
Chapter 2: Detailed Compliance Audit

HEALTH & FAMILY WELFARE DEPARTMENT

2.1 *Delivery of Health Care Services in selected District Hospitals*

2.1.1 Introduction

District Hospital is secondary level referral hospital responsible for catering the health-care needs of a district. Its objective is to provide comprehensive secondary health care services to the people in the district at an acceptable level of quality and being responsive and sensitive to the needs of people and referring centres.

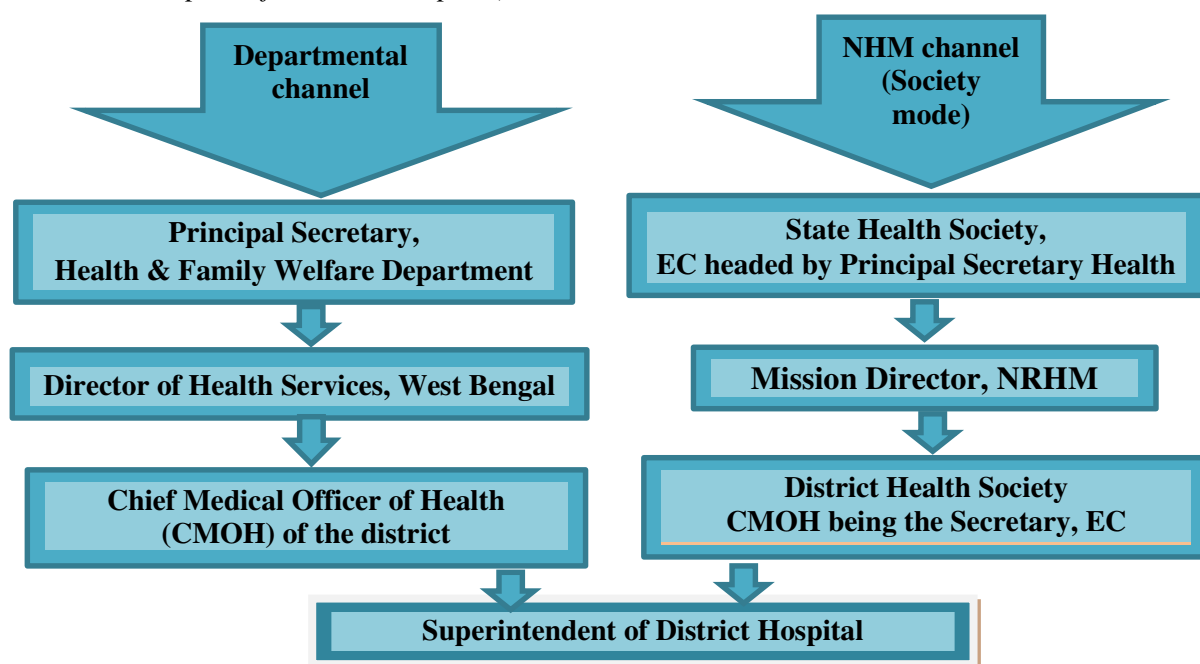
At present, there are 17 district hospitals (excluding Medical College and Hospitals and newly upgraded district hospital) for 23 districts of the State, which are providing preventive, promotive and curative healthcare services to the population, as secondary health care hospitals.

2.1.2 Organisational set-up

At the State level, the Directorate of Health Services (DHS), which functions under the Health & Family Welfare (H&FW) Department, is overall responsible for functioning of various levels of health care facilities including the District Hospitals.

At the district level, the Medical Superintendent of the district hospital, under the Chief Medical Officer of Health (CMOH), of the district is responsible for functioning of District hospitals.

Under the National Health Mission (NHM), which is implemented in Society mode, the Executive Committee of the State Health Society (SHS) is headed by the Principal Secretary, Health and Family Welfare Department who is assisted by Mission Director, National Rural Health Mission (NRHM). At the district level, the Executive Committee (EC) of District Health Society (DHS) is headed by District Magistrate (DM) and Chief Medical Officer of Health (CMOH) as Secretary. A flow chart showing the organisational structure in the State (*in respect of District Hospital*) is shown below:



2.1.3 Audit Objectives

- The main objectives of this Detailed Compliance Audit were to assess whether comprehensive plans and strategies regarding the District Hospitals (DHs) have been developed and aligned with overall State Health Policy, if any, and health care requirements at the District level.
- Audit also aimed to ascertain whether provisions for line services (such as Out-Patient Department (OPD), In-Patient Department (IPD), Intensive Care Unit (ICU), Operation Theater (OT), maternity services, *etc.*) as well as support & auxiliary services (*viz.*, diagnostic, diet, bio-medical waste management, *etc.*) conformed to standards envisaged by Indian Public Health Standards (IPHS).
- Audit also attempted to assess whether availability and management of resources of the District Hospitals (*viz.*, drug, equipment, manpower, *etc.*) was in consonance with the relevant norms and standards;

2.1.4 Audit scope, methodology and criteria

The audit scope covered public health facilities of three selected District Hospitals (namely Balurghat District Hospital, Suri District Hospital and Jhargram District Hospital) primarily five years from 2014-20 (up to February 2020), with observations on crucial aspects updated 2020-21. Selection of district hospitals was done using sampling techniques from stratified lists prepared after giving weightage to bed-strength, load of IPD & OPD patients and expenditure incurred.

Apart from these three DHs, audit examination also encompassed records maintained at the H&FW Department and Directorate of Health Services (DHS), State Project Management Unit (SPMU) of NHM, Chief Medical Officers Health (CMOsH) of three Districts (Dakshin Dinajpur, Birbhum and Jhargram).

Apart from assessing the level of compliance in district hospitals in providing health care service in a district to uniform standards introduced by Indian Public Health Standards (IPHS), comparison has also been made with some other relevant guidelines/ frameworks¹¹.

Audit Findings

Planning & Budgeting

2.1.5 Absence of Strategic Plan- Annual Plan vis-à-vis bottom up approach of budget preparation

Delivery of quality and efficient healthcare services in public health facilities plays a significant role in improving the health indicators of the public at large. Thus, it was incumbent upon the H&FW Department to carry out comprehensive and outcome-based planning so that essential resources were provided to the public hospitals as well as resources available were utilised optimally in the short, medium and long-term.

¹¹ *Maternal and Newborn Health Toolkit, 2013; Framework for Implementation of National Health Mission (NHM), 2005-12 & 2012-2017; Operational Guidelines for Quality Assurance, 2013 and GoI-2013- 'NHM Assessor's Guidebook for DH Vol. I & II' and Departmental/ Government policies, rules, orders, manuals and regulations*

2.1.5.1 Absence of health policy or attainable standards: Audit observed that Government of West Bengal (GoWB) neither framed any Health Policy/ Strategy and/ or Standards except a State Drug Policy and standards for Critical Care Unit/ Neonatal Intensive Care Unit (CCU/ NICU) nor did it expressly follow the Indian Public Health Standards (IPHS) for the State. Though a Health Sector Strategy was framed by the H&FW Department covering the period prior to audit (from 2004 to 2013) with objectives like improving accessibility, reducing maternal and child mortality, reducing communicable/ non-communicable diseases, ensuring quality of medical care services, *etc.*, no rolling shorter-term plans were ever framed for implementation of the strategic goals and also to drive the Department's budgeting process based on the plan.

Further, in the absence of any set standards to achieve, no efforts were made to identify gaps in various aspects of health care services expected from a Secondary level hospital (*i.e.*, District Hospitals) and to have a plan to plug the identified deficiencies. As a result, budget estimates also were not need based.

Planning or a set goal being a key pre-requisite, the department suffered to achieve levels in performance in all facets of service delivery as reviewed and discussed in subsequent paragraphs.

2.1.5.2 Absence of District Health Action Plans: As per the NHM framework, the State Programme Implementation Plans (PIPs) were to be an aggregate of the District Health Action Plans (DHAPs) by including the facility strengthening plans. DHAPs were to specify the current (baseline) package of services available in each facility, the inputs, activities and budget required to expand this package, improve the quality of care, expand access and enable positive outcomes in service delivery.

However, no DHAPs were prepared and aggregated to arrive at the state PIPs during the period covered under audit. Rather, PIPs were prepared without taking inputs of the requirements of the districts/ facilities.

In the above backdrop, neither any of the three selected District Hospitals had their gaps identified through facility survey nor could the DHs ever place their needs for provisioning in the State budget estimates or PIPs of NHM. Instead, it was noticed that the DHs placed proposals before the CMOH/ Health Directorate in piece-meals from time to time.

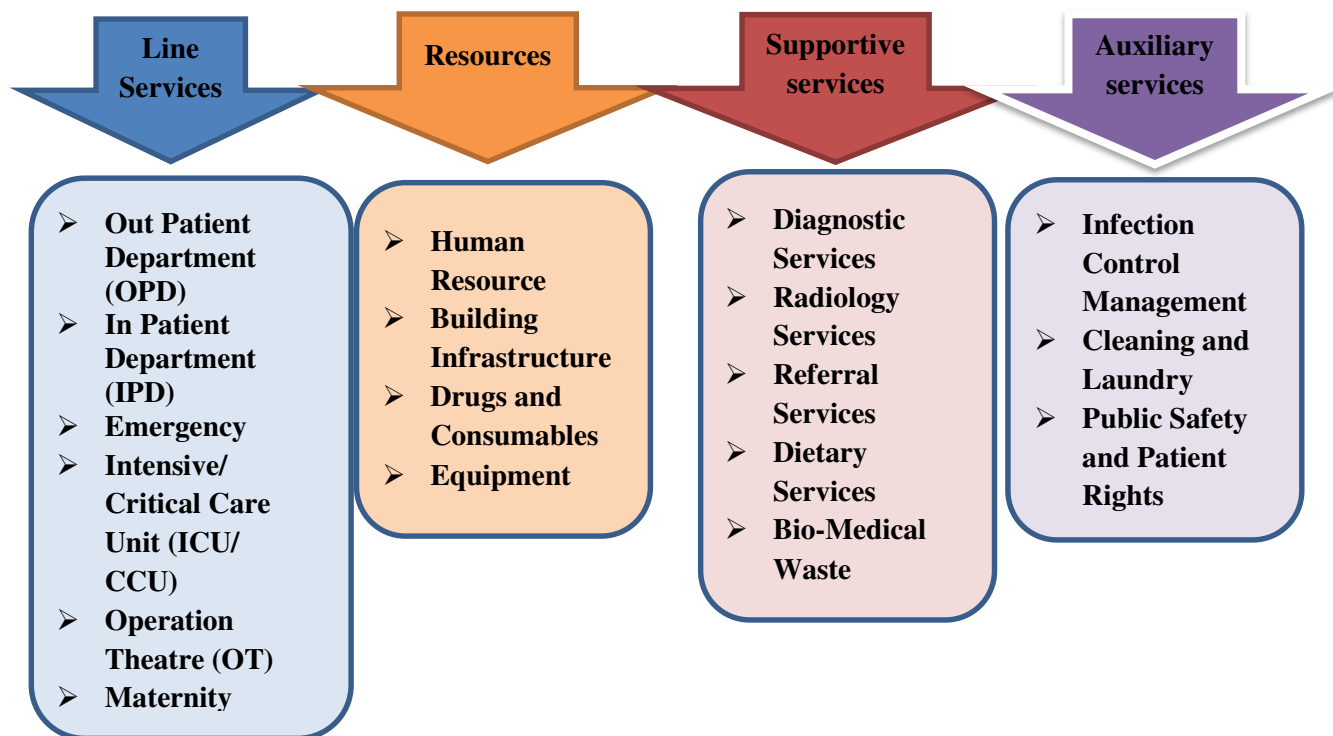
As a result, not only a number of essential infrastructure development proposals remained non-starters but also gross shortages in drugs, equipment and manpower generally in the hospital and in crucial IPD wards were persistent as discussed subsequently across the report.

Summary of observations: *The Department neither prescribed its own norms nor expressly followed the norms/ standards suggested in IPHS by the GoI in respect of resources and services for district hospitals. The relevant norms of IPHS were not expressly adopted either. Absence of attainable norms compounded by non-preparation of any District Health Action Plans resulted in non-identification of gaps in respect of facilities/ infrastructure. Therefore, locally felt needs were not duly reflected in the Programme Implementation Plan under NHM with a concomitant adverse impact on the availability of resources and service provisioning as discussed in the subsequent paragraphs.*

Services in District Hospitals

2.1.6 Services in District Hospitals

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



Adequacy and efficiency of Line, Support and Auxiliary services in hospitals impact the quality of medical care provided and the level of patient satisfaction achieved.

Line Services

2.1.6.1 Out-Patient Department (OPD) Services

To avail Out-Patient Services in the hospitals, new patients first register at the outdoor/ out-patient department (OPD). After registration, the patients are examined by concerned doctors, who either prescribe diagnostic tests for evidence based diagnosis or drugs, as per the diagnosis done during the consultation process.

Scrutiny of duty roster of doctors for 2018-19 showed that OPDs on the following departments were held in Balurghat (BDH), Suri (SDH) and Jhargram (JDH) district hospitals with number of doctors and number of days per week as mentioned against each:

Table 2.1.1: Details of OPD service and number of doctors in test-checked DHs during 2018-19

Sl. No.	Name of the OPDs	No. of doctors			OPD days/ week		
		BDH	SDH	JDH	BDH	SDH	JDH
1	Duty Roster of Medicine OPD	5	3	4	6	3	6
2	Duty Roster of Gynaecology & Obstetrics OPD	6	6	7	6	6	6

Sl. No.	Name of the OPDs	No. of doctors			OPD days/ week		
		BDH	SDH	JDH	BDH	SDH	JDH
3	Duty Roster of Surgery OPD	4	3	3	6	3	6
4	Duty Roster of Orthopedic OPD	3	3	2	4	3	6
5	Duty Roster of Psychiatry OPD	2	2	1	5	4	3
6	Duty Roster of Eye OPD	2	4	2	4	4	6
7	Duty Roster of Dental OPD	2	2	4	6	6	6
8	Duty Roster of Chest Medicine OPD	1	1	0	4	1	0
9	Duty Roster of Acupuncture OPD	1	0	0	6	0	0
10	Duty Roster of Dermatology OPD	1	1	2	4	3	6
11	Duty Roster of Pediatrics OPD	4	5	4	6	5	6
12	Duty Roster of ENT OPD	2	3	1	4	3	6
13	Duty Roster of Oncology OPD	1	0	0	6	0	0
14	Duty Roster of General OPD	0	0	13	0	0	6
Total		34	33	43	--	--	--

Source: Records of the District Hospitals

(i) OPD being manned by only one doctor: It may be observed that under six departments in three DHs, OPDs were manned by only one doctor indicating the concerned OPD becoming non-functional in case of absence of the doctors for leave or any other reason.

(ii) OPDs not held on scheduled dates: Cross-check of OPD registers *vis-à-vis* the duty rosters for the period from January 2018 to December 2018, it was found that:

- OPDs were not held on two days to 26 days in respect of ENT OPD, Eye OPD and Medicine OPDs though scheduled as per duty roster in Balurghat DH.
- Similarly, in Suri DH, Orthopaedic, Gynaecology and Psychiatry OPDs were not held on 18 days to 21 days against scheduled OPD days.

DH authorities could not clarify the matter though asked for.

(iii) OPD Procedures not done: Assessor's Guidebook (Vol.-I) of National Quality Assurance Programme under NHM outlines various procedures expected to be done in the OPDs.

- Records, however, showed that in Balurghat DH, ENT procedures like Stitching of Contused Lacerated Wounds, Chemical Cauterization, Eustachian Tube Function Test, Vestibular Function Tests and Caloric Tests were not done due to inadequate infrastructure, equipment, reagents, *etc.*
- Dental procedure like Tooth Restoration (Root Canal Treatment-RCT) was not done to patients in Suri DH.

(iv) Patient Satisfaction Survey (PSS): As per NHM Assessor's Guidebook (Vol. 1) for quality assurance of District Hospitals (2013), the DH was to carry out Patient Satisfaction Survey (PSS) of OPDs on monthly basis to have an insight into level of satisfaction of the patients. The State H&FW Department circulated guidelines for implementation of PSS at OPD & IPD patients in prescribed format. According to the guidelines, the survey results were to be analysed statistically to calculate patient satisfaction score. The outcome of this exercise was to be discussed in District Quality Team (DQT) and District Quality Assurance Committee (DQAC) Meeting for quality improvement.

- No PSS was conducted by Balurghat DH upto July 2019, while in Suri District Hospital, PSS started from January 2017. Scrutiny of forms of survey conducted during August 2019 in Balurghat and test-checked four months in Suri (January-February 2017 and April-May 2018) showed that patients were largely dissatisfied with the waiting time at the OPD registration counter (for getting OPD tickets) and pharmacy (to get medicine). The survey reports of Suri DH also showed a deteriorating trend in terms of waiting time as shown below:

Table 2.1.2: Summary of Patient Satisfaction Survey conducted in Suri District Hospital

Survey questions	Patients (percentage) opined in favour during January & February 2017	Patients (percentage) opined in favour during April & May 2018
“Waiting time at the queue of registration counter to get OPD ticket was more than 30 minutes”	15	53
“Waiting time to see a doctor at the OPD after getting OPD ticket was more than 45 minutes”	15	47
“Waiting time to get medicine at the pharmacy was less than 30 minutes”	79	14
Opined Good/ Very good/ Excellent about “Privacy is being maintained throughout the examination process at OPD”	92	43

Source: Records of the District Hospitals

- PSS started at Jhargram DH from November 2016. Scrutiny of survey forms showed that Patient Satisfaction Score based on the survey was never calculated till June 2019.

Summary of observations: *Functioning of Out-Patient Department was affected by inadequate number of doctors; on a number of occasion OPDs were not held on scheduled dates. Some OPDs were not even functional for want of doctors. Patient satisfaction surveys on OPD services were neither conducted properly nor were adequate efforts made to identify and address the deficiencies for improvement.*

2.1.6.2 IPD Services

Indoor/ In-Patient Department (IPD) refers to the areas of the hospital where patients are accommodated after being admitted, based on doctor’s assessment from the Out-Patient Department or from Emergency Services and Ambulatory Care. In-patients receive a higher level of care in the form of nursing services, regular visits by doctors, administration of drugs, conducting diagnostic tests, etc.

Availability of IPD Services: Indian Public Health Standards (IPHS) 2012 recommended list of essential and desirable services that a district hospital was to provide. The services under general specialties and super specialties included OPD, IPD and Emergency services.

Status of availability of IPD services, however, revealed that a number of In-patient departments (IPD wards) were completely absent and/ or services not rendered appropriately in the three selected District Hospitals as detailed below:

Table 2.1.3: Availability of IPD wards in test-checked DHs

Essential IPD wards	General Medicine	Available in all three DHs
	General Surgery	
	Obstetrics & Gynaecology	
	Family Planning	
	Paediatrics including neonatology and immunisation	
	Emergency	
	Critical Care Unit (CCU)/ Intensive Care Unit (ICU)	
	Ophthalmology	Not available in any of the three DHs
	Otorhinolaryngology (ENT)	
	Orthopaedics	
	Psychiatry	Available only in Balurghat
	Geriatric	Not available in any of the three DHs
	Dental	
Desirable IPD wards	Dermatology & Venerology	Not available in any of the three DHs
	Dialysis	Available in all three DHs
	Post natal	
Super specialties	Cardiology	Not available in any of the test-checked DHs
	Cardio thoracic & Vascular Surgery	
	Gastro-enterology	
	Surgical-enterology	
	Plastic Surgery	
	Electrophysiology	
	Nephrology	
	Urology	
	Neurology	
	Oncology	
	Endocrinology/ metabolism	
	Medical oncology	
	Surgical oncology	
	Radiation oncology	
	Nuclear medicine	

Source: Records of the District Hospitals

It was further observed that:

- All three DHs did not have separate IPD Wards for five (Orthopaedics, Ophthalmology, Otorhinolaryngology (ENT), Geriatric and Dental), of the 13 essential services. Instead, 10, 8 and 4 beds were earmarked in Balurghat DH for Orthopaedics, Ophthalmology and ENT respectively in General Surgery ward and 10 beds for Geriatric in General Medicine wards.

- However, against the Geriatric beds, Balurghat DH neither maintained any separate admission/ discharge records nor showed figures in Census Register. As such, rendering of such services was not evident from records.
- Suri DH also had no admission and discharge records against the earmarked 10 beds for Geriatric in the General Medicine ward.
- Further, though, the newly built Super Specialty Hospitals (SSHs) became integral part of all the three selected District Hospitals (Balurghat SSH, Suri SSH and Jhargram SSH, all from February 2016), none of the 18 desirable/ super-specialty services (except Dialysis and Post Natal) was rendered by any of the DHs.

2.1.6.3 Emergency Services

Accident and Emergency Service is among the most essential services a District Hospital is required to provide. A 24x7 operational emergency with dedicated room was to be available with adequate manpower.

(i) **Inadequate allocation and use of Emergency beds:** NHM Assessor's Guidebook specified that a District Hospital should have atleast five *per cent* of its beds earmarked as Emergency beds. There is further stipulation for maintaining buffer beds for handling large scale casualty and disaster.

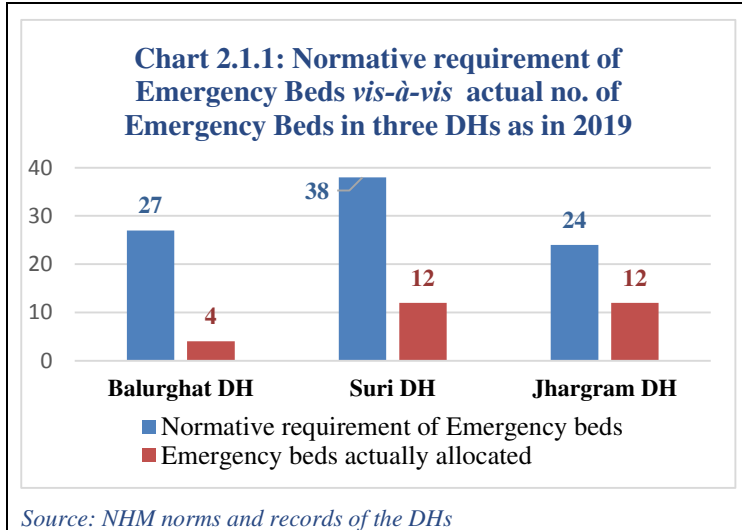
The status of Emergency observation beds allocated by the three selected DHs was below:

Table 2.1.4: Position of total beds and allocation of Emergency beds in test-checked DHs

Year	Functional beds of DH	Ideal allocation of Emergency beds	Actually allocated	Actually Functional	Shortage in percentage
Balurghat DH:					
2014	430	22	10	10	55
2015	363	18	10	10	44
2016	363	18	10	10	44
2017 (w.e.f 04.04.17)	539	27	16	04	85
2018	539	27	16	04	85
2019	539	27	16	04	85
2020	539	27	20#	20	--
Suri DH:					
2014	468	23	00	Nil	100
2015	468	23	00	Nil	100
2016	468	23	00	Nil	100
2017 (w.e.f May 17)	766	38	16	16	58
2018	766	38	16	16	58
2019	766	38	16	12	68
2020	766	38	16	12	68
Jhargram DH:					
2015	285 to 300	14/15	00	Nil	100
2016	300 to 384	15/19	12	12	20-37
2017	424 to 460	21/23	12	12	43-48
2018	460 to 473	24	12	12	50
2019	473	24	12	12	50
2020	473	24	12	12	50

Source: Records of the District Hospitals, # Balurghat DH allocated 20 Emergency beds to manage COVID cases in 2020

It could be seen that while Balurghat DH and Jhargram DH always had far less number of bed allocations for Emergency observation ward than those were required to maintain, Suri DH did not have any Emergency bed at all allocated for the DH upto April 2017. This evidently impaired the DHs in delivery of proper health care in medical emergencies.



The functional beds for the Emergency observation ward in Balurghat DH were further reduced to four only w.e.f April 2017. Moreover, it was observed that no census or details of patients admitted under observation ward or kept under observation was ever maintained by Balurghat DH during the period checked in audit; same data was also not maintained in Jhargram DH for 2015. Therefore, Audit could not ascertain whether the Emergency beds were actually utilised. Further, none of the DHs allocated any beds to

handle any case of mass casualty or disaster.

(ii) **Equipment/ instruments required in Emergency ward not available or lying unutilised:** NHM Assessor's Guidebook prescribed the list of equipment and instruments essential for delivery of services in Emergency Ward. Status of availability (as on January 2020), however, was found as below:

Table 2.1.5: Availability of equipment/ apparatus in Emergency Wards

Sl. No.	Type of Apparatus	Name of Apparatus	Available (Number) (Yes/ No)			Remarks (Functional status of available machines)
			BDH	SDH	JDH	
1	For examination & monitoring	Blood Pressure (BP) Apparatus	Yes (13)	Yes (four)	Yes (nine)	BDH: Un-serviceable: Nine. (old)
2		Multi-parameter Torch	Yes (three)	Yes (one)	No	BDH: Un-serviceable: one.
3		Spot light	Yes (four)	NA	No	
4	Point of care diagnostic devices	Glucometer	Yes (two)	Yes (two)	No	BDH: Un- serviceable: two (old)
5		ECG	Yes (three)	Yes (three)	Yes (one)	BDH: None of the three machines used in absence of ECG technician JDH: Only machine is lying inoperative and beyond repair
6	For resuscitation	Ambu bag	Yes (two)	Yes (one)	No	--
7		Defibrillator	No	No	No	--
8		Laryngoscope	Yes (one)	No	No	--
9		Nebulizer	Yes (two)	No	Yes (one)	--
10		Suction Apparatus	Yes (one)	Yes (one)	No	--
11	For storage of drug	Refrigerator	Yes (one)	NA	Yes (one)	--
12		Crash cart/ Drug trolley	Yes	Yes (one)	Yes	--
13		Dressing trolley	Yes (one)	Yes (one)	Yes (one)	--

Source: Records of the Emergency Department of the District Hospitals

There was no defibrillator at the Emergency Wards of any DHs. Suri DH and Jhargram DH did not have Laryngoscope. Suri DH did not have Nebulizer while Multi-parameter torch, spot light, suction apparatus were not in possession of Jhargram DH. The sole ECG machine of Jhargram DH lied inoperative. In Balurghat DH, Glucometers lied unserviceable and all the three ECG machines could not be operated as there was no technician available in the Emergency Ward for operating the same. A large quantity of BP apparatus and one multi parameter torch also lied un-serviceable in Balurghat.

2.1.6.4 Availability of essential services under ICU/ CCU

For providing minimum assured services to treat critically ill patients, IPHS envisaged availability of Intensive Care service in any hospital with more than 100 beds. Therefore, the ICU is essential for District Hospitals. All three test-checked DHs have provisions for 12-bedded Critical Care Unit (including CCU beds and HDU¹² beds) as of date of audit.

(i) Non-operation of CCU beds in Suri DH: As regards civil infrastructure, IPHS *inter alia* prescribe that a hospital building should be well maintained with no seepage or cracks in the walls of ICU to preclude possibility of infections amongst patients/ attendants/ visitors and hospital staff.

However, it was seen in CCU of Suri DH that CCU beds were not functional since October 2019 due to some renovation work. Instead, hospital authority started HDU from October 2019, though the roof of HDU was in very bad condition. Out of the four beds of HDU, two beds could not be made functional due to water seepage from roof. Though the CCU could be made operational from February 2020, HDU had to be closed.

Further, the HDU area had no system of monitoring room temperature and humidity. No separate space being available for nursing station, the same was set up in patient care area of HDU. Distance between beds was 0.46 meters (1.5 foot) instead of the prescribed minimum distance of 2.5 meters.



Pic 2.1.1: Bad condition of roof of HDU unit in Suri DH

(ii) Lack of human resource to run CCUs: The West Bengal Health & Family Welfare Department prepared (2014) a revised operational guideline of CCU to act as a reference and guidance to facilitate planning, establishment, operation and monitoring of Critical Care Units and High Dependency Units with an objective of reducing mortality and ensuring zero out of pocket expenditure of patients.

As per the guideline, each CCU was to be manned by a dedicated earmarked core trained team of personnel. The human resource standards envisaged for a 12-bedded CCU *vis-à-vis* actual availability in three test-checked hospitals were as below:

¹² High Dependency Units

Table 2.1.6: Requirement and availability of staff for running CCUs

Sl. No.	Category of personnel	Required numbers	Actually available			Remarks
			BDH	SDH	JDH	
1.	Medical Officer (MBBS)	8	5	5	7	One Medical Officer (MO) on study Leave in Jhargram DH
2.	Nursing-in-Charge	1	1	1	1	--
3.	Nursing Staff	15	11	10	12	--
4.	Medical Technologists (MTs) (Critical care)	5	3	3	5	Availability of only three MTs caused the CCUs in Balurghat and Suri DH to run without an MT on days of weekly offs of the MTs.
5.	General Duty Assistant (GDA)	8	5	3	0	Manned by Contractual staff in Balurghat DH.
6.	Sweeper	8	4	3	8	Manned by Contractual staff in all DHs.

Source: Records of the CCU Department of the District Hospitals

It could be seen that there existed a considerable shortage of personnel in every category of staff in the CCUs. As there were only three Medical Technologists (MTs) available in Balurghat DH and Suri DH to attend duty in three shifts every day; weekly offs of the MTs caused the CCU to run without MTs on one shift. Since three MTs used to take weekly offs on three days, such scenario recurred thrice every week.

(iii) Shortage/ non-utilisation of essential major equipment of CCU: Operational Guideline for CCU and HDU laid down standard list of equipment. Status of availability, when checked in audit, revealed considerable shortage and/ or non-functioning of equipment in CCU as detailed in [Appendix 2.1.1](#). It was observed that

- In Balurghat DH, though National Programme for Prevention and Control of Diabetes, Cardiovascular Disease and Stroke (NPCDCS) guidelines or guidelines framed by the state specified setting up of a minimum 12-bedded CCU unit in a DH and funds were also accordingly spent. The CCU unit was running with only eight beds. As a result, the associated accessories/ equipment, *e.g.*, Ripple Mattresses, Ventilators, Nebulizers, Multichannel Monitors, *etc.*, were lying un-used/ broken in the store. While, a Semi Auto Analyser, though procured, was not found either physically or in stock; the automated cell counter, which can be used on blood or urine samples to determine the number and types of cells present or to check the viability of a cultured cell line for research purposes, was never used since procurement, which was attributable to lack of training of the MTs.
- In Suri DH, it was observed that 11 out of 21 types of essential/ desirable equipment were short of the normative requirement stipulated under guidelines. Three major equipment, *viz.*, Electrolyte Analyser (primarily used to measure sodium, potassium and chloride in human body), Semi Auto Analyzer (measures different chemicals and other characteristics in a number of biological samples quickly), Microbial Culture Machine (determines the type of organism, its abundance in the sample being tested), though available, were not functional.
- Electrolyte Analyzers were not functional due to non-availability of reagents in Suri and Jhargram DHs.
- None of the CCUs ever maintained any down-time register of equipment.

(iv) **Non-availability of essential drugs for CCU:** The guidelines specified standard list of 109 medicines with buffer stock quantity which should be available in a critical care unit. The actual status of availability of 27 randomly selected drugs when checked for the five sampled months, exhibited poor status of availability and stocked quantity as detailed in *Appendix 2.1.2*. The following was evident:

Balurghat DH	Suri DH	Jhargram DH
➤ Fourteen out of the 27 drugs test-checked were out-of-stock for different periods of the test-checked months. Out of these 14, six essential drugs remained completely out-of-stock for the entire five test-checked months' period; while three drugs were out-of-stock for four of the five sampled months' period. ➤ As regards maintenance of buffer quantity in stock, adequate stock of none of the 27 test-checked drugs, except Injection (Inj.) Paracetamol, was maintained in compliance with norms. Buffer stocks of 10 drugs were not maintained for the entire test-checked period of five months.	➤ Twenty two out of the 27 drugs test-checked were out-of-stock for different periods of the test-checked months (Data available for four months). Out of these 22, 13 essential drugs remained completely out-of-stock for the entire test-checked months.	➤ Availability was checked for three sampled months in Jhargram DH. Seventeen out of the 27 drugs test-checked were out-of-stock for different periods of the test-checked months. Out of these 17, eight essential drugs remained completely out-of-stock for the entire three test-checked months' period. ➤ Excluding the stock-outs, the drugs which were in stock, were not kept in adequate quantities as prescribed. ➤ Buffer stocks of 11 drugs were not maintained for the entire test-checked period of three months.

2.1.6.5 Operation Theatre (OT) Services

(i) **Acute shortage of OT staff – Surgeries conducted without OT Technicians:** Status of requirement *vis-à-vis* availability of Surgeons, Nursing staff and OT Technician was as below:

Table 2.1.7: Requirement and availability of manpower for OT

Sl. No.	Category of staff	Requirement			Actually available (as on February 2019)			Shortage		
		BDH	SDH	JDH	BDH	SDH	JDH	BDH	SDH	JDH
1	Surgeons#	4	4	4	3	4	5	1 (25%)	0 (0%)	0 (0%)
2	Staff Nurse*	24	26	24	18	14	16	06 (25%)	12 (46%)	8 (33%)
3	OT Technician#	14	14	14	0	0	0	14 (100%)	14 (100%)	14 (100%)

Source: Records of the OT Department of the District Hospitals

as per IPHS for 500 beds; * two nurses/ OT table & one nurse/ Recovery bed as per IPHS

The OTs continued to operate without OT Technicians even as of March 2021. Availability of surgeons (two) in Balurghat and nursing staff (eight) in Jhargram found to have reduced further during 2019-21.

Thus, even in comparison with the standards of a 500-bedded hospital, there existed an acute shortage of human resource attached to OT across the selected DHs. The authorities failed to clarify how in the absence of an OT Technician, surgeries were performed.

(ii) Non-availability of OT drugs/stocks not maintained: Assessor's Guidebook of NHM specified to ensure availability of certain drugs in OT for assured services. However, when Audit attempted to check the status of availability of the specified drugs in sample months, it was seen that no stock registers were being maintained in OT of Jhargram DH.

However, records (stock register/ observation register), showed that a wide range of essential medicines were never kept in stock or were out of stock in all the three selected DHs as detailed in *Appendix 2.1.3*. The following was observed:

- Out of 23 prescribed drugs, 12 and 18 drugs were not available in the OTs in any of the test-checked months in Balurghat and Jhargram DH respectively.
- In Suri DH, 7 and 11 out of 23 essential medicines were not available in OT respectively in test-checked months of February 2017 and May 2018.

Under the circumstances, the DH authorities could not clarify how surgeries were carried out without these essential drugs in the OTs of the DHs.

(iii) Non-availability of OT equipment: IPHS lists out essential equipment for OT for delivery of assured services recommended for a 500-bedded District Hospital. Status of availability of the equipment (as of February 2020) in OTs of the three selected DHs was found grossly deficient:

Table 2.1.8: Requirement and availability of equipment for OT

Equipment Type	Requirement of types of equipment		Availability of equipment (types of equipment)			Shortage of types of equipment		
			BDH	SDH	JDH	BDH	SDH	JDH
OT	<i>Essential</i>	21	07	07	16	14	14	05
	<i>Desirable</i>	3	00	00	00	03	03	03
Anesthesia	<i>Essential</i>	15	11	08	08	04	07	07

Source: Records of the OT Department of the District Hospitals

Moreover, though Balurghat DH had sufficient number (eight) of Boyles apparatus with fluotec and circle absorber (provides an accurate supply of medical gases mixed with an accurate concentration of anaesthetic vapour, delivers continuously to the patient at a safe pressure and flow), the same could not be put to use in absence of centralised piped supply of medical gases in the OT.

It is pertinent to mention that no down-time register of OT equipment were maintained in any of the selected DHs.

(iv) Surgical safety records not ensured: NHM Assessor's Guidebook prescribes that surgical safety checklist, pre-surgery evaluation records and post-operative evaluation records for OTs should be prepared for each case. Scrutiny, however, revealed that in none of the cases of surgeries performed in Balurghat and Jhargram DHs, prescribed check lists for surgeries conducted were maintained during the period checked in audit. Suri DH only maintained the same in respect of major surgeries carried out. The situation prevailed as of August 2021.

2.1.6.6 Maternal, Neo-natal and Child Health

(i) **Pregnancy & Child birth:** Balurghat DH, Suri DH and Jhargram DH operated Maternity wards with 60, 33, 54 functional beds respectively. These maternity wards were supplemented with wards to serve post-operative, gynaecology and Lower Uterine Segment Cesarean Section (LUCS) cases (50, 90 & 40 functional beds respectively) from February 2017 in Jhargram DH, from April 2017 in Balurghat and from May 2017 in Suri DH. Labour Rooms have always been a part of the Maternity Wards.

A. Non-availability of drugs and consumables in Labour Room: As per NRHM Maternal and Newborn Health Tool Kit (2013), the emergency drug tray at Labour Room (LR) should contain certain drugs. Availability of the drugs at LR in the test-checked months showed absence of medicines in stock of all the three selected DHs as detailed in **Appendix 2.1.4**.

Out of 15 essential medicines, eight medicines in Balurghat DH, six medicines in Suri DH and nine medicines in Jhargram DH were never kept in stock¹³ of LRs during the five test-checked months. Another two medicines in Balurghat DH, four medicines each in Suri DH and Jhargram DH were partially out of stock during the test-checked period.

B. Mothers discharged within 48 hours of delivery: Guidelines on Ante-natal Care and Skilled Attendance at Birth (2010) stated that, conventionally, the first 42 days (six weeks) after delivery are considered the post-partum period. The first 48 hours of the post-partum period, followed by the first one week are considered the most crucial period for the health and survival of both of the mother and her newborn. Evidence has shown that more than 50 *per cent* of maternal deaths take place during the post-partum period. NHM Assessor's Guidebook also stipulated for discharge of mothers and babies after passage of at least 48 hours of delivery in the case of institutional delivery. However, test-check of records revealed that majority of mothers were discharged within 48 hours of delivery as tabled below:

Table 2.1.9: cases of discharge of mothers before 48 hours

Year	Discharge of mothers within 48 hours		
	Balurghat DH	Suri DH	Jhargram DH
	(percentage of total deliveries)		
2014-15	3,961 (68 %)	8,539 (69 %)	3,373 (58%)
2015-16	3,527 (60 %)	9,551 (77 %)	3,619 (60%)
2016-17	393 (7 %)	9,344 (82 %)	4,106 (69%)
2017-18	42 (1 %)	8,186 (73 %)	4,327 (66%)
2018-19	0 (0%)	8,780 (70 %)	4,056 (63%)
2019-20	0 (0%)	9,128 (70%)	4,252 (64%)
2020-21	0 (0%)	9,476 (80%)	4,452 (66%)

Source: HMIS data of the District Hospitals

The above table shows that there was improvement in Balurghat DH in this matter, but situations in Suri and Jhargram DHs remained a matter of concern as these two DHs continued to discharge upto 80 *per cent* and 66 *per cent* of mothers respectively within 48 hours of delivery (as of March 2021).

¹³ Apart from Inj. Hydrazaline, Inj. Ampicilline, Inj. Adrenaline and Methyldopa which were common for all DHs, medicines like Inj. Betamethasone, Inj. Lignocaine-2%, Inj. Diazepam, Inj. Calcium Gluconate-10%, Inj. Gentamicine, Inj. Metronidazole, Inj. Hydrocortisone Succinate and normal saline were out of stock.

C. Corticosteroids not administered – discrepancy in reporting: In case of pre-term deliveries (<37 weeks), mothers were to be administered corticosteroid drugs (Inj. Betamethasone/ Inj. Dexamethasone) to accelerate maturation of fetal lungs to decrease number of neonates with respiratory distress syndrome and improves survival in pre-term delivered neonates.

It could be seen in the preceding paragraph that Inj. Betamethasone was not available with Labour Rooms in all or some of the test-checked months. Scrutiny of Labour Room Register of Balurghat DH for May 2018 showed the following status:

Table 2.1.10: Cases of administration of corticosteroid

No. of records in LR Register in May 2018	No. of cases where gestational age was not mentioned	No. of pre-term deliveries (exclg. cases directly taken to Labour Room)	No. of cases where corticosteroids administered	No. of cases of administration of corticosteroid shown in HMIS
400	36	69	12	34

Source: HMIS data of the District Hospitals

Thus, corticosteroid was administered to the mothers only in case of 12 out of total 69 pre-term deliveries. However, there was a mismatch with number (34) reported by Balurghat DH through Hospital Management Information System (HMIS). The issue must be investigated and accountability fixed.

Further, it was found that there was no data/ information recorded in the Labour Room Register about administration of corticosteroids in case of pre-term deliveries during 2014 to 2017. Documents in support of administration of corticosteroid (Ante Natal Steroid Use Record Registers) during this period were not furnished by Balurghat DH though asked for.

D. Maternal Mortality: The status of maternal mortalities in the three selected DHs and number of reviews carried out was as below:

Table 2.1.11: Trend of conduct of maternal death reviews in three test-checked DHs

Sl. No.	Year	2015	2016	2017	2018
Balurghat DH					
1	Total live births	5,648	5,498	5,821	5,729
2	Number of maternal deaths as per hospital KPI data	2	2 (3 as per CMOH)	2 (3 as per CMOH)	3 (6 as per CMOH)
3	Total number of maternal death review done by DH	2	0	2	4
4	Rate of MMR / 1,00,000 live births	35.41	36.38	34.36	52.36
Suri DH					
1	Total live births	11,936	10,387	11,204	11,661
2	Number of maternal deaths as per hospital KPI data	14	19	14	16
3	Total number of maternal death review done by DH	14	19	14	16
4	Rate of MMR / 1,00,000 live births	117.29	182.92	124.96	137.21
Jhargram DH					
1	Total live births	5,773	5,832	6,614	6,084
2	Number of maternal deaths as per hospital KPI data	3	5	8	4
3	Total number of maternal death review done by DH	3	5	8	4
4	Rate of MMR / 1,00,000 live births	51.97	85.73	120.96	65.75

Source: Records of CMOHs alongwith KPI data of the respective DHs

In case of Balurghat DH, there was mismatch between figures of maternal death reported in KPIs and those reported by the CMOH, Dakshin Dinajpur. The reasons for such differences could not be ascertained in audit. Suri DH was far ahead in maternal mortality rate among these three test-checked DHs. While Suri continued to show highest MMR in 2019 (91.37), MMR of Jhargram increased to 117.51 in 2020 surpassing other DHs.

E. Maternal Death Reviews (MDR) - deficient and unfruitful death review:

Following instructions of NHM, Government of West Bengal issued Operational Guidelines for Implementation of Maternal Death Review (Community Based and Facility Based MDR) in July 2010. The District Hospitals were responsible for carrying out Facility Based Maternal Death Reviews (FBMDRs) for submission to CMOH of the District. Accordingly, a Facility Based Maternal Death Review Committee was to be formed by the DHs with ACMOH as the Nodal Officer and Superintendent, specialists from Gynaecology & Obstetrics (G&O) as members. For each case of maternal death, the form for facility based MDR is to be filled up within 24 hours. The committee was to meet monthly for reviewing all the MDR forms of the month. The implementation of the suggested corrective measures which emerge as an outcome of this review was the responsibility of the Medical Superintendent of the DHs.

Scrutiny of 44 MDR documents¹⁴, however, revealed the following:

- Though reviewing every death was mandatory, out of 14 maternal deaths that occurred during 2015 to 2018, Balurghat DH did not carry out review of six deaths without any recorded reasons.
- No FBMDR Committee was formed by Balurghat DH till September 2018. Even after formation of the committee, it did not discuss any maternal death till date of audit, though three maternal deaths occurred during 2019-20. Consequently, the gaps/ lacunae emerging from MDR forms (*i.e.*, Lack of CCU/ HDU facility or OT attached Post Anesthesia Care Unit), remained unresolved.
- Six deaths out of ten test-checked cases of Suri DH were attributable to potentially avoidable factors, missed opportunities and substandard care. Cases of improper identification of post partum rise of BP which lead to eclampsia, not enough early intervention during active phase of labour, Injection (name not legible) was not started from first referral unit, improper anti-natal care, *etc.*, were opined in the review reports. MDR report showed that in three out of these six cases, conditions of the mothers were “stable” at the time of admission and death could have been avoided by proper identification of postpartum rise of BP or early intervention during active phase of labour.
- IPHS 2012 stipulated that a DH should have the facility of separate eclampsia¹⁵ room and equipment for management of eclampsia mother. However, Jhargram DH did not have separate room and equipment for mothers suffering from eclampsia. Out of 20 deaths reviewed in Jhargram DH, three mothers had died due to Eclampsia.

¹⁴ 44 MDR comprised all 14 deaths from 2015 to 2018 in Balurghat DH, 10 deaths occurred in the test-checked months of 2015 to 2017 in Suri DH and all 20 deaths in Jhargram DH from 2015 to 2018

¹⁵ a condition in which one or more convulsions occur in a pregnant woman suffering from high blood pressure, often followed by coma and posing a threat to the life of mother and baby

Jhargram DH did not carry out any review of seven deaths of mothers occurred between July 2020 and July 2021. However, while furnishing KPI figures to H&FW Department, it showed all deaths as reviewed in suppression of the fact.

F. New Born Care: To accelerate the achievement of national goals and to bring down childhood mortality, the Government of India (GoI), in addition to renewing efforts in providing quality health care for women, infants and young children under the NRHM, took a key step towards setting up of newborn care facilities at various levels of public health services. A District Hospital was to set up a Special Newborn Care Unit (SNCU), which provides special care (all care except assisted ventilation and major surgery) for sick newborns, along with Newborn Care Corner (NBCC) at labour room and OT.

- **Operation of inadequate SNCU beds:** As per the Facility Based New Born Care Operational Guidelines by NHM (2011), the minimum recommended number of beds for an SNCU at a District Hospital was 12. However, if the DH conducts more than 3,000 deliveries per year, four beds were to be added for each 1,000 additional deliveries.

Actual status of bed availability was as follows:

Table 2.1.12: Availability of SNCU beds

Name of DH	No. of deliveries/ year (from 2014)	Ideal number of SNCU beds	Functional SNCU beds	Shortage (percentage)
BDH	> 5000	20	14 ¹⁶	30
SDH	> 12000	48	40	17

Source: NHM norms and records of SNCU Departments of the DHs

- **Non-availability of equipment for newborn care:** The Indian Public Health Standards (IPHS) stipulated list of equipment for use in Special Newborn Care Unit of a District Hospital. Though the list was framed for running a minimum 12-bedded SNCU, a comparison of equipment against the list in the test-checked three districts exhibited acute shortage of equipment as detailed in [Appendix 2.1.5](#).

Out of the test-checked 21 types of equipment essential to run an SNCU, Balurghat DH, Suri DH and Jhargram DH did not have/ did not adequately have 16, 13 and 10 equipment respectively,

Important instruments like Resuscitation Kits, Oxygen Hood, Suction Machines, Infantometers, Suture sets, Multi-Channel Monitors, Digital Thermometers, Neonatal Stethoscopes, etc., were either scarce and/ or absent across the test-checked DHs.

- **Neonatal deaths in SNCU and reviews thereof:** Special Newborn Care Unit (SNCU) is meant primarily to reduce fatality among sick children born within the hospital or outside, including home deliveries within first 28 days of life.

Scrutiny of records revealed that percentage of newborn death ranged between 14 and 20 in Balurghat DH, between 12 and 53 in Suri DH and between 10 and 14 in Jhargram DH during 2015-2018. The situation, however, improved during 2019-21 and ranged between 8 and 10 in all the three DHs.

¹⁶ During January 2015 to March 17, from April 2017 onwards it was 20

G. Child Death Reviews: State Health Department order circulating the Child Death Review (CDR) mechanism, recognised most child deaths occurring across the state as preventable. CDR was envisaged to enable the concerned authorities to take corrective measures to avert such deaths in future.

Scrutiny of records showed that all the selected DHs carried out CDRs against all child deaths occurred in the DHs.

Table 2.1.13: Position of conduct of child death reviews in three test-checked DHs

Name of the DH	Total Neonatal deaths reviewed (period)	Major reasons for death (percentage of total neonatal deaths reviewed)	Number of death observed as preventable	Comments
Balurghat DH	64 in 2019 (excluding babies with extremely low birth weight)	Hypoxic-ischemic encephalopathy/ Birth Asphyxia (a condition arising when the body is deprived of oxygen): 40 (63)	15	No documents in support of any discussion on the CDRs and adopting of any corrective action could be produced by Balurghat DH.
Suri DH	791 (May 2018 to Dec 2019)	- Birth Asphyxia: 550 (70) - Respiratory Distress: 59 (seven) - Septicemia: 11 (one)	04	--
Jhargram DH	54 in 2018	- Respiratory distress: 46 (85) - Septicemia: Two (below one)	14	Panel identified lack of minimal respiratory support (CPAP/ HHHF Nasal Cannula) as cause of death and recommended essential equipment/ facility/ services.

Source: Records of the District Hospitals

The trend continued as 22 (out of 105) and nine (out of 137) neonatal deaths were found preventable in 2020 in Balurghat and Jhargram DH respectively. No records on child death reviews were produced by Suri DH for the period from January 2020 to November 2020.

The Respiratory support to newborn is life saving for newborn with breathing difficulty. If breathing difficulty in newborn worsens, supply of oxygen at a high flow rate (5-10 L/ min) to newborn is essential. IPHS also stipulates for provision of one CPAP (Continuous Positive Airway Pressure) for a DH. It was stated that the CPAP machine would work only on the centralized oxygen supply through pipeline and the Jhargram District Hospital had no such arrangement even as in September 2021.

Further the facility for full sepsis screening and BACTEC blood culture was lacking at JDH, as a result, infants suffering from septicemia were not treated on emergent basis leading to mortality of infants.

H. Laxity in Vitamin K prophylaxis: Vitamin K is required for the synthesis of coagulation factors that prevent and control bleeding. The Ministry of Health and Family Welfare, Government of India recommended (April 2014) that all newborns should be given Vitamin K intramuscularly after birth to minimise the risk of 'Vitamin K Deficiency Bleeding' (VKDB). All newborns delivered in health facilities at all levels should receive Vitamin K prophylaxis with record of date and dose in the Labour Room/ OT register, neonatal case sheets and referral/ discharge slip.

Review of records made available to audit, however, revealed that ‘Vitamin K’ administration to infants soon after birth to prevent VKDB was introduced in Suri DH only from July 2015. As such, 15,513 babies (live births) born between April 2014 to July 2015 did not receive Vitamin K.

I. Adverse event registers not maintained: As per NHM Assessor’s Guidebook for Quality Assurance, a health facility should maintain records of any adverse event following vaccination and/ or family planning procedures.

Review, however, revealed that no records of adverse event following vaccination and/ or family planning procedures were maintained by Suri and Jhargram DHs. As such precision and effectiveness of the vaccination and family planning units of the DHs could not be ascertained.

Suri DH, however, started maintaining Adverse Event Register from January 2021.

***Summary of findings:** In the three test-checked District Hospitals, five out of 13 essential IPD Services in IPD wards were not available while almost none of the 18 super speciality services (excepting two in Balurghat DH and one in JDH) was in existence. As regards essential and crucial IPD services, Suri DH had its CCU non-functional from October 2019 to February 2020. Acute shortage of trained manpower, drugs, equipment, etc., were noticed in CCU, Emergency and Operation Theatre services provided by the selected DHs. Surgical safety was compromised by not complying to pre and post-surgical checklist. Justifications in support of referrals were also not properly recorded.*

In post natal care, a large number of mothers were discharged within 48 hours of delivery ignoring inherent risk of developing complications. Many labour room drugs were not in stock. A number of instances were noticed where deaths of mothers were not reviewed. Available Maternal Death Review (MDR) showed gaps at DH level labour room facilities leading to fatalities of mothers. As gaps were never plugged, MDR served no meaningful purpose. Child Death Reviews showed a number of deaths were preventable. Lack of minimal respiratory support in Jhargram DH continued to be a matter of concern as it factored in child death.

Availability of Resources

2.1.7 Drugs

Department of H&FW, GoWB framed a State Drug Policy (SDP) 2004 with an objective to define the policy goals, to outline the strategies to meet the above goals and to create a forum for evaluation and system monitoring.

As per the policy, a secondary level hospital should have a Drug and Therapeutic Committee to suggest the administration of appropriate ways and means relating to inventory management and use of drugs. Though Balurghat DH furnished a register relating to ‘Drug Procurement Committee’, it only showed the list of members without details of any deliberations and recommendations.

2.1.7.1 No drug procurement plan and drug formulary prepared

The Indian Medical Council Regulations (Professional Conduct, Etiquette and Ethics) also suggested for development of drug formulary¹⁷ for ensuring rational prescription and use of drugs by adopting the ways and means suggested by the Drug and Therapeutic Committee.

Audit, however, observed that the DHs neither prepared any hospital drug formulary nor ever assessed the quantity of drugs required for the hospital; consequently, there was no drug procurement plan of the hospitals as observed as of August 2021.

As a result, serious deficiencies were noticed in procurement and keeping of stock of essential medicines in all the selected DHs as discussed below.

(i) Essential drugs not procured: The Department of Health & Family Welfare framed (January 2018) list of essential drugs for different levels of hospitals. A District Hospital, being a secondary level hospital, was to procure and maintain stock of 694 drugs, including life-saving drugs, in its stock so that desired services could be rendered.

A review of procurement of drugs against the state framed Essential Drug List (EDL) surprisingly showed that 51% to 66% of the 694 essential drugs were never procured by any of the selected DHs during the test-checked period from 2014-15 to 2018-19 as tabulated below:

Table 2.1.14: Position of procurement of Essential drugs in three test-checked DHs

Sl. No.	Name of DHs	No. of Essential Drugs as per State EDL	No. of drugs procured	No. of drugs never procured (percentage)
1.	Balurghat DH	694	234	460 (66.28%)
2.	Suri DH		266	428 (61.67%)
3.	Jhargram DH		341	353 (50.86%)

Source: Records of Medicine Stores of the District Hospitals

In Suri DH, it was also seen that out of 250 kits, chemicals and reagents to be procured and maintained in stock (as per Notification H/TDE/299/5S-05/2017 dt. 23.03.18), the hospital authority had procured only 146 chemical reagents.

(ii) Essential drugs remaining out of stock: Of the small percentage of EDL drugs procured by the selected DHs (as discussed above), 172 drugs, 26 drugs and 18 drugs remained out of stock for different periods during 2018-19 in Balurghat DH, Suri DH and Jhargram DH respectively as shown below:

Table 2.1.15: Position of essential drugs remaining out of stock in test-checked DHs

Name of DHs	No. of drugs remained out of stock for given range of days				
	<= 15 days	16-30 days	31-90 days	91-150 days	>150 days
Balurghat DH	13	07	32	18	102
Suri DH	00	00	04	10	12
Jhargram DH	02	04	04	06	06

Source: Records of Medicine Stores of the District Hospitals

Under the circumstances the DH authorities failed to clarify how the hospitals carried on to render services and dispensed free drugs (as per free drug policy

¹⁷A drug formulary is a list of generic and brand-name prescription drugs covered by a health plan.

of the state) to the OPD and IPD patients of the hospital by not procuring and also by not keeping stock of essential drugs.

(iii) **Administration of non-standard drugs:** The Deputy Director of Health Services (Equipment & Store), Central Medical Stores, invites e-tender for selection of suppliers and preparation of Rate Schedule for procurement of drugs, equipment and other hospital consumables by District and Sub-District level Hospitals and other direct purchasing health units under the H&FW Department throughout the State.

As per existing terms and conditions of tender document, every batch of drugs except Anti Rabies Vaccine (ARV), Anti Venom Serum (AVS) and other Sera/ Vaccines & immunological products should contain In-house Test report of the Company. This apart, the Central Medical Store (CMS) also has a system of statutory testing of samples of all batches of medicines received by the district/ sub-district hospitals, from empanelled laboratories. All adverse results of the testing were to be uploaded in the Stores Management Information System (SMIS) or to be intimated otherwise to all procuring units so that the drugs were not issued and consumed.

Cross-checking of the records of medicines of the three selected DHs *vis-à-vis* the list of drugs found to be of Non-Standard Quality (NSQ) revealed that some batches of the NSQ drugs were received in the DHs. However, instead of discarding the medicines, the medicines were issued from the stores to the wards and were administered to the patients as detailed below:

Table 2.1.16: Instances of administration of NSQ drugs in test-checked District Hospitals

Sl. No.	Name of drug	Batch No.	Quantity consumed	Ward involved
Balurghat DH:				
1.	Dexamethasone Sodium Phosphate Inj. IP 8 mg/ 2 ml (Pack of 10 vials)	1603207	406.50 packets	Isolation, Burn, Emergency, OT, Male Surgical, Maternity, Labour Room, Male Medicine, Female Medicine, Child & CCU
2.	Amoxicillin 500 mg + Clavulanic Acid 125 mg Tab (Strip of 10 tabs)	CLMD-1037	500 tabs	Maternity
3.	Glimiperide 1 mg tab (strip of 10 tabs)	163208	380 tabs	OPD Pharmacy
Suri DH:				
1.	Amoxicillin 500 mg + Clavulanic Acid 125 mg Tab	CLMD-1001	13,700 tabs	OPD-1,000, Gynaecology-3,000, FSW-700
2.	Ciprofloxacin HCl Tab. I.P. 500 mg	CPL-122	41,500 tabs	OPD-30,000, Labour-4,000, Other Wards-7,500
Jhargram DH:				
1.	Ciprofloxacin 250 mg	CPR 208,210	450 tabs	Male and Female Medical
2.	Inj. Ergometrine Maleate 0.2 mg/ ml	ME11713	1,050 amps	Labour Room, Post Obstetrics and Gynaecological Ward

Source: Records of CMS and respective wards of the District Hospitals

It could be seen from the above that substantial quantities of seven different NSQ batches of six drugs were administered to the patients of various IPD and OPD wards of three DHs. This was attributed by the DH authorities to absence of any intimation about the Quality of drugs supplied.

Though impact of administration of the NSQ drugs on patients was asked for, no details could be provided by the DH authorities.

(iv) Administration of expired drugs: Assessment and procurement of drugs in consonance with assessed demand are integral elements of efficient management of inventory of drug and consumables. Review, however, showed that a large number of medicines in considerable quantities expired their shelf-lives over the years. Balurghat DH had 70 types of medicines expired while Suri DH had eight and Jhargram DH had 103 medicines that expired during the audited period.

A test scrutiny carried out in audit showed instances of expired drugs being actually administered to the patients in various IPD wards in all three DHs:

- In Balurghat DH, six types of drugs (out of 61 drugs test-checked) issued between 2017-18 and 2019-20 to different IPD wards, were administered to the patients of five IPD wards after the date of expiry of the drugs (*Appendix 2.1.6*). Though it was seen that in most wards dates of expiry were recorded against the medicines in stock register, the dates were ignored resulting in administration of expired medicines to patients.
- In Jhargram DH, in 2018-19, 381 units (tabs/ injections) of two types of drugs were administered to patients after expiry (*Appendix 2.1.6*).

It is pertinent to mention that in none of the wards of DHs, there were accesses to online Store Management Information System (SMIS).

There was no scope to evaluate the hazards of consumption of expired drugs on patients by Audit.

(v) Poor storage conditions: Drugs and Cosmetic Rules, 1945 stipulated parameters for the storage of drugs for maintaining the efficacy of the drugs before those were issued to patients. The norms and parameters prescribed in the said Rules were, however, not adhered to as observed in audit.

In Jhargram DH, the drugs and consumables were stored in open place without any container/ tray/ cart. The roof of the store building was damaged and damp and was in dilapidated condition. As a result, there was a high probability of it affecting the condition and hence, quality of drugs.



Pic 2.1.2 to 2.1.4: Store, District Hospital, Jhargram

As per Assessor's Guidebook for Quality Assurance for District Hospitals 2013, the hospital service provider was to ensure secure storage of narcotic and psychotropic drugs through lock and key. The Jhargram District Hospital did not secure storage of such drugs during the period of audit. Further, the buffer stock of medicines and consumables were not maintained by the hospital during the period of audit.

In Suri DH and Balurghat DH also, drugs were found stored on the floor in absence of adequate space on shelves. In Suri DH, three of the four freezers/refrigerators did not have 24 hour temperature recording nor did those display the storage instructions of vaccines. There was no improvements in the situation as of August 2021. Such lack of reliable access to safe and effective drugs could result in diminished public trust in the health system.

***Summary of observations:** In absence of Drug and Therapeutic Committees, there existed no drug formulary and drug procurement plan. As a result, there were instances like large number of essential drugs not being procured or remaining out of stock. This would have led to significant out-of-pocket expenditure being burdened on the patients, especially the poor. Moreover, alarming instances were noticed where non-standard and expired drugs were administered to patients representing serious laxity in control mechanism. Storage condition of drugs also called for special attention.*

Though there were provisions in place for preparation of list of drugs by hospitals on the basis of disease patterns and inflow of patients; guiding orders for maintenance of buffer stock; storage of drugs and ensuring quality of drugs before being administered to the patients; inter-district or inter-institutional transfer of medicines before the expiry, etc., compliance to these rules has to be ensured for effective operation.

2.1.7.2 Equipment

The Indian Public Health Standards prescribed equipment norms for District Hospitals based on its bed strength. The Department of H&FW neither adopted IPHS nor did it devise any essential equipment norm/ list for a District Hospital to maintain. Only list of equipment to be maintained at CCU and SNCU was found to be in place. Status of availability/ non-availability of various equipment required for various line services have already been discussed earlier in the Report. However, in the absence of any general list of equipment for a district hospital, there was no scope for the district hospital to carry out any gap analysis exercise and to prepare a procurement plan against any time scale.

(i) Poor inventory management: As a general rule { West Bengal Financial Rules (WBFR) 99 & 109}, all departments in possession of stores required for use in public service are to maintain stock account. Review, however, showed that the stores in Balurghat DH and Jhargram DH did not maintain proper stock of equipment. The equipment stock registers, as produced to Audit, recorded only some minor instruments and consumables of the hospital.

It was stated by Balurghat DH that management of stock and AMC of all equipment has centrally been vested with a private organization which had prepared a stock of equipment after assigning bar-code to each equipment in possession of the DHs. However, enquiry revealed that the list was not dynamic one as an unauthenticated list of equipment (as on 8 December 2019) was furnished to audit. The list only contained equipment already in possession of

the erstwhile DHs. The equipment supplied for the newly built Super Specialty Hospital (SSH) buildings in all the DHs, maintained by West Bengal Medical Services Corporation Limited (WBMSCL), were not included in the list. As such, the DH authorities did not have a comprehensive picture of equipment in its possession. The situation remained unchanged as of August 2021.

(ii) **Non-availability/ Shortage of equipment and serious anomalies in stock:** Observations on non-availability/ shortage of equipment in respect of CCU, OT, Emergency and SNCU have been discussed earlier in this report. A cross-checking with the list of equipment prescribed in IPHS (for a 500-bedded DH) for some of the remaining departments/ services against Asset Register (prepared by HITES) and list of equipment for SSH (maintained by WBMSCL) vis-à-vis current physical status obtained from respective departments, revealed shortages and anomalies in stock as detailed in **Appendix 2.1.7A, 2.1.7B and 2.1.7C**.

Evidently, all the selected DHs not only operated in absence and/ or with serious shortage of essential equipment, but also a discrepant inventory of equipment was maintained. No physical verification of equipment was ever carried out by the DH authority during the period covered in audit.

Summary of findings: Inventory of equipment was not properly maintained in the test-checked DHs. There were acute shortage of Eye, ENT and Endoscopy equipment compared to normative requirement envisaged by IPHS. Moreover, anomaly in stock and physical existence of equipment were observed by Audit.

2.1.7.3 Human Resource

(i) **No definite sanctioned strength- no future plan for plugging up vacancies:** There existed no separate order specifying the sanctioned strength of staff of the selected DHs. The basis of sanctioned strength was a general guiding order issued in 1991 which specified a formula of calculating the sanctioned strength of different cadre based on bed-strength of a hospital. Requirement of manpower has never been assessed and/ or revised since 1991, though there has been gradual increase in bed strengths in all three DHs. Moreover, the sanctioned strength of some cadres as obtained from H&FW Department were at variance with sanctioned strength as available with the DHs in respect of those cadres as shown below:

Table 2.1.17: Mismatch of sanctioned strength at some cadres between Departmental figures and DH level figures

Name of Cadre	Sanctioned strength as per H&FW Department			Sanctioned strength as per the District Hospitals		
	BDH	SDH	JDH	BDH	SDH	JDH
Medical Technologists (MT)	34	36	29	52	18	NA
Staff Nurse	468	516	346	400	263	NA

Source: Records of the H&FW Department and District Hospitals

As there existed no definite sanctioned strength of hospitals, evidently, there existed no plan or target of filling up the vacancies in a time frame. Jhargram DH authority was unaware of its sanctioned strength.

(ii) **Shortage of manpower vis-à-vis sanctioned strength:** There were substantial vacancies (as of April 2019) in the DHs, as compared to the sanctioned strength given by Directorate of Health Services (DHS) in different cadres of manpower as shown below:

Table 2.1.18: Shortage of manpower vis-à-vis sanctioned strength in test-checked DHs

Cadre	Sanctioned strength	Men-in-Position in DHs (01.04.2019)				Shortage
		Regular	Contractual		Total	
			State budget	NHM		
Balurghat DH:						
Medical Officer	90	50	4	2	56	34 (38%)
Paramedical	101	54	1	11	66	35 (35%)
Staff Nurse	468	279	0	0	279	189 (40%)
Administrative	195	82	0	10	92	103 (53%)
Jhargram DH:						
Medical Officer	78	57	6	NA	63	15 (19%)
Paramedical	55	35	2	NA	37	18 (33%)
Staff Nurse	346	239	0	NA	239	107 (31%)
Administrative	NA	29	0	NA	29	0

Source: Records of the H&FW Department and District Hospitals; Figures of Directorate have been taken as sanctioned strength of Nursing staff of all DHs and of all cadres of Jhargram DH.

The DHS, however, could not provide the men-in-position Cadre-wise break up of status in respect of Suri DH. The overall number of men-in-position in Suri DH showed that there were 24, 7 and 41 *per cent* vacancies¹⁸ in the cadres of Medical Officer, Paramedical Staff and Staff Nurse respectively.

The status as of March 2021 showed that shortage of Staff Nurse and in Medical Officer worsened (30 - 40 *per cent* and 41 - 43 *per cent* respectively for Balurghat and Suri DHs) while Jhargram DH showed an increasing trend in shortage in the Medical Officer and Paramedical Staff cadre. Shortage in Paramedical staff in Balurghat and Jhargram DH was, however, reduced to 30 *per cent* and 13 *per cent* respectively.

Thus, alarming level of shortage of nursing staff and Medical Officer in Balurghat and Suri DHs calls for attention of the Government as it can potentially affect the patient care.

Moreover, the existing manpower of the DHs, having a sanctioned bed-strength ranging from 600 to 1,024, was abysmally low even compared with the minimum essential manpower specified cadre-wise and specialty-wise suggested for a DH with 500 beds as by IPHS as detailed in [Appendix 2.1.8](#). A synopsis showed the following status:

Table 2.1.19: Shortage of manpower vis-à-vis IPHS norms in test-checked DHs

Specialty	Minimum strength for a 500-bedded DH	Shortage as on 01.04.19		
		BDH (930-bedded)	SDH (1,024-bedded)	JDH (600-bedded)
Medical Officer	68	29 (42.64%)	15 (22.06%)	13 (19.12%)
Paramedical Staff	100	57 (57%)	62 (62%)	64 (64%)
Administrative Staff	27	19 (70.37%)	15 (55.55%)	17 (62.96%)

Source: IPHS norms and records of the District Hospitals

The gaps found to have widened by March 2021. Shortage of MO ranged between 31 *per cent* in Suri DH and 35 *per cent* in Jhargram DH. Shortage of Administrative Staff also increased up to 63 *per cent* in Suri DH.

(iii) Human Resource needed to run Specialty and Super-specialty services, were not available: H&FW Department, GoWB, constructed (2016) a

¹⁸ Medical Officer: 61 in position out of 80 sanctioned, Paramedical Staff: 56 in position out of 60 and Staff Nurse: 306 out of 516

500-bedded 10-storied Super Specialty Hospital (SSH) in the compound of Balurghat DH as an integral part of the existing District Hospital to render specialty services like G&O, Medicine, Surgery, Paediatrics, Imaging Services, Clinical Pathology and Super Specialty Services like Ophthalmology and Orthopaedics. For the purpose of making it operational, 478 posts against 20 different cadres were sanctioned by the Department.

Review, however, showed that the existing wards of the DH were shifted to the SSH Building but continued the operation with the existing HR available with the DH. Since creation of the SSH, posting of only 66 staff nurse and seven staff (Non-Medical Technical Person) were made against the sanctioned post of 478 under different cadre as shown below:

Table 2.1.20: Shortage of manpower *vis-à-vis* sanctioned strength in SSHs attached to DHs

Sl. No.	Name of the post	No. of sanctioned strength	Number posted
1.	GDMO	15	0
2.	Specialist MO	41	0
3.	Dy. Nursing Super	4	0
4.	Staff Nurse	161	66
5.	Ward Sister	12	0
6.	Asstt. Superintendent	3	0
7.	Pharmacist	7	4
8.	Lab. Technician	04	0
9.	X-Ray Technician	4	0
10.	ECG Technician	4	2
11.	Ward Master	4	0
12.	Storekeeper	4	0
13.	Clerk	5	0
14.	Physiotherapist	2	1
15.	Dietician	1	0
16.	GDA	148	0
17.	Sweeper	50	0
18.	Driver	2	0
19.	Cleaner	2	0
20.	DEO	5	0
Total		478	73

Source: Records of the H&FW Department and District Hospitals

No GDMOs or Specialist MOs were posted. As a result, all the deliverable Specialty Services ran with acute shortage of HR rendering the delivery of comprehensive secondary care remained unfruitful.

Summary of observations: *There was no definite sanctioned strength devised for the DHs, though conflicting data were available with the Department and the test-checked District Hospitals. However, there were acute shortage in the cadres of Medical Officer and Nursing Staff. Evidently, the Department was not in a position to frame any time bound plan for filling up the vacancies. The test-checked DHs having 850 beds in average, exhibited acute shortage of manpower even against normative strength of manpower envisaged in IPHS for a 500-bedded DH. Prospect of delivery of specialty/ super specialty services at district level in Dakshin Dinajpur District remains remote as only 15 per cent of sanctioned HR for Specialty/ Super Specialty services were posted in Balurghat DH.*

2.1.7.4 Infrastructure

(i) **Sub-optimal and inefficient utilisation of infrastructure:** West Bengal Medical Services Corporation Ltd. (WBMSCL) under Department of H&FW, GoWB undertook the construction of the Super Specialty Hospitals (SSH) at district level on turnkey basis (planning, design and execution) wherein 10-storied building was constructed for SSH of 500 bed (In case of Jhargram DH, it was five storied building for 300-bedded). The turn key contractor was also responsible for supply and installation of medical equipment and furniture which was approved under the project as a package for the selected DHs.

Though the SSHs were ready by February 2016, however, it was observed that delivery of health care services started only from April-May 2017 in Balurghat and Suri SSHs. It was further seen that even after commencement of delivery of services, the DH authorities could not utilise the huge infrastructure created for the SSHs, non-posting of human resources being the main attributable factor.

A. Short utilisation of IPD beds of SSH: Year-wise sanctioned bed-strength and poor utilisation (functional) status of the beds had been detailed in *Appendix 2.1.9*.

Though with the inclusion of SSHs, the sanctioned bed strength increased by 116, 92 and 100 *per cent* in Balurghat DH, Suri DH and Jhargram DH respectively, the increase in utilisation of beds was only by 58 *per cent* in Balurghat and 74 *per cent* in Suri. Jhargram DH, however, registered a growth of 91 *per cent* in utilization of beds. Beds and bed mattresses, were, however,

found wrecked and lying dumped in the SSH buildings.



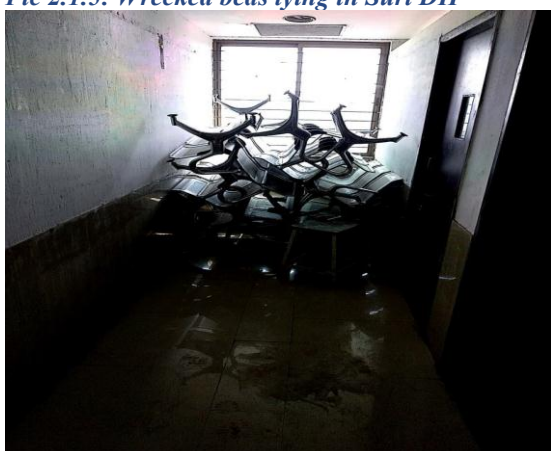
Pic 2.1.5: Wrecked beds lying in Suri DH

B. Idle civil infrastructure & furniture: The newly built multistoried SSHs with total floor area of 1,60,000/ 80,000 sq. ft. (adding together ten/ five floors) were envisaged to deliver all the specialty and super specialty services.

However, in reality no additional specialty and/ or super-specialty service could be introduced till date of audit. Instead, only some existing wards of the DHs were shifted from its pre-existing buildings to the SSH buildings. It was observed, only 77 *per cent* (1,22,759 sq. ft.) in Balurghat SSH building and 69 *per cent* (1,09,682 sq. ft.) in Suri SSH building were utilised as of June 2019 leaving the remaining floor spaces lying unutilized.

Moreover, this portion of un-used civil infrastructure and the furniture were lying without any maintenance leading to rapid wear and tear.

In Balurghat, such shifting of existing wards from old DH building to new SSH building caused scattering of departments/ wards within the campus. As a result, the Emergency in the old Balurghat DH building was so far away from OT and some IPD wards in SSH, that people had to use ambulance to



Pic 2.1.6 Floor space and furniture lying un-used without maintenance in Balurghat DH

bring ailing patients from Emergency to OT or for admission in IPD in SSH building. This can potentially cause additional danger for patients brought to emergency requiring immediate surgery.

C. Supplied equipment lying unutilised: As the Balurghat SSH could not operationalise services at desired level due to dearth of doctors and other support staff, a number of equipment were found lying unutilized in locked up rooms of the SSH building or remained unused since installation as detailed below:

Table 2.1.21: Equipment lying unutilized in test-checked DHs

Sl. No.	Equipment	Supplied Qty.	Issued Qty.	Balance Qty.	Remarks
1.	500 MA X-Ray Machine	1	1	0	Not used
2.	60 MA portable X-Ray	1	1	0	Not used by Mammography Deptt.
3.	Mammography unit	1	1	0	Not in use
4.	Fibre-optic Bronchoscope with light source	1	0	1	Not installed
5.	Nebuliser	10	3	7	Lying uninstalled
6.	Radiant Warmer	4	3	1	Lying uninstalled
7.	ECG Machine Computerised	4	3	1	Lying uninstalled
8.	Laryngoscope Fibre-optic ENT	2	2	0	Not used
9.	Laryngoscope Indirect	3	2	1	None of these three used/ installed
10.	Snellen Chart/ Drum with remote	1	0	1	Not installed
11.	Trial lens sets with frame	1	0	1	Not installed
12.	Log Mar Vision Chart	1	0	1	Not installed
13.	Retinoscope	2	1	1	Lying uninstalled
14.	Dental Chair with Accessories	3	0	3	Not installed
15.	Dental X-Ray	1	0	1	Not installed
16.	Dental Instrument and Accessories	3	0	3	Not installed
17.	Haematology Analyser	1	0	1	Not installed
18.	Class-I Bio-Safety Cabinet	2	0	2	Not installed
19.	Endoscope (OGD)	1	0	1	Not installed

Source: Records of the District Hospitals

Apart from the above list of equipment which were documented as not installed or not used by Balurghat DH, other equipment, like Baby-Incubator, which were shown as issued to Paediatrics Ward in the list and shown as commissioned in August 2017, were actually found lying packed inside a locked room indicating their idling for at least four years.



Pic 2.1.7 & 2.1.8 Four baby incubators, though shown as issued to Paediatrics ward and in service, was found lying packed in un-used locked up room of SSH building

Three Neo-Natal Ventilators also lay uninstalled in Balurghat DH due to lack of pipe line supply of medical gases. The machines were supplied in 2015 with a warranty of three years from the date of installation. Even after a lapse of six years of supply, the same could not be installed.

In Suri Super Specialty Hospital, out of 90 types of medical equipment supplied between March 2016 and July 2018 by the turnkey supplier, 29 equipment worth ₹ 9.10 crore, could not be made functional till date (February 2020) due to non-availability of specialized doctors and manpower, training, non-supply of film, cassettes, accumulation of moisture (sweating) on machine due to dampness, battery, reagents, *etc.* Audit scrutiny also revealed that the warranty of machines had already been expired.

Further, the hospital authority assessed (June 2018) and identified that the turnkey supplier supplied (January 2017) 24 types of furniture worth ₹ 2.20 crore beyond requirement or for service not planned in the SSH. Those excess supplied furniture were kept in packed condition in the seventh floor of the Super Specialty Hospital since the date of supply.

WBMSCL instructed (July 2018) Suri SSH to reallocate the surplus medical equipment and furniture to the old DH building. The residual excess, if any, after such reallocation was to be communicated to WBMSCL. The CMOH of the District was also requested to undertake the relocation exercise and ensure utilisation of all equipment/ furniture that have relocated to the existing hospital for post facto approval of the department.

However, the district authority could not reallocate to put the unused furniture/ equipment into use till date.

D. Pipeline Supply of Medical Gases remaining non-functional: The Super Specialty Hospitals in the three selected district hospitals (Balurghat, Suri and Jhargram) came up with centralized Medical Gas Pipeline System (MGPS) as included under the turnkey contract. As MGPS is a patients' life-saving system, WBMSCL had instructed the contactors to exercise the checks of the installation and commissioning process as per guidelines of HTM-2022 Standard and to get it certified through a qualified third party agency/ consultant with the approval of WBMSCL.

The MGPS were found to have been completed in all three DHs between August 2016 and April 2017. However, the system became functional in Suri DH only from October 2020, while in the remaining two DHs, it remained only partially functional. An oxygen plant has been set up for the SSH building of Jhargram DH (including some parts of the old building) under PM-CARES fund.

E. Absence of drainage system- un-scientific disposal of liquid waste: The Balurghat DH campus including SSH building, quarters for doctors, nurses and staff, *etc.*, never had a proper drainage system in place. All effluents of the hospital wards and staff quarters passing through shallow channels (cut across the compound, partially concreted and partially not) lead to a swampy land behind the SSH building.



Pic 2.1.9 & 2.1.10: Plight of drainage in Balurghat DH

Review of resolutions of Rogi Kalyan Samity (RKS) meeting showed that though the matter of construction of drainage system was under consideration from or before January 2014, and the hospital authority showed concerns of health hazards of the people of locality and the patients due to the choked drainage, the DH was still running without a proper drainage system even as of August 2021, *i.e.*, after passing of seven years.

F. Other Projects lying incomplete: Review of RKS resolutions and list obtained from district health authority showed that a number of projects essential for smooth running of the DHs were either not approved or not completed since long as detailed in **Appendix 2.1.10**.

It could be seen that a number of projects were not even approved as on date of audit and received the Administrative Approval and Financial Sanction (AAFS) of the Health Directorate. Evidently the DHs continued operation with curbed infrastructural facilities.

Summary of observations: *There was sub-optimal and inefficient utilisation of infrastructure. Even after commencement of delivery of service, the DH authorities could not utilise the huge infrastructure created for the SSHs, non-posting of human resources being the main attributable factor. Though there had been substantial increase in sanctioned bed strength (by 92 to 116 per cent), the same could not be translated into equivalent increase in functional beds in two test-checked District Hospitals. A large portion of newly created civil infrastructure and procured furniture/ fixtures for super specialty hospitals have been lying idle. This apart, as super specialty services could not be operationalised, a number of costly and sophisticated equipment supplied for the Super Specialty Hospital lied packed for years. Pipeline Supply of Medical Gases could not be operationalized creating hindrance in delivery of proper health care services to patients. Liquid waste was irregularly discharged in Balurghat DH in absence of proper drainage system.*

**Support &
Auxiliary
Services**

2.1.8 Radiology & Diagnostic Services

Efficient and effective diagnostic services, both radiological and pathological, are amongst the most essential health care facilities for delivering quality treatment to the public based on accurate diagnosis. IPHS suggested a DH to ensure a list of equipment and facilities; availability of which was as found below:

2.1.8.1 Radiology Services

The role of radiology is central to disease management for the detection, staging and treatment of diseases. Adequate availability of functional radiology equipment, skilled human resources and consumables are the key requirements for the delivery of quality radiology services.

(i) **Lack of essential equipment:** The essential equipment, as stipulated by IPHS, to ensure delivery of desired radiology services in a district hospital was not available with the DHs:

Table 2.1.22: Dearth of equipment vis-à-vis IPHS requirements

Sl. No.	Name of Equipment	Number required	Nos. available			Remarks
			BDH	SDH	JDH	
1.	500 M.A. X-Ray machine	01	01	01	01	SDH & JDH: Non-functional
2.	300 M.A. X-Ray machine	01	02	00	01	BDH: 1-Non-functional SDH: Not available & JDH: Non-functional
3.	100 M.A. X-Ray machine	01	01	00	02	BDH & JDH: Non-functional SDH: Not available
4.	60 M.A. X-Ray machine (Mobile)	01	01	01	01	All DHs: Non-functional
5.	Dental X-Ray machine	01	01	01	01	--
6.	Colour Doppler Ultrasound machine with 4 probes	04	04	02	02	BDH & SDH: Machines had only two probes (abdomen & soft parts) instead of four
7.	Portable ultrasound	01/desirable	00	00	00	All DHs: Not available
8.	C.T. Scan Multi slice (64 slice)	01/desirable	01	01	01	All DHs: In PPP mode
9.	Mammography Unit	01	01	01	00	BDH & SDH: Non-functional JDH: Not available
10.	Echocardiogram	01/desirable	00	00	00	All DHs: Not available
11.	MRI 1.5 Tesla	01/desirable	00	00	00	All DHs: Not available

Source: IPHS norms and records of Radiology Department of the District Hospitals

It could be seen that though 100 MA, 60 MA X-Ray machines and Mammography Unit were available with Balurghat DH, those were not used due to shortage of doctors (Mammography Unit) or were lying out of order. The period of lying out of order was so long that DH authority could not specify. Colour Doppler Ultrasound machine did not have two probes.

In Suri DH, out of its seven Radiography equipment, as per Asset Register, only four were functional. 500 MA, 60 MA X-Ray machines and Mammography Unit could not be used due to non-availability of film and sweating issue. The warranty periods of those machines had expired.

In Jhargram DH, for establishing Blood Component Separation Unit (BCSU) in the old Radiology unit, five working X-Ray machines inside the old Radiology unit were to be shifted to Rural Hospital. Accordingly, Electro Medical and Allied Industries Ltd. (EMAIL), a State Government Company and the supplier of the equipment, was requested by the district authority to shift the machines to the desired location. On being refused by EMAIL, the hospital authority dismantled all the five machines without technical guidance and dumped in a room. The machines had been lying dismantled and defunct since August, 2018.



Pic 2.1.11 and 2.1.12: Dumped five number of X-Ray machines in Jhargram DH

Due to non-functioning of five X-Ray machines, 550 X-Ray films also expired in December, 2017. Moreover, Jhargram DH left with only three X-Ray machines (one Digital & two portable) functional out of six machines available in the DH.

Consequently, the average Turnaround Time (TAT) of getting X-Ray done in Jhargram was eight days from the date of advice in OPD. The TAT for USG was about one year for OPD patients due to availability of only one Radiologist.

None of the desirable radiology equipment like Portable ultrasound, Echocardiogram and MRI machines were available in any of the DHs except CT scan in PPP mode.

(ii) Anomaly in number of X-Ray machines and sub-optimal usage: Review/scrutiny of various records showed that though Balurghat DH had nine X-Ray machines recorded in its Asset Register, it actually had 12 X-Ray machines in its possession of which four X-Ray machines were lying out of order. The matter should be reviewed and ensured that no intentional camouflaging was done.

It was further observed that Balurghat DH engaged a private party to perform X-Ray in the DH in PPP mode. The trend when analysed showed that the PPP unit carried out more (1,293 cases per month on an average) number of X-Rays during the test-checked months as compared to cases done in-house (793 cases per month on an average) in spite of higher in-house resources. This indicated possibility of sub-optimal utilization of in-house resources.

Similarly, in Suri DH, the hospital authority received another three X-Ray machines (one ceiling suspended Digital Radiography system, one 500 MA X-Ray Machine with Radiography & Fluoroscopy and one Portable 60 MA mobile X-Ray machine) for SSH from WBMSCL during 2016-17. However, the number of X-Rays done by using the in-house machines decreased from 9,778 in 2015 to 819 in 2019. The hospital had eight technicians in 2015 and 12 technicians in 2019. It was seen that the X-Ray technicians were engaged for registration of the OPD patients.

2.1.8.2 Diagnostic Services

(i) Lack of essential equipment: The essential 58 types of laboratory equipment as stipulated by IPHS to ensure delivery of desired diagnostic services in a district hospital, were not available with the DHs as detailed in *Appendix 2.1.11*.

Review showed that out of those 58 types of equipment,

- Thirty-two types of laboratory equipment were not available with Balurghat DH. Of the remaining 26 equipment available with the hospital, 13 were available in grossly inadequate number.
- In Suri DH, 22 essential laboratory equipment were not at all available, while 10 equipment showed gross shortage.

(ii) Non-availability of diagnostic services: Review of availability of essential diagnostic services, as stipulated in IPHS, *vis-à-vis* services available in the test-checked DHs showed that a wide range of diagnostic services were not available in the DHs (*Appendix 2.1.12*).

It was noticed that out of 60 test-checked diagnostic services specified by IPHS as to be rendered mandatorily by a District Hospital, 45 (75 per cent) services in Balurghat DH, 34 (57 per cent) services in Suri DH and 45 (75 per cent) services in Jhargram DH were not available.

(iii) Instances of erroneous test results from DH Laboratory: NHM guideline on Free Diagnostic Service Initiative also specified that a health facility should establish a system of regular sample cross-checking of diagnostic results with identified reference laboratories such as All India Institute of Medical Sciences (AIIMS) or Christian Medical College (CMC) Vellore, etc. Deviations found in cross-examinations would be categorized under “warning” zone (i.e., deviation beyond certain limit) or “not acceptable” (i.e., most severe deviations.)

- Review of the reports as detailed in [Appendix 2.1.13](#) showed that, average 12 per cent of 571 sampled test-results of Balurghat DH laboratory were categorized under ‘warning’ zone, while almost 17 per cent were termed as ‘not acceptable performance’. The error percentage was alarmingly high in case of HbA1c (70 per cent) and Urine Chemistry (55 per cent).
- In Suri DH, while the annual synopsis of such cross-verification reports, as furnished to audit, for 2016, 2017 & 2018 showed little deviations, deviations in the monthly reports of 2019 showed ‘not acceptable performance’ in four out of six occasions in respect of HbA1c test reports as detailed in [Appendix 2.1.13](#).

In case of significant deviations, the authority was to take corrective measures ranging from kits to instruments including deployment of skilled manpower. It is pertinent to mention that calibration of 137 various equipment was done in Balurghat DH in March 2019. However, out of 73 number of 26 types of laboratory equipment available with Balurghat DH, only two of the laboratory equipment, were calibrated.

Since laboratory test results defines the course of treatment, immediate rectification of the same may please be ensured so that no false treatment is rendered to patients.

(iv) Turnaround Time not assessed: NHM guideline specified reporting time of various diagnostic tests performed either in-house or by outsourcing, while Turnaround Time (TAT) for laboratory investigations is considered as a performance indicator. It also illustrated the detailed entries¹⁹ in the register for this purpose.

Review, however, showed that none of the selected DHs ever assessed TAT of radiology or laboratory investigations. The practice prevailed as of August 2021 showed that:

- In Balurghat DH, that requisitions for tests handing over of reports did not contain dates. Moreover, the laboratory reports were scribbled on the requisitions itself and returned to wards without date and signature of the doctor. As a result, the TAT could not be assessed.

¹⁹ Request form no, name and registration no. of the patient, name of authorised requester, type of primary sample, examination requested, date and time of sample collection, date and time of receipt of sample and date of delivery of report.

- In Suri DH, in the absence of the test indent forms/ registers in case of OPD patients, it was not ascertainable whether all investigations recommended by the doctors were performed by the hospital.
- In Jhargram DH, no registers were maintained at the in-house laboratory to identify the TAT. In reply, the JDH authority claimed that receipt of requisition for tests and sample collection was done on the same day.

***Summary of observations:** Wide range of IPHS-stipulated essential diagnostic services were not available in the DHs. A number of essential X-Ray machines to ensure delivery of desired radiology services in a district hospital were not in service. The available machines were also sub-optimally utilized leading to inordinately high Turnaround Time. Some essential radiological tests were not available in the DHs. Up to 78 per cent of essential laboratory equipment were either not available or acutely short of required number. Instances were observed where laboratory test results, when cross-verified externally, were proved erroneous.*

2.1.8.3 Referral Services

Assessor's Guidebook (Vol.-I) for Quality Assurance Scheme under NHM required DHs to establish a mechanism for referral linkages to other/ higher facilities so that continuity of care of patients is ensured. For this purpose, Refer in and Refer out Registers were to be maintained.

(i) Non-maintenance of records of OPD Refer-out cases: Audit observed that neither the OPD Departments nor the Emergency of any of the selected DHs maintained any records of refer out cases during the period covered under audit as continued as of August 2021. In fact, the refer out was shown as 'nil' in Key Performance Indicators submitted to the H&FW Department against almost 34.23 lakh of patients attending OPD and 7.07 lakh patients attending Emergencies during 2015 to 2018.

This may be viewed with the fact that a number of essential, desirable and/ or all super-specialty services were not available in these three DHs. Hence, it was not forthcoming as to how cases requiring such services were managed in the hospitals without referring them out.

Further, Refer in Registers, for recording details of patients who was referred by any other facility to these DHs, was also not maintained till August 2021.

(ii) Irregular referral of IPD patients: Review of Refer-out Registers of different IPD wards of Balurghat DH for 2018 showed that patients were referred out to higher health facilities without recording proper reasons as to why such patients could not be treated in the District Hospital. Out of 395 cases referred out during 2018 from 10 IPD wards of Balurghat DH, reasons against 345 referrals were recorded only as 'for better management' and in 24 cases, no reasons were recorded at all.

In Suri DH, the hospital authority maintained the Refer-Out Register only from May 2018. Review of the register in respect of four departments, viz., Orthopaedics, ENT, EYE and Dental, however, revealed the followings:

Table 2.1.23: Analysis of cases referred out from Suri DH

Name of the Department	Total no. of patients referred out	No. of patients referred out for want of equipment	Absence of equipment/ facility	No. of avoidable referral cases
Orthopaedic	971	194	C-ARM Machine with its accessories in the OT was found non-functional from May 2018 due to dampness of wall (sweating) issues.	09
ENT	150	05	Endoscope with its accessories were non-functional (from May 2018) due to want of specialist doctors.	12
EYE	93	22	Non-availability of equipment	06
Dental	29	Nil	--	Nil
Total	1,243	221		27

Source: Records of respective Departments of Suri DH

Out of 221 patients referred out to other facilities, 216 were referred out due to non-functioning of equipment and five patients were referred out for lack of equipment and specialized doctors. Further, 27 referred out cases of the above three departments could have been avoided as similar types of surgeries/ treatment were conducted in the hospital on regular basis.

2.1.8.4 Dietary Services

Dietary service of a hospital is an important therapeutic tool. As per IPHS, dietary service is an essential support and auxiliary service that a District Hospital was to provide.

All the three selected DHs supplied cooked diet to the indoor patients of the DHs by engaging private diet supplier through tender formalities.

(i) Cleanliness and hygiene never monitored: The contractors were to maintain cleanliness and hygiene with regard to kitchen site, the utensils and equipment used and manpower deployed. It was the responsibility of the contractor to ensure no entry with shoe/ slipper in kitchen area, installation of proper exhaust system, collection of waste in appropriate coloured plastic bags and proper disposal of waste from the kitchen site. For this purpose the contractor was to maintain a Kitchen Inspection Register at the kitchen site and attach all periodic maintenance certificates of equipment and appliances used in the kitchen. Competent authority of the health facility was to inspect the kitchen site at-least once a month and record its observations in the Kitchen Inspection Register.

Review, however, showed that neither did the contractors maintain any such Kitchen Inspection Registers, nor did hospital authorities pay any visit to monitor whether cleanliness and hygiene norms were being followed in any of the test-checked DHs. It was noticed from Diet Committee report of Jhargram DH that kitchen and the area earmarked for washing the utensils, serving plates was highly unhygienic.

(ii) Quality and quantity of diet never verified – insufficient quantity of sub-standard food served: The agreement executed with the contractors specified the type and standard of raw materials like rice, pulses, vegetables, condiments, milk, etc., to be procured by the contractor so that the patients' diet conform the provisions of the Food Safety and Standards Act, 2006. To ensure

that quality and quantity of diet is duly maintained, DHs authorities had the right to examine the bills of shopped items, stock registers and other books of accounts of the contractors. The bills of the contractors were only to be passed after a certificate given on the bill by the authority to the effect that diets have been satisfactorily served.

Audit scrutiny, however, showed that though regular certificate of satisfactory rendering of services were recorded on diet bills, Balurghat DH authority could not produce any evidence to have ever carried out any inspection of quality and quantity of food supplied to patients. There was no stock register of raw materials maintained by the contractor. Bills for shopped items and books of accounts of the contractor when sought for in audit were not produced.

A surprise inspection of the kitchen site of Balurghat DH by Audit revealed that grossly deficient quantity of food was served in hospital diet. For instance, the piece of fish when weighed showed 37 gm as raw and 20 gm when fried, which as per the diet scale was to be 75 gm and 50 gm respectively:



Pic 2.1.13: Raw fish in kitchen of Balurghat DH



Pic 2.1.14: Raw fish weighed 37 gms in Balurghat DH



Pic 2.1.15: Fried fish weighed 20 gms in Balurghat DH

Evidently, the weight of the pieces of fish was even less than half of the prescribed weight as per diet scale specified in the agreement. Minutes of RKS meeting also showed that such observations and/ or issues on quality or quantity of diet served in Balurghat DH were never discussed in the RKS meetings held during the period under audit.

There was no record/ mechanism followed in Suri DH of checking of quality and quantity of diet supplied to the patients.

A diet committee was formed (April 2014) by Jhargram District Hospital (JDH) to monitor the quality and quantity of the cooked diet. It was evident from the reports of the committee that not only diminished quantity of diet, but also, the contractor persistently supplied sub-standard quality of food to the patients of the DH as under:

- The Chicken and fish per meal served were not more than 30 grams and 25 grams instead of specified 75 grams and 50 grams respectively.
- Steamed rice and dal were also served 200 grams and less than 100 gram per meal instead of specified 450 grams and 100 grams respectively.
- Quality of rice was far below the standard IR 36, as specified by the Department.
- Cucumbers were served in the breakfast instead of banana.
- Diabetic diet was not provided to diabetic patients though bills for the same was claimed by the agency and was paid by the JDH authority.

- In paediatric ward, only one full rice diet (Diet-A) was served to the each mother and was forced to share the meal with her child though two separate meals for both mother (Diet-A) and child (Diet-C) were claimed separately by the agency.
- Uncooked fish, rotten egg and frozen milk were found inside the refrigerator for cooking and serving to the indoor patients.

Hon'ble Chairman, Standing Committee, Health & Family Welfare Department, GoWB after a physical inspection (September 2016), expressed his dissatisfaction in this matter.

However, the Jhargram District Hospital authority continued to renew of agreement with the contractor. Reasons for extending contract with the same contractor ignoring such documented unsatisfactory service was not stated by the JDH authority though asked for.

(iii) Use of other fossil fuel instead of LPG:

In accordance with clause 5 of section-III under General Guidelines (November 2014) for supplying cooked diet at health facilities, the diet contractor shall only use LPG as cooking fuel. It was also stipulated that use of electricity as fuels or polluting fuels like wood, other fossil fuels, etc., shall be deemed to be lapse in the services being provided by the contractor and shall be liable for deduction of liquidated damages and other remedial actions available to the health facility under the contract. The ovens and cylinders were to be procured by the contractor.



Pic 2.1.16: Cooking with other fossil fuel in Balurghat DH

During surprise inspection of the kitchen site of both Balurghat DH and Jhargram DH by Audit, it was observed that diet was cooked using other fossil fuels

instead of LPG in both the DHs, though LPG cylinders were present.

In Jhargram DH, reports submitted by Diet Committee revealed that highly inflammable liquid fuel like Diesel was used on regular basis at the kitchen. Electric heater was also found in the kitchen for cooking purposes. Wood available in and around the hospital premises and coal were used as fuel by the agency for cooking purposes.

It is pertinent to say that both the old buildings of Balurghat DH and Jhargram DH, where the kitchens were located, even did not have fire license of Fire Department.

Summary of observations: Not only the cleanliness and hygiene of the kitchen site was ill maintained, sub-standard quality of food was served, and that too in insufficient quantity, by the private contractors outsourced by the DHs. There was no monitoring on part of the DHs and allowed the private contractors to continue with such unacceptable service violating norms of diet services. Other fossil fuels were used for cooking instead of LPG.

2.1.8.5 Hospital Linen & Laundry Services

I. Stock of hospital Linen:

(i) No linen inventory maintained in Balurghat DH: IPHS specified the minimum number of different types of linen to have in custody of a DH having

500 beds. In an effort to match the inventory of linen of Balurghat DH with standards of IPHS, it was found that Balurghat DH neither had any linen store nor did it maintain any stock of linen available in the DH.

Further, scrutiny showed that the linen store keeper, by order (January 2014) of the Superintendent, was directed to close down the linen store and distribute linens in its stock among wards. There was no instruction to the wards to maintain stock register of linens either. The registers produced by the wards before Audit were incomplete and did not capture any meaningful information. Records of transaction of linen between the wards and the washing contractor were also not properly maintained. No signature of the laundry people was also obtained while handing over linens for washing.

(ii) Whereabouts of linens not known: As per guidelines for Kayakalp Initiative²⁰ (2015), in an ideal situation a hospital should have six sets (four in using cycle and two reserved) of linens per bed. Scrutiny revealed that 17,228 bed sheets were obtained from District Reserve Stores (DRS) to Balurghat DH during the period from 2014-15 to 2018-19. Out of the same, 15,758 bed sheets distributed to different wards as found from equipment store stock registers. Cross-check of records of twelve²¹ Wards having 436 functional beds showed that these wards had been issued 11,863 bed sheets (8,631 were distributed during 2017-19 only) during 2014-19. As per norms of six bed sheets per functional beds, only 2,616 bed sheets were in use. Balurghat DH was not in a position to state whereabouts of the remaining 9,247 number of bed-sheets bulk of which were received only in 2017-18 and 2018-19 by the DH. No approval of condemnation due to wear and tear and/ or discarding of soiled linen were found recorded. This unexplained shortage calls for investigation to identify the responsibility centre.

In Jhargram DH, verification of records of the following linen items at the instance of Audit showed unexplained shortage of items as compared to balance reflected in the stock register.

Table 2.1.24: Mismatch between stock balance of linen items and those physically found in Jhargram DH

Items	Balance as per stock register	Physically found	Missing stock* (percentage)
Bed-sheet	10,876	7,708	3,168 (29%)
Blanket	1,613	624	989 (61%)
Mosquito Net	884	275	609 (69%)
Patient Pant	367	202	165 (45%)
Patient Shirt	357	190	167 (47%)
Draw sheet	390	229	161 (41%)
Cut sheet	297	164	133 (45%)

Source: Record of the Jhargram DH; *includes unserviceable quantities as claimed by DH authority

No documentary evidence in support of the periodic physical verification of stock was produced to audit. It was also observed that a huge quantity of linen

²⁰ to incentivize and recognize public healthcare facilities that show exemplary performance in adhering to standard protocols of cleanliness, infection control and sanitation

²¹ Nutrition & Rehabilitation Center (NRC), Maternity Ward (MAT), Isolation Ward (ISO), Female Medical Ward (FMW), Male Medical Ward (MMW), Female Surgical Ward (FSW), Male Surgical Ward (MSW), Child Ward (CW), Sick & Newborn Care Unit (SNCU), Critical Care Unit (CCU), Neonatal Ward (NEO) and Psychiatry Ward (PSY)

items kept as unserviceable but the JDH authority never formed any committee to declare the unserviceable items as condemned.

(iii) No standard for washing followed: Laundry service was outsourced in all the three selected DHs. The guidelines for Kayakalp Initiatives specified in detail the processes and washing standards to be followed. It was the responsibility of the hospital authority to disinfect and sluice the soiled linen in 0.5% bleaching solution for 30 minutes before handing it over to the outsourced agency for washing. In case of hand washing by the outsourced agency, a 4-step detailed guideline stipulated pre-soaking in soap, use of 5% chlorine solution, liquid soap, warm water, adding of sour, etc.

Review, however, showed that none of the DH authorities followed disinfection and sluicing of soiled linens before handing over to the laundry for washing. Further, neither the tender documents (invited by CMOsH) nor the terms of agreements executed with the private parties for laundry services mentioned the requirements of washing as stipulated in guidelines. As such, there was substantial possibilities of violation of the washing protocols by the agency in the absence of prescribed protocol in terms of the Agreement.

***Summary of observations:** No inventory of linens was maintained in Balurghat DH, whereabouts of linens were not known in Balurghat and Jhargram DHs. Significant quantity of hospital linens was missing in Suri DH. Audit observed systemic lacunae in regular change and washing of bed linens. None of the DHs followed the process of disinfection and sluicing of linens before handing over linens to the outsourced contractors for laundry service. The private contractors were allowed to use hospital infrastructure and resources like water, electricity, etc., in Balurghat and Jhargram DH without any provision of the same in agreement.*

2.1.9 Bio-Medical Waste Management

A Performance Audit on Management of Bio-Medical waste in West Bengal (*vide para no. 2.1*) was included in the Report of the Comptroller & Auditor General of India for the year ended March 2018 (General & Social Sector) on Government of West Bengal, in which various irregularities in segregation, treatment and disposal of Bio-Medical Waste (BMW) in health facilities had been flagged. It is seen that similar irregularities continued to occur in the test-checked DHs, as discussed below:

2.1.9.1 BMW Authorisation

Every Occupier²² handling Bio Medical Waste was to obtain ‘Authorisation’ from WBPCB. The Authorisation was also to be renewed from time to time following the same procedure.

The test-checked three DHs obtained Authorisation of WBPCB for the facilities only in September 2018 (Balurghat), April 2018 (Suri) and June 2018 (Jhargram). Further, Authorisations of Balurghat DH and Suri DH were taken for 320 beds and 520 beds only, whereas they operated 539 and 766 functional

²² Occupier means a person having administrative control over the institution and the premises generating BMW, which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank, and clinical establishment, etc.

beds respectively. Therefore, the DHs were still operating with inadequate/partial authorisation of WBPCB.

2.1.9.2 Non-accounting of BMW generation at source

It was the responsibility of every Occupier to submit Annual Reports to WBPCB showing details of generation and treatment of BMW. For the purpose, each health care facility was to maintain a Bio-medical waste management register showing category and colour coding wise quantity of BMW generated by the hospital and BMW collected by the Common Bio-Medical Waste Treatment Facility (CBMWTF). The register was to be updated on a day to day basis. Monthly and annual reports were also to be submitted to WBPCB and uploaded in the website of the health facility.

Audit scrutiny, however, revealed that as of August 2021, Suri DH never maintained the BMW register. Jhargram DH, instead of keeping its own account only pasted the slips handed over by the CBMWTF in a register which did not mention all category of waste. Though a Bio-Medical Waste Register was maintained by Balurghat DH, it showed generation of only three categories of wastes viz., anatomical, blood stained beddings, etc., (yellow bags), glassware, metallic body implants, etc., (blue bags) and sharps (puncture proof container) waste.

2.1.9.3 Irregular segregation

The BMW (Management & Handling) Rules, 1998 and BMWM Rules, 2016 specified colour coding²³ and type of containers for segregation of BMW at point of generation.

Cases of irregular segregation of BMW at source, however, were noticed in Balurghat DH and Jhargram DH (evident from the minutes of the District Quality Team (DQT) meeting).

In Balurghat DH, it was seen that BMW was disposed (in red and yellow bags) along with black municipal waste bags, though mixing of BMW with Municipal solid waste (to be collected in black bag) was highly irregular as it had a potential risk of contaminating the entire solid waste of the town. Inappropriate segregations were noticed in blue plastics also.



Pic 2.1.17: Segregated with municipal waste



Pic 2.1.18: Blue bag not containing glass waste



Pic 2.1.19: Blue bag used in Black bin

²³ Yellow plastic bags for human anatomical waste, laboratory waste, chemical waste, etc.; Red plastic bags for recyclable contaminated waste; White Puncture proof containers for sharp wastes; Cardboard box with Blue level for glassware & metallic body implants and Black plastic bags for municipal wastes.

2.1.9.4 BMW remaining untreated for more than 48 hours

Every BMW generator was required to ensure collection, transportation, treatment and disposal of BMW within 48 hours of its generation.

Though Balurghat DH had an agreement of daily collection of BMW by the CBMWTF from the common collection site (BMW storage) of the DH, the CBMWTF used to send small vehicle for collection, inadequate to accommodate the quantity of daily generation of BMW by the DH. This resulted in gradual piling of unlifted BMW in the hospital compound for months without treatment involving the risk of spread of infection.

The Balurghat DH authority, however, did not take up the matter with the WBPCB, the controlling authority of CBMWTFs, though the issue was referred (Since 2018) to the CBMWTF, CMOH and Directorate of Health Services. The situation persisted during the visit of Audit in February 2020.

On the other hand, in Jhargram DH, the capacity of existing common collection centre for BMW was small, damaged and insufficient to cater the increasing demand of the hospital. The collection centre was located just behind the Hospital Kitchen in a close proximity, indicating substantial possibility of spread of infections. Minutes of DQT also revealed instances of irregular transportation of BMW with overflowing bins and BMW remaining untreated.

2.1.9.5 Irregular storage and disposal- discharge of untreated liquid waste

As per BMW Rules, all BMW generated at IPD wards were to be segregated in colour coded plastics/ bags and cleared daily to the covered Common Collection Site (BMW storage).

Instances were, however, noticed where BMW bags, cleared from the bins of wards, were left to lie open in corridors. Moreover, instead of the BMW storage, it was seen that, BMW plastics were disposed openly in the compound of the DHs, involving high risk of infection spreading out:



Pic 2.1.20: BMW lying open in corridor instead of storage



Pic 2.1.21: BMW lying open in corridor instead of storage



Pic 2.1.22: BMW disposed openly in DH compound



Pic 2.1.23: BMW disposed openly in DH compound

Apart from the above, as per provisions of BMW Rules, 2016 and reiteration of the same condition in Authorisation issued by WBPCB, the DHs were to install and treat the liquid chemical waste of the hospital through an Effluent Treatment Plant (ETP) before discharging the same to mix with general effluent.

However, Balurghat DH did not have an ETP to treat the liquid chemical waste as of August 2021. Moreover, it did not even have a proper drainage system {as discussed in paragraph 2.1.7.4 (i) E} to discharge the liquid waste. Balurghat DH allowed the infectious liquid waste to discharge into a swampy ground. Such arrangement may lead to seepage of the infectious fluids contaminating the ground water.

The authorization issued to Jhargram DH (June 2018) stipulated that the occupier should submit the action plan for installation of ETP within three months. However, the DH continued to operate without ETPs even as of August 2021. Consequently, the liquid chemical waste of the hospital continued to be discharged through the municipal drainage system without treatment.

Summary of observations: Balurghat DH and Suri DH were operating with inadequate/ partial authorisation of WBPCB. Category wise accounting of BMW generation at source was not done in Balurghat DH. There were instances of only partial lifting of BMW, inadequate capacity of existing common collection centre for BMW, etc., resulting in untreated BMW, in contravention to rules, remaining stored in DHs for more than 48 hours. Instances of irregular segregation and mixing of BMW with municipal solid waste were noticed in Balurghat and Jhargram DH. Liquid BMW were found to be discharged without treatment leaving substantial scope of spread of contamination. Discharge was not even through a proper drainage system in Balurghat DH which involved risk of outbreak of infection. Monitoring of management, as found in Balurghat DH, was grossly deficient.

Monitoring & Regulatory System

2.1.10 National Quality Assurance Scheme guidelines not adhered to

Ministry of Health & Family Welfare, GoI, in order to support and facilitate sustainable quality assurance programme of public health system in the country, framed (2013) a guideline under NHM for Quality

Assurance in District Hospitals. The guidelines introduced a scoring system against a set of standards and check-lists for carrying out continuous internal assessment by the DH itself at-least once in a quarter. District Quality Assessment Unit (DQAU) and State Quality Assessment Unit (SQAU) were also responsible for undertaking independent quality assessment of the DHs and act as arms of District Quality Assurance Committee (DQAC) and by State Quality Assurance Committee (SQAC) respectively.

For internal assessment, as per the Assessment Protocol, the DH was to form a 'District Quality Team' (DQT) at facility level. The DQT was to meet monthly and was responsible for orientation of staff, regular internal assessment, initiation of corrective plans and regular reporting to DQAC.

- **Delayed formation and infrequent meeting of DQT:** Formation of DQT was envisaged in NHMs Quality Assessment Guidelines in 2013. The state H&FW Department issued orders for formation of the same in January 2015. However, DQTs were formed with unjustified delay. Further, in contravention to the mandate, DQT meetings were held far less than normative requirement as shown below:

Table 2.1.25: Actual holding of DQT meetings *vis-à-vis* normative targets

Hospital	DQT formed in	Normative targeted number of meetings	Number of meetings actually held	Issues discussed
Balurghat DH	September 2018	17 meetings from September 2018 to January 2020	5	Quality control, infection control, <i>etc.</i>, and other hospital related issues were discussed.
Suri DH	August 2017	30 meetings from August 2017 to January 2020	20	After formation, DQT was to identify areas of initial assessment in its first meeting; in Balurghat DH, no area for initial assessment was decided.
Jhargram DH	March 2017	35 meetings from March 2017 to January 2020	14	DQT was to sum up area-wise and service-wise gaps and initiate time bound corrective plans to meet the gaps. However, neither gaps were identified nor corrective plans/ road maps were devised by DQT in Balurghat DH. Moreover, findings of the assessments were never found to have discussed in DQT or in DQAC.

Source: Records of the District Hospitals

Evidently, the purpose of implementation of the scheme 'Quality Assurance of District Hospitals' remained unachieved.

- **Internal Assessments not carried out:** Though internal assessments were to be carried out quarterly, no internal assessments were carried out by Balurghat DH up to February 2019 for reasons not on record. Thereafter it was conducted twice in March 2019 and January 2020. But instead of ward-wise assessment, it was done for the hospital as a whole.

In Suri DH, only two internal assessments were carried out (in November 2018 and March 2019) for the entire hospital.

No document in support of conduct of any external assessment by DQAU or SQAU could be furnished either by Suri DH or by Balurghat DH.

2.1.10.1 Key Performance Indicators not analysed

As a part of the Quality Assurance Programme, Department of H&FW, GoWB, ordered (March 2015) all hospital authorities to collect and collate crucial data from its various departments and calculate some performance indicators and monitor them on monthly basis. These, called as Key Performance Indicators (KPI), were to be reported to District Quality Assurance Committee (DQAC) and State Quality Assurance Committee (SQAC) for monitoring through monthly review meetings. The facility-in-charge was to take action for timely closure of gaps of performance of the DH.

Balurghat DH and Jhargram DH, though collected information/ statistics from its departments and collated the same to generate KPIs on monthly basis, no document in support of any analysis, either internally by the DHs themselves or by DQACs/ SQACs could be furnished to audit. It is also pertinent to mention that the order did not set any benchmark/ target against which the KPIs could be judged. As a result, the purpose of the order, to install a monitoring mechanism to identify and bridge gaps, was not served.

2.1.10.2 No Internal Audit of services carried out

As per IPHS, internal audit of services available in the hospital was to be done on regular basis, preferably quarterly, through Hospital Monitoring Committee comprising civil surgeon/ CMO, Superintendent, departmental in-charge, nursing administrator and hospital manager. Findings were to be discussed in the meetings of Hospital Monitoring Committee for corrective and preventive actions to be taken.

Though there was no committee in the nomenclature of Hospital Monitoring Committee in the selected DHs, there existed Rogi Kalyan Samity (RKS) and several other committees. However, no internal audit, as in the form suggested in IPHS, was ever carried out by any of the three DHs. Internal audit of cash and stores were only carried out by engaging a CA firm instead.

2.1.10.3 Medical Audits never conducted

As per IPHS, a Medical Audit Committee was to be constituted for carrying out medical audit on regular basis, preferably monthly. The sample size and record of patients were to be selected randomly to evaluate completeness of records against standard content format and clinical management of each case.

No Medical Audit Committee (except Suri DH) was formed in any of the DHs as of August 2021.

2.1.10.4 Death Audit not carried out

IPHS stipulated that review of all mortality that occurs in the hospital was to be carried out on a fortnightly basis. Balurghat DH and Jhargram DH, however, except maternal death reviews, did not audit any other deaths occurred in the DH. Child Death Reviews were also not carried out by Balurghat DH in format and manner prescribed by H&FW Department.

- Further, the register of Balurghat DH with labelling of ‘Medical Death Audit Committee Register’ produced before Audit, only contained signature of officials of the DH on different dates starting from September 2018 either without any resolution or with sketchy resolutions. In none of the

cases, details of deaths reviewed were recorded (during January 2018-September 2019, a total 2,298 deaths occurred in Balurghat DH).

- A test-check of 448 death reviews (except maternal and infant mortality) in Suri DH showed that in 11 *per cent* of death cases, reasons were recorded as ‘unknown and unspecified cause of morbidity’, while 66 *per cent* deaths were attributable to neurological (28 *per cent*), cardiac (14 *per cent*) and respiratory (24 *per cent*) causes. This need to be seen in the light of non-availability of any super specialty services in the hospital.

Evidently, formation and meetings of Medical Death Audit Committee fell short of the outcome envisaged.

***Summary of observations:** Norms of National Quality Assurance Scheme guidelines were not adhered to by Balurghat DH leading to failure of the DH in independent quality assessment of services. Suri DH also had conducted only two internal assessments. Key Performance Indicators (KPIs) were not discussed and analysed to assess performance in Balurghat and Jhargram DH. Internal and Medical audits were never carried out, neither was Death audit, other than maternal and neo-natal deaths.*

Summary of Conclusions

2.1.11 Summary of conclusions

Planning:

The Health & Family Welfare Department has not expressly adopted the set of uniform qualitative standards of health care delivery envisaged under the Indian Public Health Standards (IPHS). Neither did the Department prescribe its own norms. There were slippages from the norms/ standards suggested by the GoI in respect of resources and services for district hospitals. Absence of attainable norms compounded by non-preparation of any District Health Action Plan resulted in non-identification of gap in respect of facilities/ infrastructure. Therefore, locally felt needs were not duly reflected in the Programme Implementation Plan under National Health Mission with a concomitant adverse impact on the availability of resources and provisioning of service.

Line services expected from a District Hospital:

- *Functioning of **Out-Patient Department** was affected by shortage of doctors. On a number of occasions OPDs were not held on scheduled dates. Some OPDs were not even functional for want of doctors. Patient satisfaction surveys on OPD services were not conducted properly.*
- *In the three test-checked District Hospitals, five out of 13 essential **IPD Services in IPD wards** were not available, while almost none of the 18 super specialty services was in existence. Instances of crucial IPD services like Critical Care Unit remaining non-functional were also noticed in Suri District Hospital.*
- *Acute shortage of trained manpower, drugs, equipment, etc., were noticed in **Critical Care Units, Emergency and Operation Theatre** services in the selected DHs. Surgical safety was compromised by not complying to pre and post-surgical checklist.*
- *Justifications in support of **referral out cases** were also not properly recorded.*

- *In **post natal care**, a large number of mothers were discharged within 48 hours of delivery ignoring inherent risk of developing complications. Many labour room drugs were not in stock. A number of instances were noticed where deaths of mothers were not reviewed. Available Maternal Death Review (MDR) showed gaps at labour room facilities leading to fatalities of mothers. As identified gaps were never plugged, MDR served no meaningful purpose. Child Death Reviews showed that a number of deaths were preventable. Lack of minimal respiratory support in Jhargram DH continued to be a matter of concern as it factored in child death.*

Resources:

- *In absence of Drug and Therapeutic Committees, there existed no prescription protocol and **drug procurement** plan. As a result, there were instances like large number of essential drugs not being procured or remaining out of stock. This would have led to patients being burdened with significant out-of-pocket expenditure. Moreover, alarming instances were noticed where non-standard and expired drugs were administered to patients representing serious laxity in control mechanism. Storage condition of drugs also called for special attention.*
- ***Human resource management** also calls for serious attention of the Government. There is lack of clarity even on the staff sanctioned strength of the DHs, with conflicting data being available with the Department and the test-checked District Hospitals. However, there were acute shortage in the cadres of Medical Officer and Nursing Staff. The test-checked DHs having 850 beds in average, exhibited acute shortage of manpower even against normative strength of manpower envisaged in IPHS for a 500-bedded DH. Prospect of delivery of specialty/ super specialty services at district level remains remote as only a minuscule percentage of HR sanctioned for Specialty/ Super Specialty services was posted.*
- *As regards **Infrastructure**, there was sub-optimal and inefficient utilisation of infrastructure, especially the newly created Super Specialty facilities, non-posting of human resources being the main attributable factor. Though there had been substantial increase in sanctioned bed strength (by 92 to 116 per cent), the same could not be translated into equivalent increase in functional beds in two test-checked District Hospitals. A large portion of newly created civil infrastructure and procured furniture/fixtures for super specialty hospitals have been lying idle. This apart, as super specialty services could not be operationalised, a number of costly and sophisticated equipment supplied for the Super Specialty facilities lied unused or even packed. Pipeline Supply of Medical Gases could not be operationalized creating hindrance in delivery of proper health care services to patients.*

Supportive services:

- *Wide range of IPHS-stipulated **essential diagnostic services** were not available in the DHs. A number of X-Ray machines to ensure delivery of desired radiology services were not in service. Even the available machines were sub-optimally utilized leading to inordinately high Turnaround Time. Upto 78 per cent of essential laboratory equipment were either not available or acutely short of required number. Instances were observed*

where laboratory test results, when cross-verified externally, were proved erroneous.

- As regards providing **hospital dietary service** to patients, lack of cleanliness and hygiene of the kitchen site was surely an area of concern. Audit came across instances of serving of sub-standard quality of food to patients, and that too in insufficient quantity. Other fossil fuels were used for cooking instead of LPG in violation of guidelines.
- No inventory of **linens** was maintained in Balurghat DH, whereabouts of a large number of linens were not traceable in all three DHs. Audit observed systemic lacunae in regular change and washing of bed linens. None of the DHs followed the process of disinfection and sluicing of linens before handing over the same for laundry service. The private contractors were allowed to use hospital infrastructure and resources like water, electricity, etc., in Balurghat and Jhargram DH without any provision of the same in agreement.
- **Management of Bio-Medical Waste (BMW)** was an area not assigned with sufficient priority. Balurghat DH and Suri DH were operating with inadequate/partial authorisation of WBPCB. Category-wise accounting of BMW generation at source was not done in Balurghat DH. Untreated BMW, in contravention to rules, remained stored in both Balurghat and Jhargram DH for more than 48 hours. Instances of irregular segregation and mixing of BMW with municipal solid waste were noticed in Balurghat and Jhargram DH. Liquid BMW were found to be discharged without treatment leaving substantial scope of spread of contamination.

Monitoring and Regulatory system:

There is substantial scope for strengthening of **monitoring and regulatory system** as norms of National Quality Assurance Scheme guidelines were not adhered to by Balurghat DH leading to failure of the DH in independent quality assessment of services. Suri DH also had conducted only two internal assessments. Key Performance Indicators (KPIs) were not discussed and analysed to assess performance in Balurghat and Jhargram DH. Internal and Medical audits were never carried out, neither was Death audit other than maternal and neo-natal deaths.

Recommendations:

- **The State Government needs to formulate and execute a time bound plan for gradually achieving the standards envisaged in Indian Public Health Standards (IPHS) and various other programme guidelines of National Health Mission (NHM) in respect of deliverable services, deployment of human resources, availability of drugs and equipment, etc.**
- **All internal control mechanisms in place should strictly be adhered to.**

The matter has been referred to the Government in August 2021; reply was awaited (October 2021).

Appendix 2.1.1

(Refer paragraph 2.1.6.4 (iii), page 31)

Statement showing status of availability of CCU Equipment

Sl. No.	Name of the Major Equipment	Required number	Available/ in use			Shortage			Remarks
			BDH	SDH	JDH	BDH	SDH	JDH	
1.	Biphasic External Defibrillator	1	1/1	1/1	3 /2	--	--	--	BDH: Not equipped with Cardiac Monitor; JDH: One Defibrillator beyond repair
2.	Blood Gas & Electrolyte Analyzer	1	1/1	1/1	1/1	--	--	--	--
3.	USG with Echo Compatible Probe	Desirable	0	0	0	1	1	1	Maintenance of one Ultrasound was necessary as per IPHS
4.	Ripple Mattress	12	12/8	10/10	12	--	2	--	BDH: Four lied in CCU store
5.	Ventilator Standard	5	10/1	3/3	5/5	--	2	--	BDH: Nine lied in CCU store. One not working. 12 was needed as per IPHS
6.	Non-Invasive BIPAP Ventilator	3	3/0	3/3	3/2	--	--	1	BDH: Found in CCU Store; JDH: One not working due to broken musk
7.	Portable X-Ray Machine	1	2/1	1/1	1/1	--	--	--	BDH: One lied in far-away Store
8.	Automated Cell Counter	1	1/0	1/1	1/1	--	--	--	BDH: Not in use for indefinite period due to lack of training of technician.
9.	Fogger Machine	2	2/2	2/2	2/1	--	--	1	JDH: One machine beyond repair
10.	Rapid Infusion Pump	3	4/4	3/3	3/3	--	--	--	--
11.	Pulse Generator	2 Desirable	0	0	0	2	2	2	--
12.	Electrolyte Analyser	1	1/1	1/0	1/0	--	1	1	JDH & SDH: Reagent finished SDH: Not functional
13.	Nebulizer	8	7/5	6/6	8/5	1	2	3	BDH: Two of seven nebulizers non-functional (output nozzle broken)
14.	Syringe Infusion Pump	12	17/0	8/8	13/13	--	4	--	BDH: Found in CCU Store
15.	ECG Machine	2	3/1	1/1	1/1	--	1	1	BDH: Two of three non-functional (beyond repair)
16.	Over Bed Table	12	12/12	12/12	8/8	--	--	4	BDH: Found in CCU store
17.	ICU Bed	12	12/8	12/12	12/12	--	--	--	BDH: Two in CCU store; two in far-away store as non-functional (railing& wind broken)

Sl. No.	Name of the Major Equipment	Required number	Available/ in use			Shortage			Remarks
			BDH	SDH	JDH	BDH	SDH	JDH	
18.	Multi-channel Monitor	12	16/8	11/11	12/12	--	1	--	BDH: Of the rest eight, one in CCU store; six in far away store and one non-functional (display problem)
19.	Semi Auto Analyzer	1	0	1/0	0	1	1	1	BDH: Not found physically SDH: Not functional
20.	Oxygen Therapy Device	12	0	12/12	0	12	0	12	Essential as per IPHS
21.	Deep Vein Thrombosis Prevention Device	12	0	0	0	12	12	10	Essential as per IPHS

Source: IPHS norms and records of the CCU Department of the DHs

Appendix 2.1.2

(Refer paragraph 2.1.6.4 (iv), page 32)

Statement showing status of availability of drugs in CCUs

A. Balurghat DH

Sl. No.	Drug	Buffer stock qty. (in pc.)	Status	May 14 (days)	Aug 15 (days)	Nov 16 (days)	Feb 17 (days)	May 18 (days)
1.	Inj. Adrenalin	48	Stock out	21	-	-	-	-
			stock <Buffer qty.	All	All	All	All	-
2.	Inj. Aminophyllin 250 mg	120	Stock out	All	-	-	All	All
			stock <Buffer qty.	All	-	-	All	All
3.	Inj. Atropine	96	Stock out	-	-	-	-	-
			stock <Buffer qty.	03	-	-	09	-
4.	Inj. Calcium Gluconate	12	Stock out	-	-	-	-	-
			stock <Buffer qty.	24	-	01	01	-
5.	Inj. Dextrose 10 %	96	Stock out	-	-	-	-	-
			stock <Buffer qty.	All	All	All	All	01
6.	Inj. Dextrose 25 %	16	Stock out	-	-	-	-	-
			stock <Buffer qty.	-	15	-	27	-
7.	Inj. Dextrose 5 %	144	Stock out	All	-	-	-	-
			stock <Buffer qty.	All	All	All	All	-
8.	Inj. Diclofenac Na	48	Stock out	-	-	-	-	-
			stock <Buffer qty.	-	All	All	All	-
9.	Digoxin	48	Stock out	All	All	All	All	-
			stock <Buffer qty.	All	All	All	All	All
10.	Dobutamin	96	Stock out	-	-	-	-	-
			stock <Buffer qty.	All	All	All	All	All
11.	Dopamine 200 mg.	96	Stock out	-	-	-	-	-
			stock <Buffer qty.	All	All	All	All	All
12.	Inj. Frusemide	144	Stock out	-	-	-	-	-
			stock <Buffer qty.	-	All	27	07	-
13.	Inj. Hydrocortisone Na Succinate	96	Stock out	-	-	-	-	-
			stock <Buffer qty.	10	09	-	15	01
14.	Inj. Insulin Soluble	10	Stock out	-	-	-	-	-
			stock <Buffer qty.	All	All	23	-	13
15.	Inj. NPH Combination 30:70 human variety	8	Stock out	All	All	All	All	All
			stock <Buffer qty.	All	All	All	All	All
16.	Inj. Isophane Insulin	8	Stock out	All	All	All	All	--
			stock <Buffer qty.	All	All	All	All	All
17.	Inj. Mag Sulph 10 %	40	Stock out	All	-	All	All	All
			stock <Buffer qty.	All	-	All	All	All
18.	Inj. Methyle Prednisolone 40 mg.	12	Stock out	All	All	All	All	All
			stock <Buffer qty.	All	All	All	All	All
19.	Inj. Methyle Prednisolone 1 mg.	6	Stock out	All	All	All	All	All
			stock <Buffer qty.	All	All	All	All	All
20.	Inj. Methyle Prednisolone 125 mg.	12	Stock out	All	All	All	All	All
			stock <Buffer qty.	All	All	All	All	All
21.	Inj. Ondansetron 4mg/ 2ml.	120	Stock out	1	-	-	-	-
			stock <Buffer qty.	27	10	09	14	01

Sl. No.	Drug	Buffer stock qty. (in pc.)	Status	May 14 (days)	Aug 15 (days)	Nov 16 (days)	Feb 17 (days)	May 18 (days)
22.	Inj. Paracetamol	20	Stock out	-	-	-	-	-
			stock <Buffer qty.	-	-	-	-	-
23.	Inj. Salbutamol	48	Stock out	All	All	All	All	All
			stock <Buffer qty.	All	All	All	All	All
24.	Inj. Sodi-Bi-Carb	48	Stock out	-	-	-	-	-
			stock <Buffer qty.	31	31	30	28	01
25.	Inj. Nor Adrenalin	40	Stock out	-	-	-	-	-
			stock <Buffer qty.	31	31	30	26	-
26.	Inj. Vitamin K	24	Stock out	All	All	All	All	All
			stock <Buffer qty.	All	All	All	All	All
27.	Inj. Phenytoin 100 mg.	40	Stock out	-	05	-	-	-
			stock <Buffer qty.	-	09	-	-	06

B. Suri DH:

Sl. No.	Drug	Buffer stock qty. (in pc.)	Status	May 14 (days)	Aug 15 (days)	Nov 16 (days)	Feb 17 (days)	May 18 (days)
1.	Inj. Adrenalin	48	Stock out	NA	All	24	All	25
			stock <Buffer qty.	NA	All	All	All	All
2.	Inj. Aminophyllin 250 mg	120	Stock out	NA	All	All	All	All
			stock <Buffer qty.	NA	All	All	All	All
3.	Inj. Atropine	96	Stock out	NA	--	--	--	--
			stock <Buffer qty.	NA	--	--	All	--
4.	Inj. Calcium Gluconate	12	Stock out	NA	NA	All	All	All
			stock <Buffer qty.	NA	NA	All	All	All
5.	Inj. Dextrose 10%	96	Stock out	NA	All	24	23	All
			stock <Buffer qty.	NA	All	All	All	All
6.	Inj. Dextrose 25%	16	Stock out	NA	All	05	All	--
			stock <Buffer qty.	NA	All	All	All	--
7.	Inj. Dextrose 5%	144	Stock out	NA	--	All	22	All
			stock <Buffer qty.	NA	NA	All	All	All
8.	Inj. Diclofenac Na	48	Stock out	NA	--	--	All	--
			stock <Buffer qty.	NA	All	--	All	--
9.	Digoxin	48	Stock out	NA	All	All	All	All
			stock <Buffer qty.	NA	All	All	All	All
10.	Dobutamin	96	Stock out	NA	--	--	22	All
			stock <Buffer qty.	NA	All	All	All	All
11.	Dopamine 200 mg.	96	Stock out	NA	15	--	--	--
			stock <Buffer qty.	NA	All	--	22	All
12.	Inj. Frusemide	144	Stock out	NA	--	--	--	--
			stock <Buffer qty.	NA	All	04	22	21
13.	Inj. Hydrocortisone Na Succinate	96	Stock out	NA	12	--	19	22
			stock <Buffer qty.	NA	All	10	All	22
14.	Inj. Insulin Soluble	10	Stock out	NA	All	All	All	All
			stock <Buffer qty.	NA	All	All	All	All
15.	Inj. NPH Combination 30:70 human variety	8	Stock out	NA	All	All	All	All
			stock <Buffer qty.	NA	All	All	All	All
16.	Inj. Isophane Insulin	8	Stock out	NA	All	All	All	All
			stock <Buffer qty.	NA	All	All	All	All
17.	Inj. Mag Sulph 10%	40	Stock out	NA	--	--	--	--
			stock <Buffer qty.	NA	--	--	--	--

Sl. No.	Drug	Buffer stock qty. (in pc.)	Status	May 14 (days)	Aug 15 (days)	Nov 16 (days)	Feb 17 (days)	May 18 (days)
18.	Inj. Methyle Prednisolone 40 mg.	12	Stock out	NA	All	All	All	All
			stock <Buffer qty.	NA	All	All	All	All
19.	Inj. Methyle Prednisolone 1 mg.	6	Stock out	NA	All	All	All	All
			stock <Buffer qty.	NA	All	All	All	All
20.	Inj. Methyle Prednisolone 125 mg.	12	Stock out	NA	All	All	All	All
			stock <Buffer qty.	NA	All	All	All	All
21.	Inj. Ondansetron 4 mg/ 2 ml.	120	Stock out	NA	--	--	--	--
			stock <Buffer qty.	NA	28	--	23	--
22.	Inj. Paracetamol	20	Stock out	NA	All	All	All	24
			stock <Buffer qty.	NA	All	All	All	All
23.	Inj. Salbutamol	48	Stock out	NA	All	All	All	All
			stock <Buffer qty.	NA	All	All	All	All
24.	Inj. Sodi-Bi-Carb	48	Stock out	NA	All	All	All	All
			stock <Buffer qty.	NA	All	All	All	All
25.	Inj. Nor Adrenalin	40	Stock out	NA	All	All	All	All
			stock <Buffer qty.	NA	All	All	All	All
26.	Inj. Vitamin K	24	Stock out	NA	--	All	All	All
			stock <Buffer qty.	NA	--	All	All	All
27.	Inj. Phenytoin 100 mg.	40	Stock out	NA	All	All	All	All
			stock <Buffer qty.	NA	All	All	All	All

C. Jhargram DH

Sl. No.	Drug	Buffer stock qty. (in pc.)	Status	May 14 (days)	Aug 15 (days)	Nov 16 (days)	Feb 17 (days)	May 18 (days)
1.	Inj. Adrenalin	48	Stock out	NA	NA	--	--	--
			stock <Buffer qty.	NA	NA	--	--	--
2.	Inj. Aminophyllin 250 mg	120	Stock out	NA	NA	--	All	09
			stock <Buffer qty.	NA	NA	All	All	All
3.	Inj. Atropine	96	Stock out	NA	NA	--	--	--
			stock <Buffer qty.	NA	NA	--	--	--
4.	Inj. Calcium Gluconate	12	Stock out	NA	NA	--	--	--
			stock <Buffer qty.	NA	NA	--	--	--
5.	Inj. Dextrose 10%	96	Stock out	NA	NA	All	All	All
			stock <Buffer qty.	NA	NA	All	All	All
6.	Inj. Dextrose 25%	16	Stock out	NA	NA	10	--	--
			stock <Buffer qty.	NA	NA	10	--	--
7.	Inj. Dextrose 5%	144	Stock out	NA	NA	--	--	--
			stock <Buffer qty.	NA	NA	--	--	All
8.	Inj. Diclofenac Na	48	Stock out	NA	NA	--	--	--
			stock <Buffer qty.	NA	NA	All	--	--
9.	Digoxin	48	Stock out	NA	NA	--	--	All
			stock <Buffer qty.	NA	NA	All	All	All
10.	Dobutamin	96	Stock out	NA	NA	--	--	--
			stock <Buffer qty.	NA	NA	All	--	All
11.	Dopamine 200 mg.	96	Stock out	NA	NA	--	--	--
			stock <Buffer qty.	NA	NA	--	--	All
12.	Inj. Frusemide	144	Stock out	NA	NA	--	--	--
			stock <Buffer qty.	NA	NA	--	--	--
13.	Inj. Hydrocortisone Na Succinate	96	Stock out	NA	NA	--	--	NA
			stock <Buffer qty.	NA	NA	--	All	NA

Sl. No.	Drug	Buffer stock qty. (in pc.)	Status	May 14 (days)	Aug 15 (days)	Nov 16 (days)	Feb 17 (days)	May 18 (days)
14.	Inj. Insulin Soluble	10	Stock out	NA	NA	All	All	All
			stock <Buffer qty.	NA	NA	All	All	All
15.	Inj. NPH Combination 30:70 human variety	8	Stock out	NA	NA	All	All	All
			stock <Buffer qty.	NA	NA	All	All	All
16.	Inj. Isophane Insulin	8	Stock out	NA	NA	All	--	--
			stock <Buffer qty.	NA	NA	All	--	--
17.	Inj. Mag Sulph 10%	40	Stock out	NA	NA	--	All	All
			stock <Buffer qty.	NA	NA	All	All	All
18.	Inj. Methyle Prednisolone 40 mg.	12	Stock out	NA	NA	All	All	All
			stock <Buffer qty.	NA	NA	All	All	All
19.	Inj. Methyle Prednisolone 1 mg.	6	Stock out	NA	NA	All	--	--
			stock <Buffer qty.	NA	NA	All	--	--
20.	Inj. Methyle Prednisolone 125 mg.	12	Stock out	NA	NA	All	All	All
			stock <Buffer qty.	NA	NA	All	All	All
21.	Inj. Ondansetron 4 mg/ 2 ml.	120	Stock out	NA	NA	--	--	09
			stock <Buffer qty.	NA	NA	--	--	09
22.	Inj. Paracetamol	20	Stock out	NA	NA	All	All	All
			stock <Buffer qty.	NA	NA	All	All	All
23.	Inj. Salbutamol	48	Stock out	NA	NA	All	All	All
			stock <Buffer qty.	NA	NA	All	All	All
24.	Inj. Sodi-Bi-Carb	48	Stock out	NA	NA	All	All	All
			stock <Buffer qty.	NA	NA	All	All	All
25.	Inj. Nor Adrenalin	40	Stock out	NA	NA	All	--	--
			stock <Buffer qty.	NA	NA	All	--	--
26.	Inj. Vitamin K	24	Stock out	NA	NA	--	--	29
			stock <Buffer qty.	NA	NA	--	--	29
27.	Inj. Phenytoin 100 mg.	40	Stock out	NA	NA	--	--	--
			stock <Buffer qty.	NA	NA	--	--	--

Source: Records of the CCU Department of the respective DHs

Note: Blank cell implies there was no stock out/ stock was as per buffer quantity

Appendix 2.1.3

(Refer paragraph 2.1.6.5 (ii), page 33)

Statement showing status of availability of drugs in OT

Sl. No.	Group of Medicine	Name of the drugs	Whether medicines were in stock during the months				
			May 2014	August 2015	1-7 November 2016	1-7 February 2017	1-7 May 2018
Balurghat DH:							
1	Uterotonics	Injection (Inj.) Oxytocin	Y	Y	Y	Y	Y
2	Antibiotics	Inj. Ampicillin	N	N	N	N	N
3		Inj. Metronidazole	N	N	N	N	N
4		Gentamycin	Y	Y	Y	Y	Y
5	Analgesic & Antipyretics	Inj. Diclofenac Sodium	N	Y	Y	Y	Y
6	IV Fluid	Intravenous Fluids	N	N	N	N	N
7		Ringer Lactate	N	N	N	N	N
8		Plasma Expander	N	N	N	N	N
9		Normal Saline	N	N	N	N	N
10	Emergency Drugs	Inj. Magsulf	N	N	N	N	Y
11		Inj. Calcium Gluconate	N	N	N	N	Y
12		Inj. Dexamethasone	Y	Y	Y	Y	Y
13		Inj. Hydrocortisone Succinate	Y	Y	Y	Y	Y
14		Diazepam	Y	Y	Y	Y	Y
15		Pheneramine Maleate	N	N	N	N	N
16		Inj. Corboprost	Y	Y	Y	Y	Y
17		Fortwin	N	Y	Y	Y	Y
18		Inj. Phenergen	N	N	N	N	N
19		Betameathazon	N	N	N	N	N
20		Inj. Hydrazaline	N	N	N	N	N
21		Methyldopa	N	N	N	N	N
22		Nefidepin	N	N	Y	N	N
23		Ceftriaxone	N	N	N	N	N
Suri DH:							
1	Uterotonics	Inj. Oxytocin	NA	NA	NA	Y	Y
2	Antibiotics	Inj. Ampicillin	NA	NA	NA	N	N
3		Inj. Metronidazole	NA	NA	NA	Y	Y
4		Gentamycin	NA	NA	NA	Y	N
5	Analgesic & Antipyretics	Inj. Diclofenac Sodium	NA	NA	NA	Y	Y
6	IV Fluid	Intravenous Fluids	NA	NA	NA	Y	N
7		Ringer Lactate	NA	NA	NA	Y	Y
8		Plasma Expander	NA	NA	NA	N	Y
9		Normal Saline	NA	NA	NA	Y	N
10	Emergency Drugs	Inj. Magsulf	NA	NA	NA	Y	Y
11		Inj. Calcium Gluconate	NA	NA	NA	N	N
12		Inj. Dexamethasone	NA	NA	NA	Y	Y
13		Inj. Hydrocortisone Succinate	NA	NA	NA	Y	Y
14		Diazepam	NA	NA	NA	Y	Y
15		Pheneramine Maleate	NA	NA	NA	N	N
16		Inj. Corboprost	NA	NA	NA	Y	Y

Sl. No.	Group of Medicine	Name of the drugs	Whether medicines were in stock during the months				
			May 2014	August 2015	1-7 November 2016	1-7 February 2017	1-7 May 2018
17		Fortwin	NA	NA	NA	Y	N
18		Inj. Phenergen	NA	NA	NA	Y	Y
19		Betameathazon	NA	NA	NA	N	N
20		Inj. Hydrazaline	NA	NA	NA	N	N
21		Methyldopa	NA	NA	NA	Y	Y
22		Nefidepin	NA	NA	NA	N	N
23		Ceftriaxone	NA	NA	NA	Y	N
Jhargram DH:							
1	Uterotonics	Inj. Oxytocin	Y	Y	Y	Y	Y
2	Antibiotics	Inj. Ampicillin	N	N	N	N	N
3		Inj. Metronidazole	N	N	N	N	N
4		Gentamycin	N	N	N	N	N
5	Analgesic & Antipyretics	Inj. Diclofenac Sodium	N	N	N	N	N
6	IV Fluid	Intravenous Fluids	N	N	N	N	N
7		Ringer Lactate	Y	Y	Y	Y	Y
8		Plasma Expander	N	N	N	N	N
9		Normal Saline	N	Y	Y	Y	Y
10	Emergency Drugs	Inj. Magsulf	N	N	N	N	N
11		Inj. Calcium Gluconate	N	N	N	N	N
12		Inj. Dexamethasone	N	N	N	N	N
13		Inj. Hydrocortisone Succinate	N	N	N	N	N
14		Diazepam	Y	Y	Y	Y	Y
15		Pheneramine Maleate	N	N	N	N	N
16		Inj. Corboprost	N	N	N	N	N
17		Fortwin	Y	Y	Y	Y	Y
18		Inj. Phenergen	N	N	N	N	N
19		Betameathazon	N	N	N	N	N
20		Inj. Hydrazaline	N	N	N	N	N
21		Methyldopa	N	N	N	N	N
22		Nefidepin	N	N	N	N	N
23		Ceftriaxone	N	N	N	N	N

Source: Records of the OT Department of the DHs; Y: Yes and N: No

Appendix 2.1.4

(Refer paragraph 2.1.6.6 (i) A, page 34)

Statement showing status of availability of medicines in Labour Room

A. Balurghat DH

Sl. No.	Record/ Observation	May 2014	August 2015	November 2016	February 2017	May 2018
1.	Inj. Oxytocin	Yes	Yes	Yes	Yes	Yes
2.	Inj. Gentamycin	Yes	Yes	Yes	Yes	Yes
3.	Inj. Betamethasone	No	No	No	No	No
4.	Ringer Lactate	Yes	Yes	Yes	Yes	Yes
5.	Normal Saline	Yes	Yes	No	Yes	No
6.	Inj. Hydrazaline	No	No	No	No	No
7.	Methyldopa	No	No	No	No	No
8.	Inj. Calcium Gluconate – 10%	No	No	No	No	No
9.	Inj. Ampicillin	No	No	No	No	No
10.	Inj. Metronidazole	Yes	Yes	Yes	Yes	Yes
11.	Inj. Lignocaine – 2%	No	No	No	No	No
12.	Inj. Adrenaline	No	No	No	No	No
13.	Inj. Hydrocortisone Succinate	Yes	Yes	Yes	Yes	Yes
14.	Inj. Diazepam	No	No	No	No	No
15.	Inj. Carboprost	Yes	No	Yes	No	No

B. Suri DH

Sl. No.	Record/ Observation	May 2014	August 2015	November 2016	February 2017	May 2018
1.	Inj. Oxytocin	No	Yes	Yes	Yes	Yes
2.	Inj. Gentamycin	No	No	No	No	No
3.	Inj. Betamethasone	No	No	No	No	No
4.	Ringer Lactate	No	Yes	Yes	Yes	Yes
5.	Normal Saline	No	Yes	Yes	Yes	Yes
6.	Inj. Hydrazaline	No	No	No	No	No
7.	Methyldopa	No	No	No	No	No
8.	Inj. Calcium Gluconate – 10%	No	No	No	Yes	No
9.	Inj. Ampicillin	No	No	No	No	No
10.	Inj. Metronidazole	No	No	No	Yes	Yes
11.	Inj. Lignocaine – 2%	No	No	Yes	Yes	Yes
12.	Inj. Adrenaline	No	No	No	No	No
13.	Inj. Hydrocortisone Succinate	No	Yes	Yes	Yes	Yes
14.	Inj. Diazepam	No	No	Yes	Yes	Yes
15.	Inj. Carboprost	No	Yes	Yes	Yes	Yes

C. Jhargram DH

Sl. No.	Record/ Observation	May 2014	August 2015	November 2016	February 2017	May 2018
1.	Inj. Oxytocin	Yes	Yes	Yes	Yes	Yes
2.	Inj. Gentamycin	No	No	No	No	No
3.	Inj. Betamethasone	Yes	No	Yes	Yes	Yes
4.	Ringer Lactate	Yes	Yes	Yes	Yes	Yes
5.	Normal Saline	No	No	No	No	No
6.	Inj. Hydrazaline	No	No	No	No	No
7.	Methyldopa	No	No	No	No	No
8.	Inj. Calcium Gluconate – 10%	No	No	Yes	Yes	Yes
9.	Inj. Ampicillin	No	No	No	No	No
10.	Inj. Metronidazole	No	No	No	No	No

Sl. No.	Record/ Observation	May 2014	August 2015	November 2016	February 2017	May 2018
11.	Inj. Lignocaine – 2%	No	Yes	Yes	No	Yes
12.	Inj. Adrenaline	No	No	No	No	No
13.	Inj. Hydrocortisone Succinate	No	No	No	No	No
14.	Inj. Diazepam	No	No	No	No	No
15.	Inj. Carboprost	No	Yes	Yes	No	No

Source: Records of the Maternity Department of the DHs

Appendix 2.1.5

(Refer paragraph 2.1.6.6 (i) F, page 37)

Statement showing status of availability of SNCU Equipment

Sl. No.	Essential Equipment	Requirement as per IPHS	Quantities available		
			Balurghat DH (20-bedded)	Suri DH (42-bedded)	Jhargram DH (21-bedded)
SNCU General Equipment:					
1.	Electronic Weighing Scale	5	4	8	5
2.	Infantometer	5	2	1	5
3.	Procedure Trolley	5	NA	1	5
4.	Spot Lamp	5	1	0	2
5.	Portable X-Ray Machine	1 for the unit	0	1	1
6.	Basic Surgical Instruments. <i>e.g.</i> , fine scissors, scalpel with blades, fine artery forceps, suture material & needles, towel, clips, <i>etc.</i>	1 set per bed	0	NA	1
7.	Nebulizer	1 for the unit	NA	5	2
8.	Multichannel Monitor with Non-Invasive BP Monitor (three sizes: zero, one & two - disposable in plenty-reusable neonatal probe, at least four)	4 (desirable)	2 (2 non-functional)	2	2
Individual Care Equipment:					
9.	Servo-Controlled Radiant Warmer	1 for each bed + 2	21 (1 non-functional)	49	28
10.	Low-Reading Digital Thermometer (Centigrade Scale)	1 for each bed	10 (9 non-functional)	28	5
11.	Neonatal Stethoscope	1 for each bed + 2	18	19	21
12.	Neonatal Resuscitation Kit (Laerdal type, Silicone, Autoclavable 240 ml., 450 ml. and resuscitation bag with valves- including pressure release valve), Oxygen reservoir & silicone round cushion masks –sizes zero & double zero), Neonatal laryngoscope with straight blade and spare bulbs)	1 set for each bed + 2	5	9	8
13.	Suction Machine (80% should be electrically operated & 20% foot operated)	1 for each beds	2 (1 non-functional)	7	3
14.	Oxygen Hood (unbreakable-neonatal/ infant size)	1 for each bed 20% extra (in case of repair/ disinfection)	17 (1 non-functional)	30	20
15.	Non Stretchable Measuring Tape (mm scale)	1 for each bed	20	NA	21
16.	Infusion Pump or Syringe Pump	1 for every 2 beds	8	50	22 (4 non-functional)
17.	Pulse Oxymeter	1 for every 2 beds	16 (1 non-functional)	22	13
18.	Double Outlet Oxygen Concentrator	1 for every 3 beds	13	23	12 (2 non functional)
19.	Flux Meter	1 (Desirable)	12	0	0
20.	CFL Phototherapy	1 for every 3 beds	12	29	12
21.	Horizontal Laminar Flow	1	1	0	0

Source: Records of the SNCU Department of the DHs

Appendix 2.1.6

(Refer paragraph 2.1.7.1 (iv), page 42)

Statement showing status of administration of expired drugs

Balurghat DH

Wards consumed	Name of Drug/ Injection	Batch No./ Year	Date of expiry	Quantity administered
Children Ward	Snake Anti Venom Serum IP liquid (10 ml)	A1605116/ 2018-19	30.04.18	48 vials
Psychiatry Ward	Pentazosin Inj.	SV671/ 2018-19	31.03.19	10 amp.
Emergency Ward	Dextrose Solution IP 5%	P17/010/ 2019-20	31.08.19	01 bottle
Female Surgical Ward	Acetazolamide tab. IP 250 mg	ACZM-17/ 2017-18	28.02.18	10 tabs
Female Surgical Ward	Dextrose Solution IP 5%	P17/010/2019-20	31.08.19	120 bottles
Female Medicine Ward	Snake Anti Venom Serum IP liquid (10 ml)	A1605116/ 2018-19	30.04.18	72 vials

Jhargram DH

Wards consumed	Name of Drug/ Injection	Batch no.	Expiry Date	Quantity consumed	Period of Consumption
Maternity Ward	Tab Labetalol	LBTL-13	31.01.2019	22	01.02.19 to 06.02.19
Children Ward	Inj. Ondansetron 4 mg.	ONI1712	03.12.2018	16	06.12.18 to 27.12.18
Post Operative Ward	Inj. Ondansetron 4 mg.	ONI1712	03.12.2018	63	04.12.18 to 12.12.18
Female Surgical Ward	Inj. Ondansetron 4 mg.	ONI1712	03.12.2018	32	04.12.18 to 11.12.18
Male Surgical Ward	Inj. Ondansetron 4 mg.	ONI1712	03.12.2018	248	04.12.18 to 31.12.18

Source: Records of respective departments of the DHs

Appendix 2.1.7A

(Refer paragraph 2.1.7.2 (ii), page 44)

Statement showing status of availability of ENT Equipment

Names of the Equipment as per IPHS (For up to 500-bedded)	Number required as per IPHS	Available equipment (Asset Reg.+SSH list)			Shortage from IPHS norm			Remarks
		BDH	SDH	JDH	BDH	SDH	JDH	
Audiometer	2	3	2	1	0	0	1	BDH: Physical existence shown as 'zero' by Department (Deptt.) SDH : Calibration and accessories are not working properly
Impedance Audiometer	1	0	1	0	1	0	1	--
Operating Microscope (ENT)	2	1	2	1	1	0	1	--
Head Light (ordinary) (Boyle Davis)	3	0	1	0	3	2	3	--
ENT Operation Set including Head Light and Tonsils	2	3	1	2	0	1	0	BDH: No head light as per remarks in SSH list
Ear Surgery Instruments Set	2	0	1	0	2	1	2	--
Masoid Set	2	0	0	0	2	2	2	--
Micro Ear Set Myringoplasty	2	0	1	0	2	1	2	--
Stapedotomy Set	1	0	0	0	1	1	1	--
Micro Drill System Set	2	0	2	0	2	0	2	--
ENT Nasal Set {SMR, Septoplasty, Nasal Endoscopic Set (zero & thirty degree), Polypetomy, DNS and Rhinoplastly}	2	1	0	1	1	2	1	--
Laryngoscope Fibreoptic ENT	1	2	0	5	0	1	0	BDH: Department did not show. Shown in store in SSH list
Laryngoscope Indirect	2	2	0	2	0	2	0	BDH: SSH list showed two in store
Otoscope	4	2	0	2	2	4	2	BDH: Deptt. showed only one while SSH showed two in service
Oesophagoscope Adult (Desirable)	1	0	0	0	1	1	1	--
Oesophagoscope Child (Desirable)	1	0	0	0	1	1	1	--
Head Light (cold light)	2	2	2	2	0	0	0	BDH: Deptt. showed 'zero' while SSH showed two in service
Tracheostomy Set	2	0	0	0	2	2	2	--
Tuning Fork	4	0	0	0	4	4	4	--
Bronchoscope Adult & Child	1 (Desirable)	0	0	0	1	1	1	--
Examination Instruments Set (Speculums, Tongue dipressors, Mirrors and Bull's lamp)	4	0	0	1	4	4	3	--
Oto Acoustic Emission (OAE) analyzer	1 (Desirable)	0	1	1	1	0	0	--
Sound Proof room	1 (Desirable)	0	1	1	1	0	0	--

Source: IPHS norms and records of the DHs; Reg. = Register

Appendix 2.1.7B

(Refer paragraph 2.1.7.2 (ii), page 44)

Statement showing status of availability of Eye Equipment

Names of the Equipment as per IPHS (For up to 500-bedded)	Number required as per IPHS	Available equipment (Asset Reg. +SSH list)			Shortage from IPHS norm			Remarks
		BDH	SDH	JDH	BDH	SDH	JDH	
Cryo Surgery Unit with Retina Probe	2	0	0	0	2	2	2	--
Ophthalmoscope - Direct + Indirect	2 + 1	1	0	2	2	3	1	--
Slit Lamp	2	1	1	1	1	1	1	--
Retinoscope	2	1	1	2	1	1	0	--
Perimeter	2	1	1	1	1	1	0	--
Binomags	2	0	1	0	2	1	0	--
Distant Vision Charts	2	0	2	1	2	0	1	--
Near Vision Chart	2	0	1	0	2	1	2	--
Colour Vision Chart	2	0	1	0	2	1	2	--
Foreign Body Spud and Needle	2	0	0	0	2	2	2	--
Rotating Visual Acuity Drum	2	0	0	1	2	2	1	--
Trial Frame Adult/ Children	2	1	1	0	1	1	2	--
Trial Lens Set	2	1	1	1	1	1	1	--
YAG Laser	1	0	0	0	1	1	1	--
Operating Microscope	1	3	1	0	0	0	1	--
A-Scan Biometer	1	0	0	0	1	1	1	--
Keratometer	1	1	1	1	0	0	0	BDH: Not physically available with Department
Auto Refractometer	1	1	1	1	0	0	0	BDH: Not physically available with Department
Flash Autoclave	1	2	1	0	0	0	1	BDH: As per stock: two, Department had three
Applanation Tonometer	1 (Desirable)	1	0	1	0	1	0	BDH: Not with Department though in stock
Phacomachine	1	1	0	0	0	1	1	--
Laser Photocoagulator	1 (Desirable)	0	0	0	1	1	1	--

Source: IPHS norms and records of the DHs; Reg. = Register

Appendix 2.1.7C

(Refer paragraph 2.1.7.2 (ii), page 44)

Statement showing status of availability of Endoscopy Equipment

Names of the Equipment as per IPHS (For up to 500-bedded)	Number required as per IPHS	Available equipment (Asset Register + SSH list)			Shortage from IPHS norm			Remarks
		BDH	SDH	JDH	BDH	SDH	JDH	
Endoscope Fiber Optic (OGD)	1	1	1	1	0	0	0	BDH: Could not be operated as no doctor
Arthroscope	1	0	0	0	1	1	1	--
Operating Laproscope Complete for Laproscopic Surgery	1	1	1	1	0	0	0	--
Laparoscope for Diagnostic and Sterilisation	2	0	0	0	2	2	2	BDH: Not in stock but physically available with Department. However, not used as no Doctor was available.
Colonoscope and Sigmoidoscope	1	0	0	0	1	1	1	--
Hysteroscope	1	0	0	0	1	1	1	--
Colposcope	1	0	0	0	1	1	1	--
Cystoscope	1 (Desirable)	0	0	0	1	1	1	--

Source: IPHS norms and records of the DHs

Appendix 2.1.8

(Refer paragraph 2.1.7.3 (ii), page 45)

Statement showing shortage of Human Resource

Specialty	Min. strength for a 500-bedded DH as per IPHS 2012	Men-in-Position as on 01.04.19				Shortage	
		Balurghat DH	Suri DH	Jhargram DH	Balurgh at DH	Suri DH	Jhargram DH
Medical Officer:							
Medicine	5	5 (1 contractual)	5	6 (2 contractual)	0	0	0
Surgery	4	3	4	5 (1 contractual)	1	0	0
Obstetrics & Gynaecology	6	5 (1 contractual)	7	9 (4 contractual)	1	0	0
Paediatrics	5	4 (1 contractual)	5	9 (3 contractual)	1	0	0
Anaesthesia	4	3	4	3 (1 contractual)	1	0	1
Ophthalmology	2	2	3	2	0	0	0
Orthopaedics	2	2	3	2	0	0	0
Radiology	2	2	2	1	0	0	1
Pathology	4	1	2	4 (1 contractual)	3	2	0
ENT	2	2	4	3	0	0	0
Dental	3	1	4	3	2	0	0
MO	23	4	11	14 (1 contractual)	19	12	9
Dermatology	1	1	1	2 (1 contractual)	0	0	0
Psychiatry	1	1	2	1 (contractual)	0	0	0
Microbiology	1	1	1	1	0	0	0
Forensic Specialist	1	1	2	0	0	0	1
AYUSH Doctors	2	1 (contractual)	1	1	1	1	1
Total:	68	39*	61	66	29 (42.64%)	15 (22.06%)	13 (19.12%)
<i>*There were 14 other MOs in Balurghat DH: MO, SNCU: four; MO, Occupuncture: one; MO, Oncology: one; MO, CCU: six; MO, AFHC: one (contractual) & MO, Non-Communicable Disease Clinic: one (contractual), and 17 other MOs in Jhargram DH: MO, SNCU: six ; MO, CCU: seven; MO, Blood Bank: two , MO, Chest: two (contractual), only categories mention in IPHS compared in above table.</i>							
<i>The excess staff in one speciality has not be adjusted against shortage in other speciality to arrive at shortage of HR.</i>							
Paramedical:							
Lab. Technician	18	14	12	12	4	6	6
Pharmacist	13	8	17	10	5	0	3
Store Keeper	2	0	0	0	2	2	2
Radiographer	9	8	0	7	1	9	2
ECG Tech./ ECO	5	3	3	3	2	2	2
Audiometrician	1	3	1	1	0	0	0
Ophthalmic Asstt.	2	1	2	0	1	0	2
EEG Tech.	1	0	0	0	1	1	1
Dietician	1	1	0	0	0	1	1
Physiotherapist	3	3	5	4	0	0	0
O.T. Technician	14	0	0	0	14	14	14
CSSD Asstt.	3	0	0	0	3	3	3

Specialty	Min. strength for a 500-bedded DH as per IPHS 2012	Men-in-Position as on 01.04.19				Shortage	
		Balurghat DH	Suri DH	Jhargram DH	Balurgh at DH	Suri DH	Jhargram DH
Social Worker	6	1	0	0	5	6	6
Counsellor	2	3	10	0	0	0	2
Dermatology Tech.	1	0	0	0	1	1	1
Cyto-Technician	1	0	0	0	1	1	1
PFT Technician	2	0	0	0	2	2	2
Dental Technician	3	1	1	0	2	2	3
Darkroom Asstt.	9	0	0	0	9	9	9
Rehabilitation Therapist	3	0	1	0	3	2	3
Biomedical Engineer	1	0	0	0	1	1	1
Total:	100	46*	52	37	57[#] (57%)	62 (62%)	64 (64%)

* There were 12 more Paramedical Staff in Balurghat DH: Clinical Psychologist: two; MT, CCU: three; Hospital Asstt.: three; Food Safety Officer: one; Linen Keeper: one; Dental Asstt: one and Instructor Young Hearing Impaired Children: one; however, only categories specified in IPHS has been compared above. # two excess staff in Audiometrician and one in Counsellor not adjusted against shortage in other category, hence, the shortage figure came as 57 instead of 54.

Administrative:

Hospital Administrator	2	6	6	4	0	0	0
Housekeeper/ Manager	5	2	9**	0	3	0	5
Medical Record Officer	1	0	0	0	1	1	1
Medical Record Asstt.	3	0	0	0	3	3	3
Accounts/ Finance	6	0	0	0	6	6	6
Admn. Officer	1	1	0	0	0	1	1
Office Asstt. Gr.-I	2	3	1	3	0	1	0
Office Asstt. Gr.-II	4	1	4	3	3	0	1
Ambulance Services	3	0	0	3	3	3	0
Total:	27	13	20	13	19* (70.37%)	15 (55.55%)	17 (62.96%)

*In Balurghat DH, the excess of four staff in Hospital Administrator and one in Office Asstt. Gr.-I were not adjusted against shortage in other categories; hence, shortage figure is 19 instead of 14 above. Similar calculations adopted for other DHs also.

** (Ward Master: four + Facility Manager: four + Facility Level Quality Manager: one)

Source: IPHS norms and records of the DHs

Appendix 2.1.9

(Refer paragraph 2.1.7.4 (i) A, page 47)

Statement showing status of Utilisation of beds

Year	Sanctioned beds	Functional beds	Utilisation
Balurghat DH:			
2014 (Only DH)	430	430	100.00%
2015 (Only DH)	430	363	84.41%
2016 (Only DH up to 02.10.16)	430	363	84.41%
2016 (Only DH from 25.10.16)	458	393	85.80%
2017 (Only DH up to 03.4.17)	458	393	85.80%
2017 (DH & SSH from 04.04.17)	930	539	57.95%
2018 (DH & SSH)	930	539	57.95%
2019(DH & SSH)	930	539	57.95%
Suri DH:			
2014 (Only DH)	542	468	86.34 %
2015 (Only DH)	542	468	86.34 %
2016 (Only DH)	542	468	86.34 %
2017 (Only DH up to April 2017)	542	468	86.34 %
2017 (DH & SSH from May 2017)	1042	766	73.51 %
2018 (DH & SSH)	1042	766	73.51 %
2019(DH & SSH)	1042	766	73.51 %
Jhargram DH:			
2014 (Only DH)	NA	NA	NA
2015 (Only DH – January to October)	300	285	95%
2015 (Only DH – November to December)	300	300	100%
2016 (Only DH up to 10.02.16)	300	300	100%
2016 (DH & SSH from 11.02.16 to 31.07.16)	600	300	50%
2016 (DH & SSH – August to December)	600	384	64%
2017 (DH & SSH up to October)	600	424	70.67%
2017 (DH & SSH- November & December)	600	460	76.67%
2018 (DH & SSH up to October)	600	460	76.67%
2018 (DH & SSH – November & December)	600	473	78.83%
2019 (DH & SSH up to October)	600	473	78.83%
2019 (DH & SSH November to December)	600	543	90.50%

Source: IPHS norms and records of the DHs

Appendix 2.1.10

(Refer paragraph 2.1.7.4 (i) F, page 50)

List of pending civil projects

Sl. No.	Name of Projects	Proposal year	Present Status
Balurghat DH:			
1.	Patient Party-Doctors meeting room	Discussed in RKS in 2014	Not done
2.	Boundary wall around Doctor's Quarters	-do-	Not done
3.	Renovation of Police Morgue	Discussed in RKS in 2015	Thorough renovation was not done
4.	Fire-fighting arrangement in DH	Discussed in RKS in 2016	Yet not complete
5.	Shed with line divider for patients for OPD ticket and pharmacy dispensing	Discussed in RKS in 2017	Not done
6.	Separate pump house & water supply for dialysis unit	Discussed in RKS in 2019	Not done
7.	S/R to interior and exterior of Doctor's Quarters (four nos. in Block A and four nos. in Block D)	2016-17	Not yet approved
8.	S/R to interior and exterior of Nursing Quarters. (eight nos. in Block B and eight nos. in Block C)	2016-17	Not yet approved
9.	Special repair & renovation of E.I of Quarters.	2016-17	Not yet approved
10.	Repairing and painting of interior of Main Building	2017-18	Not yet approved
11.	Sinking of deep tube well along with Iron Elimination Plant, etc., to cater 40,000 ltr./ day water supply for mechanised laundry	2018-19	Not yet approved
12.	Repair & renovation of GDA Quarters, Block A	2018-19	Not yet approved
13.	Repair & renovation of GDA Quarters, Block B	2018-19	Not yet approved
14.	Special repair & renovation of Residential Quarters.	2018-19	Not yet approved
15.	Widening of road from Morgue to NTS via Superintendent Office & Nursing Quarters and the link road of Doctor's Quarters Complex (0.653 km)	2018-19	Not yet approved
16.	Repairing of water supply line replacing by six nos. PVC water storage tank (2,000 lt.) and existing damaged pipe line on the building of Thalasemia & NRC unit	2018-19	Not yet approved
17.	Repairing & renovation of the bathroom and wards for TB patients at the Isolation Ward	2018-19	Not yet approved
18.	SITC of 30 KVA UPS System for CCU/ HDU Unit	2018-19	Not yet approved
19.	E.I work additional beds at CCU & HDU including Air Purifier and UPS at CCU & HDU	2018-19	Not yet approved
Suri DH			
1.	Supply and fixing of LED tubelights and ceiling fans at different wards of Suri Hospital	02-11-2018	Not yet approved
2.	AC machines installation at SNCU (Two machines)	27-06-2019	Not yet approved
3.	Modification of Paediatric wards at SNCU-II	22-05-2018	Not yet approved
4.	Repairing and renovation of six Medical Officer's Quarters	22-08-2019 (2 nd time)	Not yet approved
5.	Repairing and renovation of four nos. and two nos. Medical Officer and Superintendent Quarters	22-08-2019 (2 nd time)	Not yet approved
6.	Repairing and renovation of six Medical Officer's Quarters	22-08-2019 (2 nd time)	Not yet approved
7.	Repairing and renovation work with special roof treatment	22-08-2019 (2 nd time)	Not yet approved
8.	Modification of Labour Room Complex and Gynaecology ward	09-02-2018	Not yet approved

Sl. No.	Name of Projects	Proposal year	Present Status
9.	Roof treatment for SNCU-I, Post Operative Ward and Post Operative-II	13-12-2019	Not yet approved
10.	Estimate Cabin and Paying Ward	06-02-2019	Not yet approved
11.	Water supply scheme (Big Over Head Water Reservoir)	27-09-2019	Not yet approved
12.	SITC of one MVA transportation and augmentation of LT Power distribution	12-09-2019	Not yet approved
13.	Special Roof Treatment of CCU	27-06-2019	Not yet approved
Jhargram DH:			
1.	Construction of changing room & toilet for Staff Nurses	RN 16000876 Dt. 07.11.16	Not sanctioned
2.	Renovation work of Hospital residential buildings	RN 16000320 Dt.17.06.16	Not sanctioned
3.	Electrical renovation of Gr.A, Gr.B, Gr.C, Gr.D and Nurses Quarters & Hostel	RN 16000852 Dt.25.10.16	Not sanctioned
4.	-Do-	-Do-	Not done
5.	Electrical Work including SITC of UPS for SNCU,OT (G&O) & Labour Room	RN18000001 Dt.02.01.18	Not done
6.	Construction of single storied Police Morgue with provision of two-storied foundation at JDH	RN 18000330 Dt.26.04.18	Not sanctioned
7.	Electrical Work of the proposed Morgue at JDH	RN 18000329 Dt.19.04.18	Not sanctioned
8.	Renovation of kitchen at JDH	RN17001072	Not sanctioned
9.	Construction of Heat Insulated Light Weight Structure at the roof of SNCU for mother's retiring room	RN18000081 Dt.02.05.18	Not sanctioned
10.	Electrical work of proposed mother's retiring room at the roof of SNCU, JDH	RN 18000002 Dt. 02.01.18	Not sanctioned

Source: Records of the DHs

Appendix 2.1.11

(Refer paragraph 2.1.8.2 (i), page 52)

Statement showing status of availability of Laboratory Equipment

Sl. No.	Name of Equipment	No. required	Nos. available			Shortage		
			BDH	SDH	JDH	BDH	SDH	JDH
1.	Binocular Microscope	10	1	5	4	9	5	6
2.	Chemical Balances	2	1	1	0	1	1	2
3.	Simple Balances	2	0	1	0	2	1	2
4.	Electric Calorimeter	2	1	2	1	1	0	1
5.	Fully Automated Auto-analyser	1	0	0	2	1	1	0
6.	Semi Auto Analyser	1	3	5	5	0	0	0
7.	Micro Pipettes of different volumes	10	13	42	1	0	0	9
8.	Water Bath	2	1	2	0	1	0	2
9.	Hot Air Oven	2	2	2	0	0	0	2
10.	Lab Incubator	3	2	4	3	1	0	0
11.	Distilled Water Plant	2	0	0	0	2	2	2
12.	Electric Centrifuge, Table Top	3	2	7	0	1	0	3
13.	Cell Counter Electronic	1	0	1	0	1	0	1
14.	Hot Plates	6	0	1	0	6	5	6
15.	Rotor/ Shaker	2	3	2	0	0	0	2
16.	Counting Chamber	4	1	2	0	3	2	4
17.	PH Meter	3	1	0	0	2	3	3
18.	Paediatric Glucometer/ Bilirubinometer	1	0	0	2	1	1	0
19.	Glucometer	2	0	1	1	2	1	1
20.	Haemoglobinometer	3	2	1	2	1	2	1
21.	TCDC Count Apparatus	2	1	0	0	1	2	2
22.	ESR Stand with Tubes	6	10	4	0	0	2	6
23.	Test Tube Stands	10-20	0	1	0	10	9	10
24.	Test Tube Rack	10-20	5	26	0	5	0	10
25.	Test Tube Holders	10-20	0	0	0	10	10	10
26.	Spirit Lamp	10	1	1	0	9	9	10
27.	Rotatry Microtome	1	1	1	1	0	0	0
28.	Wax Embel Bath	1	0	0	0	1	1	1
29.	Auto Embedic Station	1	0	0	0	1	1	1
30.	Timer Stop Watch	2	0	0	0	2	2	2
31.	Alarm Clock	2	0	0	0	2	2	2
32.	Elisa Reader-cum-Washer	2	4	3	2	0	0	0
33.	Blood Gas Analyser	1	0	0	0	1	1	1
34.	Electrolyte Analyser	1	1	1	0	0	0	1
35.	Glycosylated Haemoglobinometer	1	0	1	0	1	0	1
36.	Blood Bank Refrigerator	3	0	5	0	3	0	3
37.	Haematology Analyser with 22 parameters	1	3	2	0	0	0	1
38.	Blood Collection Monitor	1	0	2	0	1	0	1

Sl. No.	Name of Equipment	No. required	Nos. available			Shortage		
			BDH	SDH	JDH	BDH	SDH	JDH
39.	Laboratory Autoclaves	3	1	3	2	2	0	1
40.	Blood Bank Refrigerator	4	0	5	0	4	0	4
41.	Ordinary Refrigerator	4	8	6	2	0	0	2
42.	Floatation Bath	1	0	2	2	1	0	0
43.	Emergency Drug Trolley with auto cylinder	1	1	0	0	0	1	1
44.	Class – I Bio-Safety Cabinet	1	0	2	0	1	0	1
45.	Knife Sharpener	1	0	0	0	1	1	1
46.	Cyto Spin	1	0	1	1	1	0	0
47.	RO Plant	1	0	1	0	1	0	1
48.	Computer with UPS and Printer	1	3	2	0	0	0	1
49.	Automatic Blood Gas Analyzer	1	0	0	0	1	1	1
50.	Fine Needle Aspiration Cytology	1	0	0	0	1	1	1
51.	Histopathology Equipment	1	1	0	0	0	1	1
52.	CO Analyser	1	0	0	0	1	1	1
53.	Dry Biochemistry	--	0	0	0	--	--	--
54.	Whole Blood Finger Prick HIV Rapid Test and STI Screening Test each	4,000	0	0	0	4,000	4,000	4,000
55.	Blood Component Separator	1	0	0	0	1	1	1
56.	Platelet Agitator	1	0	1	0	1	0	1
57.	Platelet Thawing Machine	1	0	0	0	1	1	1
58.	Laminar Flow	1	0	0	0	1	1	1

Source: IPHS norms and records of the DHs; Numbers of equipment functional were only shown as available

Appendix 2.1.12

(Refer paragraph 2.1.8.2 (ii), page 52)

Statement showing unavailable Diagnostic Services

Sl. No.	Speciality	Sl. No.	Diagnostic services/ Tests	Not available in		
I	Clinical Pathology					
	a. Haematology					
	Immunoglobulin Profile (IGM, IGG, IGE, IGA)	1.	Bleeding Time	--	--	--
	Fibrinogen Degradation Product	2.	Clotting Time	--	--	--
		3.	Prothrombin Time	BDH	SDH	JDH
		4.	Hanging Drop for V. Cholera	BDH	SDH	JDH
		5.	Rh Typing	--	--	JDH
		6.	Blood Cross Matching	BDH	--	JDH
		7.	ELISA for HIV, HCV & HBsAg	--	--	JDH
		8.	ELISA for TB	BDH	--	JDH
		9.	APTT	BDH	SDH	JDH
		10.	ANA/ ANF, Rheumatoid Factor	BDH	SDH	JDH
		11.	Malaria/ Filaria Parasite	--	--	--
	b. CSF Analysis	12.	Analysis, Cell Count, etc.	BDH	--	--
	c. Stool Analysis	13.	Bacterial Culture and Sensitivity	BDH	SDH	JDH
II.	Pathology					
	a. PAP smear	14.	Cytology	BDH	SDH	--
	b. Sputum	15.	Sputum Cytology	BDH	--	--
	c. Histopathology	16.	All types of Specimens, Biopsies	BDH	SDH	JDH
	d. Haematology	17.	Bone Marrow Aspiration	BDH	SDH	JDH
		18.	Immuno Haematology	BDH	SDH	JDH
		19.	Coagulation Disorders	BDH	SDH	JDH
III.	Microbiology	20.	KOH study for Fungus	BDH	SDH	JDH
		21.	Smear for AFB, KLB (Diphtheria)	BDH	--	--
		22.	Culture and sensitivity for Blood, Sputum, Pus, etc.	BDH	SDH	JDH
		23.	Bacteriological Analysis of Water by H 2S Based Test	BDH	SDH	JDH
		24.	Stool Culture for Vibrio Cholera and other Bacterial Enteropathogene	BDH	SDH	JDH
		25.	Grams Stain for Throat Swab, Sputum, etc.	BDH	--	--
		26.	Supply of different media for peripheral Laboratories	BDH	SDH	JDH
IV.	Serology	27.	RPR Card Test for Syphilis	--	--	JDH
		28.	Pregnancy Test (Urine Gravindex) ELISA for Beta HCG	BDH	--	JDH
		29.	Leptospirosis, Brucellosis	BDH	SDH	JDH
		30.	ELISA Test for HIV, HBsAg & HCV	BDH	--	JDH
		31.	DCT/ ICT with Titre	BDH	SDH	JDH
		32.	RA Factor	--	--	JDH
V.	Biochemistry	33.	Glucose Tolerance Test	--	--	JDH
		34.	Liver Function Tests	--	--	--
		35.	Kidney Function Tests	--	--	--
		36.	Serum Magnesium	BDH	--	JDH
		37.	Blood Gas Analysis	BDH	--	JDH
		38.	Estimation of residual Chlorine in Water	BDH	SDH	JDH

Sl. No.	Speciality	Sl. No.	Diagnostic services/ Tests	Not available in		
		39.	Iodometry Titration	BDH	SDH	JDH
		40.	Chloride (Desirable)	BDH	SDH	JDH
		41.	Salt and Urine for Iodine (Desirable)	BDH	SDH	JDH
		42.	Icteric Index	BDH	SDH	JDH
		43.	Thyroid T3 T4 TSH	--	SDH	JDH
		44.	CPK	--	SDH	JDH
VI.	Ophthalmology	45.	Retinoscopy	--	--	--
		46.	Ophthalmoscopy	--	--	--
VII	Cardiac Investigation	47.	Stress Tests	BDH	SDH	JDH
		48.	ECHO	BDH	SDH	JDH
VIII	ENT	49.	Endoscopy for ENT	BDH	SDH	JDH
IX	Radiology	50.	MMR (Chest)	BDH	SDH	JDH
		51.	HSG	BDH	--	JDH
		52.	Barium Swallow, Barium Meal, Barium Enema & IVP	BDH	--	JDH
X	Endoscopy	53.	Bronchoscopy	BDH	SDH	JDH
		54.	Arthroscopy	BDH	SDH	JDH
		55.	Laparoscopy (Diagnostic)	BDH	SDH	--
		56.	Colposcopy	--	--	--
		57.	Hysteroscopy	BDH	SDH	--
		58.	Oesophagus	BDH	SDH	JDH
		59.	Stomach	BDH	SDH	JDH
XI	Respiratory	60.	Pulmonary Function Tests	BDH	--	JDH

Source: Records of the DHs; Note: BDH- Balurghat District Hospital; SDH- Suri District Hospital & JDH- Jhargram District Hospital

Appendix 2.1.13

(Refer paragraph 2.1.8.2 (iii), page 53)

Statement showing results of Laboratory Tests under External Quality Assurance Scheme

Balurghat DH

Constituent Group	No. of parameters checked under the group (Col-I)	No. of months (times) tested (Col-II)	Total no. of Assurances obtained (Col-III=Col-I*II)	No. of deviations (Standard Deviation Index (SDI)=>=2<=3) showing warning signals	No. of deviations (SDI>3) showing unacceptable performance	Percentage of reporting wrong results
Chemistry-I	12*	7 (May'16-Jul'16 & Sep'16-Dec'16)	84	14	6	25.07%
Chemistry-I	23#	13 (Feb'18-Mar'19 except Sep'18)	299	34	42	
Chemistry-II	8^	7 (Jun'17-Dec'17)	56	7	8	26.79%
HbA1c	1	10 (Feb'18-Dec'18 except Sep'18)	10	3	4	70.00%
Urine Chemistry®	6-8	10 (Feb'18-Dec'18 except Sep'18)	77	8	34	54.55%
Thyroid Cortisol™	5	9 (Jun'18-Mar'19 except Sep'18)	45	2	3	11.11%
Total:			571	68	97	
			571	165 (28.90%)		

* Glucose, Urea, Creatinine, Total Bilirubin, Albumin, Uric Acid, Cholesterol, Tryglycerides (TG), High-Density Lipoprotein, Aspartate Aminotransferase (AST), Alanine Aminotransferase (ALT) and Alkaline Phosphatase (ALP)

All the above plus Total protein, Calcium, Phosphorous, Sodium, Potassium, Chlorine, Bicarbonate, amylase, Creatine Phosphokinase (CPK), Iron and Magnesium

^ Glucose, Urea, Creatinine, Total Bilirubin Albumin, Uric Acid, Cholesterol and TG,

@ Urine (UR.) Albumin, UR. Urea, UR. Calcium, UR. Phosphorus, UR. Uric Acid, UR. Sodium, UR. Potassium

™ Total Thyroxin, Free Thyroxin, TSH, Total T3, Cortisol

Suri DH

Month	Constituent Group	No. of parameters checked under the group	No. of deviations (SDI=>=2<=3) showing warning signals	No. of deviations (SDI>3) showing unacceptable performance	Percentage of reporting wrong results
February	HbA1c	1	0	1	100
March	HbA1c	1	0	0	0
July	HbA1c	1	0	1	100
August	HbA1c	1	0	1	100
October	HbA1c	1	0	1	100
November	HbA1c	1	0	0	0

Source: Records of the respective DHs