Chapter III

Healthcare Services

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Healthcare Services

Line/support services such as Blood Bank, ICU, Oxygen, Mortuary and Ambulance were not available in all the district level hospitals of GNCTD. Heavy work load at Registration and Pharmacy counters as well as heavy patient load on doctors was noticed in two out of four test checked hospitals viz. Lok Nayak Hospital (LNH) and Chacha Nehru Bal Chikitsalaya (CNBC) which indicates more waiting time and less consultation time to patients. Shortage of toilets and scarcity of waiting area for attendants was noticed in LNH. Indoor Patient Departments (IPDs) were found crowded in many wards.

Major portion of fleet of Centralised Accident and Trauma Services (CATS) ambulances were found running without essential equipment and devices. Three out of four test checked hospitals did not provide ambulance services.

Only LNH has the facility to separate the blood components, the other three test checked hospitals were holding license for processing and storage of blood units only. While huge waiting time was observed for radiological diagnostic services in LNH, the radiological equipment were found underutilised in other three hospitals due to shortage of manpower. Atomic Energy Regulatory Board guidelines were not fully adhered in these hospitals for ensuring the safety of staff. Dietary services were not available in Janakpuri Super Specialty Hospital (JSSH) and RGSSH during the audit period. Periodic inspection was not conducted by the Dieticians and quality of food was never checked (except once in December 2021 in LNH) by the Government in test checked hospitals during the audit period.

JSSH had not established Emergency Services whereas shortage of essential medicines and equipment was noticed in the Emergencies/ICU of LNH and RGSSH. There was long waiting time for surgeries in two test checked hospitals. At the same time, six out of 12 modular OTs in Rajiv Gandhi Super Specialty Hospital (RGSSH) and all the seven modular OTs in JSSH were lying idle due to shortage of manpower. Sushruta Trauma Centre (STC) established for treating victims of road accidents had no separate administrative set up and was lacking permanent arrangement of Specialist Doctors and Senior Residents for 24-hour emergency services.

State Rapid Response team constituted in the wake of Covid to ensure emergency preparedness failed to carry out its assigned task. There was shortfall in conducting patient satisfaction survey, prescription audit, death reviews etc. by the test checked hospitals thereby depriving them from the benefit of such assessment for further improvement in patient services.

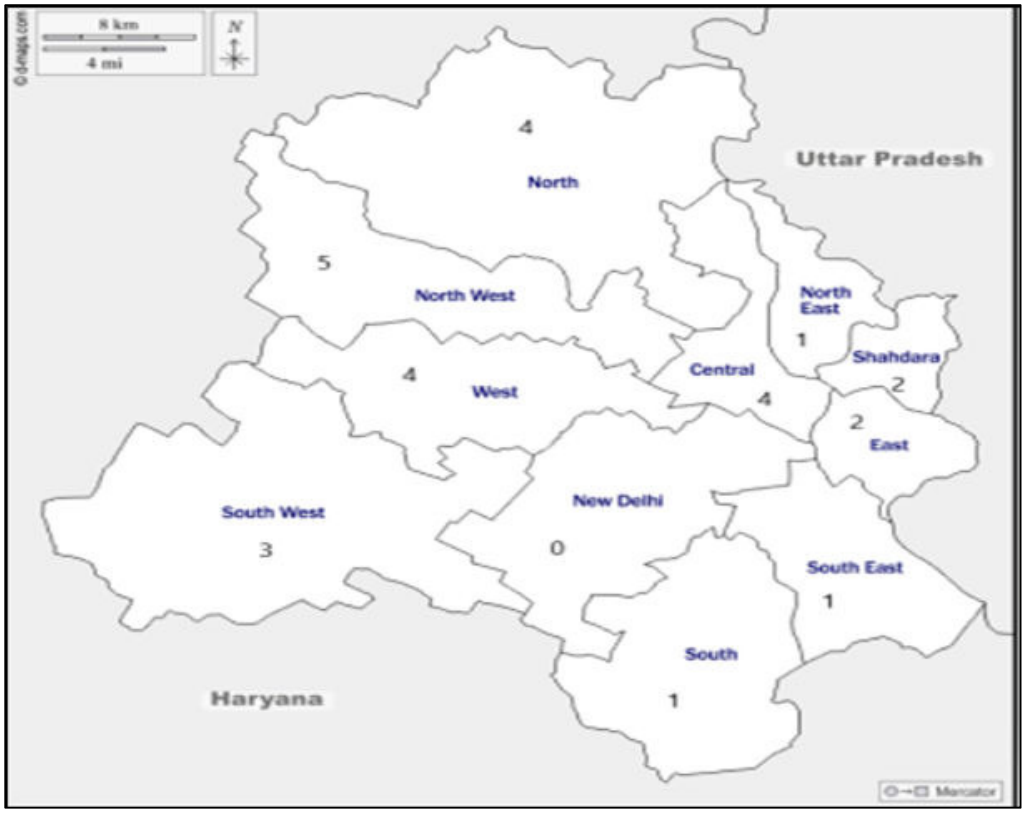
3.1 Delivery of line services

Point 3.3.2 of NHP aims to ensure that specialist skills are available within the district hospitals. IPHS envisage that each District Hospital should deliver essential services (minimum assured services) and aspire to deliver specialised services to address the needs of patients.

There are 27 hospitals, seven super speciality hospitals, four AYUSH hospitals and one Central jail hospital of GNCTD.

The distribution of 27 district hospitals in NCT of Delhi is given in **Chart 3.1**.

Chart 3.1: Distribution of district hospitals in NCT of Delhi



As per IPHS norms, OPD services such as ENT, General Medicine, Peadiatrics, General Surgery, Ophthalmology, Dental, Obstetrics & Gynecology, Psychology, Orthopedics are essential for District Hospitals whereas Dermatology is desirable.

As per information furnished in respect of OPD services provided by 27 hospitals, ENT in five, General Medicine in four, Peadiatrics in two, General Surgery in seven, Ophthalmology in five, Dental in nine, Obstetrics & Gynecology in three, Psychology in 20, Orthopedics in five and Dermatology in eight hospitals were not available. Psychology was not available in three out of 11 districts.

Availability of selected line services/support services in 27 GNCTD hospitals in 10 districts of NCTD is given in **Table 3.1**.

Table 3.1: Status of availability of Line services/Support services in 27 hospitals

Name of the hospital	Line services					Other services			
	Emergency	Imaging	Pathology	Blood Bank	Intensive Care Unit	Bio-medical Waste	Ambulance	Oxygen	Mortuary
South West									
Sri Dada Dev Matri Avum Shishu Chikitsalaya, Dabri	Yes	Yes	Yes	No	No	Yes	No	Yes	No
Rao Tula Ram Memorial Hospital, Jaffarpur	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes
Indira Gandhi Hospital Dwarka	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
North									
Maharishi Valmiki Hospital, Pooth Khurd	Yes	Yes	Yes	No	No	No	Yes	No	No
Babu Jagjivan Ram Memorial Hospital	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Burari Hospital Shankarpuri	Yes	Yes	Yes	Yes	No	No	No	No	No
Satyavadi Raja Harish Chandra Hospital, Narela	Yes	Yes	Yes	No	No	Yes	No	Yes	No
South									
Ambedkar Nagar Hospital Dkshinpuri	No	No	No	No	No	No	No	No	No
South East									
Pt. Madan Mohan Malviya Hospital, Malviya Nagar	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
West									
Sardar Vallabh Bhai Patel Hospital, Patel Nagar	Yes	Yes	Yes	No	No	No	No	No	No
Guru Gobind Singh Government Hospital	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Acharyashree Bhikshu Govt. Hospital, Moti Nagar	Yes	Yes	Yes	No	No	Yes	Yes	No	No
Deen Dayal Upadhyay Hospital, Hari Nagar	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Shahdara									
Dr. Hedgewar Arogya Sansthan, Karkardooma	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Guru Teg Bahadur Hospital, Shahdara	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Central									
Dr. N.C.Joshi Memorial Hospital, Karol Bagh	Yes	Yes	Yes	No	No	Yes	No	No	No
Aruna Asaf Ali Govt. Hospital, Rajpur Road	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Guru Nanak Eye Centre	Yes	No	Yes	No	No	Yes	Yes	No	No
Lok Nayak hospital	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Name of the hospital	Line services					Other services			
	Emergency	Imaging	Pathology	Blood Bank	Intensive Care Unit	Bio-medical Waste	Ambulance	Oxygen	Mortuary
North East									
Jag Pravesh Chandra Hospital, Shastri Park	Yes	Yes	Yes	No	No	Yes	No	Yes	No
North West									
Sanjay Gandhi Memorial Hospital, Mangol Puri	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dr. Baba Saheb Ambedkar Hospital, Rohini	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Deep Chand Bandhu Hospital Ashok Vihar	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Aattar Sain Jain eye And General Hospital	No	No	Yes	No	No	Yes	No	No	No
Bhagwan Mahavir Hospital	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
East									
Chacha Nehru Bal Chiktisalaya, Geeta Colony	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Lal Bahadur Shastri Hospital, Khichripur	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total	No (2)	No (3)	No (1)	No (16)	No (14)	No (4)	No (12)	No(8)	No (15)

Source: Information collected from respective hospitals.
Lack of services in the hospital are shaded red.

In Delhi there are 11 districts out of which 10 districts viz. South West (3), North (4), South (1), South-east (1), West (4), Shahdara (2), Central (4), North-east (1), North-west (5) and East (2) have GNCTD hospitals. New Delhi District does not have any GNCTD hospital.

Out of 27 hospitals, ICU services were not available in 14 hospitals, Blood Bank services were not available in 16 hospitals, Oxygen services were not available in eight hospitals, Mortuary services was not available in 15 hospitals and Ambulance services were not available in 12 hospitals.

District wise availability of essential lines services were as under (May 2023):

- There were no-line service/support service available in the only newly opened hospital in South District.
- Ambulance, Blood Bank, ICU and Mortuary services were not available in the only hospital of North-East District.
- Ambulance and Blood Bank services were not available in any hospital in two districts (South-West and South-East).
- ICU service were not available in any hospital in North District.

Government did not offer any comment in its reply dated 13 December 2023.

Deficiencies in delivery of line services/support services observed in selected hospitals are discussed in the succeeding paragraphs.

3.1.1 Availability of Out-Patient Department (OPD) Services in Hospitals

To avail outdoor services in hospitals, Out-patients first register at the OPD. After registration, the doctors concerned examine the patients for diagnosing ailments and prescribe either diagnostic tests for evidence based diagnosis or medicines on the basis of consultation.

The number of out-patients attended to in the four selected Hospitals are shown in **Table 3.2**.

Table 3.2: Out-patients in selected hospitals

Year	OPD patient			
	LNH	CNBC	RGSSH	JSSH
2016-17*	9,75,380	3,01,480	66,125	2,96,478
2017-18	18,54,141	3,61,665	1,40,309	3,59,854
2018-19	19,09,960	3,74,354	1,76,394	3,73,996
2019-20	18,42,976	3,38,458	2,42,239	3,77,588
2020-21**	80,373	1,85,635	84,277	2,85,808
2021-22	5,99,727	2,63,229	1,49,988	2,67,505
Total	**72,62,557**	**18,24,821**	**8,59,332**	**19,61,229**

Source: Annual Reports and information provided by the hospitals
* LNH figure does not include the OPD data for the period (July to Nov 2016) due to server failure
** LNH and RGSSH were declared as COVID only hospital.

As per IPHS, work load at OPD shall be studied and measures shall be taken to reduce the waiting time for registration, consultation, diagnostics and pharmacy. Audit noted that no study was conducted in the test checked hospitals to reduce the waiting time.

The OPD data for the period from 2016-17 to 2020-21 in respect of CNBC and for the period from 1 January 2018 to 21 March 2020 in respect of LNH which were provided to Audit was examined in detail and the observations are as under.

3.1.1.1 High workload in registration counters of OPD of LNH and CNBC

Registration counter is the first point of contact with the hospital and is an important part of hospital experience for patients and their attendants. OPD patient Registration Counters were managed by one person per counter who has to feed the patient's name and other details in the system and generate an OPD card. The Registration Counters were functioning from 7.30 AM to 11.30 AM, six days in a week with a holiday on Sunday.

Examination of OPD data of LNH revealed that average per day patient load/counter[1] in Main OPD, Orthopaedic OPD and Gynaecology ANC OPD

[1] No. of patient to be attended per day per counter

ranged between 305 to 340 patients, 506 to 628 patients and 102 to 126 patients respectively during the years 2018 to 2020[2].

Average patient load/counter in CNBC during the period 2016-17 to 2021-22, ranged between 103 (2020-21) and 213 (2018-19) patients.

Considering that OPD functions for 240 minutes a day and the work involves entering patient details in the system and issuing OPD cards, attending to such large number of patients ranging up to 628 in one counter results in long waiting time for patients at the hospital as is evident from the crowds at OPD counters shown in **Pictures 3.1** and **3.2**.

Government in its reply (December 2022) stated that both the hospitals are in the process of creating more OPD Registration Counters.

Picture 3.1: Crowded patient registration counters at LNH

Picture 3.2: Crowded patient registration counters at CNBC

3.1.1.2 Patient load in test checked departments of LNH

Patient load is defined as the average number of patients who are evaluated or treated per day per doctor. A very high patient load may lead to a long waiting time to meet doctors and subsequently a short consultation period. The consultation time per patient is a measure of quality of clinical care and patients' satisfaction[3].

[2] Data of 2021 was not included as LNH was declared dedicated COVID hospital in 2021.
[3] The consultation time in OPD of LNH was from 8 AM to 3 PM.

As per patient registration data of two test checked Departments (Medicine and Gynaecology) of LNH, the average registration of patients ranged from 673 to 718 (two Medicine OPD) and 205 to 253 (Gynaecology) respectively during the period from January 2018 to March 2020.

In respect of Medicine Department, information provided (January 2022) by the LNH showed that the two OPD units with a team of 7-9 doctors each attend OPD on daily basis and considering this, the workload per day per doctor[4] ranged from 84 to 89 OPD patients.

Considering the fact that a Doctor is available for seven hours a day (420 minutes) attending to an average patient load of 87 patients per doctor, resulted in average consultation time per patient per doctor of less than five minutes.

3.1.1.3 Workload in Pharmacy Counters

The GNCTD has not framed norms regarding number of patients per pharmacist. As per IPHS, there should be one dispensing counter for every 200 OPD patients.

Audit noted that Pharmacy Counters were not computerized and medicines were distributed manually. None of the selected Hospitals except CNBC provided data on actual number of patients to whom medicines were distributed. LNH informed (June 2022) that medicines are dispensed to all registered patients. Pharmacy Counters functioned from 8 AM to 5 PM in LNH and 9 AM to 8 PM in CNBC.

Based on the OPD data, patient load per pharmacist/counter in LNH ranged from 216 to 263 during the period January 2018 to March 2020[5]. It was noticed that many a time, due to shortage of pharmacists, medicines were not distributed on the same day. Heavy rush of patients was noticed at Pharmacy Counters. Pharmacists has to keep records of medicines distributed and also maintain stock in hand manually which effectively reduced the available time for dispensing medicines.

Similarly, patient load per pharmacist/counter in CNBC and JSSH was 110 to 192 and 238 to 315 respectively during the period 2016-17 to 2020-21 whereas in RGSSH, the average patient load per pharmacist/counter was 175 during the period 2018-19 to 2019-20.

In CNBC, the number of patients to whom medicines were distributed increased from 65,192 in 2016-17 to 1,13,761 (i.e. 74.50 *per cent*) in 2019-20 but the number of Pharmacy Counters remained only two.

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[4] Considering that on an average 8 Doctors are available daily.

[5] Upto 21 March 2020 only as LNH was declared dedicated COVID hospital.

CNBC in its reply stated (August 2022) that there were three dispensing counters in OPD Pharmacy but only two counters were operational because of scarcity of space in that area. CNBC also stated that they will relocate OPD pharmacy in bigger area.

Government replied (November/December 2022) that the process for filling up of vacant posts in LNH and RGSSH has been initiated. It was also stated that new Pharmacy Counters are being opened in LNH.

3.1.1.4 Basic amenities in OPD

IPHS provides that a hospital should have proper patient amenities like potable drinking water, functional and clean toilets with running water, etc. Further, proper signage should be present to guide the public. Citizen charter indicating patient rights and duties should also be displayed.

Joint Physical Inspection of LNH revealed that it had no toilets for patients and attendants in new OPD block and the visitors were forced to use toilets in the Emergency/Casualty building. Complaint boxes were provided on one floor only which caters to Anti-Retroviral Therapy (ART) Clinic whereas complaint boxes were not placed in other six floors which provide OPD services of other Departments. It was observed that the complaints placed by public in complaint boxes were not attended timely.

Joint Physical Inspection of CNBC revealed that one water cooler was available on ground floor while OPD is running on first floor also. Complaints placed in Complaint Box were not attended timely.

Picture 3.3: Water cooler not functioning in CNBC

Patient calling system was not operational in the OPD of any of the test checked hospitals, which would have helped in managing the crowds.

Government stated (November 2022) that toilet facilities are available in the OPD block of LNH. The reply is not tenable as the audit observation is based on facts observed during Joint Physical Inspection.

3.1.1.5 Availability of seating arrangement, toilet facility and patient calling system etc.

IPHS 2012 Guidelines for district hospitals prescribe various facilities. The status of these facilities in the test checked hospitals is given in **Table 3.3**.

Table 3.3: Status of availability of facilities in test checked hospitals

Name of service	LNH	CNBC	RGSSH	JSSH
Display of florescent fire exit sign	A	A	A	A
Enquiry/ May I Help Desk with staff fluent in local language	A	A	A	A
Directional signage for Emergency, Departments and Utilities	A	A	A	A
Display of safety, hazard and caution signs were displayed prominently at relevant places?	A	A	A	A
Important contacts like higher medical centres, blood banks, and fire department, police and ambulance services were displayed	A	A	A	A
Mandatory information (under RTI Act, PNDT Act, etc.) was displayed	A	A	A	A
Adequate seating facility	NA	NA	A	A
Patient Calling System (Digitalisation)	NA	NA	NA	NA
Separate toilets for male and female	A	A	A	A
Availability of toilets in OPD	A[6]	A	A	A
Complaint boxes in OPD	NA	NA	A	A
Water cooler	A	NA	A	A
Availability of adequate registration counters	NA	NA	A	A
Availability of Online Registration System	A	A	A	A
Patient Satisfaction Survey (OPD)	NA	A	NA	NA
Providing unique ID at the time of registration	A	A	A	A
Availability of Citizen charter at OPD	A	A	A	A

Note: Colour scheme has been used with red denoting lack of facility and green denoting availability of facility.

Source: Joint physical inspection reports, replies of the hospitals

3.1.1.6 Patient Satisfaction Survey in OPD conducted by Audit

NHM Assessor's Guidebook requires hospitals to conduct Patient Satisfaction Survey of outdoor patients on a monthly basis. The common reasons for patient's dissatisfaction are overcrowding, long waiting time to meet doctors and short consultation period. Patient satisfaction is a measure of success of the services being provided by the hospitals.

It was noticed that out of the four selected hospitals, only CNBC and JSSH had introduced Patient Satisfaction Survey during the audit period. LNH and RGSSH did not conduct any patient survey during the period 2016-17 to 2020-21. LNH introduced survey in 2021-22.

Patient Satisfaction Survey of 149 OPD patients was conducted in four selected Hospitals (JSSH-23, RGSSH-12, LNH-87 and CNBC-27) by Audit. Eleven *per cent* patients felt shortage of drinking water facilities at OPD

[6] There are three OPD blocks for patient registration in LNH with 19 registration counters out of which 16 counters were in New OPD block. It was observed that the new OPD block did not had Toilet facility.

premises and 30 *per cent* patients (most of them from LNH and CNBC) stated that clean toilets were not available. Twenty eight *per cent* patients stated that they had to wait more than one hour for OPD registration and 44 *per cent* for more than an hour for consultation. The waiting time in pharmacy for getting the medicines ranged between one to two hours in the case of 27 *per cent* of the respondents whereas in the case of nine *per cent,* the waiting time was more than two hours. The surveyed patients stated that the pathology tests (30 *per cent*) and radiology tests (33 *per cent*) recommended by the doctors were not done at the hospital.

Government replied (November 2022) that Patient Satisfaction Survey has been initiated in LNH under National Quality Assurance Standards.

Recommendation 3.1: The Government should take immediate measures to reduce the waiting time for registration, consultation, diagnostics, surgery and pharmacy in its hospitals. Government should also ensure availability of basic amenities in its hospitals.

3.2 Indoor Patient Department

Indoor Patients Department (IPD) refers to the areas of the hospital where patients are accommodated after being admitted, based on doctor's/specialist's assessment, from the Out-Patient Department, Emergency Services and Ambulatory Care. In-patients require a higher level of care through nursing services, availability of drugs/diagnostic facilities, observation by doctors, etc.

3.2.1 Lack of facilities in IPD of Hospitals

LNH provides IPD services in General and Super Speciality Departments of Medicine, Orthopaedics, Oncology, Neurosurgery, Paediatrics, Pulmonary, Gynaecology, Neonatology, Dermatology, Burns & Plastic, and ENT etc. Ophthalmology services, which is an essential general service as per IPHS, was not available in LNH as there is a full-fledged Eye Centre under MAMC to which LNH is attached.

Though a separate casualty was functioning in Gynaecology Department of LNH, no bed was available in the casualty and the patients were directly admitted to the labour rooms/wards. During Joint Inspection, it was observed that the maternity wards, labour rooms and connecting corridors were highly congested with stocks of medicines and general items stored in the corridors due to shortage of space.

On Joint Inspection of the IPD Department of LNH, it was observed that toilets in waiting area were not operational and where operational, these were found to be unhygienic and dirty. Security system existed but monitoring was weak as is evident from the fact that the IPDs were found crowded in many wards and stray dogs were roaming in corridors. There was scarcity of waiting space and chairs.

CNBC is a Paediatric Hospital and proper arrangement was not available for mothers whose neonates were admitted in NICU and they were usually allotted space in the basement area with no basic facilities like seating arrangement, drinking water and toilets.

Picture 3.4: Shortage of waiting area for attendants in CNBC and LNH

Shortage of chairs/ tables for attendants were noticed in LNH and CNBC and shortage of Bed side stools in wards were noticed in all the selected hospitals[7].

Government intimated (November 2022) that measures are being taken for improving the security in LNH. As regards to stray dogs, hospital stated that letter has been written to the PWD.

Further, LNH intimated that beds of adjacent Septic Labour Room are being used for Gynaecology Causality.

Recommendation 3.2: IPDs of hospitals should provide all basic amenities to patients and attendants and conduct periodic patient surveys to assess the quality of services being provided by the hospitals.

3.2.2 Bed Occupancy Rate

The Bed Occupancy Rate (BOR)[8] is an indicator of the productivity of the hospital services and is a measure of verifying whether the available infrastructure and processes are adequate for delivery of health service. As per IPHS, it is expected that the BOR of a hospital should be at least 80 *per cent*. High BOR is a sign of good productivity of the hospital. The BOR of test checked hospitals is given in **Table 3.4**.

[7] LNH, CNBC, RGSSH & JSSH

[8] BOR= (Total patient bed days in a month x 100) / (Total number of functional beds x Number of days in a month). BoR more than 100 *per cent* indicates that there were more patients than number of beds available.

Table 3.4: BOR of hospitals

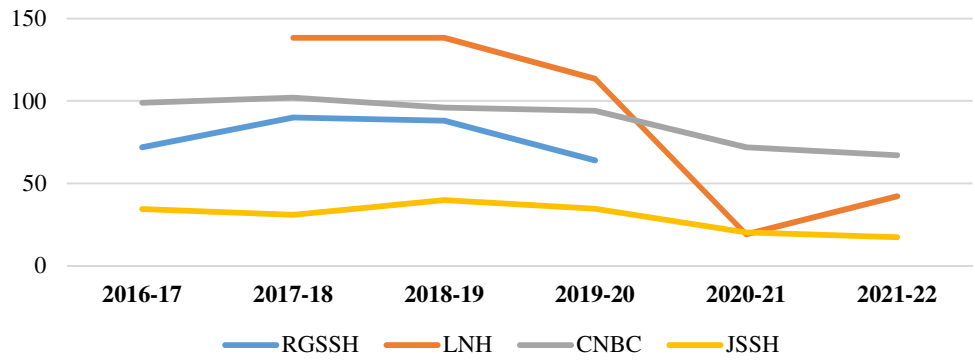
Year	RGSSH	LNH	CNBC	JSSH
2016-17	72	-	99	34.33
2017-18	90	138.27	102	30.99
2018-19	88	138.28	96	39.83
2019-20	64	113.44	94	34.56
2020-21	-	19.12	72	20.13
2021-22	-	42.1	67	17.36

Source: Information furnished by the department

Note: Data for the year 2016-17 not maintained by LNH. RGSSH and LNH were declared COVID only hospital during 2020-21 and 2021-22.

The trend of BOR in the selected hospitals is given in **Chart 3.2**.

Chart 3.2: Bed occupancy rate in selected hospitals.



It can be seen from the **Table 3.4** that bed occupancy rate was more than 100 *per cent* in respect of LNH (2017-18 to 2019-20) and CNBC (2017-18) signifying that number of patients admitted were more than the number of beds available. During Joint Inspection (July 2022) of CNBC general wards, beds were found allotted to more than one patient.

BOR at JSSH was very low showing low productivity of the hospital.

Government in its reply (December 2022) stated that the low occupancy in JSSH was due to shortage of staff.

The Department wise bed occupancy rate furnished by two[9] selected hospitals is given in **Table 3.5**.

[9] LNH and RGSSH did not maintain department wise BOR.

Table 3.5: Department wise BOR of two hospitals

Name of the Department	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
CNBC						
Emergency	130.64	142.26	128.81	135.11	91.8	83.86
Orthopedics	41.14	40.68	40.5	39.89	28.36	34.57
Paediatrics	127.56	114.35	127.61	110.79	79.73	73.54
Eyes	30.59	20.82	16.71	63.3	14.52	24.38
ENT	20.64	72.42	99.27	141.26	27.85	86.67
PICU	98.2	96.89	88.65	90.53	83.26	87.1
KMC	71.23	82.67	72.95	72.13	78.15	68.97
NICU	100	95.37	95.49	94.33	93.93	90.4
Medicines	107.79	122.42	106.26	105.28	79.40	75.50
JSSH						
Cardiology	*	26.42	35.42	33.58	28.67	26.36
Neurology	*	36.5	26.17	13.75	10.17	21.31
Gastroenterology	*	52.92	99.17	87	6.55	7.42
Nephrology	*	83.58	133.83	153.58	125.17	84.08

Source: Data furnished by the hospitals.
* Data not furnished

It can be seen from the above table that patient load was more than the capacity of available beds in Emergency (2016-20), Paediatrics (2016- 20) Medicines (2016-20) and ENT (2019-20) Departments in CNBC and Nephrology (2018-21) Department in JSSH.

Government did not offer any comment in its reply dated 13 December 2023.

3.2.3 Evaluating efficiency of hospitals

The Bed Turnover Rate (BTR)[10] is a measure of the utilization of the available bed capacity and serves as an indicator of the efficiency of the hospital. High BTR indicates high utilization of in-patient beds in a hospital while low BTR could be due to fewer patient admissions or longer duration of stay in the hospital.

Discharge Rate (DR)[11] measures the number of patients leaving a hospital after receiving due health care. High DR denotes that the hospital is providing health care facilities to the patients efficiently.

Average Length of Stay (ALoS) is an indicator of clinical care capability and to determine effectiveness of interventions. ALoS is the time between the admission and discharge/death of the patient.

The IPD indicators of selected departments of LNH during the period from January 2018 to March 2020 are given in **Table 3.6**.

[10] BTR=Total no. of discharges (including Referral, LAMA, Absconding and Death)/Total number of functional beds.

[11] DR=Total no. of discharges (excluding Referral, LAMA, Absconding and Death) x 100/Total number of Admissions.

Table 3.6: IPD indicators in LNH

Name of Hospital	Selected department	Average BTR	Discharge Rate	ALoS (No. of Days)
LNH	Gynaecology	4 to 31	95 to 98	9 to 14
	Medicine	1 to 38	81 to 97	7 to 12

Source: Data furnished by LNH.

Major portion of patients in Gynaecology Department of LNH were either referred or chronically sick patients. It can be seen from the above table that in Gynaecology Department of LNH, the average discharge rate was 96.63 *per cent* and the value ranged between 95 to 98 *per cent* which indicates that the number of patients leaving a hospital after receiving due health care was high. However, the average BTR was 20.87 *per cent* and the value ranged between 5 to 31 *per cent* whereas the ALoS was 12.49 *per cent* and the value ranged between 9 to 14 days which indicated LNH treated more number of acutely ill patients.

Similarly, in Medicine Department of LNH, the average discharge rate was 89.59 *per cent* and the value ranged between 81 to 97 *per cent* which indicates that the number of patients leaving a hospital after receiving due health care was high. However, the average BTR was 15.73 *per cent* and the value ranged between 1 to 38 *per cent* whereas the ALoS[12] was 9.55 and the value ranged between 7 to 12 days which indicates LNH treated more number of acutely ill patients.

Out of the four selected Hospitals, only LNH provided complete in-patient data for analysing these parameters and therefore, efficiency of other three Hospitals could not be evaluated.

3.2.4 Operation Theatres

Operation theatre (OT) is an essential service to be provided to the patients. As per NHM Assessor's guidebook, surgery performed per surgeon is an indicator to measure efficiency of the hospital.

All the surgical departments of essential/desirable services required for a District Hospital as per IPHS are available in LNH except Ophthalmology which is managed by the other hospital under MAMC to which LNH is attached.

The status of OT services against IPHS guidelines in test checked hospitals is given in **Table 3.7**.

[12] Average length of stay (ALOS) refers to the average time spent by a patient under treatment in the hospital.

Table 3.7: Availability of OT services in test checked DHs

Description	LNH	RGSSH	CNBC	JSSH
OT have convenient relationship[13] with surgical ward, intensive care unit, radiology, pathology, blood bank and CSSD.	Yes	Yes	Yes	OT Services not available.
Access to facility is provided without any physical barrier and friendly to people with disabilities.	Yes	Yes	Yes	
OT have piped suction and medical gases, electric supply, heating, air-conditioning, ventilation.	Yes	Yes	Yes	
Patient's records and clinical information is maintained.	Yes	Yes	Yes	
Has defined and established grievance redressal system in place.	Yes	Yes	Yes	
Whether all equipment are covered under AMC including preventive maintenance?	Covered under AMC subjects to shortfalls mentioned in audit findings.			

Note: JSSH has not started surgeries and hence not applicable.
Criteria: Indian Public Health Standards (IPHS) Guidelines for district hospitals

3.2.4.1 Waiting period for surgery in LNH and CNBC

There were 29 OTs (in all departments) in LNH and the total surgeries conducted in LNH during the period 2016-17 to 2021-22 are given in **Table 3.8**.

Table 3.8: Number of surgeries conducted in LNH

Year	No. of surgeries conducted	
	Major	Minor
2016-17	19,346	21,707
2017-18	23,842	21,558
2018-19	19,500	22,844
2019-20	19,017	19,766
2020-21 *	3,266	801
2021-22 *	10,998	8,198

Source: Reply of LNH
*Declared Covid hospital

As per information furnished by Surgery Department of LNH, the average number of major surgeries per month conducted ranged between 216 and 281 during the period from 2016-17 to 2019-20 and average waiting time was two to three months. One major OT of Surgery Department was not functional from 2016-17 till date (August 2022). Reason for not repairing or replacing the same and action taken to improve the waiting time for surgeries was not provided by the Hospital.

In respect of Burn & Plastic Surgery department of LNH, the average number of major surgeries conducted per month ranged between 86 and 95 during the same period whereas average number of minor surgeries conducted per month

[13] To indicate easy accessibility with other wards.

was between 85 and 375. Average waiting period was six to eight months in the case of major surgeries and 3-4 weeks in the case of minor surgeries.

Audit noted that there was shortage of doctors in LNH and the same has been discussed in Chapter V.

Similarly, CNBC, which is a Paediatric hospital, conducts Eye, ENT, Orthopaedics and Paediatric surgeries. Number of surgeries conducted in the Hospital during the audit period and average waiting time was as given in **Table 3.9**.

Table 3.9: Number of surgeries conducted in CNBC

Sl. No.	OT Name/Department		No. of Surgeries						Average waiting time
			2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	
1	Eye	OT	104	100	53	133	73	86	Less than one month
		Emergency	01	02	01	00	02	01	
2	ENT	OT	30	275	322	448	114	219	3 to 4 months
		Emergency	03	17	07	10	10	21	
3	Paediatric Surgery	OT	1824	1623	1118	1385	771	681	12 months
		Emergency	521	482	527	584	527	557	
4	Orthopaedics	OT	555	548	497	627	300	358	Less than one month
		Emergency	35	57	21	30	32	29	

Source: Reply of CNBC

In spite of such a long waiting period for patients to undergo surgery, the number of OTs remained five (three Major OTs, one minor OT and one emergency OT) during the period of audit. Further, one of the three major OTs was not functional due to shortage of manpower like Senior Resident doctor and Nursing, Technical and other support staff.

The Government stated (December 2022) that many pending cases in CNBC were due to Covid, disproportionate workload, lack of manpower and continuous inflow of emergency cases from Delhi and other States. Creation of more OTs and recruitment of staff is under process.

3.2.4.2 OTs lying idle in RGSSH

RGSSH is a Super specialty hospital and have the facilities of Gastro Intestinal, Urology and CVTS[14] surgeries. There were six functional OTs in RGSSH. Year wise number of surgeries conducted in GI Surgery, Urology, Cardiac and Thoracic OTs were as given in **Table 3.10**.

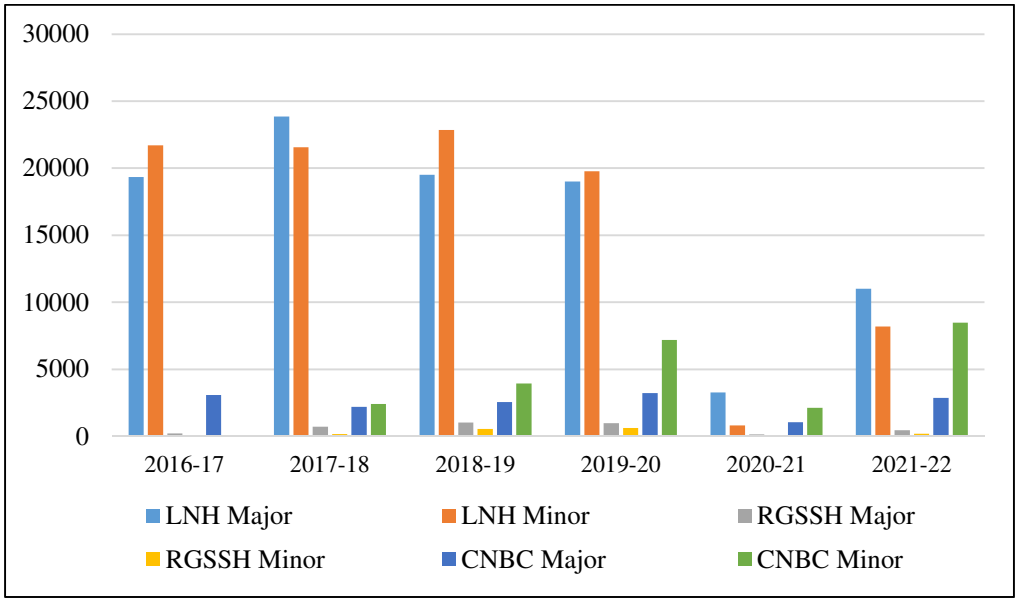
[14] Cardio vascular thoracic surgeries.

Table 3.10: Surgeries conducted in RGSSH

Sl. No.	OT Name/Department		No. of surgeries					
			2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
1	GI Surgery OT 1	Major	212	366	640	400	0	107
		Minor	0	0	0	0	0	15
2	Urology OT 2&3	Major	3	258	372	394	75	234
		Minor	0	160	526	419	35	107
3	Cardiac OT5	Major	0	0	0	28	39	46
4	Thoracic OT4	Major	0	0	3	154	29	62
5	Cardiac &Thoracic OT 4 and OT 5	Minor	83	0	26	210	54	68

Source: Reply of RGSSH

Chart 3.3: Major and Minor surgeries conducted in selected hospitals



It was observed from **Chart 3.3** that the number of surgeries conducted in the six functional OTs of RGSSH was much less as compared to that of other selected Hospitals. Apart from the six functional OTs, six more OTs were available in RGSSH which were lying unused due to shortage of man power. Underutilisation of infrastructure, created to provide quality service to patients, needs to be viewed seriously especially in view of the fact that patients are forced to wait for long periods for surgery in other hospitals.

There was no functional OT in JSSH as the work of commissioning of OTs was under process (July 2022). The same has been discussed in para 5.2.8.2 (d) of Chapter V.

3.2.4.3 Non-functional equipment in OT

In CNBC, many surgical equipment were not functional as per details given in **Table 3.11**.

Table 3.11: Equipment in OT not functioning

Sl. No.	Name of equipment	Date of installation	Date from which not functional
1	Cystoscope	December-2007	October-2019
2	Laparoscope	September-2008	December-2019
3	Hormone Cutting and Cogulation device	September-2016	October-2020
4	Three Surgical Cautery	November-2007 (one) & April-2008 (Two)	October-2020
5	Arthroscope	June-2008	August-2017
6	Ortho Electric Drill System-5	December-2010	April-2020
7	Battery Charger	December-2010	April-2020
8	Drill Machine	Augu-2007	July-2018
9	Virectomy	September-2008	January-2018
10	Ultrasonic cleaner	March-2013	March-2019

However, the Hospital could neither make the equipment functional nor purchase new equipment in lieu of non-functional equipment as of August 2022. Lack of functional equipment could hamper the working of OTs.

Similarly, the Anaesthetic Gas Scavenging System (AGSS) in MGPS was not working since February, 2016 and it was made functional only in June, 2020 after repeated reminders by the Hospital and even after that, it failed to function consistently. After this, a meeting was held in November 2020 in which the firm expressed inability to fix AGSS system. CNBC had finalized procurement of AGSS (July 2022). CNBC in its reply (February 2023) confirmed that the AGSS is still not functional.

Recommendation 3.3: Government/Hospitals should take immediate measures to lessen the waiting time for surgeries by providing more equipment and manpower and by distributing the patient load to all Health facilities and also by putting to use the infrastructure lying idle in some hospitals.

3.2.5 Lack of completeness of medical records

Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulations, 2002 requires the doctors to maintain medical records of patients in the prescribed format. These records are essential to measure effectiveness of care received by the patient for follow-up treatment as well as for legal purposes. Lack of properly maintained medical records would have an adverse impact on medical care provided to a patient, especially in cases of follow up or referral to higher facilities.

None of the test checked hospitals had computerised the medical records. The audit team checked medical records in respect of 100 patients who were discharged during January and February 2020 in selected Departments of selected Hospitals. It was noticed that patient occupation was not mentioned in the records of any hospital. In CNBC, it was not applicable, being a children hospital.

Name and signature of the doctor was not recorded in three *per cent* cases of LNH and 94 *per cent* cases in RGSSH. In CNBC, name of the doctor was not recorded in 99 *per cent* cases and patients left hospital without permission in four *per cent* cases.

3.2.6 Patient Satisfaction Survey not conducted

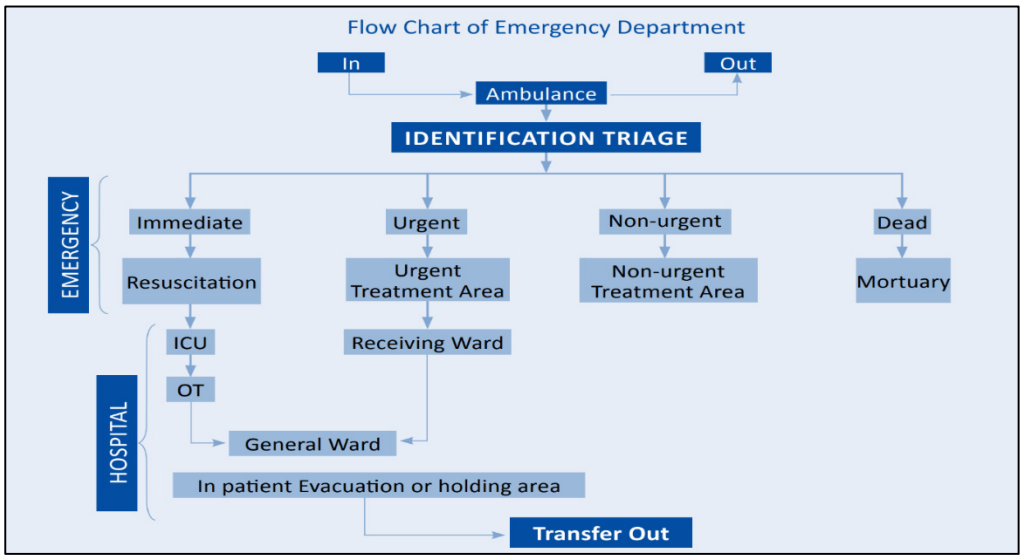
NHM Assessor's Guidebook requires hospitals to conduct Patient Satisfaction Survey of Indoor Patients on a monthly basis. Patient satisfaction is a measure of success of the services being provided by the hospitals. It was noticed that no patient survey was conducted during the period 2016-17 to 2020-21 in LNH and RGSSH. Thus, these hospitals were not in a position to understand the needs of their patients for improvement in its services. LNH later introduced patient satisfaction survey in the year 2022.

During the course of the audit, Patient Satisfaction Survey of 109 IPD patients of four selected hospitals (10 - JSSH, 10 - RGSSH, 66 - LNH and 23 - CNBC) was conducted. Out of the 23 patients surveyed in CNBC, 74 *per cent* patients stated that the doctor visited only one or two times in a day, 65 *per cent* of patients stated that they were not informed about their rights and responsibilities and 22 *per cent* stated that their complaints were not promptly attended to and the behaviour of hospital staff was not dignified and respectful. No significant shortcomings were reported in the other three hospitals.

3.3 Emergency Management

The goal of Emergency services is to provide treatment to those in need of urgent medical care, with the purpose of satisfactorily treating the malady, or referring the patient to a more suitably equipped medical facility. As per IPHS, 24x7 operational emergency with dedicated emergency room shall be available with adequate manpower in all the District Hospitals. Emergency should have mobile X-ray/laboratory, side labs/plaster room and minor OT facilities besides separate emergency beds.

Chart 3.4: Flow Chart of Emergency Department



3.3.1 Emergency facilities in hospitals

Out of the four hospitals selected for audit, in LNH, 25 beds were available in Causality and 142 beds in the Emergency wards. LNH is also managing a Disaster Ward of 50 beds to meet additional demands. Apart from these, LNH was also managing Sushruta Trauma Centre (STC) to treat victims of road accidents. CNBC and RGSSH had 12 and 10 emergency beds respectively.

Audit observed that in LNH, five[15] out of 20 essential drugs for managing Emergency services were not available during 2016-17 to 2020-21. Further, Mobile X-ray unit, as required under IPHS Guidelines was also not available during the above period. Besides, two minor OT tables and one ceiling light were not functioning in the Emergency OTs since August 2019 which were not found replaced/repaired. Three[16] out of 14 essential equipment as required under NHM Assessors Guidebook were not available in the Causality block. There was also no separate triage area in the Causality of LNH.

JSSH did not provide Emergency Services during the audit period. JSSH replied (December 2022) that it has started Emergency services at basic level for Cardiology, Nephrology and Neurology from 8 AM to 4 PM. RGSSH provided Emergency Services only to patients pertaining to their super speciality departments and refers other patients to nearby hospitals.

Seven[17] out of 20 essential medicines were not available in the Emergency of RGSSH during the audit period.

In CNBC, the annual emergency bed occupancy ranged from 129 *per cent* to 142 *per cent* during 2016-17 to 2019-20 while it was 92 *per cent* and 79 *per cent*

[15] Ampicillin, Inj. Carbopost, Inj Hydralazine, Methyldepa, Nifedipine
[16] Multiparatorch, HIV Kit, Laryngeal Mask Airway
[17] Ampicillin, Inj. Carboprost, Inj. Fortwin, Methyldopa, Pheniramine maleate, Poyvalent Snake Venom and Ringer Lactate

in 2020-21 and 2021-22 respectively. A bed occupancy of more than 100 *per cent* indicates that the number of beds available is inadequate which may hamper services to the needy in emergency.

Thus, complete complement of drugs and equipment were not available in the Casualty/Emergency of LNH, CNBC and RGSSH which may hamper the ability of these hospitals in providing critical care to those brought for emergency treatment.

Table 3.12: Availability of Emergency services as per IPHS[18] in test-checked hospitals

Particulars	LNH	CNBC	RGSSH	JSSH
Availability and functioning of Emergency OT	Yes	Yes	No	No
Availability of infrastructure hospital Emergency ward	Yes	Yes	Yes	No
Availability of infrastructure relating to trauma ward such as Bed capacity, machinery & equipment etc.	Yes	Yes	Yes	No
Availability of triage procedure to sort patients	Yes	Yes	Yes	No
Availability of emergency laboratory services	Yes	Yes	No	No
Availability of blood bank in close proximity to emergency department	Yes	Yes	Yes	No
Availability of mobile X-ray/ laboratory, side labs/plaster room in Accident and Emergency Service	Mobile X-ray unit not available	Yes	Yes	No
Availability of Emergency Operation Theatre for Maternity	Yes	Not applicable	Not applicable	Not applicable
Availability of Emergency Operation Theatre for Orthopaedic Emergency, Burns and plastic and Neurosurgery cases round the clock	Neurosurgery Not available	Burns and plastic and Neurosurgery Not available	No	No
Availability of facilities for Accidents and emergency services including poisoning and Trauma Care	Yes	No	No	No
Availability of separate provision emergency ward for examination of rape/sexual assault victim	Yes	No	No	No
Availability of sufficient separate waiting areas and public amenities in emergency ward for patients and relatives.	Yes	Yes	Yes	No
Availability of emergency protocols in emergency ward.	Yes	Yes	Yes	No
Availability of disaster management plan in emergency ward.	Yes	Yes	Yes	No

Note: Emergency services were not available in JSSH. Further, JSSH and RGSSH are super speciality hospitals and CNBC is a child hospital.

Source: Joint physical inspection reports, replies/records provided by hospitals

Government did not offer any comment in its reply dated 13 December 2023.

Recommendation 3.4: Hospitals should strengthen the Emergency services and ensure availability of essential medicines and equipment at all times and increase the number of beds in line with demand.

[18] IPHS 2012, Guidelines of District hospital (101-500 bedded) used.

3.3.2 Functioning of Sushruta Trauma Centre under LNH

Sushruta Trauma Centre (STC) generally treats victims of road accidents and the financial and administrative matters are dealt by LNH. Deployment of manpower in STC is under the purview of HOD of respective Departments such as Medicine, Surgery, ENT, Orthopaedics, Radiodiagnosis, Anaesthesia etc. of LNH.

Audit noted that Senior Residents (Medicines) were not posted in STC despite having a sanctioned strength of four (March 2022). Audit noted that senior residents were deployed on emergency duty from LNH during day time only.

Government replied (November 2022) that LNH has posted one SR (Medicine) to STC.

3.3.3 Intensive/Critical Care Unit (ICU)

The ICU provides intensive care to patients in critical conditions of various complications. All the test checked hospitals provide ICU services. However, the following issues were noticed in the functioning of ICUs:

Audit noted that in ICU of Medicine Department of LNH, out of 12 ECG machines, five ECG machines were not functioning (March 2020) and one ECG machine went missing (July 2020). Case for missing ECG was filed (February 2021). However no further information was available with the hospital. After outbreak of Covid 19 (March 2020), 13 new ECG machines were procured during April 2020 to October 2021.

Five Bipap[19] Machines available in ICU were not functional (March 2020), though 11 new machines were purchased and provided during July to November 2020. One Defibrillator was not functional (October 2020) and new defibrillator was purchased in February 2021.

Further, all the three Transport Monitors installed in March 2017 were not working since December 2021 and required maintenance and Treadmill Test Machine was not working since September/October 2019 and these were not replaced (as of July 2022).

Thus, it is evident from above that ICU department was short of functional equipment viz. ECG machines, Transport monitor, and Bipap at the outbreak of covid.

Government accepted (November 2022) the facts and intimated that the ICU is being upgraded with new advanced equipment.

3.3.4 Delay in maintenance of Medical Gas Pipeline System in CNBC

Maintenance of Medical Gas Pipeline System (MGPS) in CNBC was awarded to an agency for the period from February 2019 to April 2021. As per the

[19] Bipap machine is used for pushing air into lungs of those patients who have difficulty in breathing.

contract agreement, the agency was to ensure uptime of the equipment for at least 98 *per cent* calculated on quarterly basis. Penalty was leviable for failure to meet the targeted uptime at the rate of ₹ 5000 per one *per cent* increase in downtime in respect of each part of the equipment. Further, on any single occasion, the downtime of equipment should not exceed 72 hours except for Oxygen and Vacuum system for which the maximum downtime was three hours failing which a penalty of ₹ 2000 per day was leviable.

Scrutiny of Performance report of the agency revealed that uptime of the equipment during nine quarters from February 2019 to April 2021 in respect of oxygen ranged from 80 *per cent* (5th quarter i.e. Feb 2020 to April 2020) to 96 *per cent* (2nd quarter i.e. May 2019 to July 2019). Similarly, the agency also failed to limit the downtime for the oxygen leakage and vacuum leakage (within three hours on each occasion) during the above period on 46 occasions when the downtime exceeded three hours. The downtime ranged up to seven days on one occasion (5th quarter - Feb 2020 to April 2020) for oxygen leakage. Both equipment/systems are very important for smooth functioning of hospitals, especially in OTs and for patients with respirational distress. Although penalty under the contract was levied for these failures, nothing can adequately compensate the distress faced by the Hospital and patients, especially during Covid-19.

Government did not offer any comment in its reply dated 13 December 2023.

3.3.5 State Rapid Response Teams instructions not followed

In the wake of the COVID pandemic, Delhi Government had constituted (March 2020) a State Rapid Response Team (RRT), to ensure that prompt adequate emergency preparedness and appropriate response structure are put in place to tackle the outbreak. The main functions and responsibilities of RRT were (i) to verify any report of disease outbreak in the State, (ii) notify and activate Cluster Containment Plan, (iii) to carry out outbreak investigation (iv) to propose and plan appropriate measures for containment of epidemics to the State Disease Surveillance Unit (SSU) and response Committees, (v) to participate actively in the implementation of epidemic prevention and control strategies, and (vi) to provide technical support to the District Surveillance Units (DSU) so that, the outbreaks can be quickly controlled and number of people affected can be reduced.

Audit observed shortcomings in the functioning of RRT as well as a total disregard for its instructions/suggestions by various agencies/institutions. After its constitution, the RRT met only five times, all in 2020 and no meeting was held in 2021 and 2022. In its meetings, RRT had given suggestions such as strengthening of active surveillance in containment zones for making decisions regarding mitigation required, analysis of testing reports of all districts at State Integrated Disease Surveillance Programme (IDSP), adoption of ICMR testing strategy, preparation of specific SOP for transfer and management of hypoxic

patients in community etc. However, Audit found no evidence that any of these suggestions were put into action.

Thus, activities suggested by RRT which could have helped in better management of COVID outbreak were not implemented which defeated the purpose of constituting RRT.

Government did not offer any comment in its reply dated 13 December 2023.

3.3.6 Death Audit Committee

In view of outbreak of COVID pandemic, Delhi Government had constituted a Death Audit Committee to audit each and every death in which the patient was COVID positive in government and private hospitals of NCT of Delhi. All government and private hospitals were directed to report all such deaths to the Committee along with a copy of case sheet for death audit. Death audit could have provided valuable inputs in refining treatment protocols for the pandemic so as to reduce mortality rate.

It was also noticed that Death Audit Committee did not analyse any case of COVID death during the period January to December 2021. From the records furnished to audit, (January 2022 to April 2022), it was observed that out of 938 deaths reported, only 684 deaths were analysed by the Committee. In respect of remaining 254 cases (27.07 *per cent*) Case sheets of Covid deaths were not furnished by the hospitals concerned. Further, the daily reports of Death Audit Committee were not being utilized by the Health Department to chalk out strategy/mechanism for better management of Covid cases, thus defeating the very purpose of constitution of the Committee.

Government did not offer any comment in its reply dated 13 December 2023.

3.3.7 Preparation for disasters

As per Disaster Management Act (DMA), 2005 the Department has to operationalize medical response plan and deployment of Quick Response Team (QRT) during any crisis (earthquake, fire, flood, building collapse etc.) to mitigate the suffering and provide quality emergency medical response and care to save lives and minimize the effect of injuries. In compliance of DMA, Disaster Management Cell, DGHS does the coordination among the nodal officers identified in hospitals/ CDMO offices. It has to conduct regular mock drills or exercise to keep the staff trained and well prepared for any untoward incident so that they can handle the situation efficiently and minimise the casualties.

3.3.7.1 Hospital Disaster Management Plan not prepared by the hospitals

As per Disaster Management Act 2005, each hospital (all government hospitals and private hospitals) had to prepare Hospital Disaster Management Plan (HDMP) for responding effectively to any disaster or disaster situation. DGHS issues SoP for Medical response in Emergency to 58 hospitals under the

Department of Health and Family Welfare, Delhi and other public hospitals managed by different administrative units. As per the SoP, hospitals were to keep the HDMP updated and maintain disaster cupboard keeping in perspective, the number of cases that can be managed in crisis situation as per surge capacity[20]. Audit noted that no mechanism was put in place by DGHS to ensure that requisite action circulated vide above SoP was initiated by the respective hospitals.

However, on scrutiny of the records of DGHS, Audit noted that no hospital had prepared HDMP during the period 2016-17, 2018-19, 2019-20 and 2020-21 though some hospitals had prepared HDMP in the years 2017-18 (35 hospitals) and 2021-22 (five hospitals).

3.3.7.2 Inadequate training to health staff

To enable staff attached with disaster management related work to perform their functions and duties efficiently and effectively, DGHS conducts trainings for medical/para medical staff each year. Though Disaster Management Cell of DGHS had prepared annual training calendar for the year 2018-19 and 2019-20, these were not approved but some trainings were conducted. DGHS office neither prepared any training plan for the years 2020-21 to 2021-22 nor conducted any training. Disaster Management Cell also did not have any database of trainees to check whether the same persons are being provided training multiple times or all employees are covered.

In response, the DGHS office stated (June 2022) that some trainings could not be imparted due to unavailability of trainees and other administrative issues. The training program for the period 2020-22 could not be prepared due to COVID-19 pandemic. The fact remains that adequate training was not provided to the staff.

3.3.7.3 Quick Response Teams in healthcare establishments

DGHS office had instructed all the healthcare establishments (government as well as private) to maintain Quick Response Team (QRT) on rotation basis every month for field deployment in times of acute need according to the number of beds (up to 100 beds – one QRT, up to 200 beds – two QRTs and more than 200 beds – three QRTs). As part of the preparedness relating to response in crisis situations, all Chief Medical Officers (CDMOs) were to maintain three QRTs on rotation basis every month from their pool of human resource and ensure maintenance of such teams in all healthcare establishments in the district. The respective institution should maintain emergency kit per team and should have tested SOP for responding to the direction of CDMO, reaching the site of crisis and provision of organized medical care.

[20] Surge capacity is the ability of a health service to expand beyond normal capacity to meet increased demand for clinical care.

As per SOP, all hospitals have to send the details of QRTs on regular basis to DGHS latest by 5th of every month electronically, but this information was neither provided by the hospitals/ institutions nor sought by the Disaster Management Cell. Information in respect of 45 out of 59 Government Hospitals provided by the Disaster Management Cell revealed that 34 out of these 45 hospitals did not maintain any QRT and four hospitals did not have the required number of QRTs. Further, only one hospital had deployed the required staff in the team.

The Department stated (June 2022) that details of QRTs were sought from hospitals regularly but due to COVID-19 pandemic and involvement of hospitals/CDMOs machinery for management of COVID, details of QRTs were not received and updated. Reply is not acceptable as hospitals have not shared details of QRTs during the Non-COVID period and same was also not updated by the cell.

3.3.7.4 Hospital safety during disasters

National Disaster Management Authority (NDMA), considering the safety of hospitals for human life, has formulated the National Disaster Management Guidelines on hospital safety in 2016 so that hospitals are not just better prepared but also fully functional immediately after a disaster and are able to respond without any delay. The guidelines were statutory in nature and were required to be adhered to by all stake holders. A quarterly report was to be sent to NDMA on implementation of these guidelines.

There were 59 Government Hospitals in Delhi which had to furnish the above details quarterly to DGHS. However, none of these hospitals submitted the details during the years 2016-17 to 2021-22. DGHS also did not take up this issue with the hospitals concerned for furnishing these details for onward submission to NDMA.

It was also noticed that as per the above guideline of NDMA, each state had to constitute a Hospital Safety Advisory Committee at State level for preparation and submission of State Action Plan for implementation of hospital safety guidelines but no Hospital Safety Advisory Committee was constituted by GNCTD.

The Department stated (June 2022) that all government hospitals in Delhi did not come under its administrative control. It received NDMA instructions in 2019 and the same were circulated to all the hospitals for compliance. Also, the health machinery was busy due to COVID-19 pandemic. The reply is not acceptable as being the nodal department, DGHS is responsible for monitoring and supervising disaster management related activities in all health establishments in Delhi, as envisaged in the above guidelines.

Government did not offer any comment in its reply dated 13 December 2023.

***Recommendation 3.5*: *Government should ensure that each hospital prepares a Disaster Management Plan and maintains Quick Response Teams*.**

Recommendation 3.6: Government should ensure regular training to health staff to deal with disaster related activities.

3.4 Maternity Services and Childcare

Out of the four selected hospitals, only LNH[21] provides Maternity and Childcare services. The Hospital also has 300-500 patient attendance per day in OPD and 24 hour emergency and One Stop Centre services[22]. Audit examined the records of Obstetrics and Gynaecology Department in LNH to assess the Maternity and Childcare services being provided.

3.4.1 Shortage of Staff

As per the Maternal and Newborn (M&N) Toolkit 2013, for providing best possible care during pregnancy, delivery and postpartum period with dignity and privacy to clients, an adequate number of competent Human Resource (HR) is required.

It was noticed that there was no Anaesthetist and Paediatrician posted in Maternity Wing of the hospital and they were on call basis as and when required. Further, only 51 doctors were available in the Department of Gynaecology against the sanctioned 67 posts. As per the Nursing staff norms of Indian Nursing Council, one nurse is required for every six beds for general ward and one nurse per bed in the case of ICU. It was noticed that there was acute shortage of 34 to 60 *per cent* nurses in the Wards and 52 to 70 *per cent* nurses in the High Dependency Unit of Gynaecology Department during 2016-17 to 2020-21.

3.4.2 Antenatal and Postnatal Care and Deliveries

Antenatal care (ANC), Intra-partum care or delivery care (IPC) and Postnatal care (PNC) are major components of facility based maternity services. ANC is the systemic supervision of women during pregnancy to monitor the progress of foetal growth and ascertain the well-being of the mother and the foetus. IPC includes safe delivery in Labour Room and Operation Theatre. PNC includes medical care of mother and new born especially during 48 hours post-delivery, which is considered critical.

Under ANC component of maternity care, pregnant women are provided at least four antenatal check-ups which include physical examination and laboratory investigation to monitor the pregnancy for signs of any complication for prompt management.

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[21] CNBC is a children hospital and RGSSH and JSSH provides selected services of super speciality treatment

[22] One Stop Centre (OSC) provides multiple facilities and services under one roof to rape victims

LNH could not provide the mechanism adopted to track the pregnant women for ensuring ANC and did not maintain the details of ANC provided to all registered pregnant women. However, the details of pregnant women monitored for ANC at State level under Central Scheme has been provided in Chapter 7. The Hospital also did not introduce Radio Frequency Identification Tag System for the new born.

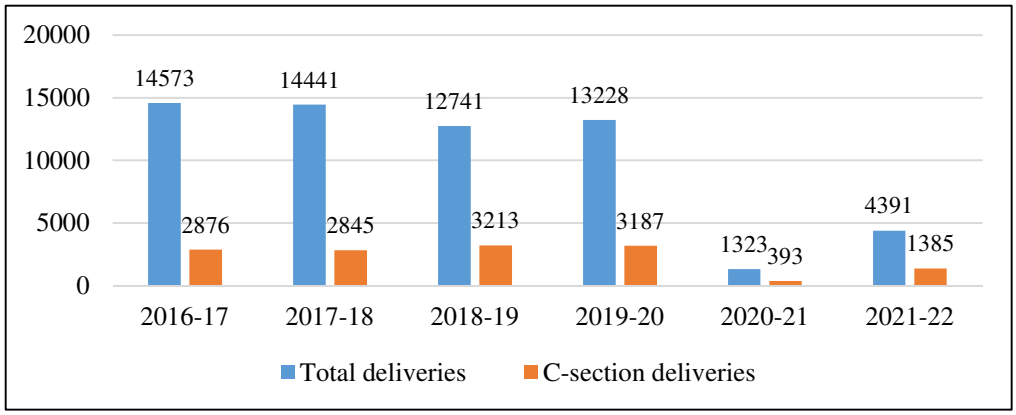
Details of total deliveries and C-section deliveries carried out during 2016-17 to 2021-22 is given in the **Table 3.14**.

Table 3.14: Deliveries carried out during 2016-17 to 2021-22

Year	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Total
No. of deliveries	14573	14441	12741	13228	1323	4391	60697
C-section deliveries	2876 (19.73%)	2845 (19.70%)	3213 (25.22%)	3187 (24.09%)	393 (29.71%)	1385 (31.54%)	13899 (22.90%)
No. of ANC	8519	29607	21938	22378	1607	20521	104570 (43.07%)
No. of IPC	8821	8751	7250	6854	511	4391	36548 (60.21%)
No. of PNC	11697	11596	10463	10041	931	4391	49119 (80.92%)

Source: Reply of LNH

Chart 3.5: Total deliveries Vs C-Section deliveries in LNH



During the period 2016-17 to 2019-20 (except Covid years), C-Section deliveries ranged from 19.73 *per cent* (2016-17) to 25.22 *per cent* (2018-19). Further, the number of ANC, IPC and PNC was also less as compared to the actual number of deliveries carried out in LNH.

3.4.3 Stillbirths

The stillbirth rate is a key indicator of quality of care during pregnancy and child birth. Stillbirth and/or intrauterine foetal death is an unfavorable pregnancy outcome and is defined as complete expulsion or extraction of the baby from its mother with no sign of life. High stillbirth rate is the sign of badly managed antenatal care/delivery process in the hospital. As per NFHS-5 (2019-21), average stillbirth rate of Delhi was 0.8 per 100 pregnancy outcomes.

Audit observed that stillbirth was 1,238 against 60,697 deliveries during the period under report in the LNH as given in **Table 3.15**.

Table 3.15: Stillbirths

Year	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Total
No. of deliveries	14573	14441	12741	13228	1323	4391	60,697
No. of stillbirth	302	297	228	238	31	142	1,238
Percentage	2.07	2.05	1.80	1.80	2.34	3.23	2.04

The average stillbirth rate in LNH was higher than the average stillbirth rate of Delhi.

Government stated (November 2022) that most of the stillbirth cases in LNH are referral cases from other centres.

3.4.4 Review of maternal and neonatal deaths

IPHS prescribes that all mortality that occurs in the hospital shall be reviewed on a fortnightly basis. Audit observed that 192 maternal deaths occurred during the period 2016-21. LNH stated that the review of maternal death was conducted monthly. However, it did not provide records of death review. Further, there should be a Committee for reviewing New-born death and it should meet at least once in a month or immediately after a child death is reported. It should prepare a report in such a manner that it should create knowledge and experience for use in future so as to avoid similar incidences. However, it was noticed that no such committee was functioning in the LNH during the period of audit. The hospital intimated that it has constituted the committee in April 2022.

Resultantly, Audit could not determine the reasons of maternal/neonatal deaths nor review the Committee's suggestions for preventing maternal/neonatal deaths.

3.4.5 Availability of essential and functional equipment

IPHS prescribes 31 types of essential equipment for Labour ward, Neonatal and Special New-Born care unit. Audit noted that three equipment namely, Cardiac Monitor (baby), CPAP machine and Nebulizer (baby) were not available in LNH.

Several equipment viz. one Mobile Examination Light unit (out of two purchased in December 2016), one CO_2 Insufflator (out of two installed in August 2016) and Weighing Machine for New-born (received in January 2017) of Gynaecology OT were not functioning as of date (July 2022). Further, five out of seven Vacuum extractors, six out of 10 CTG machines and all the five Infusion pumps in Clear Labour Room of Gynaecology Department were also not in working condition.

3.4.6 One Stop Centre (OSC)

The aim of One Stop Centre (OSC) was to provide multiple facilities and services under one roof to rape victims. As per the SoP of OSC prescribed by the GNCTD, it should have five Counsellors, five Senior Resident Doctors, five Staff Nurses and five Nursing Orderlies.

From April 2016 to January 2022, 1,169 cases were reported in the OSC in LNH which included 285 cases of sexual assault (24.37 *per cent*). Audit noted that LNH did not have any dedicated staff and it was being managed by the Senior Resident Doctors, Nursing Staff and Nursing Orderlies of Causality of the Department of Obstetrics and Gynaecology and Counsellor was called as and when required from the Rape Crisis Cell under Delhi Commission for Women (DCW).

Department stated (November 2022) that the average case load of one stop centre is very low and staff was deployed as and when required.

The fact remains that LNH could not set up OSC as per the norms.

Recommendation 3.7: LNH should review the child death cases on regular basis and should keep full records of ante-natal care. It should strengthen the One Stop Centre by providing staff.

3.5 Radiology Services

As per IPHS, there should be three X-ray Machines, one dental X-ray machine, and four colour Doppler ultrasound machines in a 500 bed district hospital. One Portable ultrasound, one CT scan machine and one MRI machine are desirable for a district hospital. One each of 500MA X-ray machine, mammography unit, C-Arm and Echocardiogram were to be provided as per need.

3.5.1 Availability of Radiology Equipment and Services

LNH provides all the above essential and desirable services except Dental X-ray. CNBC and RGSSH did not provide MRI services and JSSH and RGSSH did not provide dental services. The radiology equipment installed in Radiology Department of four selected hospitals are as shown in **Table 3.16**.

Table 3.16: Radiology equipment in test checked hospitals

Name of the equipment	Hospitals			
	LNH	CNBC	JSSH	RGSSH
MRI Machine	1	Nil	1(under PPP)	Nil
X-Ray	9	4	2	1
Colour Doppler Ultrasound Machine	9	3	2	1
CT Scan	3	1	1(under PPP)	1
Mammography	1	Nil	Nil	Nil
Dental X-Ray	Nil	1	Nil	Nil

Source: Replies of hospitals

Audit noted that the available X-Ray and Colour Doppler Machines were not in proportion to the bed strength since the requirement under IPHS was for a 500

bedded hospital whereas LNH had more than 2000 beds. Further, one X-Ray Machine and one Colour Doppler Machine in LNH were not functional. As a result, there was a waiting period of 2-3 months for Ultrasound, 15 days for MRI and seven days for CT Scan for outdoor patients of LNH.

In CNBC also, one X-Ray machine (since February 2022), one CT Scan Machine (since November 2021) and two Colour Doppler ultra sound machines (since July 2017/May 2018) were not functional and the waiting period for ultrasound was more than one and half months.

CNBC stated (December 2022) that they are in process of procurement of Ultra Sound machine and recruitment of Radiologist.

Government replied (November 2022) that Radiology services in LNH are being upgraded with new CT Machine. Further, Government is providing the facility through other diagnostic centres under Delhi Arogya Kosh for reducing the waiting period. However, waiting period in hospitals shows that benefits under the scheme of Delhi Arogya Kosh were not being availed by all the needy patients.

In spite of such long waiting periods for getting tests done, the available equipment were grossly underutilised in CNBC, RGSSH and JSSH as detailed in **Table 3.17**.

Table 3.17: Utilisation of diagnostic equipment

Name of service	Total Installed Capacity	Average No. of diagnosis conducted[23]					
		2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
CNBC							
X-Ray (4)	330 per day	123	112	105	109	83	NA
Ultrasound	35 per day	11	3	2	7	9	
CT -Scan	12 per day	4	3	4	3	4	
RGSSH							
X-Ray	70 per day	12	26	34	35	18	32
Ultrasound	50 per day	9	0	14	23	3	16
CT Scan (w.e.f November 2017)	26 per day	NA	1	7	14	5	11
JSSH							NA
X-Ray	70 per day	57	55	35	27	12	
Ultrasound	30 per day	16	17	8	1	5	

Source: Information provided by the hospitals.

Shortage of staff could be one of the main reasons for underutilisation of available diagnostic facilities as Audit observed that there was shortage of Radiologists and Radiographers in above three hospitals. There was no Radiologist available in CNBC and JSSH against sanctioned strength of three

[23] 300 working days taken for calculation

and eight respectively during the period of audit and one Radiologist/Consultant was deputed thrice a week to CNBC from GTB hospital since January 2018. In RGSSH, only two Radiologists were available against four sanctioned as of March 2021 which decreased to one as of September 2022.

In RGSSH, no Radiographer was posted and contractual staff were deployed for radiography duty. Three Radiographers were posted in JSSH against a sanctioned strength of 25 as of March 2022. However, CNBC had full complement of seven Radiographers. In LNH also, only 28 Radiographers were available against a sanctioned strength of 37 during the period from 2016-17 to 2020-21 which was later filled in 2021-22.

Government stated (December 2022) that procurement of an additional Digital Radiography Machine/high end USG Doppler Unit and deployment of associated manpower in CNBC will decrease the waiting period. It also stated that the process for recruiting Radiographers has been initiated in RGSSH.

Other shortcomings noticed in the functioning of Radiology Departments in the four selected hospitals are discussed in the succeeding paragraphs.

3.5.2 Training to staff not provided

Two[24] of the four selected hospitals had not organized any regular periodic training on radiation safety to the staff working in the Radiology Department during the period of audit and in JSSH, only six training programmes[25] were conducted during the audit period.

3.5.3 Compliance to AERB guidelines

Atomic Energy (Radiation Protection) Rules 2004 stipulates that all licensees should appoint a Radiological Safety Officer (RSO) who shall carry out routine measurements and analysis of radiation and radioactivity levels and prepare emergency plans for responding to accidents. However, there was no RSO appointed in LNH, RGSSH and JSSH.

Further, all the staff associated with operation of various diagnostic machines in Radiology department were to be registered for issue of Thermoluminescent Dosimeter (TLD) badges issued by BARC for measuring the radiation effect on the staff. It was noticed that TLD badges were not provided to the technicians of Radiology Department of RGSSH.

Health check-up including Blood cell count and General physical examination were also required to be conducted and recorded for all the radiation workers but no health check-up was conducted in LNH and RGSSH. In JSSH, health check-up of only one employee was conducted.

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[24] LNH and RGSSH

[25] Basic life support (BLS), BMW rules, Radiation safety, Infection control practices, PPE kit training, Needle stick injury.

Government did not offer any comment in its reply dated 13 December 2023.

Recommendation 3.8: Government should strengthen the radiology facility to reduce the waiting time for tests. Vacant post of radiology staff may be filled. Hospitals should adhere AERB guidelines to ensure safety of patient and staff.

3.6 Delivery of Auxiliary and Support Services

3.6.1 Ambulance Services

Centralised Accident and Trauma Services (CATS) was established as a Society in the Department of Health and Family Welfare, GNCTD in June 1989. It provides free ambulance service in Delhi for accident and trauma victims.

3.6.1.1 Response time for Ambulance services

With the aim of improving response time and availability of ambulances, CATS had outsourced (August 2019) the operation and maintenance of CATS Ambulance Services for a period of three years which was further extendable for two years on annual basis based on performance. A fleet of 200 CATS Ambulances[26] was handed over to an agency to provide free ambulance service in Delhi.

As per the agreement, the agency had to keep the response time within 15 minutes in 80 *per cent* of the calls and within 25 minutes in the remaining calls. The CATS could not calculate the average response time of ambulances up to December 2019 even though it envisioned to provide better response time to the victims. The average response time during the months from January 2020 to July 2020 ranged between 28 to 56 minutes and improved to 15 minutes as of September 2022. There were 49 instances in the selected month of February 2020 where calls were refused by the ambulances. Reasons mentioned in the records were absence of ambulance staff in the ambulance, unavailability of oxygen in the ambulance, unfit driving condition of ambulance etc.

3.6.1.2 Private Ambulances not empanelled for hiring in Emergencies

To meet the increasing calls for ambulance service during COVID19 in Delhi, GNCTD decided to hire 265 ambulances and 250 taxis/Cabs for vaccination purpose. The actual requirement of the hired ambulances/cabs was reviewed again (October 2021) and it was decided to hire 135 Ambulances and 320 Cabs. The tenure of hired 135 ambulances was further extended up to 31 March 2022.

Audit noted that GNCTD had not empanelled any agency for hiring of additional ambulances in emergencies. In the absence of any guidelines/ direction, ambulances were hired randomly by CATS.

[26] 93 Patient Transport Ambulances (PTA), nine Advanced Life Support Ambulances (ALS) and 98 Basic Life Support Ambulances (BLS)

3.6.1.3 Shortage of functional Ambulances

As per the agreement with the outsourced agency, the agency has to keep an active fleet of 90 *per cent* of the CATS Ambulances with 100 *per cent* uptime. Details of ambulances handed over to the outsourced agency and average number of call worthy ambulance during the period from January 2018 to December 2021 are given in **Table 3.18**.

Table 3.18: Availability of Ambulances

Year	Average no. of CATS Ambulances with agency	Average no. of call worthy Ambulances	Percentage of call worthy Ambulances (in *per cent*)
2018	265	227	86
2019	265	168	63
2020	229	169	74
2021	229	213	93
2022	229	217	95

Source: Data provided by CATS

As can be seen, the agency could not keep up to 90 *per cent* of the ambulances functional during 2018-20, as required in the agreement, due to which CATS was unable to attend all calls as discussed in para 3.6.1.1.

3.6.1.4 First response Vehicle.

GNCTD had approved (February 2018) introduction of First Response Vehicles (FRV) using Motor Cycles to provide medical assistance to needy persons especially in congested areas. As a Pilot Project, 16 FRVs were purchased in May 2018 at a cost of ₹ 12.84 lakh and deployed from February 2019 covering East, Shahdara and North East Districts. FRVs were operated by regular CATS employees.

Audit noted that these FRVs were later withdrawn in March 2020 due to shortage of staff and were lying idle (June 2022).

Picture 3.5: FRVs lying idle

No efforts were made to make these FRVs operational. Thus, the pilot project envisioned for improving the response time in congested areas and slums remained non-functional since March 2020. Besides, no assessment was done to ascertain the utility and impact of pilot project. Expenditure of ₹ 12.84 lakh was thus rendered infructuous.

3.6.1.5 Monitoring of Ambulances by CATS

As per the agreement of CATS with outsourced agency, CATS may inspect the ambulances to ensure compliance of service level agreements and other tender requirements. CATS management conducts monthly inspection of ambulances to assess availability of essential equipment in the ambulances managed by the private agency as per the ALS, BLS and PTA standards. Test check of Inspection Reports revealed that the ambulances were not fitted with functional essential equipment and devices[27]. CATS deducted penalty from the payment to the firm against the shortcomings but it was noticed that the irregularities continued in subsequent inspections also. Thus, CATS could not ensure availability of all essential equipment/devices in the Ambulances.

3.6.1.6 Failure to procure two Advanced Life Support Ambulances for infant transportation

Delhi State Health Mission had approved (February 2018) procurement of two ALS Ambulances for infant transportation. Director of Family Welfare was required to put up a detailed proposal for operation of these two Ambulances in Delhi through CATS. Besides, fund amounting to ₹ 56 lakh was approved (August 2018) by DSHM for purchase of these Ambulances.

Audit, however, noted that ALS Ambulances for infant transportation were not procured by CATS as of June 2022, thus depriving needy infants of specialised patient transport.

In its reply, CATS stated (January 2022) that approval letter was received from the DSHS, but the funds were not released for purchasing ambulances.

3.6.1.7 Location services of the caller to CATS control room not established

DSHM had approved (February 2018) ₹ 2.5 crore for integrating location services of the caller to CATS control room under 'Support to CATS under NUHM Innovations' so that the ambulances can reach the location swiftly and accurately. Audit noted that no action in this regard was taken by CATS.

In its reply, CATS stated (January 2021) that modern Control Room has been established in the year 2016, but did not provide any specific reply to the audit observation.

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[27] Cardiac monitor, Transport ventilator, Syringe pump, Glucometer, Ambubag, Wheel chair, Head immobilizer, Oxygen accessories, Portable oxygen delivery kit, Laryngoscope, B.P.Apparatus, Thermometer, Stethoscope, Forceps, Rescue tools, Blood transfusion sets, Pulse oximeters etc.

Government did not offer any comment in its reply dated 13 December 2023.

Recommendation 3.9: The fleets of CATS should be strengthened with enough call worthy ambulances equipped with required equipment and medicines.

3.6.2 Availability of Ambulance services/Mortuary vans in hospitals

As per the SOP for Ambulance services formulated by DGHS, the purpose of Ambulance services was to provide transport for the patients. As per SoP, every hospital should have a fleet of One Advance Life Support (ALS) Ambulance, one Basic Life Support (BLS) Ambulance, nine Patient Transport Ambulance (PTA) and five Hearse Vans.

The status of availability of ambulance service in test checked hospitals is given in **Table 3.19**.

Table 3.19: Availability of ambulances in hospitals

Health institutions	No. of ambulances	Availability of ambulance services 24X7
LNH	2 PTA	Available
CNBC	NA	NA
RGSSH	NA	NA
JSSH	NA	NA

It can be seen from **Table 3.19** that LNH had only two PTAs against the requirement of nine. LNH also had only two Hearse Vans against five. It did not have any ALS or BLS Ambulances. In spite of availability of Hearse Vans, LNH was using PTAs for carrying dead bodies to mortuary as also to transport store items, wheel chairs, etc. The Staff car drivers were assigned the duty to run these ambulances. Other three test checked hospitals did not have any Ambulance or Hearse Van. One ALS Ambulance procured by RGSSH in January 2019 for ₹ 36.58 lakh was not put to use as it was not registered and was lying idle.

JSSH stated (July 2022) that the requirement of ambulance service was limited as the hospital was a Tertiary care super speciality hospital and there was no functional emergency in the hospital.

CNBC stated (March 2022) that the hospital was providing ambulance services through CATS.

The fact remains that these hospitals did not have ambulances and hearse vans as per SoP issued by DGHS.

Government replied (December 2022) that LNH has hired ten hearse vans and the process for purchase of hearse vans is in process.

3.6.3 Dietary Services

Department of Dietetics is a paramedical department which forms an integral part of every in-patients therapeutic care during their hospital stay. The IPHS stipulates that apart from the normal diet, the food supplied should be patient

specific such as diabetic, semi-solid and liquid and distributed in covered container. The quality of diet should be checked by a competent person on a regular basis.

The quality of Dietary services provided in the selected hospitals as compared against those prescribed under National Assessor's Guidebook for Quality Assurance in District Hospitals, MoHFW, GoI is given in **Table 3.20**.

Table 3.20: Dietary services in test checked hospitals

Particulars	LNH	RGSSH	CNBC	JSSH
Availability of dietary service	Yes	No*	Yes	No*
If available, in-house/ outsourced	In-house	Outsourced from Oct 2021	Outsourced	Outsourced from Dec 2022
Availability of Kitchen	Yes	Yes	Yes	NA
Availability of standard procedures for preparation, handling, storage and distribution of clean, hygienic and nutritious diet to the indoor patients as per their caloric requirement	Yes	Yes	Yes	NA
Availability of policy and procedure for regular quality checking of raw material, kitchen sanitation, cooked food etc.	Yes	Yes	Yes	NA
Availability of Quality testing of diet supplied in health facilities	No	No	No	NA
Evaluation of dietary services in health facilities	Not feedback taken from patients	No	No	NA
Dietetic research on menu planning, preserving nutritional values, storage of food items, modern methods of cooking, etc. was not conducted to improve the dietary services in the hospitals	Yes	Yes	Yes	NA

*RGSSH started dietary service from October 2021 and JSSH from December 2022.

Source-Data collected from the hospitals.

3.6.3.1 Dietary Services not provided by RGSSH and JSSH

IPD services were started in February 2015 in JSSH and in April 2016 in RGSSH and 14940 and 36,708 patients respectively were provided indoor treatment during the period of audit. RGSSH started the Dietary service from October 2021 and JSSH stated (December 2022) that the kitchen services have been started (June 2022) under the guidance of dietician.

Audit noted that in RGSSH all the patients were given similar diet thereby ignoring the distinctive dietary requirement of different categories of patients.

3.6.3.2 Shortage of staff and Dietician

As per Nutritional Therapy Guidelines issued by DGHS, GoI, there should be one Chief Dietician, one Sr. Dietician, One Dietician and six Assistant Dieticians for 750 bedded hospitals. Against this, there were no sanctioned

posts of Chief Dietician/ Sr. Dietician in LNH and only two Dieticians and six Assistant Dieticians were posted. Further, against the sanctioned strength of seven Head Cooks and 50 Cooks, only one Head Cook and two to three Cooks were posted during the audit period up to March 2021 which further declined to only one cook in 2021-22. Due to shortage of Cooks, 27 Nursing Orderlies assisted the Cooks in various kitchen works.

Similarly, CNBC, which is a 221 bedded hospital, requires one Dietician and two Assistant Dieticians. In CNBC, there was no Dietician available and only one Assistant Dietician was available after October 2019.

CNBC stated (August 2022) recruitment for one post of Dietician and Assistant Dietician was under process.

3.6.3.3 Absence of monthly inspection

Monthly Inspection of each ward was required to be conducted by the Dietician. However, no records, though called for, were provided to Audit in LNH and CNBC. Audit noted that diet feedback was being taken from the Sister-Incharge of the Ward concerned instead of patients.

3.6.3.4 Quality of food not monitored by the Government

It was noticed that the Government Food Inspector never checked samples of food being served in LNH and CNBC during the entire audit period. In LNH, Department of Food Safety, GNCTD had inspected the quality of food only once in December 2021. GNCTD stated (December 2022) that an audit team from Food Safety and Standards Authority of India (FSSAI) inspected the dietary and kitchen services in July 2022. However, the result of the inspection was not provided to Audit.

Recommendation 3.10: Government should fill the vacancies of Dieticians, cooks etc. in the hospitals. Hospitals should ensure minimum prescribed inspection of wards by Dieticians. Government should actively monitor the functioning of RGSSH and JSSH to ensure full-fledged Dietary Services in these hospitals.

3.6.4 Blood Bank Centres in Hospitals

Ministry of Health and family welfare, GoI, stipulates that health facilities are required to obtain approval from the state/Union Territory Licensing Authority for setting up Blood Storage Centre. The approval shall be valid for a period of two years from the date of issue unless sooner suspended or cancelled. An application for renewal will have to be made three months prior to the date of expiry of the approval.

Audit observed that the license for operation of Blood Bank, processing of whole Blood and preparation of its components in LNH expired on 31 December 2021 and it applied for renewal of the same, albeit with a delay of

more than two months[28], on 17 December 2021. However, the license was yet to be renewed as of July 2022.

Audit observed that the Blood Bank at RGSSH and JSSH had licence for storage of blood and its components only.

Although RGSSH had licence for storage of blood and its components only, it had procured equipment for separation of blood components for ₹ 1.21 crore during 2014-2017. RGSSH received license for blood collection, storage, and processing of whole human blood IP and or its components only in November 2021. However, it has not received licence for separation of blood components and the equipment procured during 2014-2017 was lying idle as of November 2022. It was also observed that out of total 2671 blood units procured/collected during the period under audit, 309 blood units (12 *per cent)* were discarded by RGSSH. This indicates that RGSSH neither regulated blood collection according to requirement nor transferred excess units available to other needy hospitals.

Similarly, in JSSH Blood Bank building was developed in 2016 at a cost of ₹ 1.15 crore. Audit noted that only blood storage facilitiy was available and other planned facilities for Blood Bank were not operational. JSSH replied (July 2022) that existing Blood Storage area was sufficient to meet the requirement of the hospital which was less than 2000 units per year. It also stated that after surgical and other OTs in the hospital become operational and if the requirement of blood exceeds 2000 units per year, the Blood Bank would be made functional.

However, the fact remains that the Blood Bank infrastructure was not utilised and it did not have the facility to collect and process blood and its components even after six years of its development.

Government stated (November 2022) that LNH holds a valid Blood Bank licence which is renewed for next five years. Further, it intimated that the delay in acquiring licence for the process of blood separation in RGSSH was due to shortage of qualified man power to run the Blood Bank. However, it remained silent on other issues.

As regards LNH, the reply is not acceptable as LNH had applied for renewal in December 2021 and same was renewed only in September 2022.

3.6.5 Bio Medical Waste Management

The Bio-Medical Waste Management Rules, 2016 (BMW Rules) framed by GoI *inter alia* lays down the procedures for collection, handling, transportation, disposal and monitoring of the BMW with clear roles for waste generators i.e. health care facilities and Common Bio Medical Waste Treatment Facility (CBMWTF). The Delhi Pollution Control Committee (DPCC) has been

[28] As per rule, the due date for application of renewal was 1 October 2021.

designated as Prescribed Authority to implement these rules in the National Capital Territory of Delhi.

As per Section 4 (g) of BMW Rules, all health care workers and others, involved in handling of BMW were to be provided training at the time of induction and thereafter at least once every year by the respective organisations. Rule 3C of BMW Rules stipulates that the hospitals generating BMW should obtain authorization from the DPCC and also send an Annual Report of quantity of BMW generated and disposed to the DPCC. Rule 4H of BMW Rules states that all health care workers and others involved in handling of Bio Medical Waste should be immunized against diseases including Hepatitis B and Tetanus.

Audit noted:

- shortfall in training imparted to healthcare workers by the test checked hospitals. LNH did not impart training to its staff during the years 2016-17 and 2017-18 and imparted training to only 48 to 59 *per cent* of total staff of about 2300 during the period from 2018-19 to 2020-21. CNBC imparted annual training to 27 to 91 *per cent* of more than 400 employees during the period from 2016-17 to 2020-21. RGSSH and JSSH imparted annual training to all its staff during the audit period.
- Further, LNH could provide Hepatitis B vaccination records of only 11 out of 27 health care workers involved in handling biomedical waste during the audit period. In RGSSH and JSSH, outsourced housekeeping staff were engaged and they were deployed on reshuffling basis and all the staff (RGSSH[29] and JSSH[30]) were not vaccinated against Hepatitis B/Tetanus.
- DGHS and hospitals failed to obtain timely authorisation for disposal of BMW from DPCC. In respect of test checked hospitals, LNH did not provide letter of authorization for disposal of BMW prior to 16 July 2019 to Audit. In respect of RGSSH, it did not obtain authorization for disposal of BMW waste from June 2016 onwards.
- Within one year of notification of BMW Rules, all organisations dealing with BMW were to establish a Bar Code system for bags or containers containing bio medical waste to be sent out of the premises or place for any purpose. However, it was noticed that the Barcoding system was introduced in RGSSH and JSSH in 2019 only, i.e. after almost three years.

[29] 61 *per cent* house keeping staff did not take a single dose of hepatitis B vaccine in 2021 and approximately 20 *per cent* of the housekeeping staff could not get complete dose of vaccination during the period 2017 and 2019

[30] 60 *per cent,* 20 *per cent*, 46 *per cent,* 17 *per cent* and nil of housekeeping staff engaged in bio medical waste were vaccinated against Hepatitis B in 2017, 2018, 2019, 2020 and 2021 respectively took vaccination against Hepatitis B. Similarly, 25 to 48 *per cent housekeeping* staff were not vaccinated against Tetanus during 2018 to 2021.

Government it its reply (December 2023) intimated that it has no comment to offer.

3.6.6 Infection Control Management

Health care associated infections are a major burden on patients, society and healthcare management. Efficient infection control programmes in health care facilities reduce the chance of infections spreading among patients and staff in the facility.

Infection Control Committees were functional in all the test checked hospitals. However, the Committee was constituted in March 2022 in RGSSH. Audit observed presence of stray animals in LNH premises. Compliance on restriction of foot wear in critical areas and visitors to isolation areas was weak as per NQAS assessment done in February 2022.

Proper pest control also forms part of infection control in hospitals. LNH and CNBC had outsourced pest control services during the audit period. Audit observed that RGSSH had engaged a pest control agency for only two years during the audit period from September 2019 to September 2021.

3.6.7 Grievance redressal system and display of Citizen's Charter in hospitals

As per NHM Assessor's Guidebook, there should be an effective system for redressal of grievances of patients which *inter alia* include periodic monitoring of disposal of grievances and follow-up by superior authorities as necessary. Complaint boxes are to be available at suitable places with process for grievance redressal and name of contact person properly displayed.

Test check of records in respect of complaints and grievances of patients revealed that these were received through various methods of online and offline modes such as Public Grievance Monitoring System portal, Chief Minister's Office (CM Janta Samwad), CPGRAMS, 1031 Helpline etc.

All the test checked hospitals had constituted Grievance Cells for attending to complaints and grievances of stakeholders but Grievance Redressal Committee was not constituted in three out of the four test checked Hospitals. Officer-in-charge of the Grievance Cell was dealing with complaint cases by forwarding the complaints to the Units/departments concerned.

Table 3.21: Availability of services related to Grievance/Complaint Redressal

Particulars	LNH	CNBC	RGSSH	JSSH
Availability of Grievance Redressal Cell or Complaint cell to register patients' grievances regarding quality of supplied food to them	A	A	A	A
Availability of mechanism for receipt of complaints and whether suggestion boxes had been placed at appropriate places	NA	A	A	A
Formation of Grievance Redressal Committee	NA	A	NA	NA

Source: Information furnished by hospitals
A-Available, NA- Not available

It was also noticed that complaints were disposed off on the pretext that complainant was not responding to the call from the hospital. Besides there was no monitoring system to study the nature of grievances for initiating corrective measures to improve quality of services.

Recommendation 3.11: All hospitals should constitute Grievance Redressal Committees to dispose the complaints in an efficient manner and to assess the scope for improvement in its services.

3.6.8 Fire safety in Hospitals

National Building Code of India 2016 requires that fire extinguishers must be installed in every hospital, so that in case of any fire, the safety of the patients/attendants/visitors and the hospital staff may be ensured. As per IPHS, hospitals should have a Disaster Management Plan (DMP) in line with State Disaster Management Plan. DMP should clearly define the authority and responsibility of all cadres of staff and mechanism for mobilization of resources. All health staff should be trained and well conversant with disaster prevention and management aspects. Regular mock drills should be conducted and after each drill, the efficacy of disaster plan, preparedness of hospital and competence of staff shall be evaluated followed by appropriate changes to make plan more robust.

RGSSH did not conduct any mock drill during the audit period and could not submit the records of training imparted to staff on fire safety. It submitted a Fire Safety Certificate issued in September 2020 for the next three years, however, it could not provide Fire Safety Certificate for the previous years. Fire extinguishers were found expired during Physical Inspection. It was also noticed during Joint Physical Inspection that evacuation plans/routes for fire exit had not been displayed in the building.

LNH provided Fire Safety Certificates in respect of three out of eight blocks only i.e., (i) New Special Ward (ii) BL Taneja Block and (iii) New OT Block and informed that fire safety audit has been conducted by Delhi Fire Service on 29 April 2022. However, report in this regard was not provided to Audit. No

records in support of fire safety audit and mock drill conducted during the period of audit was provided. Further, the post of Fire Safety Officer was lying vacant in LNH, though it is one of the largest hospital having more than 2000 beds with an average footfall of more than 8000 patients per day.

Recommendation 3.12: All hospitals should timely take up the fire safety audit and conduct mock drills to ensure preparedness against any fire eventualities.