Chapter Chapter In-Patient Services

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

While availability of doctors, nurses, essential drugs/equipment, dietary services and patient safety along with performance evaluation are included in this chapter, diagnostic services and drug management are discussed in Chapters 3 and 7 respectively. Similarly, the results of audit scrutiny of infection control practices in the test-checked DHs are discussed in Chapter 6. The following paragraphs discuss the in-patient services of six District Hospitals (DHs) test-checked in audit.

4.1 Availability of in-patient services

As per NHM Assessor's Guidebook and IPHS guidelines, a DH should provide specialist in-patient services pertaining to Emergency, Burn unit, ENT, Gynecology, General Medicine, General Surgery, Ophthalmology, Orthopaedics, Psychiatry etc. Availability of these services as of March 2019 in the six test-checked DHs is shown in **Table 4.1**.

Table 4.1: In-patient services in district hospitals

Name of DH	Em	Bur	ENT	Gy	GM	GS	Oph	Orth	Psy
Deoghar	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No
East Singhbhum	Yes	No	No	Yes	Yes	Yes	No	No	No
Hazaribag	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Palamu	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No
Ramgarh	Yes	No	No	Yes	Yes	Yes	Yes	No	No
Ranchi	Yes	No	No	Yes	Yes	Yes	Yes	No	No

*Em: Emergency ward, Bur: Burn ward, ENT: Ear, Nose and Throat, GY: Gynecology GM: General medicine, GS: General surgery, Oph, Ophthalmology, Orth: Orthopedics, Psy: Psychiatry

(Source: Test-checked DHs)

It can be seen from **Table 4.1** that Burns Ward and Orthopedics were not available in four and three of the six test-checked DHs respectively including the State capital. As such, patients were compelled to get these services in private hospitals or other nearby higher government health facilities where these services were available.

The Department stated (January 2021) that IPD services for Psychiatry and ENT were presently available at DH, Palamu and accepted absence of these

services in four (Deoghar, East Singhbhum, Hazaribag and Ramgarh) test-checked DHs while remaining silent in respect of DH, Ranchi. It was further stated that IPD services for Psychiatry and ENT could not be made available in DHs at East Singhbhum and Ramgarh due to lack of manpower, infrastructure and space while these services would be started shortly at DH, Hazaribag.

The Department has only replied regarding IPD services for Psychiatry and ENT. The fact remains that essential services such as Burns Ward and Ortho services were not available in all hospitals, including the DH in the State capital.

4.2 Availability of human resources in DHs

4.2.1 Doctors

IPHS provides that Medical Officers (MOs)/ Specialists should be available round the clock in IPD to provide due medical care to the in-patients. The person-in-position (PIP) of MO/ Specialist in six test-checked DHs and shortage with respect to IPHS norms as of March 2019 are given in **Table 4.2**.

Table 4.2: Shortage of doctors/specialists in test-checked DHs

Name of DH	Sanctioned beds	Number of doctors required as per IPHS	PIP as on March 2019	Shortage in comparison to IPHS	Percentage of shortage as compared to IPHS
Deoghar	100	32	15	17	53
East Singhbhum	100	32	14	18	56
Hazaribag	250	37	20	17	46
Palamu	200	37	22	15	41
Ramgarh	100	32	26	06	19
Ranchi	200	37	27	10	27
Total	950	207	124	83	40

(Source: Test-checked DHs)

Thus, there was shortage of doctors ranging between 19 and 56 *per cent* in all the six test-checked DHs. Further, IPHS prescribes posts of specialists for different departments based on bed capacity of a DH. Audit noticed shortage of specialists *vis-a-vis* IPHS norms in the six test-checked DHs as on March 2019 as shown in **Table 4.3**.

Table 4.3: Requirement, PIP and shortage of specialists in test-checked DHs

Name of	Number of	Person	Details of shortage of different
DH	Specialist required	in	specialists (Number of total shortage)
	as per IPHS	position	26 11 1 (04) 01 1 1 0 0 (04)
Deoghar	21	09	Medicine (01), Obstetrics & Gynae (01), Ophthalmology (01), Radiology (01), Pathology (01), ENT (01), Psychiatry (01), AYUSH (01), Anesthesia (01), Dermatology (01), Microbiology (01) and Forensic Specialist (01) Total shortage –12
East Singhbhum	21	06	Medicine (02), Obstetrics & Gynae (01), Pediatrics (01), Radiology (01), Pathology (01), ENT (01), AYUSH (01), Surgery (02), Anesthesia (01), Orthopedics (01), Dermatology (01), Microbiology (01) and Forensic Specialist (01) Total shortage – 15
Hazaribag	35	23	Obstetrics & Gynae (02), ENT (01), Psychiatry (01), AYUSH (01), Surgery (02), Anesthesia (02), Dermatology (01), Microbiology (01), and Forensic Specialist (01) Total shortage – 12
Palamu	24	06	Medicine (02), Obstetrics & Gynae (02), Pediatrics (01), Ophthalmology (01), Pathology (02), ENT (01), Psychiatry (01), Surgery (02), Anesthesia (02), AYUSH (01), Dermatology (01), Microbiology (01) and Forensic Specialist (01) Total shortage – 18
Ramgarh	21	12	Medicine (02), Radiology (01), AYUSH (01), Anesthesia (02), Dermatology (01), Microbiology (01) and Forensic Specialist (01) - Total shortage – 09
Ranchi	24	13	Surgery (01), Medicine (02), Pathology (01), ENT (01), Psychiatry (01), AYUSH (01), Orthopedics (01), Dermatology (01), Microbiology (01) and Forensic Specialist (01) Total shortage – 11

(Source: Test-checked DHs)

It can be seen from **Table 4.3** that all six test-checked DHs had shortages of specialists which ranged between 34 and 75 *per cent*. None of the test-checked DHs had specialists of AYUSH, Dermatology, Microbiology and Forensic.

The Department accepted (January 2021) the shortage of specialists in three test-checked DHs with respect to IPHS norms. No reply was furnished in respect of the other three DHs (Hazaribag, Palamu and Ranchi).

4.2.2 Nurses and Paramedics

IPHS prescribes various posts of staff nurses and paramedics in DHs according to their bed capacity as shown in **Table 4.4**.

Table 4.4: Staff nurses and paramedics required for a DH

Sl. No.	Name of post	Require d for 100-200 bed hospital	Required for 300 bed hospital	Sl. No.	Name of post	Require d for 100-200 bed hospital	Require d for 300 bed hospital
1	Staff Nurse	45-90	135				
			Param	edics			
1	Lab Tech	6-9	12	11	O.T. technician	4-6	8
2	Pharmacist	5-7	9	12	CSSD Assistant	1	2
3	Storekeeper	1	2	13	Social Worker	2-3	4
4	Radiographer	2-3	5	14	Counsellor	1	2
5	ECG Tech/Eco	1-2	3	15	Dermatology Technician	-	1
6	Audiometrician	-	1	16	Cyto Technician	-	1
7	Optha. Assistant	1	2	17	Dental Technician	1	2
8	EEG Tech.	-	1	18	Darkroom Assistant	2-3	5
9	Dietician	1	1	19	Rehabilitation Therapist	1	2
10	Physiotherapist	1	2	20	Biomedical Engineer (Desirable)	1	1

Audit noticed shortage of staff nurses and paramedics in the six test-checked DHs as of March 2019 in comparison to IPHS norms as given in **Table 4.5**.

Table 4.5: Sanctioned strength, PIP and shortage of Paramedics and Staff Nurses

N C	C1	per IPHS norms		Person-in-position Shortage as per IPH norms (per cent)		-	
Name of DH	Sanctioned beds	Paramedics	Staff Nurses	Paramedics	Staff Nurses/ ANM	Paramedics	Staff Nurses
Deoghar	100	31	45	7	40	24 (77)	5(11)
East Singhbhum	100	31	45	15	11	16 (52)	34 (76)
Hazaribag	250	66	135	21	28	45 (68)	107 (79)
Palamu	200	42	90	24	12	18 (43)	78 (87)
Ramgarh	100	31	45	10	11	21 (68)	34 (76)
Ranchi	200	42	90	11	26	31 (74)	64 (71)
Total	950	219	405	88	128	131 (60)	277(68)

(Source: Test-checked DHs)

It is evident from **Table 4.5** that shortage of paramedics ranged between 43 and 77 *per cent* whereas that of staff nurses between 11 and 87 *per cent* in the test-checked DHs. Category-wise shortage of paramedics has been detailed in *Appendix 4.1*.

Thus, DHs had acute shortage of paramedics and nursing staff which would adversely affected their smooth functioning.

The Department accepted (January 2021) the shortage of paramedics and staff nurses in DHs Deoghar and Palamu. No reply was furnished in respect of the remaining four test-checked DHs.

4.3 Operation Theatre services

Operation Theatre (OT) is an essential service that is to be provided to patients. IPHS prescribes OTs for elective major surgery, emergency services and ophthalmology/ENT for DHs having bed capacity of 101 to 500. Availability of OTs in the six test-checked DHs is shown in **Table 4.6**.

Table 4.6: Availability of OTs in DHs (2018-19)

Name of DH	OT for elective major surgeries	OT for emergency surgeries	OT for ophthalmology	OT for ENT and orthopaedics
Deoghar	Yes	No	No	No
East Singhbhum	Yes	No	No	No
Hazaribag	Yes	No	Yes	No
Palamu	Yes	Yes	Yes	No
Ramgarh	Yes	No	Yes	No
Ranchi	Yes	No	Yes	No

(Source: Test-checked DHs)

It can be seen from **Table 4.6** that OTs for ENT and Orthopaedics were not available in any of the six test-checked DH. Further, OTs for emergency services was not available in five DHs. OTs for Ophthalmology started functioning in DHs, Ramgarh and Ranchi only from September 2017 and May 2018 respectively.

Thus, patients were not provided facilities for surgical treatment with respect to emergency, ophthalmology, ENT and orthopaedic services in the test-checked DHs.

The Department accepted (January 2021) the facts in respect of three (Deoghar, East Singhbhum and Palamu) out of the six test-checked DHs. It was stated that OT facilities were now being provided in DH, Palamu (now Medini Rai Medical College and Hospital). It was further stated that Eye clinic was operational in the old hospital premises in DH Deoghar. The reply regarding DH Deoghar is not acceptable as the eye clinic was being run by a Non-Government Organisation as a camp for cataract surgery.

4.3.1 Availability of equipment in OT

IPHS guidelines prescribes 23²⁰ types of equipment for OTs for DH with bed-capacity up to 300 beds. Availability of these equipment during 2018-19 in all the six test-checked DHs is shown in **Table 4.7**.

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Auto Clave HP Horizontal, Auto Clave HP Vertical (2 bin), Operation Table Hydraulic Major, Operation table Hydraulic Minor, Operating table non-hydraulic field type, Operating table Orthopedic, Autoclave vertical single bin, Shadowless lamp ceiling type major, Shadowless lamp ceiling type minor, Shadowless Lamp stand model, Focus lamp Ordinary, Sterilizer (Big instruments), Sterilizer (Medium instruments), Sterilizer (Small instruments), Bowl Sterilizer Big, Bowl Sterilizer Medium, Diathermy Machine (Electric Cautery), Suction Apparatus – Electrical, Suction Apparatus - Foot operated, Dehumidifier, Ultra violet lamp philips model 4 feet, Ethylene Oxide sterilizer and Microwave sterilizer

Table 4.7: Availability of essential equipment in OTs during 2018-19

Name of District Hospital	Bed capacity	Availability of essential equipment	Percentage of availability of essential equipment
Deoghar	100	10	43
East Singhbhum	100	6	26
Hazaribag	250	12	52
Palamu	200	11	48
Ramgarh	100	9	39
Ranchi	200	12	52

(Source: Test-checked DHs)

As evident from **Table 4.7**, only six to 12 types of equipment were available in the OTs of the six test-checked DHs against the requirement of 23 types of equipment. Thus, the equipment available for OTs in the test-checked DHs were insufficient, implying that quality of surgical treatment would have been adversely affected in these test-checked DHs.

The Department while accepting the shortage (January 2021) at DH Hazaribag stated that the necessary equipment were available in OTs at DHs, Deoghar and Palamu without giving list of equipment. No reply was furnished in respect of DHs East Singhbhum, Ramgarh and Ranchi.

The reply of Department is not acceptable as shortage of equipment (57 and 52 *per cent*) was noticed in DHs Deoghar and Palamu respectively during 2018-19 as given in **Table 4.7**.

4.3.2 Availability of drugs in OT

As prescribed in NHM Assessor's Guidebook, 23²¹ types of drugs should be available in OTs. Against this, there was shortage of drugs in the test-checked DHs in the sampled month (May 2018) as shown in **Table 4.8**.

Table 4.8: Availability of essential drugs in OTs

Name of District Hospital	Number of available essential drugs	Shortage in the number of essential drugs (per cent)
Deoghar	04	19 (83)
East Singhbhum	08	15 (65)
Hazaribag	12	11 (48)
Palamu	07	16 (70)
Ranchi	Records not furnished	NA
Ramgarh	17	6 (26)

(Source: Records of test-checked DHs)

As shown in **Table 4.8**, the shortage of essential drugs in OTs ranged between 26 and 83 *per cent* in five test-checked DHs. No information was made available by DH Ranchi. Thus, acute shortage of drugs in OTs in the

Inj Oxytocin, Inj. Ampicillin, Inj. Metronidazole, Gentamycin, Inj. Diclofenac Sodium, IV fluids, Ringer lactate, Plasma expander, Normal saline, Inj Magsulf, Inj Calcium gluconate, Inj Dexamethasone, Inj Hydrocortisone Succinate, Diazepam, Pheneramine maleate, Inj Corboprost, Fortwin, Inj Phenergen, Betameathazon, Inj Hydrazaline, , Nefidepin, Methyldopa and Ceftriaxone

test-checked DHs would have an adverse impact on surgical treatment by these test-checked DHs.

The Department replied (January 2021) that necessary drugs were available in OTs of DHs, Deoghar, Palamu and Ramgarh without giving the lists of drugs. No replies were furnished in respect of DHs, East Singhbhum and Hazaribag.

The reply of the Department is not acceptable as shortage of drugs ranging between 26 and 83 *per cent* was noticed at DHs, Deoghar, Palamu and Ramgarh as given in **Table 4.8**.

4.3.3 Documentation of OT procedures

NHM Assessor's Guidebook prescribes that surgical safety checklist, presurgery evaluation records and post-operative evaluation records for OTs should be prepared for each case. The status of records in the six test-checked DHs during the sampled²² months is given in **Table 4.9**.

Name of DH No of major **Surgical Pre-surgery** Post-operative surgeries safety evaluation evaluation checklist records performed records Deoghar 59 0 0 0 East Singhbhum 25 25 25 25 277 0 246 246 Hazaribag Palamu 246 0 0 0 Ramgarh 47 0 0 0 151 0 151 151 Ranchi **Total** 805 25 422 422

Table 4.9: Documentation of OT procedures

(Source: Records of test-checked DHs)

Table 4.9 shows that only DH, East Singhbhum maintained proper records of surgeries. While three DHs (Deoghar, Palamu and Ramgarh) did not maintain records at all, it was partially maintained in DHs, Hazaribag and Ranchi. Thus, in the absence/partial maintenance of surgical safety checklist, pre-surgery evaluation records and post-operative evaluation records for OTs, it was not ascertainable whether safety procedures in OTs were adhered to in the test-checked DHs.

The Department accepted (January 2021) the facts in respect of DH Ramgarh and stated that documentation was being maintained in DHs, Deoghar and Palamu.

The reply of the Department is not acceptable as it was noticed that while documentation of OT procedures were partially maintained in DH Deoghar, it was not being maintained at all in DH Palamu during 2014-19.

Sampled weekly data for May 2014, August 2015, November 2016, February 2018 and May 2018

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4.4 Intensive Care Unit

As per IPHS, Intensive Care Unit (ICU) facility in DHs is essential for providing highly skilled lifesaving medical aid and nursing care to critically ill patients. At least five *per cent* of the total beds should be available for ICU in each DH which may gradually be expanded up to 10 *per cent*.

The Department proposed (2016-17) to establish five bedded ICUs in 21 DHs. As informed (June 2020) by the Directorate, ICUs were established in nine²³ DHs between July 2016 and May 2017 whereas it could not be established (June 2020) in the remaining 12 DHs due to lack of human resources and non-availability of required space.

Thus, ICUs were available only in nine out of the 23 DHs in the State. Thus, proper medical aid and nursing care could not be provided to critically ill patients in 14 DHs.

4.4.1 Availability of ICU services

Audit observed that out of six test-checked DHs, ICU was functional only in DH, Deoghar. It was further observed that ICU could not be made functional in DH, Palamu despite availability of trained manpower (12 personnel), equipment (worth ₹ 35.56 lakh) and earmarked space for which no reason was furnished to audit. Photographs of the non-functional ICU in DH, Palamu with idle machines and equipment is given below:



Thus, critical patients were deprived of ICU facilities in five test-checked DHs and were dependent on higher public health facility or private hospitals in case of emergency.

The Department while accepting (January 2021) non-establishment of ICUs in DHs East Singhbhum and Hazaribag, stated that ICU facilities are presently available at Medini Rai Medical College Hospital (earlier DH, Palamu). The claim of the Department about existence of ICU facilities in

(40)

Deoghar, Dumka, Godda, Jamtara, Bokaro, Simdega, Sahibganj, Palamu and West Singhbhum

Palamu is not acceptable as it was found to be non-functional. No reply was furnished in respect of DHs Ramgarh and Ranchi.

4.4.2 Equipment in ICU

As per IPHS, each bed of ICU is required to be equipped with essential equipment viz., High-end Monitor, Ventilator, Defibrillator, Infusion pumps etc. Further, Ultrasound for invasive procedures and Arterial Blood Gas (ABG) analysis machine should also be available. One nurse is also required for each bed in ICU.

Audit observed that in ICU of DH, Deoghar, five High-end Monitors as required were available. However, against the requirement of five, only two ventilators, three infusion pumps and one defibrillator were available. Ultrasound for invasive procedures and Arterial Blood Gas (ABG) analysis machine were also not available. Further, though available, ventilators and the defibrillator (valuing ₹ 26.17 lakh) could not be used since July 2016 due to non-availability of trained personnel.

Again, as per duty roster of nurses, only one nurse was deployed in each shift in the 05 bedded ICU of DH, Deoghar and was attending, on an average, three patients per day during the sampled month (February 2018).

Thus, due to shortage/non-functioning of equipment and inadequate human resources in the ICU, optimum service delivery to critical patients could not be ensured.

No specific replies to the audit observations were furnished by the Department.

4.4.3 Drugs in ICU

NHM Assessor's Guidebook prescribes 14 essential drugs for an ICU. Audit observed that in five sampled months, six drugs (Activated Charcoal, Salbutamol, Digoxin, Vitamin K, Sodium Chloride and Antiserum Polyvalent Snake Venom) were not available in the ICU of DH, Deoghar. Further, of these six drugs, two drugs (Salbutamol and Antiserum Polyvalent Snake Venom) were available in Central Store of DH Deoghar only in one month (May 2018) out of five months test-checked.

In reply, the Department stated that the prescribed drugs were available in the ICU at DH Deoghar. The reply is not acceptable as the prescribed drugs were found to have been available only during one month out of five months test-checked.

4.5 Emergency services

4.5.1 Accident and trauma care services

Out of six test-checked DHs, Accident and Trauma Ward was available only in DH, Hazaribag whereas four DHs (Deoghar, East Singhbhum, Palamu

and Ranchi) were providing primary care to trauma patients in their Emergency ward. DH, Ramgarh was providing primary care in the Casualty and Dressing room since June 2016. Thus, separate Accident and Trauma ward for providing better care to such patients were not available in five test-checked DHs and patients were being referred to the nearest government higher health facility.

The Department accepted (January 2021) the facts in respect of DH Deoghar. However, no replies were furnished in respect of four DHs (East Singhbhum, Palamu, Ramgarh and Ranchi).

4.5.2 Equipment in accident and trauma care wards

Out of 14 equipment prescribed in NHM Assessor's Guidebook for Accident and Trauma care, six equipment - Multiparameter torch, HIV kit, Defibrillator, Laryngoscopes, Laryngeal Mask Airway and Crash cart (used for examination & monitoring of patients, undertaking diagnostic procedures for resuscitation and for providing intensive and critical care to patients and storage of essential medicine and tools) were not available in DH, Hazaribag which may affect the quality of medical care administered to the patients in the Trauma Centre.

The Department accepted (January 2021) the facts and stated that action would be taken to purchase essential equipment for emergency and Trauma Centre of DH, Hazaribag.

4.5.3 Triaging of patients and average turn-around time

NHM Assessor's Guidebook prescribes standard treatment protocol for triaging²⁴ of patients getting admitted in an emergency department.

There were no records of triaging being done in the six test-checked DHs during 2014-19. Audit could not ascertain the average turn-around time of the patients of the Emergency Department as DHs did not maintain relevant records.

Thus, assurance could not be drawn regarding efficacy of the emergency services in terms of classification of patients according to the criticality of their condition and the turn-around time.

The Department while accepting (January 2021) the facts in respect of DH Hazaribag stated that triaging of patients would be done and average turnaround time would be worked out. The Department, however, did not furnish replies in respect of the remaining five test-checked DHs.

Triaging is the process to determine the priority among patients for their treatments in accordance with the severity of their condition or likelihood of recovery.

4.5.4 Continuity of care during emergency

As per NHM Assessor's Guidebook, hospitals were required to provide appropriate facilities and referral linkage to the patients who have been referred to other/ higher health facilities to ensure continuity of care.

Audit observed that none of the test-checked six DHs maintained records of cases referred to other/higher health facilities from OPDs and Emergency. In case of IPD patients, referral was found mentioned only in Bed Head Ticket (BHT)s/IPD register but Refer out registers were not maintained in five DHs (except DH Ramgarh) to show provision of facilities or referral linkage to patients. In the absence of these records, Audit could not assess facilities provided by DHs to the referred patients, linkage of DHs with higher facilities where patients were referred and follow up of continuity of care of referred patients.

The Department accepted (January 2021) the facts in respect of DH Hazaribag. However, no replies were furnished in respect of DHs Deoghar, East Singhbhum, Palamu and Ranchi.

4.6 Burn Ward

Government of Jharkhand approved (August 2014) 10 bedded separate burn units for each DH with adequate infrastructural facilities for burn management and rehabilitation. Out of six test-checked DHs, buildings for burn units were constructed and handed over (September 2015 and January 2017) to the Civil Surgeons of four DHs (Deoghar, East Singhbhum, Ramgarh and Ranchi). Construction of burn unit building was cancelled in two DHs (Palamu and Hazaribag) due to non-availability of land.

Audit observed that burn units could not be made operational in three DHs (East Singhbhum, Ramgarh and Ranchi) due to lack of required man-power²⁵ and the equipment and buildings were lying idle. Burn patients were being referred to the nearest government higher health facility from these three DHs.

In DH, Deoghar, the unit constructed for the Burn ward was being used as TB centre and an eight bedded Burn ward was running in a separate room within the hospital building. Two DHs (Hazaribag and Palamu) did not have Burn wards and burn patients were being treated in Surgical and Medicine Wards using screen separators. Photographs of the idle building of Burn Unit and burn wards within hospital buildings are given below.

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Minimum requirement of manpower for burn ward- Physiotherapist -2, Staff Nurse 8 Dresser- 3 and Multi purpose worker - 8





Photograph showing non-functional burn unit at DH, Ramgarh as on 23.01.2020

Photograph showing newly built burn unit being used as TB centre in DH, Deoghar as on 22.01.2020





Photograph showing Burn ward at DH Deoghar running in a separate room as on 22.01.2020

Thus, the burn patients were deprived of specialised burn care services in three test-checked DHs.

The Department accepted (January 2021) the facts in respect of DH Deoghar. However, no replies was furnished regarding non-operationalisation of burn units at DHs, East Singhbhum, Ramgarh and Ranchi.

4.7 Orthopaedic services

Audit observed that Orthopaedic services were not available in three (East Singhbhum, Ramgarh and Ranchi) out of the six test-checked DHs due to non-availability of specialists and equipment.

The Department while accepting (January 2021) the facts in respect of DH East Singhbhum stated that vacant posts would be filled up. No replies was furnished in respect of DHs, Ramgarh and Ranchi.

4.8 Ophthalmic Services

As of March 2019, Ophthalmic services were available in four (Hazaribag, Palamu, Ramgarh and Ranchi) out of the six-test checked DHs. In DH, Deoghar, though this service was available between March 2014 and April 2016, it was discontinued thereafter due to non-posting of a Specialist.

Ophthalmic services were started in DH, Hazaribag only from December 2018.

4.8.1 Equipment for Ophthalmology

IPHS prescribes 24 types of equipment for ophthalmology. Equipment available in the Ophthalmic departments of the test-checked DHs is shown in **Table 4.10**.

Table 4.10: Availability of equipment in Ophthalmology

Name of DHs	Ophthalmology						
	Number of equipment required as per IPHS	Number of equipment available	Shortage (in <i>per cent</i>)				
Deoghar	24	21	3 (13)				
East Singhbhum	24	7	17 (71)				
Hazaribag	24	19	5 (21)				
Palamu	24	9	15 (63)				
Ramgarh	24	16	8 (33)				
Ranchi	24	19	5 (21)				

(Source: Test-checked hospitals)

Table 4.11 shows that none of the test-checked DH had all the equipment for Ophthalmology as required under IPHS. In DHs East Singhbhum and Palamu, shortage was to the extent of 71 and 63 *per cent* respectively.

The Department accepted (January 2021) the facts in respect of DHs, Deoghar and East Singhbhum. However, no replies were furnished in respect of the remaining four test checked DHs.

4.9 Other Services

4.9.1 Dietary services

IPHS envisages dietary service as an important therapeutic tool and requires that it should be documented through a Diet Register. Diet to maternity in-patients is to be provided free of cost under *Janani Shishu Suraksha Karyakram* (JSSK) and to other in-patients from State funds. Rates for the diets (breakfast, lunch and dinner) was ₹ 100 per patient per day under JSSK whereas for other in-patients, it was ₹ 50 per patient per day.

Audit scrutiny revealed that:

- Diet was provided to maternity/ other in-patients through outsourced agencies in four test-checked DHs. In two DHs (Ranchi and Palamu), it was provided through in-house canteen. However, none of the six test-checked DHs had a system of quality testing of the diet provided to in-patients during 2014-19 though prescribed in IPHS. Resultantly, audit could not derive an assurance regarding the quality of the diet provided to in-patients in the test-checked DHs.
- In DH, Ramgarh, free diets were being provided to the indoor

maternity patients under JSSK. However, other in-patients were not provided free diets despite funds for free diet being provided by the State Government under the sub-head 'Samagri aur Aapurti' of Major Head 2210. Thus, in-patients other than maternity patients were deprived of free diet despite availability of State funds.

In DH, Ramgarh, space for canteen was not provided to the outsourced agency and meals were being prepared in a partially constructed building in un-hygienic environment. Similar was the condition at DH, Hazaribag as depicted in the photographs below.

Photographs showing kitchens running in the test-checked DHs:



The Department did not respond to the audit observations.

4.9.2 Ambulance Services

As per IPHS, DHs shall have well equipped Basic Life support (BLS) and desirably one Advanced Life Support (ALS) ambulance. Ambulances shall be provided with communication system along with required man-power.

Requirement and availability of Ambulances and man-power in test-checked DHs is given in **Table 4.11**.

Table 4.11: Requirement and Availability of Ambulances and manpower

Sl.			Name of DH					
No	Particulars	Deoghar	East Singhbhum	Hazaribag	Palamu	Ramgarh	Ranchi	
1	Number of beds sanctioned	100	100	250	200	100	200	
2	Number of ambulances required ²⁶	03	03	03	03	03	03	
3	Number of ambulances in service	02	01	03	02	03	03	

Every ambulance should have one driver and two technicians.

Sl.		Name of DH					
No	Particulars	Deoghar	East Singhbhum	Hazaribag	Palamu	Ramgarh	Ranchi
4	Shortage of ambulances	01	02	00	01	00	00
5	Number of drivers available	02	01	03	04	03	04

(Source: Test-checked DHs)

Audit observed that, against the requirement of 18 ambulances, 14 ambulances were in service in the six test-checked DHs. Further, no technicians were available with any ambulance though two were to be deployed with each ambulance as per IPHS norms.

The Department accepted the facts in respect of DHs Deoghar and Hazaribag. However, no replies was furnished in respect of the remaining four DHs.

Further, Jharkhand Rural Health Mission Society (JRHMS) signed (October 2015) a Memorandum of Understanding (MoU) with a private agency (Ziqitza Health Care Ltd. Mumbai, Maharashtra) to render ambulance services in the State on contract basis. The service "108 Ambulance Service" commenced in November 2017. The Agency was running 327 ambulances of which 40 ambulances were equipped with Advanced Life Support (ALS) and 287 with Basic Life Support (BLS). As per information furnished by NHM, 5,39,391 patients were provided 108 Ambulance Service during 2017-21 (up to December 2020).

4.10 Patient Safety

4.10.1 Disaster Management in DHs

NHM Assessor's Guidebook read with IPHS norms envisage that every DH should have a dedicated Disaster Management Plan (DMP). DMP should clearly define the authority with their responsibilities and mechanism to mobilise resources.

Audit observed that DMP was prepared only in one (East Singhbhum) out of the six test-checked DHs. Thus, five DHs²⁷ lacked proper plan in case of any kind of disaster.

The Department did not furnish replies to the audit observations.

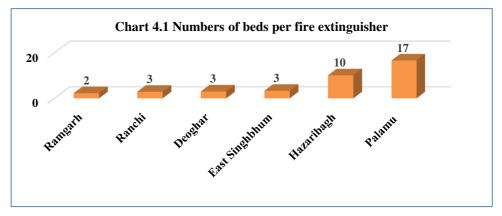
4.10.2 Safety from Fire

IPHS provides that hospital buildings should be equipped with fire protection features. National Building Code of India, 2005 (updated in 2016) also stipulates that fire extinguishers (FEs)/fire hydrants must be installed in every hospital to ensure safety of patients, attendants, visitors

²⁷ Deoghar, Hazaribag, Palamu, Ramgarh and Ranchi.

and the hospital staff in case of any fire mishap in the hospital premises.

Audit observed that fire hydrants²⁸ were not installed in any of six test-checked DHs. However, FEs²⁹ were available in all the six test-checked DHs. Sufficiency of FEs in the test-checked DHs could not be ascertained in the absence of any prescribed norms. However, number of available FEs were not uniform in all test-checked DHs. Number of beds per FEs in the test-checked DHs is as shown in **Chart 4.1**.



Thus, while one fire extinguisher was available against less than five beds in four DHs (Deoghar, East Singhbhum, Ramgarh and Ranchi), in DHs Hazaribag and Palamu, only one fire extinguisher was available against 10 and 17 functional beds respectively.

The Department while accepting the facts in respect of DH, Hazaribag stated that requirement of fire hydrants and extinguishers would be assessed and necessary action would be taken to purchase and install them. Regarding DH, Palamu, it was stated that firefighting system was being installed with renovation of Medini Rai Medical College and Hospital, Palamu. Regarding DH Deoghar, it was stated that sufficient FEs were available while no reply was furnished in respect of DHs, Ramgarh and Ranchi.

4.11 Evaluation of Outcome Indicators

IPHS stipulates preparation of Outcome Indicators (OIs) like Bed Occupancy Rate (BOR), Leaving Against Medical Advice (LAMA) Rate, Patient Satisfaction Score (PSS), Average Length of Stay (ALoS), Adverse Event Rate (AER), Completeness of Medical Records, Absconding Rate, Referral Out Rate (ROR), Discharge Rate (DR) and Bed Turnover Rate (BTR) by each DH (*detailed in Appendix 4.2*). Audit findings with respect to above OIs against IPD services provided during 2014-19 in the six test-checked DHs are discussed in the succeeding paragraphs.

In the absence of any benchmark or fire safety audit, number of fire extinguishers available were compared against the total number of beds

A separate water connection point from which water can be tapped in case of fire mishap

4.11.1 Bed Occupancy Rate

Bed Occupancy Rate (BOR) is an indicator of the productivity of hospital services and is a measure of verifying whether the available infrastructure and processes are adequate for delivery of health services. As per IPHS, the BOR of hospitals should be at least 80 *per cent*.

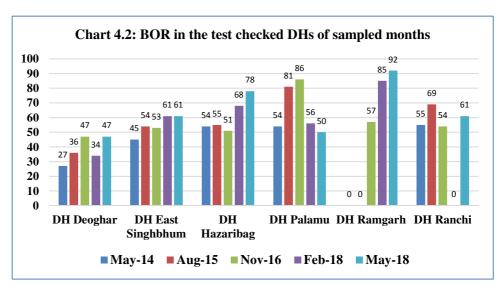
Audit observed that BOR was prepared by DH, East Singhbhum (since February 2018) and DH, Ramgarh out of the six test-checked DHs. BOR calculated³⁰ by Audit in respect of five sampled months for all the test-checked DHs except DH, Ramgarh is given in **Table 4.12** and **Chart 4.2**.

	Bed Occupancy Rate (BOR)							
Name of DH	May 2014	August 2015	November 2016	February 2018	May 2018			
Deoghar	27	36	47	34	47			
East Singhbhum	45	54	53	61	61			
Hazaribag	54	55	51	68	78			
Palamu	54	81	86	56	50			
Ramgarh	NA*	NA	57	85	92			
Ranchi	55	69	54	_	61			

Table 4.12: BOR in the test-checked DHs of sampled months

*Note: Records for 2014-16 were not available in DH, Ramgarh.

(Source: Records of test-checked hospitals)



It can be seen from **Table 4.12** and **Chart 4.2** that the desired BOR of more than 80 *per cent* was achieved only by two DHs (Palamu and Ramgarh) during two months. However, improvement in BOR was visible in May 2018 with respect to May 2014 in all DHs except DH, Palamu where it decreased to 50 *per cent* in May 2018 from 54 *per cent* in May 2014.

The Department accepted (January 2021) the facts in respect of DH Hazaribag and Ramgarh and stated that necessary action would be taken to

BOR = Total Patient Bed Days / (Functional Beds in DH x Calendar Days in month) x 100

(49)

improve the quality of IPD services in order to improve BOR. The Department did not furnish replies in respect of DHs, Deoghar, East Singhbhum, Palamu and Ranchi.

4.11.2 Bed Turnover Rate

Bed Turnover Rate³¹ (BTR) is the rate of usage of beds in an in-patient department in a given period of time and is a measure of the utilisation of the available bed capacity and serves as an indicator of the efficiency of the hospital. High BTR indicates high utilisation of the in-patient beds in a department while low BTR could be due to fewer patient admissions or longer duration of stay in the departments.

Audit observed that BTR had not been worked out by any test-checked DH during 2014-19. BTR calculated by Audit in respect of five test-checked DHs except Ramgarh³² for five sampled months is shown in **Table 4.13**.

Table 4.13: BTR in sampled months in the test checked DHs

	Bed Turnover Rate (BTR)						
Name of DH	May 2014	August 2015	November 2016	February 2018	May 2018		
Deoghar	1	2	1	1	2		
East Singhbhum	3	4	3	3	3		
Hazaribag	7	8	6	7	10		
Palamu	4	11	8	4	5		
Ranchi	11	8	8	-	6		

(Source: Test-checked DHs)

Table 4.13 shows that BTRs of two DHs (Deoghar and East Singhbhum) were much lower compared to BTRs of other DHs which indicated comparative inefficiency of these two test-checked DHs.

The Department accepted (January 2021) the facts in respect of DHs, Hazaribag and Ramgarh and stated that quality of IPD services would be improved so that BTR improves. The Department did not furnish replies in respect of the remaining four DHs (Deoghar, East Singhbhum, Palamu and Ranchi).

4.11.3 Referral out rate

As per IPHS norms, referral services to higher government health facility centres denote that the facilities for treatments were not available in the hospitals. The Referral Out Rate (ROR) during sampled months³³ for in-patients calculated by audit in the test-checked DHs is given in **Table 4.14**.

In-patient discharged (including deaths) during the month/functional beds

³² In DH Ramgarh, BTR could not be calculated as details of discharge was not mentioned in BHTs/ other related records

³³ May 2014, August 2015, November 2016, February 2018 and May 2018

Table 4.14: ROR during sampled months for in-patients in test checked DHs during 2014-19

Name of DHs	Referral out Rate (ROR) (percentage)
Deoghar	4.57 to 8.03
East Singhbhum	6.56 to 16.97
Hazaribag	6.34 to 9.14
Palamu	0.24 to 0.59
Ramgarh	3.06 to 6.55
Ranchi	1.67 to 5.58

ROR= No of patients referred in the month*100/ Total Admission (Source: Records of test-checked DHs)

It can be seen from **Table 4.14** that RORs of three (Deoghar, East Singhbhum and Hazaribag) test-checked DHs was on the higher side compared to RORs of the remaining three test-checked DHs which indicated inadequate health care facilities in the DHs with higher ROR.

The Department accepted (January 2021) the facts in respect of DH Hazaribag and Ramgarh and stated that reason for high referral rate would be assessed and services would be improved to reduce the ROR. The Department did not furnish replies in respect of the remaining four DHs (Deoghar, East Singhbhum, Palamu and Ranchi).

4.11.4 Average Length of Stay

Average Length of Stay³⁴ (ALoS) is an indicator of clinical care capability and determines the effectiveness of interventions. ALoS is the time between the admission and discharge/death of the patient.

Audit noticed that none of test-checked DHs prepared ALoS during 2014-19. ALoS (in days) during sampled months in the test-checked DHs except Ramgarh³⁵ calculated by audit is given in **Table 4.15**.

Table 4.15: ALoS in test checked DHs

Name of DHs	ALoS during 2014-19 (in days)
Deoghar	1 to 2
East Singhbhum	4 to 6
Hazaribag	2
Palamu	2 to 3
Ranchi	1 to 3

(Source: Test-checked DHs)

ALoS was high in DH, East Singhbhum in comparison to the other test-checked DHs. Thus, due to non-preparation of ALoS by the DHs, hospital authorities were not able to determine their clinical care capability and effectiveness of interventions.

The Department accepted the facts in respect of DH Hazaribag and Ramgarh and stated that the monthly rate of ALoS would be calculated. The

ALoS = Total Patient Bed Days in the month (excluding newborn) / Discharges in the month (including Death, LAMA, absconding)

35 In DH Ramgarh, ALoS could not be calculated as details of discharge was not mentioned in BHTs/ other related records Department did not furnish replies in respect of the remaining four DHs (Deoghar, East Singhbhum, Palamu and Ranchi).

4.11.5 Adverse Event Rate (AER)

Adverse outcomes with respect to healthcare received are known as adverse events (wrong drug administration, needle stick injury etc.) which should be identified quickly and managed to limit their detrimental effects on the patients/staff. Typology of adverse events can also indicate specific problems in the system.

Audit observed that records relating to AER were not maintained by the test-checked DHs during 2014-19. In the absence of AER, the test-checked DHs were not in a position to quickly assess and manage the detrimental effects of adverse events.

The Department accepted (January 2021) the facts in respect of DHs Hazaribag and Ramgarh and stated that records related to adverse event rate would be maintained. The Department did not furnish replies in respect of the remaining four DHs (Deoghar, East Singhbhum, Palamu and Ranchi).

4.11.6 Leaving against Medical Advice

To measure service quality of a hospital, Leaving against Medical Advice (LAMA) Rate³⁶ and Absconding Rate³⁷ are evaluated. LAMA is the term used for a patient who leaves the hospital against the advice of the doctor and Absconding Rate refers to patients who leave the hospital without informing the hospital authorities.

To assess these rates, Audit scrutinised the IPD registers of five sampled months in the six test-checked DHs. Admission registers did not have mention of absconding patients. LAMA rate per thousand admission in sampled month of test-checked DHs is presented in **Table 4.16**.

Table 4.16: LAMA Rate in test checked DHs

Nam of DHs	LAMA Rate during 2014-19
Deoghar	344 to 433
East Singhbhum	8 to 107
Hazaribag	148 to 235
Palamu	152 to 274
Ramgarh	4 to 37
Ranchi	58 to 113

(Source: Records of test-checked hospitals)

Table 4.16 shows that LAMA Rate was alarmingly high in three DHs (Deoghar, Hazaribag and Palamu) while it was the least in DH, Ramgarh.

LAMA rate = Total No. of LAMA cases x 1000 / Total No. of Admissions.

Absconding rate = Total No. of Absconding cases x 100 / Total No. of Admissions.

Higher LAMA Rate indicated poor service quality in the concerned DHs.

The Department accepted the facts in respect of DH Hazaribag and Ramgarh and stated that necessary action would be taken to decrease the LAMA rate without stating how it will be done. The Department did not furnish replies in respect of the remaining four DHs (Deoghar, East Singhbhum, Palamu and Ranchi).

4.12 Completeness of medical records

The Regulations on Graduate Medical Education 2012 of Medical Council of India (MCI) prescribes maintenance of accurate, clear and appropriate records of the patient in conformity with the legal and administrative framework. Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulations 2002 contain the format for doctors to maintain medical records of patients in which details of the patients are required to be filled. These records are essential to measure effectiveness of care received by the patient, for legal purposes as well as for follow-up treatment.

Scrutiny of 1,651 Bed Head Tickets³⁸ (BHTs) of three sampled months³⁹ in the six test-checked DHs revealed that the required details were not filled in BHTs as shown in **Table 4.17** and **Chart 4.3**.

Table 4.17: Status of completeness of BHTs during 2014-19

	Particulars						
Name of DH	No of BHTs test- checked	Diagnosis after investigation	Follow up	Investigation advised	Patient occupation		
Deoghar	440	227	98	223	00		
East Singhbhum ⁴⁰	60	60	22	60	00		
Hazaribag	364	66	00	205	00		
Palamu	295	109	00	216	00		
Ramgarh	145	69	00	80	00		
Ranchi ⁴¹	347	64	60	203	00		
Total	1651	595	180	987	0		

(Source: Records of test-checked DHs)

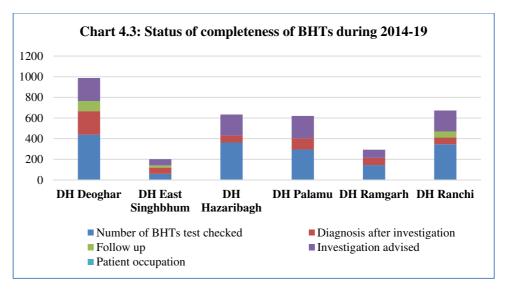
(53)

Bed Head Ticket is a form of chart wherein medical history of a patient from the date of his admission till the date of his discharge is written.

³⁹ February 2017, February 2018 and May 2018

January, February and March 2019

⁴¹ February 2017 and May 2018



It can be seen from **Table 4.17** and **Chart 4.3** that details of diagnosis were not found entered by DHs in all BHTs except in DH East Singhbhum. Follow-up was another detail which was not given due care in BHTs.

Thus, deficiencies in filling up the BHTs properly had an impact on the continuity and efficiency of medical care provided to the patient, especially in case of follow-up.

The Department accepted (January 2021) the facts in respect of three (Hazaribag, Ramgarh and Ranchi) out of the six test-checked DHs. Regarding DH, Ranchi, it was stated that BHT and other records could not be maintained properly due to non-availability of medical record room and manpower. It was further stated that necessary instructions would be issued to DHs, Hazaribag and Ramgarh to maintain and complete the medical records. Reply of the Department is not satisfactory as Medical Records come under "Essential Administrative Services" under IPHS Guidelines. It was also stated that two test-checked DHs (Deoghar and Palamu) were presently maintaining records whereas no reply was furnished for DH, East Singhbhum.

4.13 Patient Satisfaction Score

Patient satisfaction score (PSS) is an indicator of patient satisfaction and acts as an important monitoring and feedback mechanism for IPDs.

Audit observed that survey was conducted on 66 IPD and 70 OPD patients by three (East Singhbhum, Hazaribag and Ranchi) out of the six test-checked DHs to analyse PSS. Survey was conducted on five parameters each for IPD⁴² and OPD⁴³ services. In case of IPD survey, four out of 25 patients responded that IPD services at DH, Hazaribag was poor. The

Waiting time for registration, cleanliness of ward, cleanliness of beds, regular attendance of doctor and overall satisfaction.

Waiting time for registration, cleanliness of OPD and service utilities, attitude and skill of doctor, time taken for investigation, response of medicine counter.

remaining 62 patients were satisfied with IPD services (*Appendix 4.3*). Similarly, with regard to OPD services, six out of 70 patients responded that OPD services was poor on different parameters (*Appendix 4.3*).

Three⁴⁴ test-checked DHs which did not conduct PSS missed the opportunity to identify gaps based on feedback by patients and developing an effective action plan for quality improvement in their respective hospitals.

Further, the Ministry of Health and Family Welfare, GoI launched (2018) *Mera Aspatal* web portal to capture patient feedback for the services received at the hospital through user-friendly multiple channels such as Short Message Service, Outbound Dialling mobile application and through web portal.

As per the feedback provided by the patients, satisfaction levels of various services and other aspects of DHs was displayed on the *Mera Aspatal* web portal. Data of *Mera Aspatal* available for two DHs (Deoghar and Ramgarh) for the period 2018-19 is shown in **Table 4.18**.

Table 4.18: Result of Patient Satisfaction Survey by Mera Aspatal

	No. of	Patient satisfaction level		Areas of dis-satisfaction (in per cent)		
Name of DH	patient surveyed	Very satisfied/ satisfied	Not satisfied	Staff behaviour	Cleanliness	Cost of treatment
Deoghar	117	76	41	46	11	27
Ramgarh	87	58	29	22	11	44

It can be seen from **Table 4.18** that the main area of dissatisfaction amongst patients were staff behaviour and the cost of treatment. This indicated that patients were still not getting sufficient and affordable health care at DHs.

The Department did not furnish replies to the Audit observations.

To sum up, audit scrutiny of IPD services revealed that there were significant shortage of doctors/specialists, drugs and equipment besides deficiencies in OT services. Dietary support to patients was deficient and varied from hospital to hospital. Patient safety in the hospital premises was compromised on account of non-compliance with Disaster Management Guidelines and there was lack of proper fire safety arrangement in the test-checked DHs.

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⁴⁴ Deoghar, Palamu and Ramgarh.