (21.05.2015)



Picture 2: Patients accommodated on floor at DH Surendranagar (06.05.2015)



Picture 3: A patient accommodated on the floor in passage at DH Palanpur (24.06.2015)

The Chief District Medical Officers (CDMOs) stated (May-June 2015) that due to insufficient infrastructure, beds had been kept adjacent to accommodate more number of patients and arrangement of floor bed was done to give

treatment to patients in need. Audit appreciates the efforts of hospital authorities for providing treatment despite non-availability of vacant beds. However, the patients were highly vulnerable to getting hospital induced infection.

The ACS H&FWD in the exit conference stated (January 2016) that the increase in bed capacity was a continuous exercise and assured that requirement of beds in DHs in those districts where CH was not available would be assessed and needful would be done to prevent the instance of floor beds. It was further stated that budget provision had been made for construction of a new hospital at Dahod.

The Government may note that 2.49 crore (41 per cent) of population are served by only 3,188 (23 per cent) beds in 22 districts. The Government may take steps to increase the bed capacity of DHs in the State as per IPH Standards in a systemic manner, so that the imbalance is rectified for affordable healthcare to the common man.

- ***Creation of Infrastructure***

Project Implementation Unit (PIU), Gandhinagar and its district level offices are responsible for undertaking construction activities as well as repair and maintenance work in all Government Healthcare Institutions. During the period 2010-15, the PIU had funds of ₹ 732.64 crore including opening balance of ₹ 97.82 crore for creation of infrastructure. However, only ₹ 580.08 crore (79 per cent) have been expended as on March 2015. The details of physical achievement of PIU as against the works approved in respect of DHs¹¹ and CHs during 2011-15 is shown in **Table 6** below –

Table 6: Physical achievement of PIU in respect of approved works as on 31 March 2015

Particulars	Number of works						
	Approved	Dropped	At tender stage	Awarded	Scheduled to be completed on or before 31 March 2015	Completed as on 31 March 2015	Percentage of works completed within stipulated time
2010-11	82	06	17	59	59	43	73
2011-12	164	16	63	85	85	54	64
2012-13	69	06	35	28	27	15	56
2013-14	14	00	07	07	01	01	100
2014-15	18	00	15	03	01	01	100
Total	347	28	137	182	173	114	66

(Source: Information furnished by PIU, Gandhinagar)

The table above shows that out of 347 works approved during the period 2010-15, work orders were issued for only 182 works (52 per cent). Out of these 182 works, 173 works were scheduled to be completed on or before 31 March 2015, however, only 114 works (66 per cent) could be completed within the stipulated time. Further, out of 315 works approved during 2010-13, 28 works (nine per cent) have been dropped and 115 works (37 per cent) were at tender stage.

Delay in execution of work by PIU had the following impacts on delivery of healthcare services in test-checked hospitals –

¹¹ It includes all work falling under Medical Services viz. District Hospital and Sub-District Hospital

- A work of refurbishing and reconstruction of civil and electrical work for addition and alteration of operation theatre block (B and C) in CH, Vadodara was awarded (January 2012) to an agency¹² at a tendered cost of ₹ 86.19 lakh. The work was to be completed by January 2013.

Audit observed that the agency had stopped (March 2014) the work after execution of the work worth ₹ 56.00 lakh due to change in structural design subsequently by PIU. Thereafter, no action was taken by the PIU to get the work completed resulting in difficulties in performing operations, as the Operation Theatre (OT) and ward of Orthopaedics wing were stationed in different buildings.

The PIU Vadodara stated (June 2015) that the work had been re-started and would be completed soon. However, the work had not been completed as of October 2015.

- Work of construction of new born intensive care unit (NICU) with 36 beds at CH Surat was awarded (July 2010) to an agency¹³ at a tendered cost of ₹ 2.28 crore. The work was to be completed by July 2011. However, Audit observed that after executing work worth ₹ 2.18 crore, the work was stopped by the agency (March 2013) on its own without stating any reasons. This resulted in high congestion in the existing NICU as it had a capacity of 15 beds against which approximately 25 to 30 neonates were being either accommodated on additional beds or two neonates were being kept together on a single bed to provide medical aid, on regular basis.

The PIU Surat attributed (August 2015) the delay in completion of work to the agency and stated that the work had been restarted and would be completed soon. It was further stated that necessary action as per tender clause would be taken against the agency. However, the work had not been completed as of October 2015.

The ACS H&FWD in the exit conference stated (January 2016) that instruction would be issued to PIU for early completion of works.

- The guidelines of IPH Standards provide that for barrier free access to non-ambulant (wheel chair, stretcher), visually impaired and elderly persons, ramp and hand rail were required to be provided in each block of the hospital building. The guidelines further provide that the imaging department such as X-ray, CT Scan, Ultrasonography, etc, should be located at a place which is easily accessible to OPD, IPD and OT.

However, Audit observed that ramp and hand rail had not been provided in IPD in DH Dahod, DH Godhra and CH Surat. In DH Dahod, OT was located on the ground floor and the surgical ward was on first floor of the building without the facility of ramp and hand rail or lift. Attendants were seen lifting the patients on stretcher (**Picture 4**). In CH Surat, imaging department was located in the Administrative Block without any connectivity with IPD. Patients with oxygen support were seen approaching on stretcher under open sky to imaging department (**Picture 5**). The problem for the patients used to be aggravated during the rainy season.

¹² M/s. Sarang Construction

¹³ M/s Shreeji Krupa Buildcon Limited



Picture 4: Patient lifted on stretcher to cross stairs at DH Dahod (21.05.2015)



Picture 5: Patient on oxygen support approaching for Image at CH, Surat (08.07.2015)

Apart from patient's inconvenience, non-availability of ramp in IPD and ward may cause serious problems in the event of exigencies or natural calamity.

The Medical Superintendent, CH Surat stated (August 2015) that the proposal would be sent to PIU for creation of ramp and inter-connectivity between IPD and Imaging Department.

Audit is of the view that the progress of infrastructural works may be geared up and needs of physically challenged patients may be taken care by constructing ramp and inter-connectivity between various departments.

- ***Drugs and Equipment***

World Health Organisation (WHO) defined essential medicines as drugs that satisfy the healthcare needs of the majority of the population; they should therefore be available at all times in adequate quantity and in appropriate dosage forms, at a price the community could afford.

In this regard, it should be mentioned that the Central Medical Stores Organisation (CMSO) established (1978) in the State under Health and Family

Welfare Department is responsible for procurement, storage, distribution of medicines, surgical goods, medical equipment/instruments and insecticides to healthcare institutions of the State. With changes in the healthcare arena, there was a felt need of developing new as well as upgrading the existing functioning and processes of CMSO, and consequently develop an institution supported with necessary infrastructure to make the system responsive to meet the objectives of the universal health coverage. With the view to match the changing demands and pace of development in the sector, CMSO was transformed (July 2012) into Gujarat Medical Services Corporation Limited (GMSCL) as a company and was incorporated under Companies Act, for systematic procurement, inventory management, Management information system and to infuse professional management with establishment, development and strengthening the use of information technology in medical stores organisation. Prior to formation of GMSCL, the unspent funds with CMSO were required to be surrendered to the State Government. Details of funds placed at the disposal of CMSO/GMSCL for procurement of drugs and equipment and its utilisation thereof in respect of district level hospitals¹⁴ during the period 2010-15 are given in **Table 7** below –

Table 7: Availability of funds vis-à-vis its utilisation by CMSO/GMSCL

(₹ in crore)

Year	Opening balance	Funds received	Total available funds	Funds utilised	Funds surrendered/ closing balance	Percentage of utilisation
2010-11	Nil	25.48	25.48	24.46	1.02	96
2011-12	Nil	33.82	33.82	32.80	1.02	97
2012-13	Nil	37.98	37.98	32.64	5.34	86
2013-14	Nil	33.68	33.68	28.91	4.77	86
2014-15	4.77	99.78	104.55	57.77	46.78	55
Total		230.74		176.58		

(Source: Information furnished by GMSCL)

The above table shows a reducing trend of utilisation of funds with respect to availability by CMSO and GMSCL during the period 2010-15. Though the percentage utilisation of funds by GMSCL was only 55 *per cent* against availability during the period 2014-15, the actual expenditure jumped almost 100 *per cent* in 2014-15 over the previous year's expenditure of ₹ 28.91 crore.

The main objective of GMSCL is to ensure timely and reliable supply of drugs and equipment throughout the year to healthcare institutions in the State by infusing professional management besides systematic procurement and inventory management. However, instances of non-availability of medicines and supply of medicines Not of Standard Quality (NSQ) were noticed in test-checked hospitals as discussed below, despite availability of sufficient funds.

- **Availability of medicines**

GMSCL has come up with a list of Essential Drugs (EDs) for the State of Gujarat containing a list of drugs that are to be procured and supplied to all healthcare institutions, irrespective of their inclusion in any other healthcare programme. This list is regularly updated by GMSCL. The ED list for 2014-15 contains 532 EDs and surgical items.

¹⁴ CHs, DHs and Sub-District level hospitals

Ensuring the uninterrupted supply of EDs to hospitals plays a vital role in the delivery of quality healthcare services in hospitals. Hospitals submit online demand for drugs and medicines required during the ensuing year in the month of January every year. GMSCL consolidates demands and procures the same after following e-tender procedure. Medicines received from suppliers are stocked in GMSCL depots and subsequently distributed to various hospitals.

On scrutiny of stock register for medicines maintained in test-checked hospitals, it was observed that many EDs such as Amoxycilin, Choloroquine, Diclofenac Sodium, Hepatitis B Vaccine, Injection Ceftazimide, Insulin, Gentamicin eye drop, *etc.* were not available in the stock on regular basis. Availability of EDs as of August 2015 as against those indented by the test-checked hospitals for the year 2015-16 is shown in **Table 8** below –

Table 8: Availability status of stock of EDs in the test-checked hospitals as on August 2015

Name of the hospital	Total EDs indented for the year 2015-16 (Items)	EDs not available as of August 2015 (Percentage) (Out of Col. 2)	EDs not available for one to two months (Out of Col.3)	EDs not available for two to four months (Out of Col.3)	EDs not available for more than four months (in percentage)
1	2	3	4	5	6
CH Bhavnagar	360	134(37)	21	16	97(27)
CH Surat	483	125(26)	25	40	60(12)
CH Vadodara	415	243(59)	49	68	126(30)
DH Dahod	308	120(39)	21	16	83(27)
DH Godhra	299	44(15)	08	02	34(11)
DH Himatnagar	345	46(13)	24	05	17(05)
DH Petlad	346	41(12)	18	06	17(05)
DH Palanpur	366	109(30)	13	94	02(01)
DH Surendranagar	324	48(15)	20	08	20(06)
DH Vadodara	341	258(76)	19	11	228(67)

(Source: Information furnished by test-checked hospitals)

The table above shows that 12 to 76 *per cent* of EDs indented by the test-checked hospitals were not available as on August 2015. The situation was alarming in DH Vadodara as 67 *per cent* of EDs were not available for more than four months and consequently the patients were forced to purchase medicines from the open market.

The hospital authorities attributed (May-August 2015) the reasons for stock-out of medicines due to delay in supply of medicines by GMSCL and stated that essential medicines for IPD were being purchased by the hospitals locally, in case of need. The General Manager, GMSCL accepted (September 2015) the delay in supply of medicines to the hospitals and stated that drugs procurement policy was being modified to ensure uninterrupted supply of medicines to hospitals. It was further stated by the GMSCL that the indents would be called for from the hospitals in the month of November instead of January and the availability of essential medicines in the hospitals would be monitored online and the supply of medicines would be ensured before exhaustion of stock.

The ACS H&FWD in the exit conference stated (January 2016) that necessary actions were being taken by GMSCL for supply of quality medicine on continuous basis. It was further stated that construction of six new depots of GMSCL had been planned for early supply of medicines to the hospitals.

The GMSCL may evolve a proper mechanism to ensure uninterrupted supply of quality medicines to hospitals to prevent instances of non-availability of stock.

• **Supply of Not of Standard Quality (NSQ) medicines to hospitals**

To ensure the quality of medicines supplied to healthcare institutions, the State Government issued (July 2010) instructions for pre-dispatch testing of medicines from Food and Drug Laboratory, Vadodara. The samples are to be taken from each batch of medicines and send to the laboratory for testing the quality. The medicines of the batch with confirmed quality as per test report was to be released to healthcare institutions. It was also mentioned therein that the testing of each batch of medicines should be ensured in next three years.

GMSCL supplied medicines to healthcare institutions through five depots¹⁵. However, Audit observed that pre-dispatch testing of samples was not done by four out of five (except Adalaj) depots till March 2015. It was also observed that the medicines were supplied to healthcare institutions before receipt of pre-dispatch testing reports. Apart from pre-dispatch testing, samples are also taken from hospitals to assure quality of drugs under Drugs and Cosmetics Act, 1940.

On scrutiny of records of GMSCL, it was observed that 495 out of 13,509 samples of different medicines sent for pre-dispatch testing during 2010-15 were reported as NSQ. Similarly, 389 out of 3,325 samples (obtained from the hospitals) sent for testing under Drugs and Cosmetics Act, 1940 were reported as NSQ. Instances of receipt of NSQ medicines and subsequent issue to the patients were noticed in test-checked hospitals. From the records of the test-checked hospitals, it was observed that some of the essential as well as life saving drugs such as Injection Ampicilin, Injection Iron sucrose, Injection Gentamycin, Tablet Paracetamol, Diclofenac Sodium, Injection Oxytocin, etc. were reported as NSQ and majority of the quantity of these NSQ medicines were issued to patients. The details of receipt and issuance of NSQ medicines to the patients in test-checked hospitals during the period 2010-15 is shown in **Table 9** below –

Table 9: Receipt and issuance of NSQ medicines in test-checked hospitals

Name of the Hospital	Number of batches of NSQ medicines received	Number of batches of NSQ medicines not consumed	Percentage of quantity of medicines ¹⁶ consumed out of the batches reported NSQ			Percentage of batches of NSQ medicines fully consumed (Col.6/Col.2)*100
			Upto 50 per cent	51 to 99 per cent	100 per cent	
1	2	3	4	5	6	7
CH Bhavnagar	23	01	01	05	16	70
CH Surat	66	05	09	04	48	73
CH Vadodara	52	01	12	04	35	67
DH Dahod	55	11	22	08	14	25
DH Godhra	58	07	05	03	43	74
DH Himatnagar	41	03	08	08	22	54
DH Petlad	15	06	05	01	03	20
DH Palanpur	30	06	09	05	10	33
DH Surendranagar	30	05	06	04	15	50
DH Vadodara	29	03	09	02	15	52
Total	399	48	86	44	221	55

(Source: Information furnished by test-checked hospitals)

¹⁵ Adalaj, Amreli, Jamnagar, Patan and Surat

¹⁶ Tablets/Capsules, Injection, Miscellaneous, Surgical and Dressing

The above table shows that the test-checked hospitals had issued NSQ medicines to the patients. Further, 221 batches out of 399 batches (55 *per cent*) of NSQ medicines received by these test-checked hospitals were fully utilised by issuing to the patients due to delay in receipt of testing report (of around four months to one year) from the date of supply of medicines.

Supply and issue of NSQ medicines is a serious concern as the medicines given to the patients may be less effective or ineffective. Besides, the public would lose the trust bestowed on Government hospitals.

The General Manager GMSCL accepted (September 2015) the facts and stated that pre-dispatch testing was now being done at all depots since July 2015 and two private laboratories had also been engaged for testing the samples to get the testing report in time.

The ACS H&FWD in the exit conference stated (January 2016) that the issue was of great concern and many measures such as making it mandatory for supplier to enclose laboratory test certificate with each and every batch of medicine, empanelment of two more laboratories for pre-dispatch testing, 100 *per cent* and 25 *per cent* pre-dispatch testing from Adalaj depot and other depots respectively, *etc.* had been initiated. It was further stated that all possible efforts would be made to prevent supply of NSQ medicines.

The challenge however lies in cutting down the time consumed for testing of sample medicines, both pre-dispatch and hospital-supplies. The Government may prescribe the time to be taken in testing of medicines and the GMSCL should ensure strict compliance to the same and replace the NSQ medicines forthwith. Punitive action against errant suppliers of NSQ medicines needs to be taken so as to ensure deterrence.

- ***Storage of Medicines***

To sustain effectiveness of drugs, proper infrastructural facility is required in every hospital to store the drugs in prescribed manner. Audit observed that the storage facility and its management were satisfactory in test-checked hospitals except in DH Godhra and DH Dahod. In DH Godhra, the store room was in a dilapidated condition and medicines were exposed to rain whereas in DH Dahod, there were only two small refrigerators to preserve the injections. Injections instructed to be stored in a cool place (two to eight degree celsius) were kept outside, as both refrigerators were filled with Anti-Rabies Serum/Anti-Snake Serum/Anti-Tetanus Serum, *etc.*

The CDMO DH Dahod stated (June 2015) that new refrigerators would be procured and provided to pharmacy department for storage of drugs.

The ACS H&FWD in the exit conference stated (January 2016) that instructions would be issued to head of all DHs for proper upkeep of medicines.

The hospital authorities should make necessary arrangements forthwith for storing medicines in prescribed manner for maintaining their effectiveness.

2.1.8 Core Services

2.1.8.1 OPD and IPD Services

(1) Registration of Patients

Registration of patients is the first step for getting healthcare facilities in hospitals. Around 400 to 600 patients visit each DH and around 800 to 2,000 patients visit each CH daily. There were two counters in each of the test-checked DHs except DH Vadodara¹⁷ and eight to eleven counters in each of the test-checked CH for registration of patients. During joint field visit of registration counters in the test-checked hospitals, Audit observed long queues of patients in front of registration counters (**Picture 6 and 7**). Based on the information furnished to Audit, it was observed that patients had to wait for one to two hours for getting themselves registered. These facts indicated that the number of counters were not sufficient to handle the volume of work.



Picture 6: Registration Counter in CH Surat (07.07.2015)



Picture 7: Registration Counters in DH Palanpur (25.06.2015)

¹⁷ Five counters were available to register 800-900 patient daily in DH Vadodara

Apart from insufficient counters, Audit observed that there was no facility of ceiling fans in the public area of registration counter in DH Palanpur and the registration counters in DH Dahod was in open area without any roof.

Hospital authorities stated (May-July 2015) that efforts would be made to provide better facilities.

The ACS H&FWD in the exit conference stated (January 2016) that instructions would be issued to head of all DHs for proper arrangement for early registration of patients.

(2) *Availability of Specialist Services*

Guidelines of IPH Standards provide that each DH should provide essential specialist services called minimum assured services such as General Medicine, General Surgery, Obstetrics and Gynaecology, Paediatrics, Anaesthesia, Ophthalmology, Orthopaedics, ENT, Radiology, etc.

Audit observed that specialist services of all aforesaid departments had been established in all test-checked CHs. However, as discussed in paragraph 2.1.7.1, due to 55 *per cent* vacancy in the post of specialist doctors against sanctioned posts in test-checked DHs, some of the specialist services were either partially available (three hours daily specialist service under CM Setu scheme or doctors hired through Rogi Kalyan Samiti) or not available at all. Availability of specialist services in test-checked DHs are shown in **Table 10** below –

Table 10: Availability of specialist services in test-checked DHs as on 31 March 2015

Sr. No.	Name of DHs	Services partially available	Services not available
1.	Dahod	ENT	-----
2.	Godhra	General Medicine, Obstetrics and Gynaecology	Orthopaedics, ENT and Radiology
3.	Himatnagar	-----	Radiology
4.	Palanpur	Radiology	-----
5.	Petlad	Paediatrics, ENT and Orthopaedics	General Medicine, General Surgery and Radiology
6.	Surendranagar	Obstetrics and Gynaecology, Paediatrics, ENT and Orthopaedics	General Medicine, Anaesthesia and Radiology
7.	Vadodara	----	Radiology

(Source: Information furnished by test-checked DHs)

The above table shows that the situation in DH Surendranagar, DH Petlad and DH Godhra was very deplorable as most of the essential services were either partially available or were not available. Further, regular service of radiology was not available in any of the test-checked hospitals except DH Dahod.

The hospital authorities stated (May-July 2015) that services were not available due to vacant posts of Specialist Doctors.

The ACS H&FWD in the exit conference stated (January 2016) that Specialist Doctors were appointed under CM Setu and other state flagship programmes to render the service. However, efforts would be made for providing essential specialist services on 24X7 basis in all DHs.

The Government may take action to post at least one Specialist Doctor in each department at all DHs to make services of Specialist Doctors available to the patients.

(3) Patient care in OPD and IPD

Audit observed non-compliance of various norms prescribed under IPH Standards and National Rural Health Mission (NRHM) guidelines on quality assurance as discussed below -

- In CH Bhavnagar, CH Surat and DH Palanpur, there was only one examination table and one X-ray viewer for four to five patients.
- In DH Dahod, separate male and female wards were not available. Further, wards were highly congested in all test-checked DHs due to presence of high number of attendants.
- Toilets attached with female ward in DH Surendranagar and toilets attached with orthopaedic ward in DH Dahod were non-functional. Patients expressed difficulties due to non-functional toilets.

2.1.8.2 Accident, Emergency and Trauma Care Services

The guidelines of IPH Standards provide that each DH should have Accident and Emergency Services, with distinct entries. The emergency department should be equipped with life saving instruments such as Ventilator, Multi-parameter monitor, Cardiac monitor with defibrillator, *etc.* to treat accidental and emergency cases effectively.

Audit observed that -

- Emergency department and Trauma care centre are available in all the three test-checked CHs.
- Out of seven test-checked DHs, Accident and Emergency services were not available in DH Dahod, DH Petlad and DH Vadodara.
- Emergency department was operational in DH Godhra and DH Surendranagar. However, the hospitals were not equipped to deal with emergency cases due to non-availability of regular services of specialist doctors of medicine, orthopaedics, *etc.* Even essential equipment such as ventilator, cardiac monitor, *etc.* were not available with the departments.
- Trauma Care Centres were to be established to provide intensive medical services at nearest place to the victims during highway accidents and utilise golden hours of the treatment to save precious life of the victims. In the State, 18 trauma care centres have been established and are functional. However, Audit observed that there were no trauma care centres on National Highway No. 59 connecting Ahmedabad to Indore which passes through Godhra and Dahod districts. Non-availability of trauma care centre coupled with inefficient accident and emergency services in DH Godhra and DH Dahod jeopardises the life of accident victims.
- A trauma care centre constructed (2008) at a cost of ₹ 1.92 crore at CH Bhavnagar was functional and 31,852 patients have been treated there upto February, 2012. Thereafter, service of trauma centre was discontinued due to non-availability of doctors and supporting staff.

The building was being utilised by shifting other departments. Thus, the very objective behind establishment of trauma care centre got defeated.

The Government stated (December 2015) that necessary steps are being taken to equip all hospitals with all necessary life saving instruments in phased manner to ensure adequate emergency, accident and trauma care services. As regards trauma care centre at CH Bhavnagar, the ACS H&FWD in the exit conference stated (January 2016) that the matter would be reviewed and necessary action would be taken to make the trauma care centre functional.

2.1.8.3 Intensive Care Unit

The guidelines of IPH Standards provide that each DH should have an Intensive Care Unit (ICU) to attend critically ill patients such as major medical and surgical cases, head injuries, severe haemorrhage, *etc.*, requiring highly skilled life saving medical aid and nursing care. The guidelines of IPH Standards further provide that the number of beds may be restricted initially to five *per cent* of the total bed capacity of the hospital and gradually expanded to 10 *per cent*. Life saving equipment such as High End Monitor (HEM), Ventilator, and Thrombosis Prevention Device (TPD), Oxygen therapy for each bed and common Ultrasound (USG) and Defibrillator are essential to save critical patients. The availability of equipment and efficacy of ICU in test-checked hospitals are shown in **Table 11** below –

Table 11: Availability of equipment and efficacy of ICU in test-checked hospitals as on 31 March 2015

Name of the Hospitals	Number of beds				Fully equipped ICU beds	Availability of equipment (NA= Not available)					
	Beds required as per IPH Standards	Beds available	Shortage of beds	Percentage of shortage		HEM	Ventilator	TPD	Oxygen	USG	Defibrillator
CH Bhavnagar	35	11	24	69	05	24	05	NA	YES	YES	YES
CH Surat	52	30	22	42	27	27	31	YES	YES	YES	YES
CH Vadodara	75	36	39	52	09	09	20	NA	YES	NA	YES
DH Dahod	08	05	03	38	Nil	NA	NA	NA	YES	NA	YES
DH Godhra	10	02	08	80	01	01	02	NA	YES	NA	YES
DH Himatnagar	10	10	-	-	02	02	02	YES	YES	NA	YES
DH Petlad	10	NA	NA	100	NA	NA	NA	NA	NA	NA	NA
DH Palanpur	10	02	08	80	01	01	01	YES	YES	NA	YES
DH Surendranagar	08	NA	NA	100	NA	NA	NA	NA	NA	NA	NA
DH Vadodara	10	NA	NA	100	NA	NA	NA	NA	NA	NA	NA

(Source: Information furnished by test-checked hospitals)

The above table shows that ICU was not available in three out of seven test-checked DHs. In the remaining four DHs, the shortage of beds as compared to IPH Standards ranged from 38 to 80 *per cent* and only one or two beds were fully equipped with life saving equipment to handle critical cases. The position was also very deplorable even in CHs, as only five out of 11 beds and nine out of 36 beds in CH Bhavnagar and CH Vadodara respectively were fully equipped with life saving equipment.

Audit observed that -

- In DH Surendranagar, a new block was constructed (February 2012) for establishment of ICU at a cost of ₹ 69.85 lakh and four Multi-parameter monitors were procured (November 2011) at a cost of ₹ 9.78 lakh for

use in the ICU. However, Audit observed that the ICU was not operational (May 2015) due to vacant posts of physicians, Orthopaedic Surgeons, etc.

- In CH Surat, a new Medical Intensive Care Unit (MICU) of 12 beds constructed (January 2013) at a cost of ₹ 55.65 lakh alongwith necessary medical fittings and equipment such as medical gas pipeline, bed head panel, ICU beds, 12 ventilators costing ₹ 99.29 lakh was found non-operational due to shortage of nursing staff and other supporting staff since its establishment (**Picture 8**).



Picture 8: A well equipped MICU lying non-operational at CH Surat (21.07.2015)

The Medical Superintendent, CH Surat stated (August 2015) that demand for additional staff had been submitted (April 2014) to the Government for making the MICU operational.

The Government may review the availability of emergency departments and ICUs functioning in all district level hospitals and take necessary measures to establish these units to deal with critical cases effectively wherever they are deficient.

The ACS H&FWD in the exit conference agreed (January 2016) to the recommendation and stated that Government would review the functioning of ICUs in all district level hospitals and necessary action would be taken to strengthen these units to deal with critical cases effectively.

2.1.8.4 Maternal, Child and Neo-natal Healthcare Services

Reducing the maternal and infant mortality is a key goal of Reproductive and Child Health Programme under the National Rural Health Mission. Government of India launched (June 2011) Janani Sishu Suraksha Karyakaram (JSSK) to assure free services to all pregnant women and sick neonates accessing public health institutions. The JSSK guidelines state that about 67,000 women in India die every year due to pregnancy related complications. Similarly, nine lakh newborns die within the first four weeks of birth. Thus, first 28 days of infancy are very important and critical for survival of new-born children.

The details of births, neo-natal and maternal deaths in test-checked hospitals during the period 2010-15 are shown in **Table 12** as below –

Table 12: Details of births, neo-natal and maternal deaths in test-checked hospitals during 2010-15

Name of Hospitals	Number of births	Number of neonatal deaths	Neo-natal death rate (per 1,000 live births)	Number of maternal deaths	Maternal Mortality Rate (per one lakh live births)
CH Bhavnagar	15,213	366	24	23	151
CH Surat	33,077	712	22	174	526
CH Vadodara	22,845	1,887	82	197	862
DH Dahod	18,223	166	09	35	192
DH Godhra	2,461	10	04	01	41
DH Himatnagar	2,839	265	93	13	458
DH Petlad	4,246	02	01	01	23
DH Palanpur	1,885	91	48	12	637
DH Surendranagar	844	06	07	00	00
DH Vadodara	14,400	10	01	01	07

(Source: Information furnished by test-checked hospitals)

The above table shows higher neo-natal deaths in CH Vadodara, DH Himatnagar and DH Palanpur, and higher Maternal Mortality Rate (MMR) in all CHs, DH Palanpur and DH Himatnagar as compared to the State Infant Mortality Rate (IMR) and MMR mentioned in **Table 1** which stand at 41 and 122 respectively. The high mortality rates in hospitals indicate that hospitals are not well equipped to deal with critical cases.

The hospital authorities stated (May-July 2015) that despite making best efforts, neonates and mothers could not be saved as they were brought to the hospitals at an advanced stage of deterioration. The fact remains that the number of deaths registered in hospitals was on higher side as compared to the State average. Further, as discussed in preceding paragraphs, lack of facilities in ICU and non-availability of regular specialist doctors resulted in poor quality of maternal healthcare services in the hospitals which require to be strengthened in order to achieve the goal of reducing maternal and infant mortality as envisaged in JSSK guidelines.

The ACS H&FWD in the exit conference stated (January 2016) that Government was keen to improve the maternal, child and neonatal healthcare and all necessary steps would be taken for its betterment.

Audit further observed that –

- In DH Surendranagar, the posts of Gynaecologist and Paediatrician were lying vacant since November 2011. Resultantly, average delivery cases in a month was less than 15, as people hesitated to come for institutional delivery in the hospital.
- Maternity ward of CH Surat was highly congested and patients were found lying on the floor (**Picture 9**).



Picture 9: Patients found lying on the floor in the maternity ward of CH Surat (08.07.2015)

The hospital authority attributed (July 2015) the reasons of less availability of beds in maternity ward for accommodation of patients on the floor. However, Audit is of the view that the State Government may take urgent actions for enhancing the bed capacity in the maternity ward to avoid neonatal and maternal deaths on account of infections.

- Important equipment such as Incubator, Ventilator, Baby Cardiac Monitor, *etc.* to handle critical cases were not available in any of the test-checked DHs.
- As per provisions of JSSK guidelines, mother and new born child should be kept under medical observation for 48 hours in case of normal delivery. However, Audit observed at DH Dahod, DH Godhra, DH Palanpur and CH Surat that the mother and new born child were being discharged on the same day or before 48 hours.

The CDMO, DH Dahod stated (June 2015) that one of the reasons for early discharge of patients was shortage of beds in maternity ward. The hospital authorities of other DHs and CHs stated (May-July 2015) that patients were discharged on their own request.

2.1.8.5 Special Newborn Care Unit

Special Newborn Care Unit (SNCU) is meant to provide medical treatment for child born prematurely (born before 37 weeks of pregnancy), having low birth weight or have a medical condition that requires special care. The SNCU facilities provided controlled environment, individual warming and close monitoring devices, intravenous fluid and medications by infusion pump, central oxygen, oxygen generators, bedside procedures, *e.g.* resuscitation and exchange transfusion, portable x-ray, and in-house side laboratory services.

The guidelines of IPH Standards envisage that SNCU should have at least 12 beds alongwith facility of day and night shelter for mothers of neonates. The SNCU should be well equipped with all required equipment and should be kept dust free.

Audit observed that -

- The SNCU was established in all test-checked DHs (except DH Surendranagar). However, the number of beds available in each of the test-checked DHs was only five to six.
- In DH Surendranagar, it was observed that the bed procured for child care was lying idle due to non-establishment of SNCU (**Picture 10**).



Picture 10: SNCU bed lying idle at DH Surendranagar (15.05.2015)

The CDMO DH Surendranagar stated (August 2015) that SNCU was not set-up in the DH due to vacant posts of Gynaecologist and Paediatrician.

- Due to shortage of beds, an instance of two neonates accommodated on one bed was noticed at DH Palanpur (**Picture 11**).



Picture 11: Two neonates accommodated on one SNCU bed in DH Palanpur (25.06.2015)

Further, a neonatal ventilator purchased (June 2014) by DH Palanpur at a cost of ₹ 14.18 lakh for maintaining physiologic normalcy of infants was found lying idle due to non-availability of centralised oxygen supply in SNCU (**Picture 12**). Lack of action on the part of the hospital authorities resulted in idling of the equipment and deprivation of intended treatment to the neonates.



Picture 12: Neonatal Ventilator lying idle in DH Palanpur (25.06.2015)

The CDMO, DH Palanpur stated (June 2015) that demand for more beds in SNCU would be placed to Government and necessary action would be taken to use the Neonatal Ventilator.

- Facility of day and night shelter for mothers of neonates kept in SNCU was not available at DH Himatnagar and DH Dahod.
- In all test-checked DHs, there was shortage of important equipment such as Infantmeter, spot lamp, Portable X-ray, cardiac monitor, *etc.* Further, equipment for disinfection such as electronic fumigator, disinfectant sprayer, formalin vaporizer, *etc.* were also not available in any of the test-checked DHs.

The Government may strengthen the maternal and child health departments in all hospitals by deploying specialist doctors and providing requisite equipment and adequate number of beds, to prevent the stage of advanced deterioration which ultimately leads to higher IMR and MMR.

The ACS H&FWD in the exit conference agreed (January 2016) to the recommendation and stated that Government is keen to improve the maternal child and neonatal healthcare and all necessary steps would be taken for betterment.

2.1.9 Essential component to complement Core Services

2.1.9.1 Diagnosis Service

Laboratory diagnostic service is required for providing effective diagnosis of the disease suffered by the patient, measure the quantum of medicines to be provided, quantify the extent of cure effected, identify the medical sensitivities of the patient to avoid wrong/under/over medication resulting in adverse effects and to extend the research and development capabilities of the medical process. The guidelines of IPH Standards envisage that each district hospital laboratory should be able to perform all tests required to diagnose epidemics or important diseases from the view point of public health. The details of availability of diagnosis services as per IPH Standards in test-checked hospitals are shown in **Table 13** as follows–

Table 13: Availability of diagnosis service in test-checked hospitals as on 31 March 2015

Name of the hospitals	Availability of diagnosis services							
	Clinical pathology	Haematology Bone Marrow/ Sickle Cell Anaemia/ Thalesemia	Micro-Biology	Bio-chemistry	Cardiac	Ophthal-mology	ENT	Endoscopy
CH, Bhavnagar	Yes	Partial	Yes	Partial	Yes	Yes	Yes	Yes
CH, Surat	Yes	Partial	Yes	Partial	Yes	Yes	Yes	Partial
CH, Vadodara	Yes	Partial	Yes	Partial	Yes	Yes	Yes	Yes
DH, Dahod	Yes	Partial	Partial	Partial	No	Yes	No	No
DH, Godhra	Yes	Partial	Yes	Partial	No	Yes	No	No
DH, Himatnagar	Yes	Partial	Yes	Partial	Yes	Yes	Yes	No
DH, Petlad	Yes	Partial	Yes	Partial	No	Yes	No	No
DH, Palanpur	Yes	Partial	Partial	Partial	No	Yes	No	No
DH, Surendranagar	Yes	Partial	Yes	Partial	Yes	Yes	No	No
DH, Vadodara	Yes	Partial	Yes	Partial	No	Yes	No	No

(Source: Information furnished by test-checked hospitals)

The above table shows that most of the pathological tests except few were available in all test-checked hospitals. However, facility of advance tests related to Cardiac, ENT or Endoscopy was available in only a few of the test-checked DHs and CHs.

Audit further observed -

- Shortage of important equipment such as Electrolyte Analyzer, Haematology Analyzer, Infant Glucometer, *etc.* in the diagnosis laboratory of all test-checked DHs.
- The guidelines of IPH Standards envisage separate areas for sample collection, sample processing, haematology, bio-chemistry, clinical pathology and reporting, *etc.* However, Audit observed at DH Dahod and DH Palanpur that collection and processing of samples were being done in one room in contravention to the provisions of guidelines of IPH Standards.

The ACS H&FWD in the exit conference stated (January 2016) that the State Government was going to launch free Laboratory Nidan Yojana for providing diagnosis services in all DHs. It was further stated that procurement of important equipment under this scheme by GMSCL was under process.

2.1.9.2 Imaging Services

The guidelines of IPH Standards provide that each DH should have imaging facilities such as X-ray, Portable X-ray, two Ultra Sonography (USG) - one for gynaec and one for others patients, C.T Scan, Mass Miniature Radiography (MMR) for chest and Barium Meal Test (BMT), *etc.* Details of availability of imaging services in test-checked hospitals are shown in **Table 14** as follows –

Table 14: Availability of Imaging Services in test-checked hospitals as on 31 March 2015

Name of the hospitals	X-ray	Portable X-ray	USG		CT Scan	MMR	BMT
			Gynaec	Others			
CH, Bhavnagar	Yes	No	Yes	Yes	Yes	No	No
CH, Surat	Yes	No	Yes	Yes	Yes	No	No
CH, Vadodara	Yes	No	Yes	Yes	Yes	No	No
DH, Dahod	Yes	No	Yes	Yes	No	No	No
DH, Godhra	Yes	No	Yes	Yes	No	No	No
DH, Himatnagar	Yes	No	No	No	No	No	No
DH, Petlad	Yes	No	Yes	Yes	No	No	No
DH, Palanpur	Yes	No	Yes	Yes	Yes	No	No
DH, Surendranagar	Yes	No	No	No	No	No	No
DH, Vadodara	Yes	No	Yes	No	No	No	No

(Source: Information furnished by test-checked hospitals)

The above table shows that the facilities of Portable X-Ray, CT Scan (except three CHs and DH Palanpur), MMR and BMT were not available in any of the test-checked hospitals, as a result, the patients had to approach outside agencies for the tests.

Audit further observed that –

- In DH Palanpur, a CT scan machine purchased (June 2014) for Trauma Care Centre was being utilised without a Radiologist. The images taken by the technician were being sent to Medical College, Jamnagar for opinion. Till date (August 2015), 153 tests had been carried out since its installation. However, a CT scan machine purchased (March 2004) at DH Himatnagar at a cost of ₹ 92.86 lakh is lying idle since January 2014 due to vacancy of a Radiologist (**Picture 13**) and in DH Dahod, a Radiologist is posted but no CT scan machine is available. The efforts made by DH Palanpur are highly appreciable and the same efforts could have been made by DH Himatnagar. The State Government could also utilise the services of the lone Radiologist posted at DH Dahod for DH Himatnagar.



Picture 13: CT Scan machine lying idle at DH Himatnagar (01.09.2015)

- In CH Surat, despite availability of CT scan machine and Radiologist, the patients (including BPL patients) were being sent outside for the tests.

The Medical Superintendent stated (July 2015) that as the machine was old (2007 model) and not of required capacity, the patients were being sent outside for the tests. It was further stated that a demand (February 2014) for supply of CT scan machine of 128 slide had been made to the Government, however, the same was awaited (July 2015).

- In DH Surendranagar, a CT scan machine imported (February 2006) at a cost of US\$ 1.97 lakh was found non-functional since January 2010 due to a fault in the X-ray Tube of the machine. The hospital could obtain only 10 images since its installation. The manufacturer company submitted (August 2010) a quotation of ₹ 28.00 lakh for replacement of X-ray Tube. However, the machine could not be repaired and the State Government subsequently accorded (August 2014) permission to condemn the machine. Thus, the machine procured was not optimally utilised and was lying idle for want of repair besides depriving the patients of the facility who were forced to get the tests done from outside.
- Atomic Energy Regulatory Board (AERB) guidelines (August 2004) on licensing of X-ray units stipulate that licence for operating radiation installation be obtained and the X-ray units ensure adherence to prescribed safety standards, availability of appropriate radiation monitors and dosimeter devices for radiation surveillance.

Audit observed at CH Bhavnagar, DH Dahod and DH Palanpur that the X-ray machine had been put into operation without obtaining licence from the competent authority. The technicians manning the X-ray units were not provided Thermo Luminescence Dosimeter (TLD) badges to indicate levels of exposure to radiation. In the absence of TLD badges and safety certification from the competent authority, Audit could not vouchsafe the reasonability of radiation levels the patients and technicians are exposed to.

- USG machine was not available in DH Himatnagar and DH Surendranagar. In DH Vadodara, USG available was not being utilised since January 2014 due to non-availability of a Radiologist.

The ACS H&FWD in the exit conference stated (January 2016) that the State Government had planned to provide CT scan machine/other imaging equipment of required capacity in all DHs through PPP mode in future.

The Government may take initiatives to ensure availability of basic imaging facilities such as USG, CT scan and Portable X-ray machines in all DHs for early and proper diagnosis of diseases.

2.1.9.3 Blood Bank

Blood Bank/storage centre is an essential element in the functioning of any hospital. The guidelines of IPH Standards provide that hospitals should follow standard operating procedures for management of blood bank services including policy on rational use of blood and blood products as promulgated by the Government. A Compliance Audit on “Functioning of blood banks” in the State was undertaken and findings thereof were incorporated in Paragraph 3.2

under Chapter - III (Compliance Audit) in the Report of the Comptroller and Auditor General of India (General and Social Sector) for the year ended March 2014 – Government of Gujarat.

Audit reviewed the functioning of blood banks (BBs) in test-checked DHs during this audit and following deficiencies were noticed -

- The facility of BB/Blood Storage centre was not available in DH Dahod and DH Petlad among the test-checked DHs. Non-availability of BB in DH Dahod was pointed out in earlier Audit, however, no corrective action have been initiated by the Department till December 2015. The CDMOs stated (May-July 2015) that in case of any need of blood, either the hospital arranged it from Red Cross Society or the patients arranged it themselves.
- Blood component separation facilities to separate whole blood into its constituent components such as red blood cells, platelets, plasma, *etc.* were available in all test-checked CHs. However, separation facility was not available in any of the test-checked DHs.
- In DH Palanpur, the licence of the BB was cancelled (August 2013) by the Commissioner, Food and Drugs Control Administration due to deficiencies noticed during inspection. The licence was renewed (March 2015), however, the BB remained non-functional as of June 2015 as requisite facilities were not made available by hospital authorities. Similarly, in DH Vadodara, the BB was non-functional since January 2015 under directives of the Commissioner, Food and Drugs Control Administration due to non-compliance of the prescribed standard. The CDMOs stated (June 2015) that the hospital arranged the required blood from BBs managed by Private Trusts and necessary action was being taken to make the BB operational.

The ACS H&FWD in the exit conference stated (January 2016) that BBs were available in most of the DHs. For DHs without BBs, an MoU had been made with the Indian Red Cross Society for supply of blood. However, necessary action would be taken to establish BB in all DHs and keep them functional.

The Government may ensure availability of functional BB to provide quality blood and blood components to all who are in need of them.

2.1.9.4 Operation Theatres

The guidelines of IPH Standards provide that DHs should have minimum three Operation Theatres (OTs) equipped with all instruments, with departments of surgery, ICU, imaging, Central Sterile Supply Department (CSSD), *etc.* near to the OTs. It further provides that the OTs should have preparatory, pre-operative and post-operative resting rooms. However, Audit observed in test-checked hospitals that –

- OTs were functional and fumigated regularly in all test-checked hospitals.
- Pre-operative and post-operative rooms were not found in DH Dahod and the patients after surgery were being shifted from the OT to respective wards. Thus, the surgical patients were at risk of being infected.

- The guidelines of IPH Standards stipulate establishment of CSSD in each DH for sterilisation of equipment and implementation of standard operating procedure for transfer of unsterile and sterile equipment between CSSD and other departments. However, Audit observed that CSSD was not established in any of the test-checked DHs except DH Godhra and DH Himatnagar. In absence of CSSD, the equipment were sterilized in autoclave machines kept in the OTs.
- In CH Surat, the work of renovation, modification and construction of 24 OTs was completed by PIU at a cost of ₹ 15.66 crore and was handed over (October 2013) to the hospital authorities. However, Audit observed that eight OTs constructed at a cost of ₹ 3.04 crore have not been put to use even after a lapse of more than 18 months by hospital authorities from the date of taking possession, due to shortage of nursing and supporting staff (**Picture 14**). This resulted in idling of OTs despite incurring huge expenditure.



Picture 14: Non-operational OT at CH Surat (25.07.2015)

The Medical Superintendent, CH Surat accepted (July 2015) the fact and stated that demand for filling up 36 vacancies had been placed (November 2013) to the Government, however, the same was still awaited (July 2015).

The ACS H&FWD in the exit conference stated (January 2016) that action to fill the vacant posts had been initiated and OTs would be made operational immediately after filling-up these vacant posts.

2.1.10 Auxiliary and Supporting Services

2.1.10.1 Dietary service

The dietary service of a hospital is an important therapeutic tool. The guidelines of IPH Standards envisage supply of diet to patients thrice a day. It further envisages that the food supplied should be patient specific such as diabetic, semi solid, liquid, *etc.* Audit observed that free of cost diet was being provided to all indoor patients in all test-checked hospitals, three times a day. However, hygiene in serving the diet was not being observed, as the cooks and serving staff were not wearing head masks, gloves, *etc.* during cooking and serving food to the patients as prescribed in the guidelines (**Picture 15 and 16**).



Picture 15: Food served to patients without gloves in DH Dahod (21.05.2015)



Picture 16: Food cooked without headmask in DH Dahod (21.05.2015)

The CDMOs of concerned DHs accepted that patient specific food was not being provided by the hospitals.

The Government stated (December 2015) that necessary instruction would be given to all DHs to ensure supply of quality hygienic food to all patients in the hospital.

Audit appreciates the hospital authorities for providing free of cost food to IPD patients. However, Audit is of the view that the Government may ensure supply of patient specific food and maintenance of hygiene during cooking and serving of food.

2.1.10.2 Rogi Kalyan Samiti (RKS)

National Rural Health Mission (NRHM) envisages upgrading the healthcare institutions to IPH Standards by providing sustainable quality healthcare with total transparency, accountability and people's participation. To ensure a degree of permanence and sustainability, Rogi Kalyan Samiti (RKS) was established in all healthcare institutions. The main functions of RKS were to identify and redress the problems faced by patients and encouraging community participation in maintenance of hospitals. RKS receives funds in

the form of various grants from State and Central Government, by levying user charges for the services rendered to patients, donations, *etc.*

(1) Redressal of problems

The issues such as non-availability of stock of medicines, non-availability of specialist doctors, lack of diagnostic services, *etc.* discussed in the preceding paragraphs were to be redressed by the RKSs. The details of patient specific issues and redressal thereof by RKS in test-checked hospitals are shown in **Table 15** below –

Table 15: Redressal of patient specific issues by RKS in test-checked hospitals

Sr. No.	Issues	Applicable to	Course of Action	Initiatives taken by RKS
1	Non-availability of prescribed medicines	All hospitals	Provide medicines to the poor patients.	Medicines were provided to poor patients in all hospitals.
2	Non-availability of diagnosis and imaging service	All hospitals	Provide the services through outside Laboratories.	Provided to only poor patients in test-checked CHs.
3	Non-availability of specialist doctors	Only DHs	Specialist doctors should be hired to bridge the gaps.	Few Specialist doctors were hired in test-checked DHs except in DH Vadodara.
4	Lack of Super-Specialist services	All hospitals	Super-specialist doctors should be hired for quality healthcare services.	Provided only in CH Surat.
5	Non-availability of waiting sheds for patients and attendants	All hospitals	Construction of waiting sheds with sitting arrangements.	Was not provided in any of the test-checked hospitals

The table above shows that RKS in the test-checked hospitals has made efforts for redressal of patient specific issues to some extent. However, they could be a little more proactive in addressing the patient specific issues such as hiring super-specialist doctors and providing sheds, *etc.* in hospitals where these services are deficient.

The Government stated (December 2015) that necessary instructions would be issued to the RKS of all DHs for becoming more proactive in redressal of patients specific issues.

2.1.10.3 Referral System

(1) Efficacy of First Referral Unit

Community Health Centre (CHC) is the first referral unit to provide healthcare for cases referred from Primary Health Centres (PHCs) and for cases in need of specialist care approaching the CHC directly. During visit of 18 CHCs of nine test-checked districts, Audit observed that –

- Two CHCs¹⁸ were functioning in a small and dilapidated building
- The guidelines of IPH Standards for CHC provide that each CHC should have five Specialist Doctors *viz.* Physician, General Surgeon, Obstetrician and Gynaecologist, Paediatrician and Anaesthetist besides two general duty Medical Officers. However, Specialist Doctors were not available in 11 out of 18 test-checked CHCs¹⁹.

¹⁸ Ghoghamba and Ranagadh

¹⁹ Ghogha, Ghoghamba, Kathor, Piluda, Ranagadh, Rupal, Sahera, Singwad, Savli, Suigam and Thangadh

- Laboratory and diagnosis services were found wanting on many counts in all test-checked CHCs.
- Facility of X-ray was not available in six CHCs²⁰.
- Operation Theatre was not functional in four CHCs²¹.
- Facility of blood storage was not available in any of the CHCs.

The ACS H&FWD in the exit conference stated (January 2016) that continuous efforts were being made for upgradation of CHCs to deliver quality healthcare services.

(2) Referral Management

The quality assurance guidelines prescribe that when a patient is referred to a higher level hospital, the hospital authorities are required to inform in advance about the referral of the patients to the bigger hospital in order to enable them to avail better medical care. It further provides that the hospital authorities should follow-up with the treatment of the referred patient. However, Audit observed that this mechanism was neither developed nor followed in any of the test-checked DHs.

Further, all DHs were having ICU on wheels ambulance to refer critical patient to higher level hospitals with advance medical support. However, it was observed that a trained technician was not being sent with the ambulance to operate life saving instruments installed in the ICU on wheels. Thus, the very purpose of ICU on wheels got defeated.

The CDMO of DHs attributed (August 2015) the reasons of shortage of trained technicians with the hospital.

The ACS H&FWD in the exit conference stated (January 2016) that instructions would be issued to head of all DHs particularly those, which are at far distance from CH.

(3) Ambulance facilities

Availability of ambulance as per need is essential to refer patients to the higher level hospitals in time. Audit observed that each of the test-checked DHs was having a fleet of only two to three ambulances. For DH Dahod, DH Palanpur and DH Surendranagar, the tertiary care services being more than 100 Km. away, on referring patients to tertiary care hospitals, the ambulance used to return after a minimum of six hours. Thus, due to non-availability of adequate ambulance and tertiary care hospitals, patients or attendants of patients were being forced to arrange private ambulances.

The CDMOs stated (May-June 2015) that proposal for supply of two more ambulances had been sent to the Government but the same was still awaited (August 2015).

The Government stated (December 2015) that more ambulances would be made available to these hospitals in due course.

²⁰ Ghoghamba, Kathor, Padra, Ranagadh, Sahera and Sayan

²¹ Ghoghamba, Piluda, Ranagadh and Suigam

The Government may take measures to provide Specialist Doctors, diagnosis and imaging facilities, OTs and Blood Storage facilities in all CHCs for better healthcare services. Further, adequate number of ambulances may be provided to those DHs which are situated far away from CH for timely referral of patients to tertiary care centres.

2.1.10.4 Infection Control Management

Guidelines of IPH Standards provide that each hospital should constitute an infection control team and develop Standard Operating Procedures (SOP) for aseptic procedures, culture surveillance and determination of hospital acquired infections. Apart from safe injection administration practices, safe disposal of bio-medical waste, general cleanliness and adoption of hygienic practices are important tools in prevention of infection.

Audit observed in test-checked hospitals that -

- Infection control team was not constituted in DH Dahod and DH Surendranagar to take preventive measures to control hospital acquired infection.
- In CH Surat, OPD of Medicine and OPD of Tuberculosis (TB) are located in front of each other in the same corridor. Similarly, in CH Vadodara, Chest and TB wards are functioning in the same hall without any separator. Such mismanagement on the part of hospital authorities makes the patients of chest ward highly vulnerable to TB viruses.
- In DH Surendranagar, patients suffering from infectious diseases were accommodated with other patients in the same ward. Thus, risk of infection spreading to other patients cannot be ruled out.
- In DH Godhra, washrooms for patients of female medical ward and female isolation wards were common which makes the patients highly vulnerable to getting infections from other patients.

The Government stated (December 2015) that guidelines had already been issued and necessary instructions would be issued to DHs for corrective actions.

The heads of all district level hospitals may take measures to strengthen infection control management, through systemic reforms and implementing already available SOP on the matter.

2.1.11 Patient Amenities and Citizen's Charter

2.1.11.1 Sanitation and drinking water facilities

Sanitation and drinking water facilities were available in all test-checked hospitals. However, upkeep and maintenance level was poor in DH Dahod, DH Godhra and DH Surendranagar.

2.1.11.2 Citizen's charter and Grievance Redressal System

List of services available in the hospitals, user fees, signages, etc. were found displayed in all test-checked hospitals for the convenience of the patients. However, none of the test-checked hospitals had maintained a complaint

register. In absence of a complaint register, Audit could not ascertain the response of hospital administration to resolve the patient specific issues and grievances.

The Government stated (December 2015) that necessary instructions would be issued to all DHs to take requisite action immediately.

Audit is of the view that though patient amenities have been provided to a great extent, however the area of concern highlighted above may be addressed in a time bound manner. Also, a complaint register at a convenient place should be maintained in all hospitals for the patients and their attendants, which should be reviewed by the head of the hospital regularly and periodically.

2.1.12 Quality Assurance and Monitoring

The guidelines of IPH Standards advocate that hospitals should develop and implement standard operating procedures for the administrative and clinical processes to ensure quality of all services provided by the hospitals. The details of implementation of IPH Standard recommendations in test-checked hospitals are shown in **Table 16** as below –

Table 16: Details of IPH Standards recommendations implemented in test-checked hospitals as on August 2015

Sr. No.	Component	What IPH Standards says	Implemented	Not implemented
1	Check-list	For proper monitoring and delivery of services, hospitals would develop and implement checklist for various processes viz. Housekeeping, Bio-Medical Waste, Surgical safety, etc.	In all test-checked CHs and DH Palanpur.	In any of the test-checked DHs (except in DH Palanpur).
2	Internal Audit	Internal audit of the services available in hospitals should be done on regular basis. Findings are to be discussed in meeting of hospital monitoring committee and take corrective action.	In all CHs.	In any of the test-checked DHs.
3	Medical Audit	A medical audit committee shall be constituted in all hospitals. The committee shall select records of patient randomly. Records shall be evaluated for completeness against standard content format and clinical management.	In all CHs.	In any of the test-checked DHs.
4	Mortality Review	Review of all mortality that occurs in hospitals shall be done on fortnightly basis. All maternal death in hospitals shall come under this purview.	In all CHs.	Only maternal death reviewed in all DHs.
5	Hospital Management Information System (HMIS)	A standard format for capturing key performance indicators should be developed and reviewed regularly.	HMIS was operative but deficient, as out of 30 modules, six to ten modules were not operational in any of the test-checked CHs and DHs. Thus, monitoring of the performance of hospitals was not adequate in the State.	

The above table shows that quality assurance and monitoring level was poor in all test-checked DHs. The CDMO of test-checked DHs stated (August 2015) that the prescribed procedures were not being followed due to shortage of manpower and heavy work load. However, Audit is of the view that these checks are prescribed to upgrade and improve the standards of healthcare services in the State and they need to be adhered to diligently.

The Government stated (December 2015) that instructions had been issued to all DHs to form medical audit committee and to review all mortality that occurred in the hospitals.

2.1.13 Other points of interest

(1) Government accorded (2010) sanction for setting-up a Stem cell therapy institute at CH Surat for treatment of genetic disorder disease. Accordingly, a stem cell laboratory was constructed (September 2013) at a cost of ₹ 1.27 crore and various equipment such as Microscope, Cell Centrifuge, Cryomade Freezer, etc. were procured at a cost of ₹ 33.16 lakh. However, the laboratory remained non-operational as of October 2015 due to non-availability of Fluorescence Activated Cell Sorting (FACS) machine, a fundamental equipment of stem cell laboratory which allows rapid and accurate characterisation of stem cell population as well as isolation of rare stem cells or differentiated cells from contaminating cell populations.

The Government stated (December 2015) that construction of Stem Cell Therapy Institute was under progress.

(2) Audiometer, an equipment for ENT department, procured (June 2011) at a cost of ₹ 5.52 lakh each in DH Dahod and DH Palanpur was lying idle in the store despite availability of an ENT specialist in each of these hospitals (**Picture 17**).



Picture 17: Audiometer lying idle in the store room at DH Palanpur (25.06.2015)

The CDMO attributed (June 2015) non-availability of a sound proof room, for non-functioning of the machine.

The Government stated (December 2015) that the concerned CDMOs had been instructed to make sound proof room in the ENT Department.

2.1.14 Conclusion and Recommendations

The Performance Audit on “Delivery of Healthcare Services in Government Hospitals at District Level” revealed appreciable efforts of the Government in creation of infrastructure, supply of free medicines to all patients and diets to all indoor patients. However, following major deficiencies in delivery of healthcare services were noticed during the course of Audit which needs urgent attention of the State Government for remedial action –

- Health Department had prepared a five year plan for betterment of healthcare services in district level hospitals, however, the plan was not comprehensive as the current status of healthcare services of the hospital *vis-à-vis* the requirement as per IPH Standards was not identified. Further, the plan had no specific target and enshrined timeframe to achieve the targets.

The timelines for all activities enshrined in the Five Year Plan prepared by the State may be fixed and progress against these be watched on a regular basis for ensuring that the targets set are achieved.

- The sanctioned strength of all cadres of staff including doctors and nurses remains much below the IPH Standards. Shortage in manpower exclusively in the cadres of specialists and medical officers was noticed at State level as well as in test-checked hospitals. Specialist services of various departments were either not available or partially available in test-checked district hospitals.

The Government may revise the sanctioned strength of DHs in the State as envisaged in the guidelines of IPH Standards and fill up the vacancies gradually, over a timely manner (say two-three years) to provide quality healthcare facilities to the public. At least one specialist doctor for each department may be posted to all DHs to facilitate specialist services to the patients.

- Availability of beds in district hospitals was neither as per IPH Standards nor in consonance with the requirements. Resultantly, patients were seen lying on floor for treatment.

The Government may take steps to increase the bed capacity of DHs in the State as per IPH Standards in a systemic manner, so that the imbalance is rectified for affordable healthcare to the common man.

- Availability of essential drugs of standard quality in hospitals plays a vital role in the delivery of quality healthcare services. Instances of stock out of number of essential medicines, non-testing of samples and issue of NSQ medicines to the patients were noticed in all test-checked hospitals.

The GMSCL may evolve a proper mechanism to ensure uninterrupted supply of quality medicines to hospitals to prevent instances of non-availability of stock. The Government may prescribe the time to be taken in testing of medicines and the GMSCL should ensure strict compliance to the same and replace the NSQ medicines forthwith.

Punitive action against errant suppliers of NSQ medicines needs to be taken so as to ensure deterrence.

- Availability of well equipped emergency and ICU in all hospitals are essential to save the patients in critical condition. Audit observed that emergency departments and ICUs were not established as per IPH Standards in test-checked hospitals.

The Government may review the availability of emergency departments and ICUs functioning in all district level hospitals and take necessary measures to establish these units to deal with critical cases effectively wherever they are deficient.

- Availability of Gynaecologists, Paediatricians and life saving equipment are essential for delivery of maternal and child healthcare services. Audit observed higher neo-natal and maternal deaths, vacant posts of Gynaecologist and Paediatrician, and lack of life saving equipment and beds in all test-checked district hospitals.

The Government may strengthen the maternal and child health departments in all hospitals by deploying specialist doctors and providing requisite equipment and adequate number of beds, to prevent the stage of advanced deterioration which ultimately leads to higher IMR and MMR.

- The departments of diagnosis, imaging and blood banks are integral components of a hospital to provide healthcare services. Audit observed that equipment for conducting various tests were not available in the diagnostics and imaging departments in test-checked district hospitals. Blood bank/blood storage centres were either not established or remained non-functional in four test-checked district hospitals.

The Government may take initiatives to ensure availability of basic imaging facilities such as USG, CT scan and Portable X-ray machines in all DHs for early and proper diagnosis of diseases. Further, the Government may ensure availability of functional BB to provide quality blood and blood components to all who are in need of them.

- All test-checked district level hospitals need strengthening of healthcare services. However, DH Surendranagar need special attention because of deplorable condition of its healthcare delivery due to acute shortage of specialist doctors, non-existence of Emergency and ICU services, lack of imaging facilities and poor maternal, child and neo-natal healthcare services. Similarly, in DH Dahod despite availability of regular specialist services, delivery of healthcare services suffered due to lack of emergency and accident services, ICU, Blood bank, etc., as well as lower bed capacity as against the requirement. Deficient healthcare services in DH coupled with availability of CHs at more than 100 km. away from the district have compounded the problem of patients in need of treatment.

The Government may give urgent attention for upgradation of these two DHs to provide proper healthcare services to the people of these two districts.

APPENDIX-II

Details of Detailed Explanations pending as of 31 December 2015

(Reference: Paragraph 1.7.3; Page 10)

Sl. No.	Department	2003-04	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Total
1.	Co-operation	--	--	01	--	--	--	--	--	--	--	01
2.	Education	--	--	--	--	--	01	01	--	01	01	04
3.	Fisheries	--	--	--	--	--	01	--	--	--	--	01
4.	Forest and Environment	--	--	--	--	01	--	01	--	--	--	02
5.	Health and Family Welfare	--	--	--	--	01	01	--	01	--	01	04
6.	Home	--	--	--	--	--	--	--	01	--	01	02
7.	Labour and Employment	--	--	--	--	--	--	--	--	01	--	01
8.	Legal	--	--	--	--	--	--	--	--	--	01	01
9.	Panchayats, Rural Housing and Rural Development	--	--	01	01	01	01	--	01	--	01	06
10.	Ports	--	--	--	--	--	--	--	--	--	--	00
11.	Revenue	--	01	--	--	--	--	01	--	--	--	02
12.	Roads and Buildings	--	--	01	--	--	01	01	--	--	--	03
13.	Science and Technology	01	--	--	--	--	01	--	--	--	--	02
14.	Social Justice & Empowerment	--	--	01	01	01	--	--	01	--	--	04
15.	Urban Development and Urban Housing	--	--	--	--	--	--	01	01	01	01	04
16.	Water Resources	--	--	01	01	01	01	01	--	--	--	05
17.	Water Supply	--	--	--	--	01	--	01	--	--	--	02
18.	Women & Child Development	--	--	--	--	--	--	--	01	--	--	01
19.	Youth Services and Cultural Activities	--	--	--	--	--	--	01	--	01	01	03
20.	General paragraphs	--	--	01	01	--	01	--	--	--	--	03
Total		01	01	06	04	06	08	08	06	04	07	51

APPENDIX-III

Paragraphs to be discussed by Public Accounts Committee as of 31 December 2015

(Reference : Paragraph 1.7.4; Page 10)

Sl. No.	Department	2003-04		2005-06		2006-07		2007-08		2008-09		2009-10		2010-11		2011-12		2012-13		2013-14		Total	
		C.A.	P.A.	C.A.	P.A.	C.A.	P.A.	C.A.	P.A.	C.A.	P.A.	C.A.	P.A.	C.A.	P.A.	C.A.	P.A.	C.A.	P.A.	C.A.	P.A.	C.A.	P.A.
1.	Co-operation	--	--	--	--	04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	04	--
2.	Education	--	--	--	--	--	--	--	--	--	--	02	01	01	--	--	--	02	--	01	--	06	01
3.	Energy and Petro Chemical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4.	Food, Civil Supplies and Consumer Affairs Department	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	01	--	--	--	01
5.	Fisheries	--	--	--	--	01	--	--	--	--	--	01	--	--	--	--	--	--	--	--	--	02	--
6.	Forest and Environment	--	--	--	--	--	--	--	--	--	01	--	--	--	01	--	--	--	--	--	--	--	02
7.	Health and Family Welfare	--	--	--	--	--	--	--	--	--	01	01	02	--	--	01	01	--	--	01	01	03	05
8.	Home	--	--	--	--	--	--	01	--	--	--	--	--	--	--	--	--	--	01	01	--	02	01
9.	Home (Transport)	--	--	--	--	--	--	--	01	--	--	--	--	--	--	01	01	--	--	--	--	01	02
10.	Labour and Employment	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	01	--	--	--	01	--
11.	Panchayats, Rural Housing and Rural Development	--	--	--	--	01	--	02	--	01	--	02	--	--	--	01	01	02	02	03	01	12	04
12.	Ports	--	--	--	--	--	--	--	--	--	--	--	--	01	--	--	--	--	--	--	--	01	--
13.	Revenue	--	--	--	01	--	--	--	--	--	--	--	--	--	01	--	--	--	--	--	--	--	02
14.	Roads and Buildings	--	--	--	--	01	01	--	--	--	--	05	--	02	--	--	--	--	--	--	--	08	01
15.	Science and Technology	01	--	--	--	--	--	--	--	--	--	--	01	--	--	--	--	--	--	--	--	01	01
16.	Social Justice & Empowerment	--	--	--	--	01	01	--	01	--	01	--	--	--	--	01	--	--	--	--	--	02	03
17.	Urban Development and Urban Housing	--	--	--	--	01	--	--	--	--	--	--	--	01	--	--	01	--	02	05	--	07	03
18.	Women & Child Development	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	01	--	--	--	--	--	01
19.	Water Resources	--	--	--	--	01	--	06	01	02	--	01	01	02	--	--	--	--	--	--	--	12	02
20.	Water Supply	--	--	--	--	01	--	06	--	03	--	01	--	02	01	--	--	03	--	06	--	22	01
21.	Youth Services and Cultural Activities	--	--	--	--	--	--	--	--	--	--	--	--	--	01	--	--	--	01	01	--	01	02
22.	Legal	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	01	--	01	--
23.	General paragraphs	--	--	--	--	01	--	01	--	--	--	01	--	--	--	--	--	--	--	--	--	03	--
Total		01	--	--	01	12	02	16	03	06	03	14	05	09	04	04	05	08	07	19	02	89	32

Note: Performance Audit (PA) and Compliance Audit (CA)

APPENDIX-IV

Availability of Doctors and Para-Medical Staff as on 31 March 2015 in test-checked DHs (Reference: Paragraph 2.1.7.1; Page 19)

District Hospitals	Number of beds in Hospital	Minimum requirement as per IPHS	Sanctioned strength	Men-in-position (MIP)	Percentage shortfall in MIP as compared to IPHS	Percentage shortfall in MIP as compared to sanctioned strength
A. Specialist Doctors						
Anand (Petlad)	119	21	14	07	67	50
Palanpur	225	35	19	14	60	26
Dahod	150	21	26	15	29	42
Godhra	210	35	18	08	77	56
Himatnagar	200	35	19	15	57	21
Surendranagar	150	21	26	07	67	73
Vadodara	213	35	17	13	63	24
Total		203	139	79		
B. Medical Officers						
Anand (Petlad)	119	13	06	04	69	33
Palanpur	225	15	19	13	13	32
Dahod	150	13	12	08	38	33
Godhra	210	15	15	08	47	47
Himatnagar	200	15	16	14	7	13
Surendranagar	150	13	13	05	62	62
Vadodara	213	15	15	14	7	7
Total		99	96	66		
C. Nursing Staff						
Anand (Petlad)	119	90	34	28	69	18
Palanpur	225	135	73	69	49	5
Dahod	150	90	33	25	72	24
Godhra	210	135	62	56	59	10
Himatnagar	200	135	51	39	71	24
Surendranagar	150	90	90	84	7	7
Vadodara	213	135	52	39	71	25
Total		810	395	340		
D. Para-Medical and other Staff						
Anand (Petlad)	119	57	22	10	82	55
Palanpur	225	87	39	27	69	31
Dahod	150	57	16	06	89	63
Godhra	210	87	40	23	74	43
Himatnagar	200	87	102	60	31	41
Surendranagar	150	57	37	20	65	46
Vadodara	213	87	35	28	68	20
Total		519	291	174		

APPENDIX-V

Availability of beds in district level hospitals in the State as of March 2015

(Reference: Paragraph 2.1.7.2; Page 20)

Districts	DH	Number of beds in DH	CH	Number of beds in CH	Hospital attached with GMERS/PPP	Number of beds in GMERS/PPP hospital	Total beds in the district
Ahmedabad	NA	0	YES	2,000	YES	530	2,530
Ahwa-Dang	YES	150	NA	0	NA	0	150
Amreli	YES	200	NA	0	NA	0	200
Anand (Petlad)	NA	119	NA	0	NA	0	119
Bharuch	YES	210	NA	0	NA	0	210
Bhavnagar	NA	0	YES	709	NA	0	709
Bhuj-Kachchh	NA	0	NA	0	YES/PPP	300	300
Botad	YES	100	NA	0	NA	0	100
Chhotaudepur	YES	100	NA	0	NA	0	100
Dahod	YES	150	NA	0	NA	0	150
Gandhinagar	NA	0	NA	0	YES	415	415
Panchmahal	YES	210	NA	0	NA	0	210
Sabarkantha	YES	200	NA	0	NA	0	200
Devbhumi Dwarka	YES	150	NA	0	NA	0	150
Jamnagar	NA	0	YES	1,263	NA	0	1,263
Junagadh	NA	0	NA	0	YES	327	327
Mahisagar	YES	100	NA	0	NA	0	100
Mehsana	YES	243	NA	0	NA	0	243
Aravali	NA	0	NA	0	NA	0	0
Morbi	NA	0	NA	0	NA	0	0
Kheda	YES	160	NA	0	NA	0	160
Navsari	YES	180	NA	0	NA	0	180
Patan	NA	0	NA	0	YES	415	415
Banaskantha	YES	225	NA	0	NA	0	225
Porbandar	YES	241	NA	0	NA	0	241
Rajkot	YES	115	YES	850	NA	0	965
Narmada	YES	150	NA	0	NA	0	150
Surat	NA	0	YES	1,050	NA	0	1,050
Surendranagar	YES	150	NA	0	NA	0	150
Vadodara	YES	213	YES	1,513	YES	530	2,256
Valsad	NA	0	NA	0	YES	415	415
Veraval	NA	0	NA	0	NA	0	0
Tapi	YES	150	NA	0	NA	0	150
Total		3,516		7,385		2,932	13,833