

Chapter 3

Healthcare Services

Highlights

- All 10 specialist services as per IPHS norms were not available in 18 (78 *per cent*) out of 23 DHs in the State, while in DH, Kondagaon only four specialist services were available. Similarly, Outpatient Department (OPD) services in General Medicine, General Surgery, Obstetrics and Gynecology and Pediatrics were not available in 104 (60 *per cent*), 148 (86 *per cent*), 126 (73 *per cent*) and 133 (77 *per cent*) CHCs respectively. In 282 (36 *per cent*) out of 776 PHCs, Doctor (Medical Officer) was not available to provide OPD services as per IPHS norms.
- OPD services in the Cancer unit in GMCH Jagdalpur and Cardiology, Nephrology, and Neurology Departments in GMCH Rajnandgaon could not be started for more than eight years due to non-availability of specialist doctors.
- Average OPD cases per doctor per annum in DHs ranged between 10,437 and 3,834 and in CHCs, it ranged between 19,659 and 4,451. In GMCHs, it ranged between 28,804 and 7,723. Against the national average of 28 OPD cases per doctor per day for DHs, one DH (Raipur) out of seven test checked DHs had more number of OPD cases (upto 35) than the national average. In 11 HIs (DHs/CHCs/GMCHs) number of patients per hour per registration counter was more than norms (20) during 2016-22.
- IPD ward/ beds as per IPHS norms were available for all five basic in-patient services (General medicine, General surgery, Ophthalmology, accident and trauma, Pediatrics) in only one out of seven test checked DHs. In two DHs the number of beds were available as per IPHS norms in respect of four out of five services. DH Balod did not have the required number of beds in any of the five wards. Burn ward was not available in four out of seven test checked DHs.
- Bed occupancy rate (BOR) of five out of seven DHs was below 80 *per cent* norms of IPHS. Average BOR of DH Surajpur and Baikunthpur was 137 and 185 respectively which shows inadequate number of beds against requirement.
- Average Bed turnover ratio of DH, Sukma was 173 *per cent* during the period which shows requirement of additional beds. The bed turnover ratio of DH Raipur was quite low (16.50) as compared to other DHs.
- Operation Theatre (OT) services were available in all test checked GMCHs and DHs. All 12 surgical procedures were available in only two DHs as per IPHS norms. In the remaining five DHs, non-availability of surgery ranged between one and four.
- All four surgery services (General Surgery, ENT, Orthopedics and Ophthalmology) were available in only three out of seven test checked

- DHs. Three types of surgeries in two DHs and only two types of surgery were available in one DH.
- Against the national average of 194 surgeries per surgeon in a year, four DHs had more than average surgeries per surgeon in Ophthalmology. Similarly, it was more than the national average in one DH in General Surgery department and in one DH in orthopedics department.
- OT services were available in three (21 *per cent*) out of 14 test checked CHCs and seven (50 *per cent*) out of 14 test checked PHCs.
- Emergency services were available in all test checked DHs, but all types of infrastructure and facilities as per IPHS norms were not available in four out of seven test checked DHs.
- Routine and emergency care was not available in 25 (15 *per cent*) out of 172 CHCs in the State. Facility of 24 hours management of selected emergency services such as accident, first aid, stitching of wounds etc., were not available in two out 14 test checked PHCs.
- Intensive Care Unit (ICU) facility was not available in four out of seven test checked DHs. Whereas, in one DH, the number of available ICU beds was less than the IPHS norm. The required number of ICCU beds was not available as per MCI norms in three GMCHs but availability of beds (25) in NICU (GMCH Bilaspur) was less than the average patient load per day (33) and thus, two neonates had to share a single bed.
- As per NFHS-5 survey report, only 60 *per cent* pregnant women received four Ante Natal Care (ANC) during pregnancy and only 26.30 *per cent* pregnant women were provided, iron folic acid tablets for 180 days. Further, 66 *per cent* of pregnant women received ANC during their first trimester during 2020-21.
- Institutional birth increased from 70.20 *per cent* to 85.70 *per cent* during 2016-21 and C-section deliveries increased from 9.9 *per cent* in 2015-16 to 15.2 *per cent* in 2020-21, but it was much higher (57 *per cent*) in private HIs than the public HIs (8.9 *per cent*).
- Special Newborn Care Unit (SNCU) service was not available in five (22 *per cent*) out of 23 DHs in the State. Neonatal death rate was highest in DH Kondagaon and lowest in DH Bilaspur.
- All Imaging (Radiology) services required under IPHS were not available in any of the test checked DHs/ CHCs. Stress test and ECHO facility was not available in five out of seven test checked DHs. In GMCHs, MRI services were not available in three out of five GMCHs. Ultra Sonography facility was available in only one out of 14 test checked CHCs. A full range of essential pathological investigations as per IPHS norms was not available in any of the test checked HIs (GMCH/ DHs/ CHCs).
- The number of Advance Life Support (ALS) ambulances were insufficient in 15 districts as only 30 ALS vehicles were deployed against the requirement of 52 under *108 Sanjeevni Express*, as of March 2022. In 33.99 *per cent* cases, the response time of ambulances was more than

30 minutes whereas in 57,398 cases (8.59 *per cent*) ambulance reached patients after one hour of receiving their calls. In nine districts, the response time was more than 30 minutes.

- Dietary services in HIs were marred by inadequate facilities like lack of dedicated kitchens, dieticians and food safety registration certificates. Blood bank/storage facility was available in all test checked DHs/GMCHs but license to operate blood bank was expired in DH Baikunthpur (Korea). Laundry services were available in all test checked DHs. In three test checked CHCs, records of linen services were not maintained. In two test checked GMCHs, linen were not changed every day and quality of bed linen was not checked on daily basis in any of the test checked GMCHs except GMCH Raipur.
- All test checked DHs and GMCHs had 24x7 mortuary facility but availability of facility for pathological postmortem was not available in four DHs and one GMCH. System to provide identification tag/ wrist band for each stored dead body was not available in two DHs and three GMCHs.
- Biological testing/ physical testing of water samples were not carried out in nine HIs out of 26 test checked DHs/ CHCs/ GMCHs. Uninterrupted stabilised power supply was not available in CHC Dondilohara and PHC Chintagupha out of test checked 14 CHCs and 14 PHCs.
- Citizen's charter was not displayed in nine out of 27 HIs (DHs/CHCs/GMCHs/DKSPGI). NOC/fire safety license was not obtained by 39 out of 41 HIs (DHs/CHCs/PHCs/GMCHs/DKS PGI). Healthcare Institutions also lacked smoke detection systems (36), fire hydrants (36) and signage (31). Hospital Infection Control Committee was not formed in 30 out of 41 HIs.
- Patient satisfaction survey was not conducted in three GMCHs, in three CHCs and in two PHCs out of test checked five GMCHs, 14 CHCs and 14 PHCs during 2016-22. Audit conducted survey of 450 patients and non-availability of neat and clean toilet facilities, adequate seating arrangements and non-availability of prescribed medicines was expressed by 38, 14 and 18 *per cent* patients respectively.
- The test checked HIs of AYUSH lacked fire safety equipment. Panchakarma services were not extended in seven test checked HIs.

3.1 Introduction

Health services should be accessible to all people and in a way that responds to their preferences, are coordinated around their needs and are safe, effective, timely, efficient and of an acceptable quality while also ensuring that the use of these services does not expose the user to financial hardship.

3.2 Delivery of healthcare services

Healthcare services provided by Healthcare Institutions (HIs) are broadly classified into line services (directly related to patient care), support services (indirectly related to patient care) and auxiliary services (facilitate delivery of healthcare services). The Audit assessed the availability of these services in

the HIs in the State and observations related to management of these services in test checked HIs are discussed in succeeding paragraphs.

Line services

Line services include (i) Outdoor Patient Department (OPD), (ii) Indoor Patient Department (IPD), (iii) Emergency, (iv) Super Specialty Services etc., directly related to patient treatment.

3.3 Availability of OPD Services

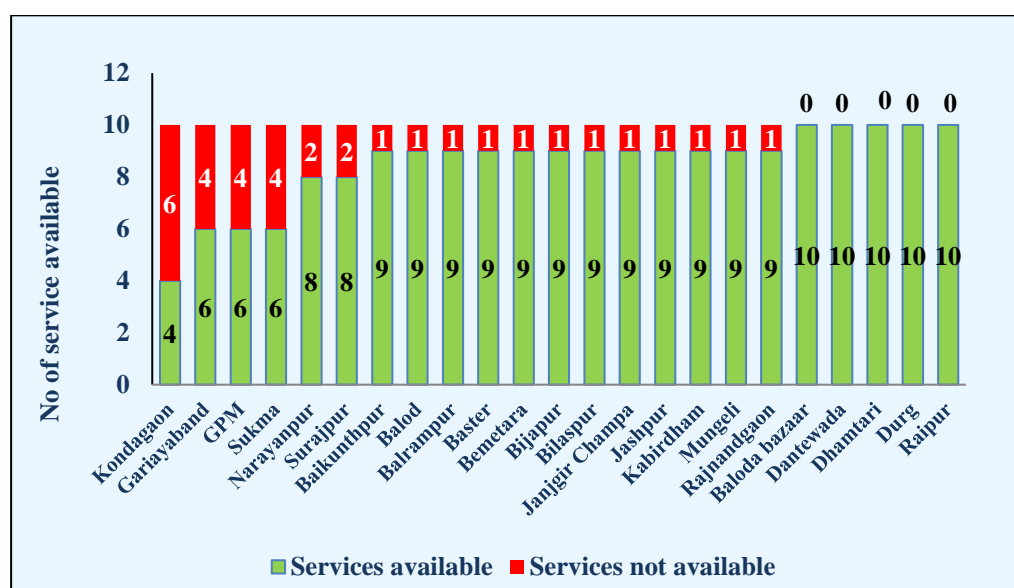
3.3.1 OPD Services

3.3.1.1 Availability of OPD services in District Hospitals (DHs)

As per IPHS norms, nine OPD services viz., ENT, General Medicine, Paediatrics, General Surgery, Ophthalmology, Dental, Obstetrics and Gynaecology, Psychiatry and Orthopaedics are essential for DHs while one service i.e., Dermatology and Venereology is desirable.

Availability of OPD services in all DHs in the State is shown in the following *Chart - 3.1*:

Chart - 3.1: Availability of specialist OPD services in DHs



(Source: Compiled from information furnished by respective DHs)

From the above chart, it could be seen that all ten specialist services were available only in five (22 per cent) out of 23 DHs in the State, while in DH, Kondagaon only four specialist services were available. Twelve DHs had all the essential OPD services except the services in Dermatology and Venereology Department, as detailed in *Appendix - 3.1*.

Details of availability/ non-availability of OPD services in seven test checked DHs as of March 2022 is given in *Table - 3.1*

Table - 3.1: Availability of OPD services in seven test checked DHs

Specialty Services (OPD)	DH Baikunthpur (Korea)	DH Balod	DH Bilaspur	DH Kondagaon	DH Raipur	DH Sukma	DH Surajpur	Not Available
ENT	Yes	Yes	Yes	No	Yes	No	No	3
General Medicine	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
Pediatrics	Yes	Yes	Yes	No	Yes	Yes	Yes	1
General Surgery	Yes	Yes	Yes	No	Yes	Yes	Yes	1
Ophthalmology	Yes	Yes	Yes	Yes	Yes	No	Yes	1
Dental	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
Obstetrics & Gynaecology	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
Psychiatry	No	Yes	Yes	No	Yes	No	Yes	3
Orthopedics	Yes	Yes	Yes	No	Yes	Yes	Yes	1
Derma & venereology	Yes	No	No	No	Yes	No	No	5
Number of Services Available	9	9	9	4	10	6	8	-

(Source: Information furnished by test checked DHs)

It could be seen from the above table that in four (57 per cent) out of seven test checked DHs, all nine essential specialised services were not available. It was further observed that:

- General Medicine, Obstetrics and Gynaecology and Dental services were available in all test checked DHs.
- DH Kondagaon did not have six OPD services in ENT, Paediatrics, General Surgery, Psychiatry, Orthopedics and Dermatology and venereology service.
- Dermatology and Venereology which is desirable service was not available in five DHs¹.
- Psychiatry services was not available in three DHs².
- ENT service was not available in DH Sukma, Surajpur and Kondagaon.

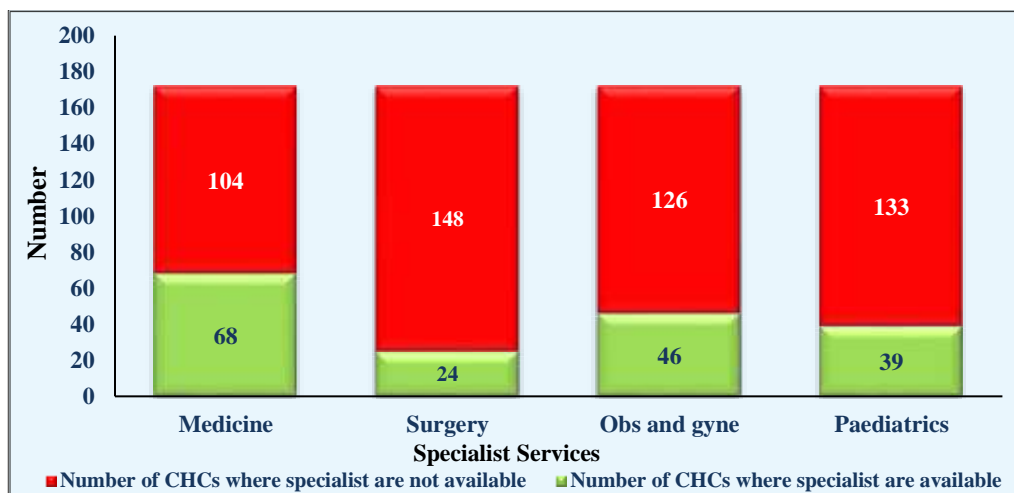
3.3.1.2 Availability of OPD services in CHCs

As per IPHS norms, CHCs should provide four specialist out-patient services pertaining to General Medicine, General Surgery, Obstetrics and Gynaecology, and Paediatrics. Availability of specialist services in 172 CHCs in the State is depicted in the following *Chart - 3.2*:

¹ Balod, Bilaspur, Kondagaon, Sukma and Surajpur

² Baikunthpur, Kondagaon and Sukma

Chart - 3.2: Availability of specialist services in CHC



(Source: Information furnished by test-checked Healthcare Institutions)

It could be seen from the chart that non-availability of General medicine, General Surgery, Obstetrics and Gynecology and Paediatrics Services were alarming in CHCs and it was not available in 60, 86, 73 and 77 per cent CHCs respectively.

The availability/ non-availability of OPD services in the test checked CHCs is shown in **Table - 3.2**:

Table - 3.2: Availability of OPD services in test checked CHCs

Sr. No.	Name of HIs	General Medicine	Surgery	Obstetrics & Gynaecology	Paediatrics	Dental	AYUSH
1	Arang	No	No	Yes	Yes	Yes	No
2	Bhaiyathan	Yes	No	No	No	Yes	Yes
3	Bishrampur	Yes	No	Yes	Yes	No	No
4	Chhindgarh	Yes	No	No	No	Yes	No
5	Chirmiri	Yes	No	Yes	Yes	No	No
6	Dondi	No	No	No	No	Yes	No
7	Dondilohara	Yes	No	No	No	Yes	No
8	Janakpur	Yes	No	Yes	Yes	Yes	Yes
9	Konta	Yes	Yes	Yes	Yes	Yes	Yes
10	Kota	Yes	No	Yes	Yes	Yes	Yes
11	Makdi	Yes	No	No	No	Yes	Yes
12	Takhatpur	Yes	No	Yes	Yes	Yes	No
13	Tilda	No	No	Yes	No	Yes	No
14	Vishrampuri	Yes	No	Yes	Yes	Yes	Yes

(Source: Information furnished by test checked CHCs)

It can be seen from the above table that none of the 14 test checked CHCs have all specialist services available except CHC Konta. In CHC Dondi, only Dental care OPD services were available. Thus, the CHCs failed to provide comprehensive healthcare services to the people in their/nearby area.

3.3.1.3 Availability of OPD services in PHCs

As per IPHS norms, six hours of OPD services (four hours in the morning and two hours in the afternoon) for six days in a week is mandated. No specialist OPD services are prescribed in IPHS for PHCs.

Doctors (Medical Officers) were not posted in 282 (36 per cent) PHCs out of 776 PHCs in State and thus, general OPD services as per IPHS norms were not available in these PHCs.

Audit observed that general OPD services were available in all 14 test checked PHCs. In four PHCs³, doctors were not posted and OPD services were provided by Rural Medical Assistants⁴ (RMA). Further, separate areas for consultation and examination in outpatient room were available in all PHCs.

3.3.1.4 Non-availability of AYUSH services in DHs, CHCs and PHCs

As per IPHS norms, DHs and CHCs should have AYUSH services and it is desirable in PHCs.

Audit observed that AYUSH services were not available in 15 DHs (65.22 per cent), 84 (48.84 per cent) CHCs and 720 (92.78 per cent) PHCs out of 23 DHs, 172 CHCs and 776 PHCs respectively due to vacancy in the post of AYUSH doctors.

Similarly, in test checked HIs, Audit observed that AYUSH services were not available in five DHs⁵ (71 per cent), eight (57 per cent) CHCs⁶ and 14 (100 per cent) PHCs out of test checked seven DHs, 14 CHCs and 14 PHCs respectively due to vacant post of AYUSH doctors.

3.3.1.5 Availability of OPD services in GMCHs

In five test checked GMCHs, all essential OPD services were available as per norms of MCI. However, in two GMCHs, following OPD services were not provided to patients:

- Posts of doctors and supporting staff for cancer unit were sanctioned in January 2014 in GMCH, Jagdalpur but till date (January 2023) these posts were lying vacant due to which cancer unit has not been established and cancer patients were being attended by Professor of Radiotherapy Department.
- Similarly, posts were sanctioned (October 2015) for the Cardiology, Nephrology and Neurology Departments in GMCH Rajnandgaon. However, no doctor was posted in these departments, as of March 2022 resulting in non-availability of these specialised patient care services.

Government stated (April 2023) that proposals for filling the vacant posts were sought from the GMC/GMCHs.

³ PHC Bahrasi, Nawagaon (salka), Salna and Sanjari

⁴ Chhattisgarh started a novel three years medical course for medical assistants, to counteract physician shortage in rural areas.

⁵ DH Balod, Bilaspur, Kondagaon, Raipur and Surajpur

⁶ CHC Arang, Tilda, Bhaiyathan, Chhindgarh, Dondi, Dondilohara, Takhatpur and Janakpur

In the last seven years the Department has not made any significant efforts for recruitment of vacant post.

3.3.2 OPD cases

3.3.2.1 In test checked DHs, CHCs and GMCHs

OPD cases in test checked seven DHs, 14 CHCs and five GMCHs during 2016-22 is shown in the *Table - 3.3*:

Table - 3.3: OPD cases in test checked HIs during 2016-22

Year	No. of out-patients in DHs	Increase (YoY) (per cent)	No. of out-patients in CHCs	Increase (YoY) (per cent)	No. of out-patients in GMCHs	Increase (YoY) (per cent)	Total No. of out-patients in GMCHs/DHs/CHCs
2016-17	6,05,354	-	3,89,845	-	12,79,559	-	22,74,758
2017-18	7,28,930	20	4,52,057	16	15,20,385	19	27,01,372
2018-19	7,81,253	7	4,31,144	-5	16,09,044	6	28,21,441
2019-20	8,30,140	6	4,84,671	12	16,83,383	5	29,98,194
2020-21	4,52,743	-45	3,44,561	-29	10,51,767	-38	18,49,071
2021-22	6,19,662	37	4,38,569	27	11,32,781	8	21,91,012

(Source: data provided by test checked HIs)

It can be seen from the table that OPD cases in DHs ranged between 4,52,743 and 8,30,140. Similarly, for CHCs and GMCHs, it ranged from 3,44,561 to 4,84,671 and 10,51,767 to 16,83,383 respectively during 2016-22.

There was a substantial increase of 31.80 *per cent* in out-patient load in the test-checked HIs in 2019-20 as compared to 2016-17 but decreased (38.32 *per cent*) in 2020-21 due to COVID-19, and again it has been increased (18.49 *per cent*) in 2021-22 as compared to 2020-21.

3.3.2.2 OPD Services in AYUSH facilities

OPD cases in AYUSH HIs during 2016-22 and HI wise daily patient load⁷ across the State was as shown in *Table - 3.4*:

⁷ Daily patient load is defined as the number of outpatients visiting a facility divided by the number of days the facility is in operation in a year.

Table - 3.4: Statement showing year wise daily patient load

Year	No of patient	No of days ⁸	Daily patient load	Total HIs	HI wise patient load
A	B	C	D (B/C)	E	F (D/E)
2016-17	51,41,477	296	17,370	1,174 ⁹	15
2017-18	53,36,494	296	18,029	1,174	15
2018-19	62,04,050	296	20,960	1,174	18
2019-20	57,56,681	296	19,448	1,174	17
2020-21	35,54,312	296	12,008	1,174	10
2021-22	38,46,783	296	12,996	1,174	11
				Average	14

(Source: Data provided by Directorate, AYUSH and compiled by Audit)

As shown in **Table - 3.4**, the daily patient load ranged from 10 to 18 patients per day per HI for the State during 2016-22, which indicates that the mainstreaming of AYUSH healthcare to the population of State is yet to be achieved.

Further, it could be seen that this load had been decreasing during COVID-19 period. This shows less interest of the people in visiting AYUSH facilities.

GoCG replied (December 2022) that due to Covid-19 pandemic and shortage of doctors the patient load was average and instructions for increasing the patient ratio had been issued to the DAOs. It was further stated that AYUSH centres organised health camps, awareness camps and AYUSH health fair etc. as per the Government directions to make people aware of various aspects of AYUSH.

3.3.2.3 Average OPD cases per doctor per annum against available OPD services

Average OPD cases per doctor per annum against the available OPD services in test checked DHs, CHCs and GMCHs during 2016-22 is shown in **Chart - 3.3 (a), (b) and (c)**:

⁸ Days counted as 296 days (excluding 52 Sundays and 17 gazetted holidays from 365 days) in a year.

⁹ 637 Ayurveda Dispensary, 52 Homeopathy Dispensary, 6 Unani Dispensary, 5 District Hospital, 2 MCH, 15 AYUSH Wing, 12 AYUSH Polyclinic, 74 co-located centres in CHC, 371 co-located centres in PHC.

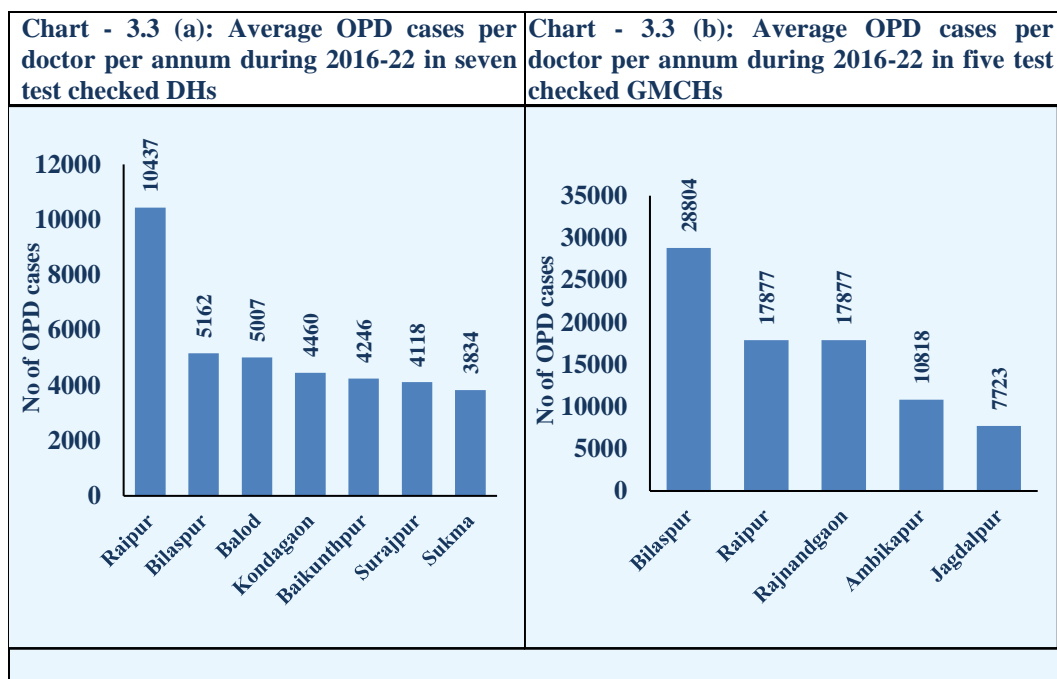


Chart - 3.3 (c): Average OPD cases per doctor per annum during 2016-22 in 14 test checked CHCs



(Source: Information furnished by test-checked Healthcare Institutions)

The average OPD cases per doctor per annum in DHs ranged between 10,437 and 3,834 and in CHCs and GMCHs, it ranged between 19,659 to 4,451 and 28,804 to 7,723 respectively during 2016-22.

Against the national average¹⁰ of 28 OPD cases per doctor per day for DHs, one DH (Raipur) out of seven test checked DHs, had more number of OPD cases¹¹ (upto 35) than the national average.

¹⁰ As per *Niti Ayog* report for DHs (best practices in the performance of district Hospitals), 2021.

¹¹ OPD cases per doctor per annum was divided by 296 days (excluding 52 Sundays and 17 gazetted holidays from 365 days)

3.3.3 Average consultation time

Average consultation time given to patients in test checked DHs/CHCs/GMCHs during 2016-22 is shown in **Table - 3.5**:

Table - 3.5: Average consultation time taken per case in OPD

Consultation time	Test checked His		
	DHs (7)	CHCs (14)	GMCHs (5)
Up to five minutes	0	1	1
5.1 to 10 minutes	0	2	3
above 10 minutes	7	11	1

(Source: data provided by test checked HIs)

As evident from the above, the average consultation time given to patients was more than 10 minutes in all test checked DHs, one GMCH and 11 CHCs. Less than five minutes average consultation time was noticed in one GMCH and one CHC.

3.3.4 Availability of registration counter and average daily patient load per registration counter

As per NHM assessor’s guidebook for quality assurance in HIs, the number of registration counters should be such that there are 12-20 patients/hour per registration counter. A total of 296 working days and six hours per day OPD have been considered during 2016-22.

Average number of patients per hour per registration counter in DHs, CHCs and GMCHs during 2016-22 is shown in the **Chart - 3.4 (a) and (b)**:

Chart - 3.4 (a): Average number of OPD patients in GMCHs and DHs per registration counter per hour during 2016-22

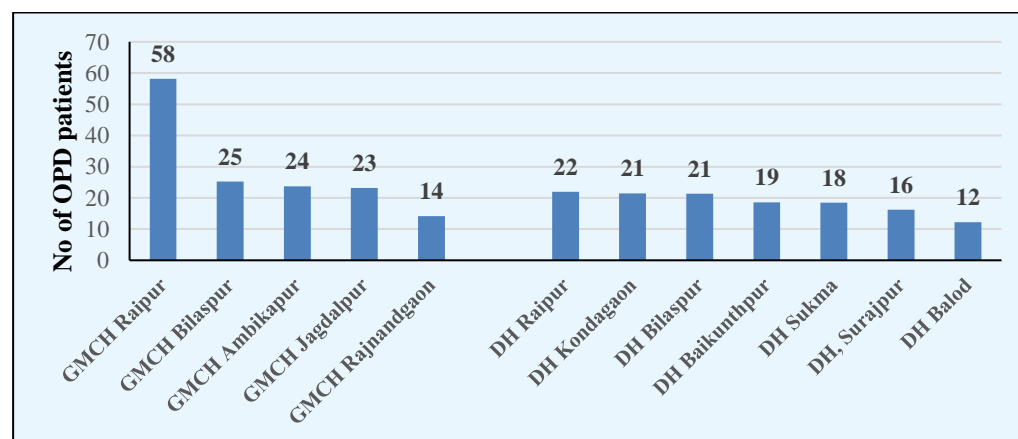
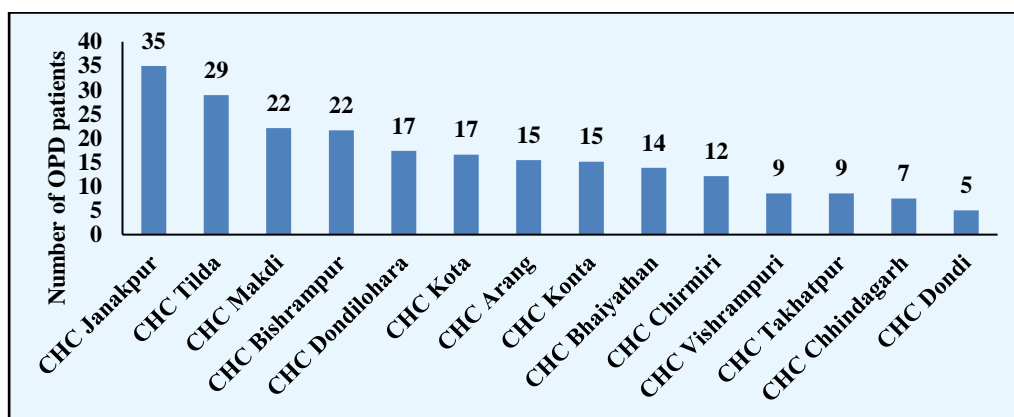


Chart - 3.4 (b): Average number of OPD patients in CHCs per registration counter per hour during 2016-22



(Source: Information furnished by test checked Health Institutions)

As can be seen from above, 11 HIs (DHs/CHCs/GMCHs) had a higher average number of patients per hour per registration counter than the norms during 2016-22. Thus, the HIs with higher patient load against the norms should increase the number of registration counters.

The result of higher number of patients was visible in long queues in the HIs, as depicted in the **Photograph 1 and 2**:



Implementation of e-hospital project

e-hospital Project was implemented under European Commission State Partnership Programme (ECSP) to provide health-related services of the HIs like patient registration (IPD, OPD) and billing, through online platform to expedite these services for both HIs and patients. The DHS released ₹ 6.22 crore for implementation of e-hospital project for 24 DHs in two installments between June 2016 and March 2017.

The Mission Director, National Health Mission (MD, NHM), directed (October 2021) to operate all modules of e-hospital i.e., OPD, Billing, Nursing, Pharmacy, Lab Service, Blood bank in all the DHs.

Audit observed that 17 DHs hosted e-hospital project in the cloud space and only three modules- OPD registration, IPD and billing could be started due to lack of human resources and cloud space. Due to non-availability of NIC cloud space, seven DHs could not operate e-hospital project.

Audit further observed that the department developed (October 2021) a new State specific Software (Health Management Information System: HMIS) in coordination with National Informatics Centre (NIC), covering five GMCs, 24 DHs, eight Civil Hospitals, 143 CHCs and 464 PHCs which involves capturing data of name based OPD registration, IPD, Discharge, Bed Management. The project will be financed through NHM in RoP 2022-24 with an estimated cost of ₹ 13.99 crore.

Thus, due to improper planning, all modules could not be started in 17 DHs even after lapse of six years and in remaining seven DHs it could not be started till date.

DHS stated (January 2023) that due to lack of human resources and cloud space, the other modules could not be started. The new software (HMIS) was user friendly and easily acceptable to the human resources working in the remote areas.

The reply confirms that e-hospital could not be fully implemented.

3.4 IPD Services

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

3.4.1 IPD cases in DHs/CHCs/GMCHs

Number of IPD cases in test checked DHs/CHCs/GMCHs during 2016-22 is shown in *Table - 3.6*:

Table – 3.6: IPD cases in test checked DHs/ CHCs/ GMCHs during 2016-22

Year	No. of in-patients in DHs	Increase (YoY) (per cent)	No. of in-patients in CHCs	Increase (YoY) (per cent)	No. of in-patients in GMCHs	Increase (YoY) (per cent)
2016-17	53,253	-	36,213	-	2,66,463	-
2017-18	65,171	22	36,566	1	2,80,755	5
2018-19	70,671	8	38,409	5	2,08,261	-26
2019-20	78,373	11	35,918	-7	2,21,477	6
2020-21	57,970	-26	27,753	-23	1,69,985	-23
2021-22	67,446	16	37,529	35	1,65,459	-3

(Source: data provided by test checked HIs)

Thus, there was a substantial increase of IPD patients in DHs (26.65 per cent) and CHCs (3.63 per cent) but it decreased in GMCHs during 2016-22.

IPD cases for DHs ranged between 53,253 and 78,373, for CHCs it ranged between 27,753 and 38,409 and for GMCHs it ranged between 1,65,459 and 2,80,755 during 2016-22. Further, it was observed that department wise IPD data was not maintained in test checked DHs/CHCs for the year 2016-22.

3.4.2 Availability of IPD wards/beds in District Hospitals

As per IPHS norms for DHs, the IPD bed shall be categorised as General Medicine Ward, Paediatrics Ward, General Surgery Ward, Ophthalmology

Ward, Accident and trauma Ward, etc. Availability of IPD beds in seven test checked DHs is shown in *Table - 3.7*:

Table - 3.7: Availability of IPD wards and beds in seven test checked DHs, as of March 2022

Sr. No.	Name of Ward	Requirement of beds in DH as per IPHS up to 200 beds ¹²	DH Baikunthpur (Korea)	DH Balod	DH Bilaspur	DH Kondagaon	DH Raipur	DH Sukma	DH, Surajpur
1	General Medicine	30	120	20	28	37	20	29	50
2	General Surgery	30	30	10	14	37	20	17	30
3	Ophthalmology	5	30	2	23	14	20	21	25
4	Accident and trauma	10	4	2	6	10	10	9	4
5	Paediatrics	10	30	5	6	20	42	21	50

(Source: Information furnished by test checked DHs)

Colour code:

Availability range			
0-50 per cent	51-75 per cent	76-99 per cent	100 per cent and above

As could be seen from the table, beds as required in IPHS norms were not maintained in any of the test checked DHs except DH Kondagaon. DH Balod did not maintain minimum required beds in General Surgery, General Medicine, Ophthalmology, Accident and Trauma and Pediatrics Ward. DH Bilaspur (General Surgery, General Medicines, Pediatrics, Accident and Trauma) and Sukma (General Surgery, General Medicines, Accident and Trauma) also did not maintain minimum number of IPD beds against the requirement under IPHS Norms.

3.4.3 Availability of Burn and Isolation wards in District Hospitals

As per IPHS norms, HIs should have certain wards like burn ward, isolation ward etc. Audit observed that out of 23 DHs, 11 DHs (48 per cent) did not have burn ward and four DHs (17 per cent) did not have facility of isolation ward. Availability of burn and isolation wards in seven test checked DHs is mentioned in the *Table - 3.8*:

Table - 3.8: Availability of Burn ward and Isolation ward in seven test checked DHs, as of March 2022

District Hospital	Burn ward	Isolation ward
Balod	Available	Available
Bilaspur	Not Available	Available
Kondagaon	Not Available	Available
Baikunthpur (Korea)	Available	Not Available
Raipur	Not Available	Not Available
Sukma	Not Available	Available
Surajpur	Available	Available

(Source: Information furnished by seven test checked DHs)

¹² Seven test checked DHs are up to 200 beds

It could be seen from the table that DH Raipur did not have either burn ward or isolation ward whereas DH Balod and Surajpur had both the services.

3.4.4 Availability of six beds in PHCs with Maternal and Child Health Care

As per IPHS norms for PHCs, six indoor/observation beds, labour room should be available at PHCs. Availability of beds, labour room and operation theatre (optional) to facilitate conduct of selected surgical procedures (vasectomy, tubectomy, hydrocelectomy etc.) in test checked PHCs is given in **Table – 3.9:**

Table - 3.9: Availability of labour rooms with beds and OT in test checked PHCs

District	Number of PHCs checked	Availability of six beds	Availability of labour room	Availability of OT (for vasectomy, tubectomy, etc.)
Balod	2	Yes	Yes	No
Bilaspur	2	Partially available	Yes	No
Kondagaon	2	Yes	Yes	No
Korea	2	Yes	Yes	No
Raipur	2	Yes	Yes	No
Sukma	2	Yes	Yes	No
Surajpur	2	Yes	Yes	Partially available

(Source: Information furnished by test checked PHCs)

It is evident from the above table that:

- All 14 test checked PHCs except PHC Nawagaon Salka in Bilaspur had six beds as per norms.
- All 14 test checked PHCs in seven districts had facility of labour room as per norms.
- OT facility for vasectomy and tubectomy surgeries was not available in all test checked PHCs as per norms except PHC Basdei (Surajpur).

3.4.5 Evaluation of IPD services through Outcome Indicators

The productivity, efficiency, clinical care capability and service quality provided by seven test-checked DHs during 2016-22 was evaluated through certain Outcome Indicators (OI) viz., Bed Occupancy Rate¹³ (BOR), Bed Turn Over Rate¹⁴ (BTR), Leave Against Medical Advice Rate (LAMA), Average Length of Stay (ALoS) and Referral Out Rate (ROR).

¹³ Bed occupancy rate (BOR) is a measure of utilisation of the available bed capacity in the hospital, and it indicates the percentage of beds occupied by patients in a given period of time.

¹⁴ The Bed Turnover Rate (BTR) is the rate of usage of beds in an in-patient department at a given period of time and is a measure of the utilization of the available bed capacity. 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.

The outcome indicators were evaluated based on the data provided by the DHs from the IPD registers of the HIs and against the prescribed norms of the NHM Assessor Guidebook and the same is indicated in the *Table - 3.10*:

Table - 3.10: Outcome indicators of IPD services in seven test checked DHs for the year 2021-22

Name of DH	No of sanctioned / functional beds in DH	BOR (per cent)	BTR	Discharge Rate (per cent)	ROR (per cent)	ALoS (No. of Days)	LAMA rate (per cent)
Balod	100/100	75.04	53.11	65.22	6.29	5.71	6.53
Bilaspur	200/180	57.57	55.02	99.22	NA	3.78	6.35
Kondagaon	100/125	46.72	42.70	71.72	11.87	5.50	7.50
Baikunthpur (Korea)	100/250	185.00	92.00	87.00	8.00	6.00	5.00
Raipur	200/220	59.62	16.50	95.49	2.52	3.61	1.87
Sukma	100/168	70.90	172.53	83.00	1.29	3.06	0.01
Surajpur	100/110	137.01	97.00	88.00	7.00	4.00	4.00

(Source: Information furnished by test checked DHs)

It could be observed that:

- BOR of five DHs was below 80 per cent norms of IPHS. Average BOR of DH Surajpur and Baikunthpur was 137 and 185 respectively which shows inadequate number of beds against requirement. DHs did not maintain the data of BOR for each IPD department during 2016-22.
- The average BTR of DH, Sukma was 173 per cent during the period which shows requirement of additional beds. BTR of DH Raipur was quite low as compared to other institutions.

Above outcome indicators were not maintained by the test checked GMCHs and CHCs during 2016-22, due to which Audit could not ascertain the bed occupancy in test checked GMCHs and CHCs.

3.4.6 Operation Theatre (OT) services

3.4.6.1 OT services in District Hospitals

(a) Availability of OTs

Operation Theatre (OT) is an essential service that is to be provided to the patients. IPHS norms prescribe OT for elective major surgery; emergency services; ophthalmology, and ENT for DHs. As per guidelines/assessors' guidebook for quality assurance for HIs, the OT should have convenient relationship with surgical ward, ICU, radiology, pathology, blood bank and Central Sterile Supply Department (CSSD). It should have access without any physical barrier.

As per the information provided by DHs, convenient relationship with surgical ward, intensive care unit, radiology, pathology, blood bank and CSSD, disabled friendly access and maintenance of patient's records and clinical information was being ensured by all seven test checked DHs. OTs in all DHs had piped suction and medical gases, electric supply, heating, air-conditioning

and ventilation. The procedure for internal and external calibration of measuring equipment was also available as shown in **Photograph no. 3 and 4**:



(b) Surgery facility in District Hospitals

As per NHM assessor’s guidebook, 2013 and IPHS norms for DH, surgeries related to General Surgery, Obstetrics and Gynaecology, Paediatrics, Ophthalmology, ENT and Orthopaedics should be available at DHs. Further, as per IPHS norms, CHCs should be able to provide routine and emergency care in surgery. This includes dressings, incision and drainage, surgery for hernia, hydrocele, appendicitis, haemorrhoids, fistula, and stitching of injuries. It should also be able to handle emergencies like intestinal obstruction, haemorrhage etc., and do fracture reduction and putting splints/ plaster cast.

Availability of specific surgery procedures in the test-checked DHs is provided in **Table - 3.11**:

Table - 3.11: Availability of surgery facility in test checked DHs

Name of procedure (as per IPHS)	DH Bilaspur	DH Balod	DH Kondagaon	DH Baikunthpur (Korea)	DH Raipur	DH Sukma	DH Surajpur
Hernia	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hydrocele	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Appendicitis	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Haemorrhoids	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fistula	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intestinal Obstruction	No	No	Yes	Yes	Yes	Yes	Yes
Haemorrhage	No	Yes	Yes	No	Yes	Yes	No
Nasal packing	No	No	No	Yes	Yes	Yes	Yes
Tracheostomy	No	No	No	No	Yes	Yes	Yes
Foreign body removal	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fracture reduction	Yes	No	Yes	Yes	Yes	Yes	Yes
Putting splints/ plaster cast	Yes	Yes	Yes	Yes	Yes	Yes	Yes

(Source: Information furnished by test-checked Health Institutions)

It could be seen from the table that surgeries required under IPHS were available in DH Raipur and Sukma. Surgery facility for Haemorrhoids, Intestinal obstruction, Nasal Packing and Trachestomy was partially available in test checked DHs.

(c) ***Availability of major and minor surgeries in General surgery, ENT, Eye and Orthopaedics departments in test checked District Hospitals***

Major and minor surgeries performed in General surgery, ENT, Eye and Orthopaedics departments in test checked DHs is shown in the **Table - 3.12**:

Table - 3.12: Major and Minor surgeries performed in General Surgery, ENT, Ophthalmology and Orthopedics Departments in seven test checked DHs during 2016-22

Name of DH	General surgery		ENT		Orthopaedics		Ophthalmology	
	Major	Minor	Major	Minor	Major	Minor	Major	Minor
Baikunthpur (Korea)	382	1,157	52	134	1,984	369	2,766	154
Balod	372	732	0	0	0	0	406	1
Bilaspur	Data not provided						2,193	98
Kondagaon	14	16	2	17	58	13	2,106	546
Raipur	122	277	7	37	476	335	1,420	202
Sukma	301	639	0	0	480	2,056	255	0
Surajpur	11	289	0	0	5	192	1,455	174
Total	1,202	3,110	61	188	3,003	2,965	10,601	1,175

(Source: Information furnished by test checked DHs)

It could be seen from the table that surgery facility in General Surgery and Eye Department was available in all seven test checked DHs.

ENT (major and minor) surgeries were available in only three (43 per cent) DHs i.e., DH Baikunthpur (Korea), Kondagaon and Raipur. Similarly, Orthopaedic (major and minor) surgeries were available in five test checked DHs and not in DH Balod and DH Bilaspur.

Further, it could be seen that, all four types of surgeries were available in only three DHs (Baikunthpur, Kondagaon and Raipur), three type of surgeries in (DH Sukma and Surajpur) and two types of surgeries in DH Balod.

(d) ***Surgery load per surgeon***

Audit analysed data of surgeries conducted per surgeon available in seven test checked DHs and observed huge variations across DHs during 2016-22, as shown in **Table - 3.13**:

Table - 3.13: Average number of surgeries per surgeon in seven test checked DHs

Name of DH	Year	General surgery		ENT		Orthopaedics		Ophthalmology	
		Avg. No. of surgeons	Average No. of surgeries per annum per surgeon	Avg. No. of surgeons	Average No. of surgeries per annum per surgeon	Avg. No. of surgeons	Average No. of surgeries per annum per surgeon	Avg. No. of surgeons	Average No. of surgeries per annum per surgeon
Baikunthpur (Korea)	2016-22	1	257	2	16	3	131	2	243
Balod ¹⁵	2016-22	1	184	0	0	0	0	1	68
Bilaspur	2016-22	Data was not provided						1	382
Kondagaon	2016-22	1	5	1	3	1	12	1	442
Raipur	2016-22	2	33	2	7	3	45	3	90
Sukma	2016-22	1	157	0	0	1	422	1	43
Surajpur	2016-22	2	25	0	0	1	33	1	272

(Source: Information furnished by test-checked DHs)

It could be seen from the table that against the national average¹⁶ of 194 surgeries per surgeon in a year, four DHs had more than average surgeries per surgeon in Ophthalmology. Similarly, it was more than the national average in one DH in General Surgery department and in one DH in orthopedics department.

3.4.6.2 In Community Health Centers

(a) Operation Theatres

IPHS norms for OT in CHCs prescribe that there should be one OT and one labour room. Audit observed that labour room was available in all 172 CHCs in the State. However, 38 (22 per cent) CHCs were functional without OT.

In 14 test checked CHCs, though labour rooms were available in all the CHCs but OT services were available in only three (21 per cent) CHCs¹⁷. Non-functional OTs were found in CHC Kota and CHC Bhaiyathan, as depicted in **Photographs number 5 and 6**:

¹⁵ Surgeries were conducted by PGMOs.

¹⁶ NITI Ayog report on District Hospitals 2021.

¹⁷ CHC Arang, Janakpur and Tilda



(b) *Surgery facility in CHCs*

In 14 test checked CHCs it was noticed that in seven CHCs¹⁸, none of the surgery facility was available. In remaining seven CHCs, surgery facility of Hernia, Hydrocele, Appendicitis, Hemorrhoids, Fistula, Intestinal obstruction and Tracheostomy etc., was partially available. Surgery facility for Haemorrhage was available in four CHCs¹⁹; Nasal Packing facility was available only in three CHCs Dondilohara, Janakpur and Tilda; Foreign body removal facility was available in six CHCs²⁰; Fracture reduction facility was available only in three CHCs Arang, Janakpur and Tilda. Reasons for non-availability of all types of surgery was mainly due to vacant post of specialist doctors.

3.4.6.3 *In Primary Health Centers*

As per IPHS norms, minor OT/ emergency room should be located close to the OPD to cater to patients for minor surgeries and emergencies after OPD hours. It should be well equipped with all the emergency drugs and instruments.

Audit observed that out of 776 PHCs in the State, minor OT facility was not available in 464 (60 per cent) PHCs. In test checked PHCs it was observed that in seven²¹ (50 per cent) out of 14 PHCs, services of minor OT were not available.

The DHS stated (January 2023) that due to shortage of Specialist Doctors these services were affected, and it was further stated that corrective action would be taken for operationalisation of OT services in all CHCs.

3.4.6.4 *OT in Government Medical College Hospitals*

On review of OT services, Audit observed that OT services were available in all the five test checked GMCHs. Audit further observed that:

¹⁸ Takhatpur, Vishrampuri, Chirmiri, Chhindgarh, Konta, Bishrampur and Bhaiyathan

¹⁹ CHC Dondi, Dondilohara, Janakpur and Tilda

²⁰ CHC Dondi, Dondilohara, Janakpur, Kota, Makdi and Tilda

²¹ Basdei, Chikhlakasa, Reewa, Salna, Sanjari, Shampur and Tongpal

- One modular OT valuing ₹ 94.14 lakh installed (September 2018) in DKSPGI Raipur, remained unutilised from October 2018 due to seepage in ceiling, as shown in following **Photograph - 7**:



7. OT not in use in DKS PGI, Raipur due to seepage (Date 03 June 2022)

- C-Arm machine valuing ₹ 39.98 lakh supplied (August 2019) to GMCH Bilaspur was of inferior quality and not in accordance to the technical specification; as such, it could not be installed. Thus, Orthopedics Department at GMCH Bilaspur was facing problem in conducting laparoscopic surgeries forcing them to conduct open surgeries thereby denying the advance patient care. Due to non-availability of machines, number of surgeries were reduced to 233 (2021) from 427 (2019).

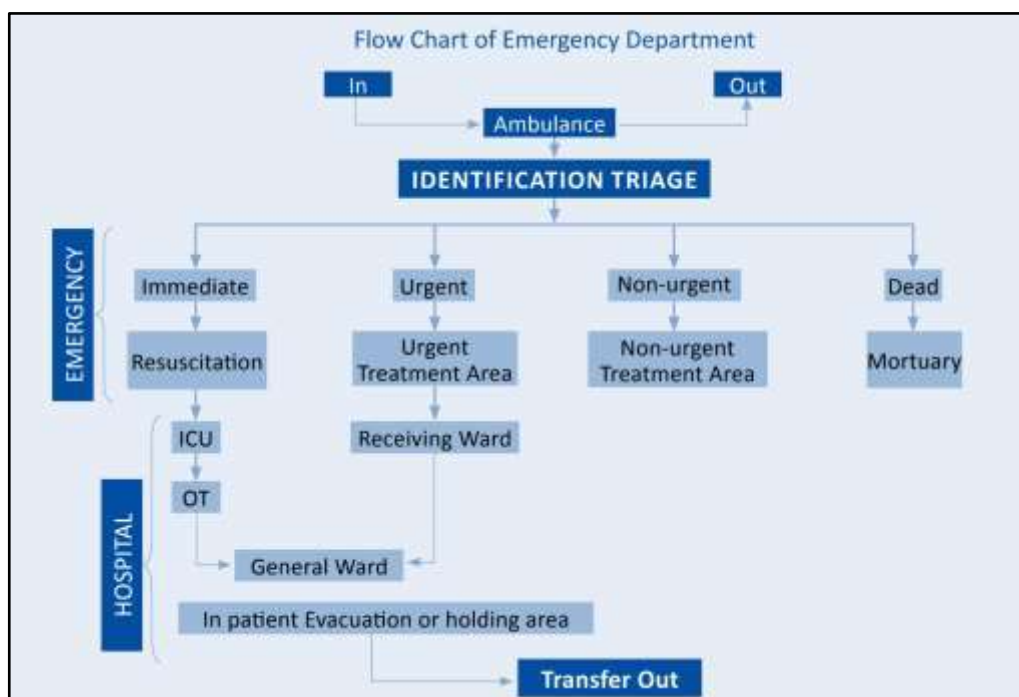
Government stated (April 2023) that procurement of new C-Arm machine is under progress.

The reply was not acceptable as the Department could not procure machine for more than three years and thus, surgery cases were badly affected in Orthopedic Department at GMCH Bilaspur.

3.5 Emergency services

The Emergency Department is the first point of contact for any critically ill patient needing immediate medical attention. Due to the unplanned nature of patient attendance, the department must provide initial treatment for a broad spectrum of illnesses and injuries, some of which may be life-threatening and require immediate attention. Flow chart of Emergency Department is shown in **Chart - 3.5**:

Chart – 3.5: Flow chart of Emergency Department



(Source: IPHS DH)

3.5.1 Availability of emergency services

(i) In District Hospitals

As per IPHS norms for DHs, 24x7 operational emergency services should be available with dedicated emergency room, medical equipment, adequate manpower, dedicated triage, resuscitation and observation area, mobile X-ray/laboratory, side labs/plaster room, One Emergency OT and minor OT facilities.

The status of emergency services in seven test-checked DHs is detailed in **Table - 3.14**:

Table - 3.14: Availability of emergency services in test-checked DHs

Availability of	DH Baikunthpur	DH, Balod	DH, Bilaspur	DH Kondagaon	DH, Raipur	DH, Sukma	DH, Surajpur
Emergency OT	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Infrastructure in Emergency ward	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Infrastructure relating to trauma ward such as Bed capacity, machinery & equipment etc.	No	Yes	Yes	Yes	No	Yes	Yes
Triage process to sort patients	No	Yes	Yes	Yes	Yes	Yes	Yes
Surgical facilities for Emergency Appendectomy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Diagnose and to treat for Hypoglycemia, Ketosis and Coma	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Assault injuries/ Bowel injuries/ Head injuries/ Stab injuries /Multiple injuries/ Perforation/ Intestinal	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Availability of	DH Baikunthpur	DH, Balod	DH, Bilaspur	DH Kondagaon	DH, Raipur	DH, Sukma	DH, Surajpur
obstruction							
Emergency laboratory services	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Blood bank in close proximity to emergency department	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mobile X-ray/ laboratory, side labs/plaster room in Accident and Emergency Service	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Emergency Operation Theatre for Maternity, Orthopaedic Emergency, Burns and plastic and Neurosurgery cases round the clock	Yes	No	Yes	Yes	Yes	Yes	Yes
Facilities for Accidents and emergency services including poisoning and Trauma Care	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Separate provision of emergency ward for examination of rape/sexual assault victim	No	Yes	Yes	Yes	Yes	Yes	Yes
Sufficient separate waiting areas and public amenities in emergency ward for patients and relatives.	No	Yes	Yes	Yes	Yes	Yes	Yes
Emergency protocols in emergency ward.	Yes	Yes	Yes	Yes	Yes	Yes	No
Disaster management plan in emergency ward.	No	Yes	Yes	Yes	Yes	Yes	No

(Source: Information furnished by test-checked DHs)

(ii) Community Health Centres

As per IPHS norms, CHCs should provide care of ‘routine and emergency cases’ like dengue hemorrhagic fever, cerebral malaria and others like dog and snake bite cases, poisonings, burns, shock, acute dehydration etc. Further, essential and emergency obstetrics care including surgical interventions like C-Sections and other medical interventions should be available.

Audit observed that out of 172 CHCs in State, emergency services were not available in 25 (15 per cent) CHCs. Further, in 14 test checked CHCs, emergency services were not available in two (14 per cent) CHCs²².

The availability of care of ‘Routine and Emergency cases’ in CHCs is given in **Table - 3.15:**

²² CHC Chhindgarh and CHC Konta

Table - 3.15: Availability of routine and emergency care in 14 test checked CHCs

Name of Routine and Emergency care service	No. of test checked CHCs						
	Balod (02)	Bilaspur (02)	Kondagaon (02)	Korea (02)	Raipur (02)	Sukma (02)	Surajpur (02)
Dengue Haemorrhagic Fever	P	P	A	P	P	P	NA
Cerebral Malaria	A	A	A	P	NA	P	A
Dog and snake bite cases	A	A	A	A	A	A	A
Poisonings	A	P	A	A	A	A	A
Congestive Heart Failure	P	NA	P	P	NA	P	P
Left Ventricular Failure	P	NA	P	NA	NA	P	P
Pneumonias	A	P	A	A	A	A	A
Meningoencephalitis	NA	P	P	NA	NA	NA	NA
Acute respiratory conditions	A	P	A	A	P	A	A
Status Epilepticus	A	P	A	A	P	P	A
Burns	A	NA	A	A	P	A	A
Shock	A	NA	A	A	P	A	P
Acute dehydration	A	A	A	A	A	P	A
Obstetric care including surgical interventions like caesarean Sections and other medical interventions	NA	P	NA	A	A	NA	NA

(Source: Information furnished by test-checked CHCs)

A-Available, NA- Not Available and P- Partially Available

It was observed that:

- Routine and Emergency care service for dengue haemorrhagic fever was not available in seven CHCs (Dondi, Kota, Chirmiri, Tilda, Chhindgarh, Bishrampur and Bhaiyathan) and cerebral malaria care was not available in four CHCs (Chirmiri, Tilda, Arang and Chhindgarh).
- Dog and snake bite care services were available in all CHCs and pneumonias, poisonings emergency care services were also available in test checked CHCs except CHC Takhatpur.
- Care of acute respiratory conditions was not available in CHC Takhatpur and Arang while acute dehydration care was available in all test checked CHCs except CHC Chhindgarh.
- Burns care was not available in three CHCs (Kota, Takhatpur and Arang) while emergency care of shock was not available in four CHCs (CHC Kota, Takhatpur, Arang and Bishrampur)

- Obstetric care including surgical interventions like C-Sections and other medical interventions was available only in five CHCs (Takhatpur, Chirmiri, Janakpur, Tilda and Arang) out of 14 test checked CHCs.

(iii) Management of Emergency cases in Primary Health Centres

As per IPHS norms for PHCs, 24 hours emergency services such as appropriate management of injuries and accident, first aid, stitching of wounds, incision and drainage of abscess, stabilisation of the condition of the patient before referral, Dog bite/ snake bite/ scorpion bite cases, and other emergency conditions should be provided in PHCs. Intra-natal care: 24-hour delivery services both normal and assisted including appropriate and prompt referral for cases needing specialist care should be ensured.

Audit observed that out of 776 PHCs in State, emergency services were not available in 65 (8.38 per cent) PHCs. Further, out of 14 test checked PHCs, emergency services were available in 12 PHCs.

Availability of 24 hours management of selected emergency services and emergency on call basis, 24-hour normal delivery services and referral emergency services in PHCs is detailed in **Table - 3.16**:

Table - 3.16: Availability of Emergency Services in 14 test checked PHCs

Name of District	Name of test-checked PHCs	24 hours management of selected emergency services	Emergency on call basis, 24-hour normal delivery services and referral
Balod	Sanjari	Available	Available
	Chikhlakasa	Available	Available
Bilaspur	Belpan	Not Available	Available
	Nawagaon salka	Available	Available
Kondagaon	Shampur	Available	Available
	Salna	Available	Available
Korea	Khadgawa	Available	Available
	Baharasi	Available	Available
Raipur	Bangoli	Available	Available
	Reewa	Available	Available
Sukma	Tongpal	Available	Available
	Chintagupha	Available	Available
Surajpur	Basdei	Available	Available
	Salka	Not Available	Available

(Source: Information furnished by test-checked PHCs)

Facility of 24 hours management of selected emergency services such as accident, first aid, stitching of wounds etc., were not available in two out of the 14 test checked PHCs. 24 x7 emergency, referral and normal delivery services were available in all the 14 test checked PHCs.

(iv) In Government Medical College Hospitals

Number of beds available and availability of medical equipment in emergency ward in the five test checked GMCHs is mentioned in **Table - 3.17**:

Table - 3.17: Availability of beds and equipment in emergency ward in five test checked GMCHs

No of beds/ Equipment	Requirement as per MCI norms	Ambikapur	Bilaspur	Jagdalpur	Raipur	Rajnandgaon
No. of beds	20	20	24	20	31	20
Ventilators	03	01	03	03	09	07
Multipara monitors	03	01	05	03	20	13
ECG machine	03	01	05	02	02	04
Emergency X ray 300/500 mA	01	00	00	00	01	00
Mobile X ray 100 mA	01	01	01	00	01	03
Sonography machine	01	00	00	00	02	04
Pulse oximeter	02	01	07	02	00	01

(Source: Information provided by test checked GMCHs and compiled by Audit)

Colour code:

Availability range		
0-50 per cent	51-99 per cent	100 per cent and above

Audit observed that required number of beds as per norms were available under emergency services in all test checked GMCHs. However, only one ventilator, multipara monitor and ECG machine was available against three in GMCH Ambikapur. Emergency X ray was not available in four out of five GMCHs and mobile X ray was not available in GMCH Jagdalpur. Sonography machines were not available in GMCH Jagdalpur, Ambikapur and Bilaspur. Pulse oximeter was not available in GMCH Raipur whereas its availability was only one against two in GMCH Ambikapur and Rajnandgaon.

Government stated (April 2023) that instructions have now been issued to GMCHs for providing emergency services according to MCI Norms.

3.5.2 Availability of Intensive care units: Critical Care Services

Intensive Care Unit (ICU) is essential for critically ill patients requiring highly skilled life-saving medical aid and nursing care. These include major surgical and medical cases such as head injuries, severe haemorrhage, poisoning etc.

On review of ICU services, Audit observed following:

(i) District Hospitals

Intensive care services in DHs are essential for providing minimum assured services as per the IPHS for DHs with more than 100 beds. IPHS prescribes for keeping 5 to 10 per cent of total beds for critical care. Out of 23 DHs in the State, ICU ward was not available in 11 DHs. The details of availability of total beds and ICU beds in seven test checked DHs during 2021-22 is shown in **Table - 3.18:**

Table - 3.18: Details of availability of ICU beds in test-checked DHs during 2021-22

Name of District Hospital	Total sanctioned beds	Minimum ICU beds required as per IPHS norms (5-10 per cent of total beds)	ICU beds available	Percentage of beds kept for ICU
Balod	100	5	10	10
Bilaspur	200	10	Not available	00
Kondagaon	100	5	11	11
Baikunthpur	100	5	03	03
Raipur	200	10	Not available	00
Sukma	100	5	Not available	00
Surajpur	100	5	Not available	00

(Source: Information furnished by test-checked DHs)

Colour code:

Availability range		
0 per cent	less than 100 per cent	100 per cent and above

Audit observed that ICU ward was not available at DH, Bilaspur, Raipur, Sukma and Surajpur due to shortage of manpower. Thus, in the absence of ICU facility, patients approaching DHs despite being in an emergent condition were likely to be referred to another DH, GMCH or private HIs.

DHS stated (January 2023) that through NCD program, ICU facility is soon going to start in these districts.

(ii) **Government Medical College Hospitals**

As per MCI norms, there shall be well equipped five beds each in Intensive Care Unit (ICU), Intensive Coronary Care Unit (ICCU), Intensive Care Pediatric/Neonatal Unit (PICU/NICU) and preferably Intensive Care in Tuberculosis and Respiratory Diseases.

Availability of beds in Critical Care Units in GMCHs as of March 2022 is shown in **Table - 3.19:**

Table 3.19: Availability of beds in critical care units in five test checked GMCHs

Name of Critical Care Unit	Norms of functional beds as per MCI Regulations, 1999 as amended in October 2020	Number of functional beds				
		Ambikapur	Bilaspur	Jagdalpur	Raipur	Rajnandgaon
ICU	5	10	08	17	68	17
ICCU	5	0	20	0	10	0
PICU	5	10	0	08	14	30
NICU	5	0	25	36	0	40
SICU	5	10	09	20	10	0
	Total	50	53	61	92	87

(Source: Information provided by test-checked GMCHs)

Colour code:

Excess/No shortage	Shortage
--------------------	----------

Audit observed that there were no separate Intensive Coronary Care Unit (ICCU) in three GMCHs (Ambikapur, Jagdalpur and Rajnandgaon), PICU, in GMCH, Bilaspur, NICU in two GMCHs (Ambikapur and Raipur) and SICU

in GMCH, Rajnandgaon. But availability of ICU beds were higher than the minimum required. Further, there were insufficient beds in NICU of GMCH, Bilaspur against the number of patients which is detailed in following paragraph:

Insufficient beds in NICU affected the quality of vital health services

New born babies who need intensive medical care are often put in a special area of the HIs i.e. NICU.

During scrutiny of records and joint physical verification of NICU of GMCH, Bilaspur, Audit observed that number of neonates admitted in the NICU were much more than existing bed capacity of 25 beds. It was further, observed that in 342 days out of 387 days (in 13 latest months) more patients (up to 54 patients in a day) were admitted against the availability of 25 beds. Due to shortage of beds, two neonates were accommodated in a single bed as depicted in the following **Photograph - 8**:



8. Image of NICU in GMCH Bilaspur where two neonates were accommodated in one bed. (20 April 2022)

Government stated (April 2023) that instructions have been issued to increase the number of beds for better patient care.

3.5.3 *Emergency cases referred to other Healthcare Institutions (HIs)*

Details of emergency cases referred to other HIs from seven test checked DHs is given in **Table - 3.20**:

Table - 3.20: Emergency cases referred to other HIs from test-checked seven DHs

(figures in per cent)

Year	Baikunthpur	Balod	Bilaspur	Kondagaon	Raipur	Sukma	Surajpur
2016-17	9	20	11	11	0	0	62
2017-18	8	14	10	10	0	6	39
2018-19	10	14	9	11	4	9	36
2019-20	13	7	11	12	20	16	47
2020-21	11	12	10	14	9	18	42
2021-22	15	15	6	12	3	13	54
Average	11	13	13	13	5	13	48

(Source: Information furnished by test-checked DHs)

Colour code:

Percentage range of referral cases			
0 per cent	1-10 per cent	11-30 per cent	Above 30 per cent

It is evident from the above table that percentage of emergency cases referred to other HIs ranged between 36 and 62 *per cent* (highest) in DH Surajpur and ranged between zero and 20 *per cent* (lowest) in DH Raipur during 2016-22.

3.6 Maternity Services

Ante Natal Care (ANC), Intra-Partum Care or delivery care (IPC) and Post Natal Care (PNC) are the major components of facility based maternity services. ANC is the systemic supervision of women during pregnancy to monitor the progress of fetal growth and to ascertain the well-being of the mother and the fetus. PNC includes medical care of the mother and newborn after delivery of the child especially during the 48 hours post-delivery, which are considered critical.

3.6.1 Achievement of required four Antenatal Care check-ups and delivery of Iron folic Acids tablets, Tetanus Toxoid to pregnant women

ANC involves general and abdominal examination and laboratory investigations to monitor pregnancies and management of complications. Every pregnant woman is required to visit at least four times for ANC, including the first visit/ registration.

All pregnant women need to be given one tablet of Iron Folic Acid for at least 180 days. Further, as per IPHS immunization programme, Tetanus Toxoid (TT), TT-1 should be provided early in pregnancy and TT-2 after 4 weeks of TT-1.

Percentage of pregnant women provided ANC, TT, and IFA tablets in the State as per National Family Health Survey -5 (NFHS-5) is shown in **Table - 3.21:**

Table - 3.21: Indicators of Antenatal Care, TT administration and IFA tablets in State

Indicators	<i>(in per cent)</i>	
	2015-16	2020-21
ANC received in the first trimester	70.80	65.70
Pregnant women received at least four ANC	59.10	60.10
TT administration	94.30	91.90
IFA (180 days)	9.50	26.30

(Source: NFHS-5 report)

It is evident from the above table that mothers who consumed iron folic acid for 180 days or more when they were pregnant has increased to 26.30 *per cent* from 9.50 *per cent* during 2016-21 but still only at 26.3 *per cent* of pregnant women get these tablet. Further, during 2020-21 only 65.7 *per cent* of pregnant women received ANC during their first trimester while 60.1 *per cent* of pregnant women received four required ANC during their pregnancy period.

3.6.2 Status of institutional deliveries

IPHS norms of CHCs/ PHCs provide that each CHC/ PHC should have a fully equipped and operational labour room. Percentage of institutional births in

public HIs and home birth by Skilled Health Personnel in the State as per NFHS-5 is shown in *Table - 3.22*:

Table - 3.22: Indicators of institutional births and home births by Skilled Health Personnel in the State

Indicators	<i>(In per cent)</i>	
	2015-16	2020-21
Institutional births	70.2	85.7
Institutional births in public health facility	55.9	70
Home birth by Skilled health personnel	8.4	5.8

(Source: NFHS-5 survey report)

As could be seen from the above table that institutional births have increased from 70.2 *per cent* in the year 2015-16 to 85.70 *per cent* in 2020-21. However, institutional births in public health facility remained at 70 *per cent* during 2020-21.

3.6.3 Labour room facilities in DHs/ CHCs/ PHCs

Availability of labour room facility in test checked DHs/CHCs/ PHCs is given in *Table - 3.23*:

Table - 3.23: Availability of labour room in test-checked DHs/CHCs/ PHCs

Type of Health Institutions	Total Number of HIs	Availability of Labour Room in no. of HIs
DHs	07	07
CHCs	14	14
PHCs	14	14

(Source: Information furnished by test-checked health institutions)

It could be seen that labour rooms were available in all the test checked DHs, CHCs and PHCs.

3.6.4 Pathological investigations

ANC Guidelines 2010 prescribes conducting six pathological investigations²³, depending upon the condition of pregnancy during ANC visits to identify pregnancy related complications. Availability of Pathological investigations for pregnant women in test-checked HIs is given in *Table - 3.24*:

Table - 3.24: Availability of Pathological investigations for pregnant women in test-checked HIs

Name of test	DHs (07)	CHCs (14)
Blood group including Rh factor	07	14
Venereal disease research laboratory (VDRL)/Rapid Plasma Reagin (RPR)	07	14
HIV testing	07	14
Rapid Malaria test	07	14
Blood Sugar testing	07	14
Hepatitis B surface Antigen (HBsAg)	07	14

(Source: Information furnished by test-checked Health Institutions)

²³ Blood group including Rh factor, Venereal disease research laboratory (VDRL)/Rapid Plasma Reagin (RPR), HIV testing, Rapid Malaria test, Blood Sugar testing, Hepatitis B surface Antigen (HBsAg)

Audit observed that all pathological investigations facility related to pregnancy were available in all test-checked DHs and CHCs.

3.6.5 Caesarean deliveries (C- section)

Maternal and Newborn Health Toolkit designated all FRU-CHCs/DHs as centre for providing surgical (C-section) services with the provision of specialised human resources (gynecologist/obstetrician and anesthetist) and equipped operation theatre to provide Emergency Obstetric Care (EmOC) to pregnant women. The statement showing C-section deliveries as per NFHS-5 in Chhattisgarh is shown in **Table - 3.25**:

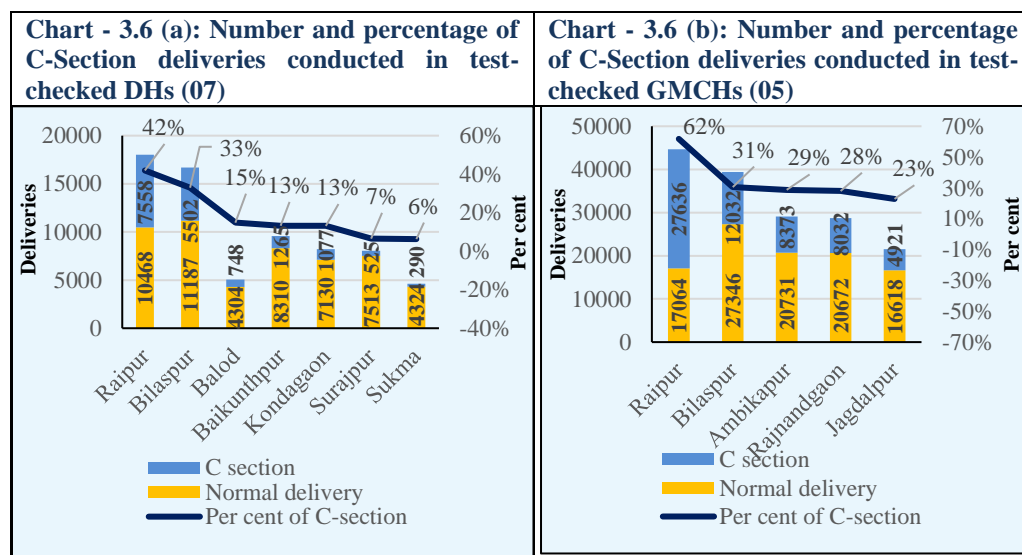
Table - 3.25: Status of Caesarean deliveries (C-Section) in the State

<i>(In per cent)</i>			
Indicators	2015-16	2020-21	Per cent increase
C-section deliveries	9.9	15.2	53.54
Private health facility C-section deliveries	46.6	57	22.32
Public health facility C-section deliveries	5.7	8.9	56.14

(Source: NFHS-5 survey report)

It is evident from the above table that C-section deliveries have increased from 9.9 per cent in 2015-16 to 15.2 per cent in 2020-21, but it was much higher (57 per cent) in private HIs than the public HIs (8.9 per cent). The increase in rate of C-section deliveries was lower at private HIs (22.32 per cent) as compared to public HIs (56.1 per cent).

Number of C-section deliveries conducted during 2016-22 in test-checked five GMCHs and seven DHs is shown in **Chart - 3.6 (a) and (b)**:



(Source: Information provided by HIs)

It was also observed that:

- Facility of C-section delivery was available in all test checked DHs and it was noticed that percentage of C-section delivery was highest in DH Raipur (41.93 per cent). There was an increasing trend of C-section deliveries in DH, Kondagaon (13 to 759) during 2016-22.

- During the period 2016-22, average percentage of C-section deliveries was highest in GMCH Raipur (61.8 per cent) and lowest in GMCH Jagdalpur (22.8 per cent).
- In 11 CHCs²⁴ (79 per cent) out of test checked 14 CHCs due to non-availability of specialist doctors no C-section deliveries could be conducted during the period 2016-22.

3.6.6 Plotting of partograph

In three GMCHs Bilaspur, Rajnandgaon, Raipur and in DH Balod and Raipur, partograph²⁵ was plotted for all the deliveries. No record of plotting of partograph was maintained in DH Bilaspur. The details of partographs plotted against the number of deliveries in test checked GMCHs/ DHs, is given in **Table - 3.26**:

Table - 3.26: Partographs plotted against deliveries in test checked DHs/ GMCHs

Name of HI	Total no. of deliveries	No. of partographs plotted
DH Baikunthpur	9,575	8,409
DH Bilaspur	16,689	Not maintained
DH Kondagaon	8,207	3,949
DH Sukma	4,614	4,058
DH Surajpur	8,038	7,877
GMCH Ambikapur	29,104	17,014
GMCH Jagdalpur	21,539	19,033

(Source: Information furnished by test checked DHs/ GMCHs)

3.6.7 Special Newborn Care Unit

As per IPHS norms, twelve bedded Special Newborn Care Unit (SNCU) is essential to treat critically sick new-born in a DH. Twelve bedded SNCU was not available in five out of 23 DHs in the State, and in seven test checked DHs, SNCU service was not available in one DH Surajpur.

Total admission, Referral rate, LAMA rate and neonatal death rate in SNCUs of seven test-checked DHs is given in **Table - 3.27**:

Table - 3.27: Evaluation of SNCU services in test-checked DHs through Outcome Indicators

DH	Year	Total Admission	Referral Rate (per cent)	LAMA rate (per cent)	Neonatal death rate (per cent)
Baikunthpur (Korea)	2016-17	794	7.76	5.41	5.33
	2017-18	778	27.48	2.1	7.92
	2018-19	857	20.1	1.5	3.66
	2019-20	1247	13.44	3.75	5.23
	2020-21	961	19.46	1.5	3.95
	2021-22	933	15.72	1.25	4.8

²⁴ CHC Bishrampur, Chhindagarh, Dondi, Dondilohara, Konta, Kota, Makdi, Takhatpur, Vishrampur, Bhaiyathan and Janakpur

²⁵ A partograph or partogram is a composite graphical record of key data (maternal and fetal) during labor entered against time on a single sheet of paper.

DH	Year	Total Admission	Referral Rate (per cent)	LAMA rate (per cent)	Neonatal death rate (per cent)
Balod	2016-17	Service started in 2019-20			
	2017-18				
	2018-19				
	2019-20	646	9.20	2	1
	2020-21	726	10	1	3
	2021-22	834	10.20	3	1
Bilaspur	2016-17	520	11	2	0
	2017-18	840	15	0.83	0.23
	2018-19	771	17.5	3.11	0.9
	2019-20	626	22.52	15.43	0.47
	2020-21	417	25.4	5	0.23
	2021-22	418	26.40	11	0.5
Kondagaon	2016-17	Service started in 2019-20			
	2017-18				
	2018-19				
	2019-20	222	7.20	3	14
	2020-21	791	7	3	15
	2021-22	719	14.60	3	13
Raipur	2016-17	651	8.60	6.45	0.30
	2017-18	681	9.54	6.46	0
	2018-19	662	10.72	4.98	0
	2019-20	750	13.60	1.20	0.66
	2020-21	844	13.38	0.71	0.71
	2021-22	831	5.29	2.04	0.72
Sukma	2016-17	Service started in 2019-20			
	2017-18				
	2018-19				
	2019-20	133	9.77	2.25	1.50
	2020-21	607	14	2.30	1.15
	2021-22	547	19	1.64	2.00

(Source: Information furnished by test-checked DHs)

Colour code:

Performance range			
0 per cent	less than 10 per cent	above 10 and less than 20 per cent	above 20 per cent

It is evident from the above table that referral percentage was on higher side in DH Baikunthpur and Bilaspur which ranged from 7.76 per cent to 27.48 per cent and 11 per cent to 26.40 per cent respectively. Referral percentage was lowest in DH Balod and it ranged from 9.20 per cent to 10.20 per cent during 2016-22.

LAMA rate was highest in DH Bilaspur (0.83 per cent to 15.43 per cent) and lowest in DH, Sukma between 1.64 per cent and 2.30 per cent during 2016-22.

Neonatal death rate was highest in DH, Kondagaon and ranged between 13 per cent and 15 per cent and lowest in DH, Bilaspur which ranged between zero and 0.90 per cent.

3.6.8 Vaccination of birth doses to new-born

As per IPHS norms, “A fully immunized infant is one who has received BCG, three doses of OPV, three doses of Hepatitis B and Measles before one year of age.” The details of achievement in vaccination of birth doses to new-born in seven test-checked districts is shown in **Table - 3.28**:

Table - 3.28: Achievement (per cent) of birth doses given to newborn in seven test checked districts during 2021-22

Name of District	Total live birth	Achievement (per cent)			
		Vitamin 'K'	OPV	Hepatitis B	BCG
Balod	6090	91	133	100	145
Bilaspur	21186	52	166	97	218
Kondagaon	11190	88	107	79	122
Korea	10224	99	110	100	127
Raipur	26849	86	120	95	121
Sukma	6154	58	90	88	105
Surajpur	13366	53	102	70	137

(Source: Data compiled by Audit from HMIS.)

It can be seen from the above table that the percentage of doses of Vitamin K which were supposed to be given to neonates soon after birth and within 24 hours of delivery was only 52 per cent in Bilaspur district followed by Surajpur (53 per cent) and Sukma (58 per cent). Similarly, the percentage of doses of OPV and Hepatitis B administered to neonates in Sukma District was respectively 90 per cent and 88 per cent.

3.6.9 Less check-up within 48 hours of delivery in post-natal care

The *Janani Shishu Suraksha Karyakram* (JSSK) programme entitles all pregnant women to free institutional delivery including C-section with a provision for free drugs, diagnostics, diet, blood and transport from home to HIs, between HIs and drop back home. There should be adequate number of beds in postnatal care ward to ensure 48 hours of stay after delivery. Details related to women discharged within 48 hours from HIs in seven test-checked districts is shown in **Table - 3.29**:

Table - 3.29: Total no. of women discharged within 48 hours after delivery in seven test checked districts during 2021-22

Name of District	Total no. of institutional delivery	Total no. of women discharged within 48 hours	Percentage
Balod	6,104	1,292	21.17
Bilaspur	20,795	1,690	8.13
Kondagaon	11,329	4,377	38.63
Korea	10,331	258	2.50
Raipur	26,968	2,435	9.03
Sukma	6,041	54	0.89
Surajpur	13,365	1,088	8.14
Total	94,933	11,194	11.79

(Source: Data compiled by Audit from HMIS.)

It is evident from the above table that during the year 2021-22, out of the total 94,933 institutional deliveries, 11,194 (11.79 per cent) women were discharged from HIs within 48 hours. This percentage was highest (38.63 per cent) in Kondagaon followed by Balod district (21.17 per cent).

Thus, it can be seen from the above paras that though labour room and pathology facilities were available, lack of specialist doctor and OT and sonography services at CHC level and inadequate ante and post natal care such as administration of IFA tablets and at least four ANC to all pregnant women, discharge after delivery within 48 hours contributed to higher maternal and neonatal deaths.

3.6.10 Maternity care outcomes

With a view to gauge the quality of maternity care provided by the test checked HIs, Audit collected data for maternal care outcomes in terms of still birth, referral, LAMA, Absconding rate, and neonatal deaths pertaining to 2016-22.

(a) Still Births

The stillbirth rate is a key indicator of quality of care during pregnancy and childbirth. Stillbirth and/or intrauterine fetal demise is an unfavorable pregnancy outcome and is defined as complete expulsion or extraction of the baby from its mother with no signs of life. Details of rate of still birth/Intra Uterine Fetal Demise (IUFD) in test checked five GMCHs and seven DHs is given in *Table - 3.30*:

Table - 3.30: Still birth rate in test-checked GMCHs/ DHs

Name of HIs	Still birth percentage					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
DH, Baikunthpur	4.42	3.92	2.65	4.84	6.16	5.17
DH, Balod	3.60	4.20	1.30	3.00	2.80	1.60
DH, Bilaspur	2.50	2.90	2.30	3.10	2.30	1.50
DH, Kondagaon	7.50	9.50	6.80	5.60	4.60	5.20
DH, Raipur	0.40	0.48	0.67	0.76	1.56	0.68
DH, Sukma	3.52	4.54	5.11	5.55	5.53	4.89
DH, Surajpur	0.60	0.90	1.00	0.70	0.50	0.20
GMCH, Ambikapur	0.13	0.07	0.12	0.26	0.23	0.38
GMCH, Bilaspur	2.70	3.10	0.10	0.10	0.30	0.40
GMCH, Jagdalpur	0.05	0.24	0.44	0.63	0.84	0.43
GMCH, Raipur	4.70	5.20	4.80	4.60	4.70	3.50
GMCH, Rajnandgaon	5.92	4.59	4.17	4.05	4.55	2.51

(Source: Information furnished by test-checked DHs/GMCHs)

Colour code:

0- 1 per cent	1- 5 per cent	above 5 per cent
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It was observed that:

- Still birth rate ranged between 0.2 *per cent* and 9.5 *per cent* of the total births in test checked seven DHs and it was on higher side in DH Kondagaon and Sukma during the year 2016-22.
- Still birth rate ranged between 0.05 *per cent* and 5.92 *per cent* of the total births in test checked GMCHs during the year 2016-22. Still birth rate was highest in GMCH Rajnandgaon.

(b) Other indicators

Performance of the test checked DHs/GMCHs in maternity care on certain outcome indicators such as average ROR, average LAMA and average Absconding Rate (AR) for the period 2016-22 given in **Table - 3.31**:

Table - 3.31: Average ROR/LAMA/AR in test-checked DHs/GMCHs

Name of His	Total IPD in Maternity	Average ROR		Average LAMA		Average Absconding		
		Cases	Rate	Cases	Rate	Cases	Rate	
DH	Baikunthpur	9575	1078	11	433	5	138	1
	Balod	8272	0	0	0	0	0	0
	Bilaspur	24050	1418	6	1291	5	422	2
	Kondagaon	10058	2309	23	664	7	162	2
	Raipur	21470	54	0.25	90	0.4	0	0
	Sukma	52582	4059	8	1863	4	88	0.16
	Surajpur	13600	962	7.07	221	1.63	128	0.94
GMCH	Ambikapur	41360	4229	10.22	4788	11.57	1789	4.33
	Bilaspur	39378	0	0	918	2.33	85	0.22
	Jagdalpur	32242	0	0	13635	42.29	0	0
	Raipur	24050	1418	5.89	1291	5.37	422	1.75
	Rajnandgaon	41482	488	1.18	3692	8.9	265	0.63

(Source: Information furnished by test-checked DHs/GMCHs)

Colour code:

0- 1 per cent	1- 5 per cent	5- 10 per cent	Above 10 per cent
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It is evident from the above table that average ROR was lowest (zero *per cent*) in GMCH, Jagdalpur, Bilaspur and DH Balod, whereas the same was highest (23 *per cent*) in DH, Kondagaon. The average LAMA rate was lowest (zero *per cent*) in DH Balod and highest (42.29 *per cent*) in GMCH Jagdalpur. There was no absconding case in GMCH Jagdalpur, DH Balod and Raipur but it was highest (4.33 *per cent*) in GMCH Ambikapur.

(c) Maternal Death and Neonatal Death Review

As per IPHS norms, all the mortality that occur in HIs shall be reviewed on fortnightly basis. Further, as per child death review guidelines (2014), detailed investigation should be conducted in all cases of child deaths.

Details of maternal and neonatal death reviews conducted in test checked GMCHs/ DHs during 2016-22 are given in **Table - 3.32**:

Table - 3.32: Maternal Death Review/ Neonatal Death Review conducted in test-checked GMCHs/ DHs during 2016-22

Name of District	Maternal Death			Neonatal Death		
	No. of Maternal deaths	No. of Maternal death review conducted	Shortfall (per cent)	No. of Neonatal deaths	No. of Neonatal death review conducted	Shortfall (per cent)
DH Baikunthpur	33	33	0	306	306	0
DH, Balod	0	0	0	0	0	0
DH Bilaspur	5	5	0	23	23	0
DH Kondagaon	36	36	0	418	247	41
DH Raipur	3	3	0	19	5	74
DH Sukma	7	7	0	44	44	0
DH Surajpur	3	3	0	74	0	100
GMCH Ambikapur	265	265	0	2944	2944	0
GMCH Bilaspur	0	0	0	3915	3915	0
GMCH Jagdalpur	146	146	0	3457	0	100
GMCH Raipur	365	365	0	1136	1136	0
GMCH Rajnandgaon	62	62	0	516	516	0

(Source: Information furnished by test-checked GMCHs/DHs)

Colour code:

0 per cent	1-50 per cent	51-75 per cent	76-100 per cent
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It is evident from the above table that:

- Maternal death case was nil in DH, Balod and GMCH Bilaspur. Maternal death cases were reviewed in six test checked DHs and four GMCHs.
- Four DHs (Baikunthpur, Balod, Bilaspur, Sukma) and four GMCHs (Ambikapur, Bilaspur, Raipur and Rajnandgaon) reviewed all neonatal deaths but there was shortfall of 41 per cent in conducting review of neonatal deaths in DH, Kondagaon and 74 per cent in DH Raipur during 2016-22 whereas no neonatal death review was conducted by DH Surajpur and GMCH, Jagdalpur.

It could be seen from above paragraphs that higher number of maternal and neonatal death contributed to higher MMR and IMR in the State. Lack of adequate maternal and neonatal care facilities/services coupled with improper implementation of Central Sector Scheme such as JSSK and other programmes related to maternal and child health might have affected the maternal and neonatal health adversely resulting in higher MMR and IMR in the State in comparison to national average.

3.7 Availability of services in Health and Wellness Centers

As per Comprehensive Primary Health Care guidelines, the availability of diagnostic services, essential medicines, clinical materials, tools and equipment, linens, consumables and miscellaneous supplies, furniture and

fixtures and lab diagnostic materials and reagents for screening should be ensured for the delivery of comprehensive primary healthcare services by converting existing SHCs and PHCs into HWCs. The availability (*per cent*) of equipment, consumables, etc., in the test checked HWCs (14) is shown in *Table - 3.33*:

Table - 3.33: Availability of essential services in 14 test checked HWCs (in *per cent*)

Name of District	Name of HWC	Diagnostic Services (PHC: 22)	Essential Medicines (91)	Medicine indented by MLHP (43)	Clinical Material, Tools, and Equipment (66)	Linens, Consumables, and misc. items (37)	Furniture and Fixtures (7)	Lab - Diagnostic Materials and Reagents for Screening (19)
Balod	Chikhlakasa	100	59	21	73	92	100	84
	Sanjari	100	53	44	71	81	100	79
Bilaspur	Belpan	82	65	81	76	76	100	79
	Nawagaon Salka	64	59	100	53	81	71	74
Kondagaon	Salna	100	41	49	94	76	100	95
	Shampur	100	34	67	52	68	100	32
Korea	Khadgawa	100	78	100	85	86	100	100
	Bahrasi	50	125	70	91	89	100	79
Raipur	Bangoli	73	81	65	86	81	86	79
	Reewa	36	79	30	59	89	86	89
Sukma	Chintagupha	64	115	67	73	65	57	42
	Tongpal	86	96	93	100	95	100	105
Surajpur	Basdei	91	100	86	100	100	100	100
	Salka	82	69	74	91	81	100	53

(Source: Information furnished by test checked HWCs)

Colour code:

Availability of essential services			
100 <i>per cent</i>	76-99 <i>per cent</i>	51-75 <i>per cent</i>	1-50 <i>per cent</i>

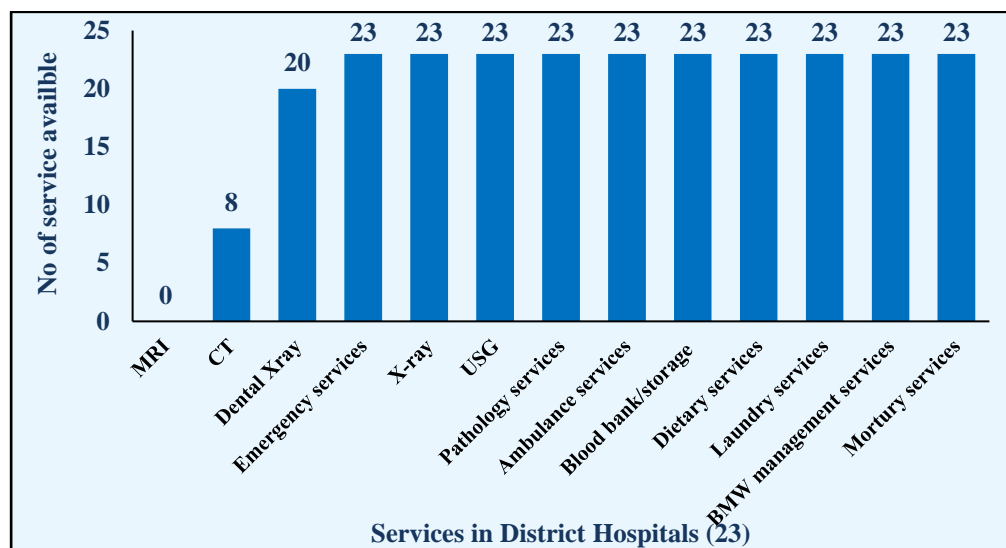
It is evident from the above table that there was shortfall in required number of equipment, consumables, miscellaneous supplies, Diagnostic Services, Essential Medicines, etc.

3.8 Support Services

3.8.1 Availability of Support Services in DHs in State

Support services in HIs are the services which are not directly related to patient care but indirectly contribute to patient management. Availability of (i) emergency services, (ii) imaging diagnostic services, (iii) pathology services, (iv) ambulance services, (v) blood bank, (vi) dietary, (vii) laundry services, (viii) bio medical waste management services etc., in DHs in State is mentioned in the *Chart - 3.7*:

Chart - 3.7: Availability of support and auxiliary services in all DHs in State



(Source: Information provided by DHs)

It could be seen from the chart that MRI services was not available in any of the DHs in State while CT scan services was available in eight DHs²⁶ (34.78 per cent) only. Dental X-ray was not available in three DHs²⁷ whereas emergency services, X-ray, USG, blood bank etc., were available in all DHs.

3.8.2 Diagnostic Services

Efficient and effective diagnostic services, both radiological and pathological, are amongst the most essential healthcare facilities for delivering quality treatment to the public based on accurate diagnosis. Significant audit findings are discussed in the succeeding paragraphs:

(i) Availability of Imaging (Radiology) Diagnostic Services in test-checked District Hospitals

IPHS 2012 prescribe norms for radiology services for DHs (X-ray, Ultrasonography and CT scan etc.) and X-ray (Chest, Skull, Spine, Abdomen, bones, Dental). It also prescribes diagnostic services under cardiac investigation, ENT, Radiology, Endoscopy, Respiratory and Ophthalmology in DHs. The availability of diagnostic services under various categories was checked in test-checked seven DHs during audit and the status of availability is shown in *Table - 3.34*:

²⁶ DH Baloda Bazar, Bastar, Dantewada, Dhamtari, Durg, Janjgir-Champa, Kondagaon and Rajnandgaon.

²⁷ DH Bastar, Dhamtari and Gaurella-Pendra-Marwahi.

Table - 3.34: Availability of Imaging (Radiology) services in seven test checked DHs

Name of Service	Name of Test/Diagnostic Service	DH Balod	DH Baikunthpur	DH Bilaspur	DH Kondagaon	DH Raipur	DH Sukma	DH Surajpur
Radiology	X-ray for chest, Skull, Spine, Abdomen, bones	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Dental X-ray	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Ultrasonography	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CT scan	No	No	No	Yes	No	No	No
	Barium Swallow, Barium meal, Barium enema, IVP	No	Yes	No	No	Yes	No	No
	MMR (Chest)	No	No	No	No	Yes	No	No
	HSG	No	Yes	No	No	Yes	No	No
Cardiac Investigation	ECG	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Stress tests	No	Yes	No	No	Yes	No	No
	ECHO	No	Yes	No	No	Yes	No	No
ENT	Audiometry	Yes	Yes	Yes	No	Yes	Yes	Yes
	Endoscopy for ENT	Yes	Yes	No	No	Yes	No	No
Ophthalmology	Refraction by using Snellen's chart	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Retinoscopy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Ophthalmoscopy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Endoscopy	Laparoscopic (diagnostic)	No	No	No	Yes	No	No	No
	Oesophagus	No	No	No	No	No	No	No
	Stomach	No	No	No	No	No	No	No
	Colonoscopy	No	No	No	No	No	No	No
	Bronchoscopy	No	No	No	No	No	No	No
	Arthroscopy	No	No	No	No	No	No	No
	Hysteroscopy	No	No	No	No	Yes	No	No
Respiratory	Pulmonary function tests	No	No	Yes	No	Yes	No	No

(Source: Information furnished by test checked DHs)

It was observed that:

- Facility of X-ray for chest, skull, spine, abdomen and bones, Dental X-Ray and ultrasonography was available in seven test checked DHs but CT scan facility was available only in DH Kondagaon.
- Facility for Barium Swallow, Barium meal, Barium enema, IVP test and HSG was available in two DH Baikunthpur and Raipur while MMR services were available only in DH Raipur.

- ECG service was available in all test checked DHs. ECHO Radiology service and stress test was not available in five DHs (Balod, Bilaspur, Kondagaon, Sukma and Surajpur).
- Endoscopy tests like Arthroscopy, Bronchoscopy, Colonoscopy, Oesophagus and Stomach tests were not available in any of the test checked DHs.
- Laparoscopic (diagnostic) was available only in DH Kondagaon and hysteroscopy test was available only in DH Raipur.
- Ophthalmology test was available in all of the test-checked DHs but audiometry test was not available in DH Kondagaon and Endoscopy for ENT was not available in four DHs viz Bilaspur, Kondagaon, Sukma and Surajpur.
- Pulmonary function tests were available only in DH Bilaspur and DH Raipur out of seven test checked DHs.

(ii) ***Availability of Imaging (Radiology) Diagnostic Services in test checked Community Health Centers***

IPHS 2012 norms provide that X-ray for chest, skull, spine, abdomen, bones; Dental X-ray, and USG (desirable) facilities should be available in a CHC under imaging services. Further, ECG which is a cardiac investigation service should be provided in every CHC. Out of 172 CHCs in the State, X ray services were not available in nine CHCs²⁸. Availability of these services in test checked CHCs is shown in **Table - 3.35**:

Table - 3.35: Availability of services related to Radiology and Cardiac investigation in 14 test checked CHCs

District	Name of CHC	Radiology			Cardiac Investigation
		X-ray for chest, skull, spine, abdomen, bones	Dental X-ray	Ultrasonography (desirable)	ECG
Balod	CHC, Dondi	Yes	Yes	No	Yes
	CHC, Dondilohara	Yes	Yes	No	Yes
Bilaspur	CHC, Kota	Yes	Yes	No	Yes
	CHC, Takhatpur	Yes	Yes	No	No
Kondagaon	CHC, Makdi	Yes	Yes	No	Yes
	CHC, Vishrampuri	Yes	Yes	No	No
Korea	CHC, Chirmiri	Yes	No	No	Yes
	CHC, Janakpur	Yes	Yes	No	Yes
Raipur	CHC, Arang	Yes	Yes	No	No
	CHC, Tilda	Yes	Yes	No	No
Sukma	CHC, Chhindgarh	Yes	Yes	No	Yes
	CHC, Konta	Yes	Yes	Yes	Yes
Surajpur	CHC, Bhaiyathan	Yes	Yes	No	Yes
	CHC, Bishrampur	Yes	No	No	Yes

(Source: Information furnished by test checked CHCs)

It was observed that X-Ray service for chest, skull, spine, abdomen and bones were available in all test checked CHCs but Dental X-ray facility was not

²⁸ CHC, Biharpur, Usoor, Amlipadar, Patadhi, Pharsabahaar, Lormi, Darima, Shankargarh and Gujara

available in two CHCs viz. Bishrampur and Chirmiri. Ultrasonography (desirable) was not available in the test checked CHCs except CHC Konta. Further, ECG service was not available in four (Takhatpur, Vishrampur, Arang and Tilda) out of 14 test checked CHCs.

DHS replied (January 2023) that USG facilities were not available in CHCs as it requires ultrasound sonologist, but the post was not available in the sanctioned set up of CHCs.

Fact remains that the Department had not taken efforts to create ultrasound sonologist posts in CHCs in order to make available the USG facilities.

(iii) Availability of Imaging (Radiology) Diagnostic services in Government Medical College Hospitals

During the course of audit, details related to availability of diagnostic services in five test checked GMCHs were gathered and the same was compared with IPHS norms for 500 bedded DH shown in **Table - 3.36**:

Table - 3.36: Availability of Imaging (Radiology) services in five test checked GMCHs

Sr. No.	Type of Diagnostic Services	GMCH Ambikapur	GMCH Bilaspur	GMCH Jagdalpur	GMCH Raipur	GMCH Rajnandgaon
1	Cardiac ²⁹ (3)	2	2	2	3	1
2	Ophthalmology ³⁰ (3)	2	3	3	3	3
3	ENT ³¹ (2)	2	2	1	2	2
4	Radiology ³² (7)	5	6	4	5	3
5	Endoscopy ³³ (7)	0	0	5	1	4
6	Respiratory ³⁴ (1)	0	0	1	1	1

(Source: Information furnished by test checked GMCHs.)

Colour code:

Availability of Imaging (Radiology) services			
100 per cent	51-99 per cent	1-50 per cent	Not Available

In two GMCHs (Ambikapur and Bilaspur), endoscopy and respiratory diagnostic services were not available.

Audit observed in test checked GMCHs that MRI services were not available in three GMCHs and CT scan, despite being an essential service, was not available in GMCH Rajnandgaon, as mentioned in the **Table - 3.37**:

²⁹ ECG, Stress Test, ECHO

³⁰ Refraction by using Snellen's chart, Retinoscopy, Ophthalmoscopy

³¹ Audiometry, Endoscopy for ENT

³² X ray for chest, skull, spine, abdomen, bones; Barium swallow, Barium meal, Barium enema, IVP; MMR(Chest); HSG; Dental X-ray; ultrasonography; CT scan

³³ Oesophagus, stomach, colonoscopy, Bronchoscopy, Arthroscopy, Laparoscopy (Diagnostic), Hysteroscopy

³⁴ Pulmonary function test.

Table - 3.37: Availability of various types of radiology services in test checked GMCHs

Radiology services	Ambikapur	Bilaspur	Jagdalpur	Raipur	Rajnandgaon
CT Scan	Yes	Yes	Yes	Yes	No
MRI	No	Yes	No	Yes	No
X-Ray	Yes	Yes	Yes	Yes	Yes

(Source: information provided by five GMCHs)

Government stated (April 2023) that in GMCH Rajnandgaon, budget provision was being made in 2022-23 for MRI and that purchase of CT Scan machine is under process at CGMSCL.

The Department failed to create CT and MRI facility in GMCH Rajnandgaon despite lapse of eight years of establishment. Reply is silent on procurement of MRI machine in other two GMCHs.

3.8.3 Pathology Services

Pathology services are the backbone of any HI for extending evidence-based healthcare to the public. The availability of essential equipment, reagents and human resources are the main drivers for the delivery of quality pathology services through laboratories.

(i) *Availability of Pathology diagnostic services in test-checked District Hospitals / Government Medical College Hospitals.*

IPHS prescribed 72 types of laboratory investigations for DHs under six categories viz., Clinical pathology, Pathology, Microbiology, Serology, Biochemistry etc. The position of availability of laboratory services in test-checked DHs/ GMCHs is shown in following **Table - 3.38**:

Table - 3.38: Availability of Pathology services in test checked GMCHs/DHs

Name of Health Institution	Clinical pathology ³⁵ (29)	Pathology ³⁶ (08)	Microbiology ³⁷ (07)	Serology ³⁸ (07)	Biochemistry ³⁹ (21)	Total (72)
GMCH Ambikapur	27	7	7	7	15	63
GMCH Bilaspur	21	2	7	5	0	35
GMCH Jagdalpur	27	6	7	5	20	65
GMCH Raipur	24	8	0	0	0	32
GMCH Rajnandgaon	27	8	6	6	11	58
DH Balod	21	2	1	4	10	38
DH Baikunthpur	19	1	1	5	11	37

³⁵ Clinical Pathology (DH): Haematology, Immunoglobulin profile (IGM, IGG, IGE, IGA), Fibrinogen Degradation product, Urine Analysis, Stool Analysis, Semen Analysis, CSF Analysis Aspirated fluids

³⁶ Pathology (DH): PAP smear, Sputum, Haematology, Histopathology

³⁷ Microbiology (DH): KOH study for fungus, Smear for AFB & KLB, supply of different media for peripheral laboratories, Culture and sensitivity for blood, sputum, pus, urine etc.

³⁸ Serology (DH): RPR card test for syphilis, Pregnancy test ELISA for Beta HCG, Leptospirosis, WIDAL test, DCT/ ICT with titre etc.

³⁹ Biochemistry (DH): Blood sugar, Glucose, Glycosylated haemoglobin, Blood urea, blood cholesterol, serum bilirubin, Icteric index, Serum calcium, Serum Phosphorous, Serum Magnesium, Iodometry titration etc.

Name of Health Institution	Clinical pathology ³⁵ (29)	Pathology ³⁶ (08)	Microbiology ³⁷ (07)	Serology ³⁸ (07)	Biochemistry ³⁹ (21)	Total (72)
DH Bilaspur	18	1	0	4	9	32
DH Kondagaon	27	4	5	5	14	55
DH Raipur	24	1	6	6	13	50
DH Sukma	13	1	0	3	9	26
DH Surajpur	17	2	0	3	11	33

(Source: Information furnished by test checked GMCHs/DHs)

Colour code:

Availability of pathology services			
100 percent	51- 99 per cent	0 -50 per cent	Not available

It is evident from above **Table - 3.38** that the test checked DHs are providing pathology services ranging between 36 and 76 per cent. However, three DHs viz., Bilaspur, Surajpur and Sukma did not provide even 50 per cent pathology tests as per IPHS norms. Non-availability of tests in five test checked GMCHs ranged between 10 and 56 per cent.

It was further observed that:

- Thyroid test (T3 and T4) to test the function of the thyroid was not available in six DHs⁴⁰ and also in GMCH Bilaspur and Raipur.
- Coagulation test used to check the coagulation disorder of blood was not available in any of the test checked DHs and in GMCH Bilaspur and Jagdalpur.
- ELISA for TB was not available in five DHs⁴¹ and in four GMCHs Ambikapur, Bilaspur, Raipur and Rajnandgaon.
- HbA1c test used to measure the amount of blood sugar (glucose) attached to hemoglobin was not being conducted in GMCH Bilaspur since September 2021 due to non-availability of reagents. On an average 150 tests per month were conducted (January to March 2021).

(ii) *Laboratory services in Community Health Centers*

IPHS norms prescribes facilitation of 29 types of pathological investigation for CHCs under various categories, viz., Clinical Pathology⁴² (18), Pathology (01), Microbiology (02), Serology (03) and Biochemistry (05).

Audit observed that the full range of pathological investigations was not available in all 14 test checked CHCs. The position of availability of investigation facility in the test-checked CHCs is shown in the **Table - 3.39**:

⁴⁰ DH Balod, Bilaspur, Baikunthpur, Raipur, Sukma and Surajpur

⁴¹ DH Baikunthpur, Bilaspur, Kondagaon, Raipur and Sukma.

⁴² Haematology (14), Urine Analysis (01) and Stool Analysis (03)

Table - 3.39: Availability of Laboratory services in 14 test checked CHCs

District	Name of CHC	Clinical pathology (18)	Pathology (01)	Microbiology (02)	Serology (03)	Biochemistry (05)	Total availability (29)
Balod	Dondi	12	0	1	3	5	21
	Dondilohara	14	1	2	3	2	22
Bilaspur	Kota	9	1	1	3	5	19
	Takhatpur	11	0	1	3	5	20
Kondagaon	Makdi	11	0	1	3	5	20
	Vishrampur	13	1	1	3	5	23
Korea	Chirmiri	13	0	0	3	2	18
	Janakpur	15	1	2	3	5	26
Raipur	Arang	13	0	1	3	5	22
	Tilda	17	1	1	3	5	27
Sukma	Chhindgarh	5	0	1	3	4	13
	Konta	15	0	1	3	5	24
Surajpur	Bhaiyathan	14	1	2	3	4	24
	Bishrampur	12	0	2	3	5	22

(Source: Information provided by test checked CHCs)

Colour code:

Availability of pathology services			
100 per cent	51-99 per cent	1 -50 per cent	Not available

The above table indicates that the test checked CHCs lacked investigations under one or more sub-categories. Percentage of non-availability of pathology services in test checked CHCs was highest in CHC Chhindgarh (55.17 per cent) and lowest in CHC Tilda (6.90 per cent).

(iii) *Laboratory services in Primary Health Centers*

As per the information provided by CMHOs, laboratory services were not available in 106 PHCs (13.66 per cent) out of 776 PHCs in the State. Further, in seven PHCs⁴³, due to non-engagement of lab technician, laboratory services could not be extended to patients. While in all test checked 14 PHCs lab services were available.

DHS stated (January 2023) that the GoCG is committed to improve the availability of prescribed pathological tests as per IPHS norms through *Hamar lab*⁴⁴.

Fact remains that the required pathology tests were not available as per IPHS norms.

3.8.4 Ambulance Services

(i) *Shortage of ambulances in State*

MCI and IPHS norms provide for round the clock ambulance service with basic life support system in GMCHs, DHs and CHCs.

⁴³ PHC – Kargikala, Kenda, Katadol, Dornapal, Anatpur, Lubha, Shampur

⁴⁴ “Hamar Lab” (our lab) scheme launched in February 2020 is an integrated health laboratory with state-of-the-art equipment.

An MoU was entered (November 2019) with Consortium of M/s Jai Ambey Emergency Services, M/s Samaan Foundation, M/s Jai Ambey Road Lines and M/s Pragati India Road Lines (Agency) by DHS for providing services of 108 *Sanjeevani Express* ambulance in the State.

Ambulance service is being provided by 108 *Sanjeevani* express and 102 *Mahtari* express (dedicated for pregnant women) operated centrally in the State apart from the dedicated ambulance available at the HIs. The State Health Resource Centre under DHS monitors the services of 108 ambulances in the State.

As per the operational guidelines of Emergency Response Service System of National Ambulance Services (ENAS), a district with five lakh population should have five Basic Life Support (BLS) ambulances and one ALS (Advanced Life Support) ambulance.

Audit observed that the required number of BLS vehicles were deployed in State, but ALS vehicles were insufficient. In 15 districts, only 30 ALS vehicles were deployed against the requirement of 52 as of March 2022 under 108 *Sanjeevani Express* (detailed in **Appendix - 3.2**). Apart from the 108 ambulances, test checked DHs/ GMCHs had sufficient ambulances as per the norms.

DHS replied (January 2023) that as per WHO guidelines, and norms of national Ambulance services, deployment of one ambulance per one lakh population has been ensured. Ambulances were deployed according to the ROP and proposal would be submitted to GoI after receipt of population status. Apart from the 108 ambulances, 513 Government owned ambulances are also deployed at the district level.

Reply is not acceptable as deployment of ALS ambulances in State was not as per guidelines.

(ii) *Response time*

Response time is the duration between call received time and the time when ambulance reaches the patient. As per para 5.1.2 of MOU, average response time for all ambulances should be 30 minutes. Response time for the period December 2019 to March 22 is shown in the **Table - 3.40**:

Table - 3.40: Response time of 108 ambulances in State during 2019-22

Sl	Response time Range (in Minutes)	No. of cases	Cases in per cent
1	0-15	2,63,342	39.41
2	15-30	1,77,797	26.61
	Response time upto 30 minutes	4,41,139	66.01
3	30-60	1,69,725	25.40
4	60-120	52,030	7.79
5	120-240	4,480	0.67
6	240-360	165	0.02
7	More than 360	723	0.11
	Total	6,68,262	

(Source: Information provided by DHS)

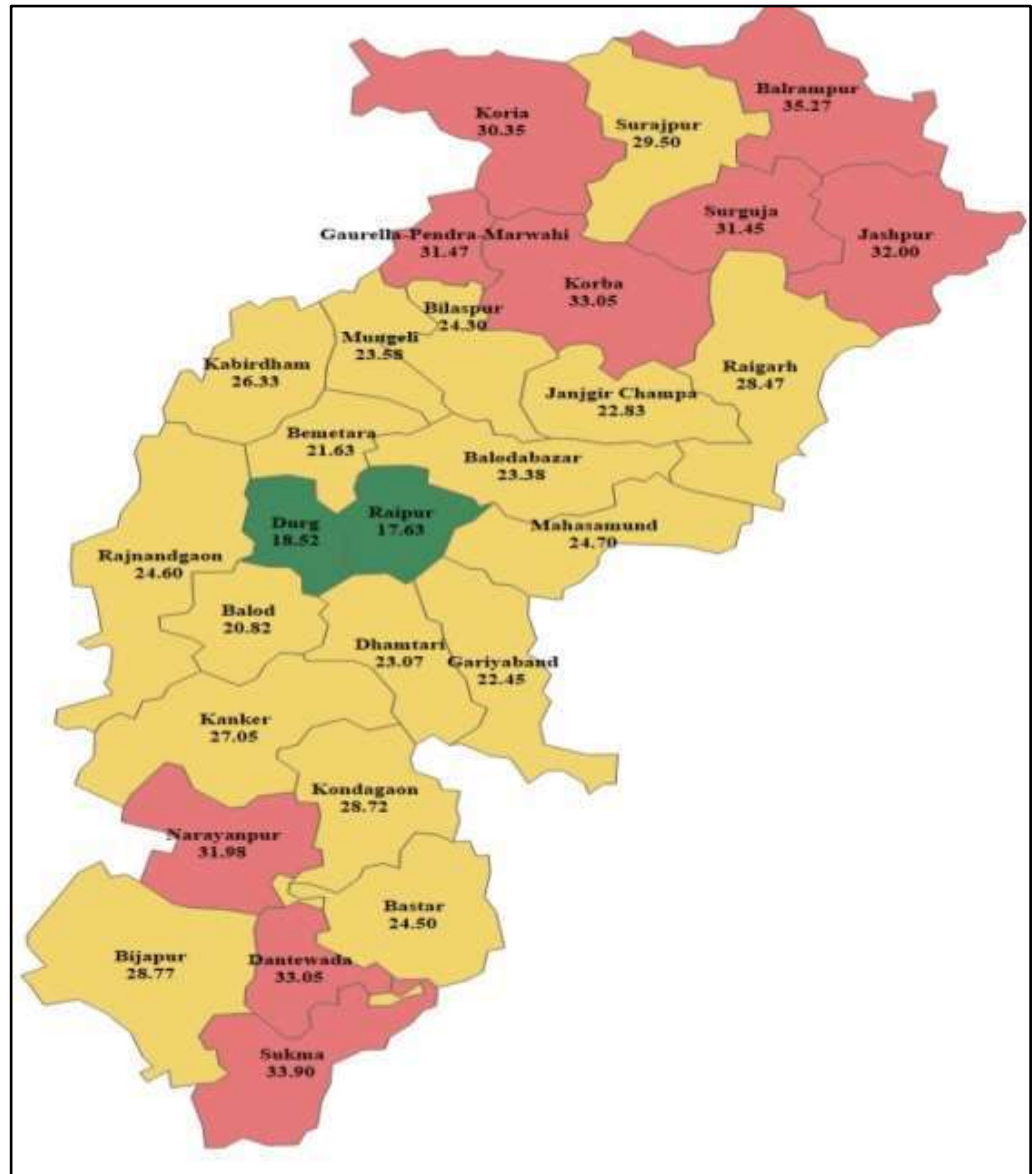
Colour code: Response time (in minutes)

0-30	31-120	121-240	More than 240
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As shown in **Table - 3.40**, in 2,27,123 (33.99 per cent) cases the response time was more than 30 minutes whereas in 57,398 (8.59 per cent) cases, ambulance reached patients after one hour of receiving calls.

It was further noticed that in nine districts,⁴⁵ response time was more than 30 minutes. The highest response time was noticed in Balrampur district (35:16 minutes) while in Raipur district (17:38 minutes) it was the lowest. District wise response time in State is shown in map in **Chart - 3.8**:

Chart - 3.8: District wise average response time of 108 Ambulance in State



Less than 20 minutes	20-30 minutes	More than 30 minutes
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(iii) Undue favour to agency of ₹3.59 crore

As per MoU, the firm was to be paid ₹ 1.33 lakh per vehicle per month for old fleet and ₹ 1.92 lakh for new fleet as operational expenses for Ambulance services. State Health and Resource Centre (SHRC) was to monitor the

⁴⁵ Balrampur, Dantewada, GPM, Jashpur, Korba, Korea, Narayanpur Sukma and Surguja

services of the agency. As per clause 4.4 of the MoU, 10 per cent of payments to be made to the agency was to be withheld till verification of the bills by SHRC which was to be released after adjustment of penalty (if any) based on SHRC report.

It was observed that SHRC reported (June 2020) that during December 2019 to April 2020, against the target of 300 vehicles per month, the agency had deployed only 247 vehicles. Out of this, it operated only 193 vehicles on an average and 54 vehicles remained non-operational during the same period. SHRC had recommended that a proportionate amount on account of non-operational vehicles should be deducted from the bills payable to the agency. However, the agency submitted the bills claiming that all 247 vehicles (per month) were operational during December 2019 to April 2020 and accordingly, entire payment of ₹ 18.17 crore was made to the agency. Out of this, ₹ 3.59 crore was paid (August 2020 and September 2020) to the firm by ignoring the recommendation of SHRC, which had resulted in undue benefit of ₹ 3.59 crore to agency for non-operational vehicles, as detailed in *Appendix - 3.3*.

The DHS stated (January 2023) that the payment of last three years will be reviewed and suitable penalty clause will be included in next MoU.

(iv) Non-availability of ambulance services in AYUSH hospitals

Audit observed that ambulance services were available only in Government Ayurveda College and Hospital (GAC&H), Bilaspur. In Govt. Ayurveda College Hospital (GACH) Raipur, District Ayurveda Hospital (DAH) Balod and DAH Surguja, ambulance vehicles were not in working condition since two to 12 years with expired fitness, insurance and pollution certificate and thus resulted in non-availability of services. DAH Bastar did not have any ambulance. The details of deficiencies in ambulance services are as detailed in *Table - 3.41*:

Table - 3.41: Availability of ambulance services in AYUSH hospitals

District	Name of Facilities	Ambulance Services available (Yes/No)	Ambulance Vehicle available (Yes/No)	Reason
Raipur	GACH	No	Yes	Available ambulance not in working condition as vehicle has completed 15 years and registration and RC cannot be renewed (RC valid till 30/01/2018)
Balod	DAH	No	Yes	Available ambulance not in working condition as vehicle has completed 15 years and registration and RC cannot be renewed (RC valid till 2010)
Surguja	DAH	No	Yes	Available ambulance not in working condition as vehicle has completed 15 years and registration and RC cannot be renewed (RC valid till 02/08/2010)
Bilaspur	GAC&H	Yes	Yes	Available ambulance in working condition
Bastar	DAH	No	No	Ambulance not available

(Source: Data provided by selected units and compiled by Audit)

GoCG replied (December 2022) that work regarding write-off of unusable ambulance is in progress and after completion of the same, demand for new ambulances will be submitted to GoCG.

3.8.5 Oxygen Services

IPHS norms and NHM Assessors guidelines provides that HIs should ensure the availability of centralised/ local piped oxygen. Audit observed that central oxygen supply system was installed and arrangements for oxygen cylinder were made in five test checked GMCHs. Availability of oxygen services in test-checked DHs is given in *Table - 3.42*:

Table - 3.42: Oxygen services in test checked DHs as of March 2022

Name of service	District Hospital						
	Baikunthpur	Balod	Bilaspur	Kondagaon	Raipur	Sukma	Surajpur
Whether the requirement of oxygen in the hospital was assessed and infrastructure created accordingly?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Whether the standard operating procedure for oxygen was available and was being followed?	No	Yes	Yes	No	Yes	Yes	Yes
Whether agreements were executed for the supply of uninterrupted oxygen?	No	Yes	Yes	Yes	Yes	Yes	No
Whether Centralised oxygen supply system was installed in the hospital?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
In all such cases, whether required buffer stock was assessed and maintained all the time?	Yes	Yes	Yes	Yes	Yes	No	Yes
Whether records of serviceability and availability of oxygen cylinders were maintained as per guidelines?	Yes	Yes	Yes	No	Yes	Yes	Yes
Whether required number Oxygen Supply (Central) are available in Eclampsia Room?	No	Yes	Yes	Yes	Yes	Yes	Yes
Whether oxygen reservoir is available for each bed at Special New-born Care Unit?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Whether the health institution have Double Outlet Oxygen Concentrator at Special New-born Care Unit?	Yes	Yes	Yes	Yes	Yes	No	Yes

(Source: Information furnished by test checked DHs)

It was observed that:

- Requirement of oxygen was assessed, and necessary infrastructure was created in all test checked DHs, but standard operating procedure for oxygen was not available in two DHs viz. Baikunthpur and Kondagaon.
- Centralised oxygen supply system was installed, and oxygen reservoir was available for each bed at Special New-born Care Unit in all test

checked DHs, but Double Outlet Oxygen Concentrator was not available at Special New-born Care Unit in DH Sukma.

- Required number of oxygen supply (Central) was available in Eclampsia Room of all the test checked DHs except DH Baikunthpur.
- Required buffer stock was not assessed and maintained in DH Sukma.
- Records of serviceability and availability of oxygen cylinders were not maintained as per guidelines in DH Kondagaon.

3.8.6 Dietary Services

(i) Availability of dietary services in District Hospital, Community Health Centers and Government Medical College Hospitals

The dietary service of a hospital is an important therapeutic tool. The IPHS stipulate that apart from the normal diet, the food supplied should be patient specific such as diabetic, semi solid and liquid. In order to prescribe diet on the scientific lines for different types of patients, the services of qualified dietician are essential in all the GMCHs and DHs, while it was desirable in CHCs.

Audit observed that the dietary services were available in all test checked GMCHs/ DHs/ CHCs. Other deficiencies are detailed in *Table – 3.43*:

Table - 3.43: Availability in dietary services in test checked five GMCHs, DKSPGI, seven DHs and 14 CHCs

Sl. No.	Particulars	GMCHs including DKSPGI (6)	DHs (7)	CHCs (14)
1	Availability of dedicated kitchen	6	5	4
2	Dietician is available	5	0	0
3	Food supplied to the patients is patients specific such as diabetic, semi solid and liquid	6	6	13
4	System of diet counselling to the patients, formulation of caloric requirement and accordingly setting diet for the patients is adopted	6	0	2
5	List of the items to be provided in diet is prepared (Menu Chart)	6	7	12
6	Protective gears (apron, head gear, clear plastic gloves) are used by the cooks in the kitchen those serving food	5	7	6
7	Proper hygiene of kitchen is maintained	5	6	10
8	Quality of diet is checked by a competent person on regular basis as prescribed in IPHS Guideline	5	1	6
9	FSSAI registration certificate were issued under food safety and standard Act 2006, and it was renewed regularly?	4	6	1
10	Distribution of foods to patients is checked by Food Inspector or district authorities from time to time	3	0	7

(Source: Data provided by test checked HIs during joint physical verification)

Colour code:

Availability range		
100 per cent	51 – 99 per cent	0-50 per cent

Audit noticed following deficiencies in dietary services during joint physical verification:

- Dedicated kitchens were not available in two DHs⁴⁶ and 10 CHCs⁴⁷ and food was prepared outside hospital premises through outsourcing agencies.
- In GMCH Rajnandgaon and all seven test checked DHs, dieticians were not posted while the post of dietician was not included in sanctioned set-up of CHCs. Thus, in the absence of dietician, food supplied to patients was not prescribed by a dietician according to the requirement of patient in a scientific manner.
- As per IPHS norms, quality of diet was not checked on regular basis in GMCH Rajnandgaon, six DHs⁴⁸ and eight CHCs⁴⁹.
- GMCH Ambikapur and Rajnandgaon, DH Baikunthpur and 13 CHCs⁵⁰ did not obtain registration certificate under Food Safety and Standard Act, 2006.
- Distribution of foods to patients was not checked by Food Inspector or district authorities in three GMCHs⁵¹, all seven DHs and seven CHCs⁵².

(ii) Dietary services in Primary Health Centres

As desired in the IPHS norms, nutritious and well-balanced diet shall be provided to all IPD patients keeping in mind their cultural preferences.

Out of 776 PHCs in the State, 301 PHCs (38.79 per cent) did not provide dietary services to IPD patients. Audit observed that dietary services were not provided to the 18,884 patients admitted in eight (57 per cent) PHCs⁵³ out of 14 test checked PHCs during 2016-22.

Government replied (April 2023) that letter has been issued to healthcare facilities to comply with the observations of Audit. The DHS did not furnish specific reply and stated that Department has enhanced diet charges from ₹ 150 to ₹ 250 per day per patient from this year (2022-23).

3.8.7 Blood Bank

As per IPHS norms, Blood bank shall be in close proximity to pathology department and at an accessible distance to operation theatre department, intensive care units and emergency and accident department. Blood Bank

⁴⁶ DH Balod and Kondagaon

⁴⁷ CHC Arang, Bhaiyathan, Chhindgarh, Chirmiri, Dondilohara, Konta, Kota, Makdi, Takhatpur, and Tilda

⁴⁸ DH Balod, Bilaspur, Kondagaon, Raipur, Sukma and Surajpur.

⁴⁹ CHC Bhaiyathan, Chhindgarh, Chirmiri, Kota, Konta Dondilohara, Takhatpur and Tilda

⁵⁰ CHC Arang, Bhaiyathan, Bishrampur, Chhindgarh, Chirmiri, Dondi, Dondilohara, Konta, Kota, Makdi, Takhatpur, Tilda & Vishrampur

⁵¹ GMCH Ambikapur, Bilaspur & Rajnandgaon.

⁵² CHC Bishrampur, Chhindgarh, Dondi, Konta, Kota, Makdi and Tilda

⁵³ PHC Bangoli, Basdei, Chintagupha, Reewa, Salka, Salna, Sanjari and Shampur

should follow all existing guidelines and fulfil all requirements as per the various Acts pertaining to setting up of the Blood Bank.

- Blood bank was available in all test checked GMCHs except GMCH Rajnandgaon where blood storage facility was available.
- In test checked DHs, though blood bank was available in all DHs but in DH Baikunthpur (Korea), license to operate blood bank had expired and was not renewed.

3.8.8 Laundry Services

(i) *Availability of laundry service in test-checked District Hospitals and Community Health Centers*

IPHS norms provides that hospital laundry should be provided with necessary facilities for segregated collection, drying, pressing and storage of soiled and cleaned linens.

It was observed that required linen sets, system of changing the patient/OT linen at the prescribed intervals to maintain hygiene, system to check the quality of cleanliness of the linen received from laundry, system of date wise and patient wise records against each entry of linen issued from linen stock, system for periodic physical verification of linen inventory and procedure for sluicing of soiled and infected linen were available in all test checked DHs.

In CHCs it was noticed that:

- Required linen sets were not available in CHC Kota and system of changing the patient/OT linen at the prescribed intervals to maintain hygiene were not followed by three CHCs viz. Bishrampur, Kota and Takhatpur.
- System to check the quality of cleanliness of the linen received from laundry was not available in two CHCs viz. Kota and Takhatpur.
- Date wise and patient wise records against each entry of linen issued from linen stock and system for periodic physical verification of linen inventory was not maintained in three CHCs viz., Kota, Takhatpur and Tilda.
- Follow-up of procedure for sluicing of soiled and infected linen was not done in three CHCs viz., Bishrampur, Kota and Takhatpur.

(ii) *Laundry services in Government Medical College Hospitals*

Availability of laundry services in five test checked GMCHs and DKSPGI is shown in the **Table - 3.44**:

Table - 3.44: Details of availability of laundry services in GMCH and DKSPGI

Particulars	Bilaspur	Jagdalpur	Ambikapur	Raipur	Rajnandgaon	DKS PGI Raipur
Whether bed linen are changed every day?	Yes	No	No	Yes	Yes	Yes
Whether different coloured bed linen is provided on different weekdays?	No	No	No	No	No	No
Whether bed linen is changed every time when got soiled?	Yes	Yes	No	Yes	Yes	Yes

Whether complaint about linen was attended?	Yes	No	No	No	Yes	Yes
Whether any officer visits to check the bed linen every day?	No	No	No	Yes	No	No

(Source: Data compiled from joint physical verification of GMCHs)

It could be seen from the table that:

- Bed linens were not changed daily in GMCH Ambikapur and Jagdalpur.
- Different coloured bed linen was not provided on different weekdays in any of the GMCHs.
- Quality of bed linen was not checked every day in any of the GMCHs except GMCH Raipur.

3.8.9 Mortuary Services

As per IPHS norms, mortuary provides facilities for keeping of dead bodies and conducting autopsy. Infrastructure for mortuary services under norms was available in three DHs⁵⁴ and one GMCH (Ambikapur) out of test-checked seven DHs and five GMCHs. Availability of infrastructure for mortuary services in remaining four DHs and four GMCHs is shown in *Table - 3.45*:

Table - 3.45: Mortuary Services in test checked DHs and GMCHs

Availability of	DH				GMCH			
	Bilaspur	Kondagaon	Sukma	Surajpur	Rajnandgaon	Jagdalpur	Bilaspur	Raipur
24x7 mortuary facility	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stainless steel autopsy table with sink, a sink with running water for specimen washing and cleaning and cup-board for instruments in post-mortem room	Yes	Yes	No	Yes	No	Yes	Yes	No
Availability of separate room for body storage provided with at least 2 deep freezers for preserving the body	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Mortuary van	No	Yes	Yes	No	Yes	No	Yes	No
Availability of facility for pathological post mortem	No	No	No	No	Yes	Yes	Yes	No
System to categorize the dead bodies before preservation	No	No	No	No	Yes	Yes	Yes	No
System to provide identification tag/wrist band for each stored dead body	Yes	Yes	No	No	No	No	Yes	No
System for storage of unclaimed body for fixed duration	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Copy of death certificate accompanied with bodies sent to mortuary	Yes	Yes	Yes	No	No	No	No	No
Facility of high level disinfection by boiling or chemical	Yes	Yes	Yes	No	Yes	Yes	Yes	No

(Source: Information furnished by test checked DHs and GMCHs)

It was observed that:

⁵⁴ DH Balod, Baikunthpur and Raipur

- (i) All the test checked DHs and GMCHs had 24x7 mortuary facility. System to provide identification tag/wrist band for each stored dead body was not available in two DHs at Sukma and Surajpur and in three GMCHs (Raipur, Rajnandgaon and Jagdalpur). Facility for high level disinfection by boiling or chemical were available in all test checked DHs/ GMCHs except DH, Surajpur and GMCH Raipur.
- (ii) Facility of separate room with at least two deep freezers for preserving and storage of the body was available in test checked DHs and GMCHs except GMCH Raipur. Facility for pathological postmortem was not available in four DHs⁵⁵ and GMCH Raipur.

Auxiliary Services

3.8.10 Water supply

As per *Kayakalp* guidelines, availability of adequate water, sanitation and hygiene services are essential components for providing basic healthcare services in the HIs. Assessment of water requirement, physical testing of water, maintenance of records, cleaning of overhead water tank etc., were being followed in GMCH Jagdalpur, three DHs (Bilaspur, Raipur and Surajpur) and four CHCs (Bhaiyathan, Dondi, Dondilohara and Bishrampur) in test checked HIs. Adequacy of water supply at remaining GMCHs (4)/ DHs (4)/ CHCs (10) is shown in **Table - 3.46**:

Table - 3.46: Water Supply in test checked DHs/ CHCs/ GMCHs

Name of health institution		Assessment of water requirement per bed per day after excluding requirements for fire fighting, Horticulture and steam	Biological/ Physical testing of water samples and maintenance of record	Maintenance of record related to water consumption, purification, complaints on water supply disruption/ downtime	Regularly Cleaning of Overhead water tank at prescribed interval	AMC of water purifiers
GMCH	Ambikapur	Yes	Yes	Yes	Yes	No
	Bilaspur	No	No	No	Yes	No
	Raipur	Yes	No	Yes	Yes	No
	Rajnandgaon	No	Yes	No	Yes	No
DH	Baikunthpur (Korea)	No	Yes	No	Yes	Yes
	Balod	Yes	Yes	Yes	Yes	No
	Kondagaon	Yes	Yes	No	Yes	Yes
	Sukma	Yes	Yes	Yes	Yes	No
CHC	Arang	No	No	Yes	Yes	Yes
	Chhindgarh	No	Yes	No	Yes	Yes
	Janakpur	Yes	No	Yes	Yes	Yes
	Chirmiri	No	No	No	Yes	No
	Konta	No	No	No	Yes	Yes
	Kota	Yes	No	No	Yes	Yes
	Makdi	Yes	Yes	No	Yes	No
	Takhatpur	Yes	No	No	Yes	Yes
	Tilda	No	Yes	Yes	Yes	Yes
	Vishrampur	No	No	No	Yes	Yes

(Source: Information furnished by test checked Health institutions)

⁵⁵ DH Bilaspur, Kondagaon, Sukma, Surajpur

It was observed from the table that:

- (i) Out of 26 test checked DHs/CHCs/GMCHs, the assessment of water requirement per bed per day was made in only 17 HIs.
- (ii) Nine out of 26 test checked DHs/CHCs/GMCHs did not carry out biological testing/ physical testing of water samples.
- (iii) Records related to water consumption, purification, complaints on water supply disruption were not maintained in 11 HIs out of 26 test checked HIs. So, in the absence of physical testing/biological testing of water samples and non-maintenance of above record, quality of water supply could not be assessed.
- (iv) Water tanks were regularly cleaned in all the test checked HIs.
- (v) In eight out of 26 test checked DHs/CHCs/GMCHs, AMC of water purifier was not initiated.

3.8.11 Power supply

As per IPHS norms, 24-hour uninterrupted power supply should be available in all HIs. Back-up generator facility should also be available. Further, AMC should be done for all equipment which need special care and preventive maintenance should be done to avoid breakdown and reduce down time of all essential and other equipment. Availability of power supply in test-checked HIs is shown in *Table - 3.47*:

Table - 3.47: Power supply in test checked Healthcare Institutions

Name of District	Name of health facility	Availability of 24-hour uninterrupted stabilised power supply	Installation of Generator back-up and inverters	AMC of backup facility like generators and inverters
Balod	DH Balod	Yes	Yes	No
	CHC (02)	Partially available	Partially available	Partially available
	PHC (02)	Yes	Yes	Partially available
Bilaspur	DH Bilaspur	Yes	Yes	Yes
	CHC (02)	Yes	Partially available	Yes
	PHC (02)	Yes	No	Partially available
Kondagaon	DH Kondagaon	Yes	Yes	No
	CHC (02)	Yes	Yes	Partially available
	PHC (02)	Yes	Partially available	Partially available
Korea	DH, Baikunthpur	Yes	Yes	Yes
	CHC (02)	Yes	Yes	Yes
	PHC (02)	Yes	Yes	Yes
Raipur	DH, Raipur	Yes	Yes	Yes
	CHC (02)	Yes	Yes	Yes
	PHC (02)	Yes	Partially available	Yes

Name of District	Name of health facility	Availability of 24-hour uninterrupted stabilised power supply	Installation of Generator back-up and inverters	AMC of backup facility like generators and inverters
Sukma	DH, Sukma	Yes	Yes	No
	CHC (02)	Yes	Yes	Yes
	PHC (02)	Partially available	Partially available	Partially available
Surajpur	DH, Surajpur	Yes	Yes	Yes
	CHC (02)	Yes	Yes	Yes
	PHC (02)	Yes	Partially available	Partially available

(Source: Information furnished by test checked Health Institutions)

It was observed that 24-hour uninterrupted stabilised power supply with backup of generator was available in all the test checked DHs but AMC of backup facility like generators and inverters was not available in three DHs viz., Balod, Kondagaon and Sukma.

In test checked 14 CHCs and 14 PHCs, Audit observed that:

- Uninterrupted stabilised power supply was not available in CHC Dondilohara and PHC Chintagupha.
- The backup of generator or inverter was not found installed in two CHCs viz., Dondilohara and Takhatpur and five PHCs viz., Belpan, Nawagaon, Shampur, Reewa and Basdei.
- AMC of backup facility like generators and inverters was not available in two CHCs viz., Dondilohara and Makdi and five PHCs viz., Basdei, Belpan, Chikhlakasa, Chintagupha and Shampur.

3.9.1 Citizen charters

As per IPHS norms, citizen's charter should be displayed at a proper place in the HIs, so that the patients are aware of their rights.

During joint physical verification of test checked HIs, it was observed that in nine HIs⁵⁶ citizen's charter was not displayed and patients coming to HIs were unaware of their rights and services available in the HIs. Details are in **Table - 3.48:**

⁵⁶ GMCH Bilaspur, Raipur, Rajnandgaon; CHC Arang, Chhindgarh, Dondilohara, Konta, Kota and Vishrampur

Table - 3.48: Non-availability of citizen charter and patient rights and display of services-in test checked GMCHs, DKS PGI, DHs and CHCs

Sl. No.	Particulars	GMCHs, DKS PGI(6)	DHs (7)	CHCs (14)
1	Services and entitlements available in its departments were not displayed	2	1	4
2	Rights of patients were not found displayed	3	1	7
3	User charges were not found displayed	3	1	6
4	Information about available OPD services and their department wise timings was not found displayed	2	0	5
5	Information about available diagnostic services was not displayed	3	1	4
6	Information about available family welfare, maternity and childcare services were not found displayed	1	1	6

(Source: Data collected from test checked HIs)

Colour code:

Availability range			
100 per cent	76-99 per cent	51-75 per cent	upto 50 per cent

It could be seen from the above table that:

- In seven HIs,⁵⁷ services and entitlements available in its departments were not displayed.
- Rights of patients were not found displayed in 11 HIs⁵⁸.
- User charges were not found displayed in 10 HIs⁵⁹.
- Information about available OPD services and their department wise timing was not found displayed in seven HIs⁶⁰.
- Information about available diagnostic services was not displayed in eight HIs⁶¹.
- Information about available family welfare, maternity and childcare services were not found displayed in eight HIs⁶².

3.9.2 Patient registration, grievance/ complaint redressal

As per IPHS norms, online registration facility should be available in DHs. Patient satisfaction survey is to be conducted quarterly. Each DH should display prominently a citizen's charter for the DH indicating the services available, user fees charged, if any, and a grievance redressal system. Citizen's

⁵⁷ GMCH Bilaspur, Rajnandgaon DH Bilaspur, CHC Bhaiyathan, Chhindgarh, Takhatpur and Vishrampuri

⁵⁸ DKSPGI, Raipur; GMCH Rajnandgaon, Raipur; DH Sukma; CHC Arang, Dondilohara, Kota, Takhatpur, Konta, Chhindagarh and Vishrampuri

⁵⁹ DKSPGI, Raipur; GMCH Bilaspur, Raipur; DH Bilaspur; CHC Arang, Dondilohara, Makdi, Takhatpur, Chhindagarh and Vishrampuri

⁶⁰ DKSPGI, Raipur; GMCH, Rajnandgaon; CHC Bishrampur, Kota, Konta, Chhindagarh and Vishrampuri

⁶¹ GMCH Bilaspur; Jagdalpur, Rajnandgaon DH Bilaspur, CHC Takhatpur, Konta, Chhindagarh and Vishrampuri

⁶² GMCH Rajnandgaon; DH Bilaspur, CHC Arang, Takhatpur, Dondi, Chhindgarh, Konta and Vishrampuri

charter should be in local language. There shall be provision of complaints/suggestion box and a mechanism to redress the complaints.

Further, NHM Assessors guidelines provides that adequate registration counters should be available as per patient load. Unique identification number should be given to each patient during process of registration. Availability of patient registration, grievance/complaint redressal facilities in test-checked HIs is shown in **Table - 3.49**:

Table - 3.49: Availability of patient registration, grievance/complaint redressal services in test checked HIs

Particulars	DHs (07)	GMCHs includes DKS PGI (06)	CHCs (14)	PHCs (14)
Availability of adequate registration counters	7	6	13	14
Availability of Online Registration System	7	2	14	10
Patient Satisfaction Survey (OPD)	7	3	11	12
Legibility of prescription slips	7	6	12	14
Availability of Citizen charter at OPD	7	5	13	6
Providing unique ID at the time of registration	7	6	12	12
Availability of Grievance Redressal Cell or Complaint cell to register patients' grievances regarding quality of supplied food to them	6	6	10	6
Availability of mechanism for receipt of complaints and whether suggestion boxes had been placed at appropriate places	7	5	13	12
Formation of Grievance Redressal Committee and redressal of complaints in a timely manner	7	5	11	9

(Source: Information furnished by test checked Health Institutions)

Colour code:

Availability range			
100 per cent	76-99 per cent	51-75 per cent	upto 50 per cent

It was observed that:

- Adequate registration counters were available in 40 out of 41 test checked HIs.
- Online registration system was not available in DKSPGI, three GMCHs (Bilaspur, Raipur and Rajnandgaon) and four PHCs (Belpan, Nawagaon, Bahrasi and Basdei) out of the test checked HIs, whereas legible prescription slips were given to patients in all these HIs except CHC Kota and CHC Makdi.
- The patient satisfaction survey (OPD) was not conducted in three GMCHs viz., Bilaspur, Raipur and Rajnandgaon, three CHCs viz., Kota, Makdi and Vishrampuri and two PHCs viz., Belpan and Salka.
- Unique ID at time of registration were not provided in two CHCs viz., Bishrampur, Kota and two PHCs (Shampur and Bahrasi).
- Grievance redressal cell or complaint cell to register the complaint related to quality of supplied food to the patients was not available in DH Kondagaon, four CHCs (Chhindgarh, Kota, Makdi and Vishrampuri) and eight PHCs (Sanjari, Chikhlakasa, Belpan, Shampur, Bahrasi, Reewa, Salka and Tongpal).

- Mechanism of receipt of complaint and suggestion boxes were placed at appropriate place in all GMCHs/ DHs/ CHCs/ PHCs except GMCH Bilaspur, CHC Kota and PHC Shampur and Bahrasi.
- Grievance Redressal Committee was formed in all the test checked DHs but not available in GMCH Rajnandgaon, three CHCs (Chirmiri, Kota and Makdi) and five PHCs (Nawagaon, Salna, Bahrasi, Bangoli and Reewa).

In CHC Makdi, drug distribution counter was used as patient registration counter due to non-availability of separate registration counter, as shown in following **Photograph - 9** (date: 23 May 2023) :



9. Non availability of separate registration counter at CHC Makdi (Date 23 May 2023)

3.9.3 Infection Control Management

Infection Prevention and Control (IPC) programme and quality standards of healthcare are essential for the well-being and safety of patients, their families, health workers and the community.

NHM Assessor's guidebook requires that for cleaning and disinfection of patient care areas, standard practices be followed through maintenance of a checklist for hygiene and infection control in each HI. Also, infection control policies are needed to be framed, practiced and monitored by the Hospital Infection Control Committee (HICC). The role of the HICC is to implement the infection control programme and policies by monitoring, surveillance, reporting, research and education.

Audit observed that no such committees were formed in DKSPGI, Raipur, DH Kondagaon, 14 test checked CHCs and in 14 test checked PHCs. So, regular infection control exercise done by the HIs could not be verified during audit.

It was observed that:

- All the test checked GMCHs/ DHs had checklist for hygiene and infection control. The test checked HIs had HICC and meetings of HICC were conducted in all the test checked HIs.

- Pest control, rodent control and anti-termite treatment was done in all test checked GMCHs and DHs but cattle trap was not installed in GMCH Jagdalpur and Raipur and DH Kondagaon.
- Out of the four procedures⁶³ for disinfection and sterilization, chemical sterilization and autoclaving procedures were available in all the test checked GMCHs/ DHs.

DHS replied (January 2023) that in most of the DHs and CHCs, HICC is formed and working, However, DH Kondagaon and CHCs will again be monitored to have infection control practices and HICC.

3.9.4 Patient safety

(i) Availability of patient safety services in test checked health institutions

NHM Assessors guidelines provide that the health facility should have a disaster management plan in place and ensure that the staff is aware of disaster plan and their role and responsibilities in disaster is defined.

IPHS norms for CHCs provide that all healthcare staff should be trained and well conversant with disaster prevention and management aspects. Availability of patient safety services in test-checked HIs is shown in *Table - 3.50*:

Table – 3.50: Availability of services related to patient safety

DKS PGI/ GMCH/DH/ CHC	Name of the His	Services			
		Disaster management plan formulated for patient safety	Formation disaster management committee	Facility assigned a space or ward to manage additional patient load in the event of a disaster	Standard Operating Procedure for all concerned departments to act in an event of a disaster
DH	Baikunthpur	Yes	Yes	No	Yes
	Balod	Yes	Yes	Yes	Yes
	Bilaspur	Yes	Yes	Yes	Yes
	Kondagaon	Yes	No	Yes	Yes
	Raipur	Yes	Yes	Yes	Yes
	Sukma	Yes	Yes	Yes	No
	Surajpur	Yes	Yes	Yes	Yes
CHC	Arang	Yes	Yes	Yes	No
	Bhaiyathan	Yes	No	Yes	Yes
	Chhindgarh	Yes	No	Yes	Yes
	Dondi	No	No	Yes	Yes
	Dondilohara	No	No	No	No
	Janakpur	Yes	Yes	Yes	Yes
	Chirmiri	No	No	No	No
	Konta	Yes	Yes	Yes	Yes
	Kota	No	No	No	No
	Makdi	No	Yes	No	No
	Bishrampur	Yes	Yes	Yes	Yes
	Takhatpur	Yes	Yes	Yes	Yes
	Tilda	No	No	No	No

⁶³ boiling, high level disinfection, chemical sterilization, autoclaving

DKS PGI/ GMCH/DH/ CHC	Name of the His	Services			
		Disaster management plan formulated for patient safety	Formation disaster management committee	Facility assigned a space or ward to manage additional patient load in the event of a disaster	Standard Operating Procedure for all concerned departments to act in an event of a disaster
	Vishrampuri	Yes	No	Yes	No
GMCH	Ambikapur	Yes	Yes	Yes	Yes
	Bilaspur	Yes	No	Yes	No
	Jagdapur	Yes	Yes	Yes	Yes
	Raipur	Yes	No	Yes	No
	Rajnandgaon	Yes	Yes	Yes	Yes
DKSPGI	Raipur	Yes	Yes	Yes	Yes

(Source: Information furnished by test checked HIs)

A-Available, NA-Not Available

It could be seen from the above table that:

- Disaster management plan for patient safety was not formulated in six CHCs.
- Disaster management committee was not formed in DH Kondagaon, eight CHCs and two GMCHs.
- Standard operating procedure for all concerned departments to act in an event of a disaster was not prepared in DH Sukma, seven CHCs and two GMCHs.

(ii) Availability of fire-fighting equipment

As per IPHS norms, fire-fighting equipment should be available, maintained and be readily available when there is a problem.

The status of availability of fire extinguishers and other items in test checked HIs during 2021-22 is shown in **Table - 3.51**:

Table - 3.51: Non-availability of firefighting equipment and other items in test checked HIs

Equipment/Statutory compliance		GMCHs DKS PGI (6)	DHs (7)	CHCs (14)	PHCs (14)
NOC/license not granted		4	7	14	14
Provision of detection (non-availability)	smoke detector	3	5	14	14
	Alarm	3	5	14	14
For meeting fire exigencies (non-availability)	Extinguishers	0	0	0	0
	Fire hydrants	2	6	14	14
	Sand buckets	4	6	13	13
	underground back up water	1	4	13	14
Evacuation (non availability)	Signage	6	0	14	11

(Source: Compiled from test checked healthcare facilities)

Colour code:

Non Availability range			
0 per cent	1-25 per cent	26-50 per cent	51-100 per cent

Audit observed that:

- Joint physical verification of test checked 41 HIs (GMCHs, DKSPGI, DHs, CHCs and PHCs) revealed that only DKSPGI, Raipur and GMCH Jagdalpur had obtained NOC/ fire safety license.
- Provision of smoke detection and alarm were not available in three GMCHs,⁶⁴ five DHs⁶⁵ and all test checked CHCs and PHCs.
- Provision for fire exigencies, fire hydrants were not available in GMCH Bilaspur and Raipur, six DHs⁶⁶ and all test checked 14 CHCs and 14 PHCs. For functioning of fire hydrant, underground backup water was not available in GMCHs Bilaspur, four DHs⁶⁷ and 13 CHCs⁶⁸ as well as all 14 test checked PHCs. Further, Audit also observed that sand buckets were not available in four GMCHs,⁶⁹ six DHs,⁷⁰ 13 CHCs and 13 PHCs.
- In case of fire accident, signage facility for evacuation of people, was not available in all six GMCHs, all 14 test checked CHCs and 11 PHCs.
- Fire detection and alarm system was installed in NICU of GMCH Bilaspur only after the fire accident (2019) and in remaining buildings still no such equipment was installed. Open MCB box posing risk of fire, was found in GMCH Bilaspur, as shown in **Photograph - 10** below:



10. Open MCB box in GMCH Bilaspur in risk of short circuit (Date 26 April 2022)

- Audit observed that GoCG accorded administrative sanction of ₹ 1.16 crore for establishment of Fire safety system in GMCH, Raipur in 2016-17 and 2018-19. GMCH, Raipur transferred the fund to CGMSCL between 2016-19. However, the system was not supplied or installed, as of May 2022 and funds remained blocked with CGMSCL for more than five years.

⁶⁴ Ambikapur, Bilaspur and Raipur

⁶⁵ DH Balod, Bilaspur, Baikunthpur (Korea), Sukma and Surajpur

⁶⁶ DH Balod, Bilaspur, Kondagaon, Baikunthpur (Korea), Sukma and Surajpur

⁶⁷ DH Balod, Baikunthpur (Korea), Sukma and Surajpur

⁶⁸ CHC Dondilohara, Bhaiyathan, Bishrampur, Chhindgarh, Chirmiri, Dondi, Konta, Kota, Takhatpur, Makdi, Sukma, Tilda and Vishrampuri

⁶⁹ DKSPGI, Raipur; GMCH Bilaspur, Jagdalpur and Raipur

⁷⁰ DH, Balod, Bilaspur, Kondagaon, Baikunthpur (Korea), Sukma and Surajpur

DHS replied that ₹ 6.50 crore has been sanctioned for fire safety in 20 DHs and firefighting system will be installed in a phased manner after conducting fire safety audit. Government stated (April 2023) that fire safety license has been obtained in DKSPGI, Raipur and GMCH Ambikapur and instructions have been issued to other GMCHs for obtaining fire safety license.

(iii) Fire safety measures in AYUSH HIs

During scrutiny of records and joint physical verification of 77 AYUSH HIs, Audit observed that the inspected HIs did not had adequate and proper fire safety equipment in the premises. All the five⁷¹AYUSH hospitals did not obtain NOC from the Fire Department and fire safety audit was also not conducted in any of the facilities. Moreover, fire extinguishers available in these five hospitals were inadequate which showed lack of preparedness in all the facilities towards fire related emergency/hazard.

GoCG replied (December 2022) that it has instructed all the AYUSH HIs for installation of fire safety equipment.

3.9.5 Availability of seating arrangement, toilet facility and signage for Emergency, Departments and Utilities

As per IPHS norms, a waiting area with adequate seating arrangement shall be provided and an Enquiry/ ‘May I Help Desk’ with staff fluent in local language should be displayed. Health institutions should put in place directional signage for emergency, departments and utilities. The status of availability of the above features in test checked GMCHs/DHs/CHCs/PHCs is given in **Table - 3.52**:

Table - 3.52: Non-availability of seating arrangement, toilet facility etc. in test checked HIs

Name of service	DHs	GMCHs	CHC	PHC
	Total =7	Total =5	Total=14	Total=14
Enquiry/ ‘May I Help Desk’ with staff fluent in local language	0	0	0	4
Directional signage for Emergency, Departments and Utilities	0	0	5	4
Display of safety, hazard and caution signs were displayed prominently at relevant places?	0	0	2	1
Important contacts like higher medical centres, blood banks, and fire department, police and ambulance services were displayed	0	0	3	6
Mandatory information (under RTI Act, PNDT Act, etc.) was displayed	0	1	2	7
Adequate seating facility	1	0	1	1
Patient Calling System (Digitalisation)	4	3	11	10
Separate toilets for male and female	0	0	0	2

(Source: Information furnished by test checked HIs)

Colour code:

Non-availability range			
0 per cent	1-25 per cent	26-50 per cent	51-100 per cent

⁷¹ Three District Hospitals and two Medical College Hospitals.

From above, it could be seen that Enquiry/ 'May I Help Desk' with staff fluent in local language was not displayed in four PHCs. Adequate seating arrangement was not available at one DH, one CHC and one PHC. Availability/ non-availability of seating arrangements was noticed in DH Bilaspur and CHC Arang, as shown in the following *Photographs - 11 and 12*:



11. Inadequate seating arrangement at OPD area in CHC Arang (Date 09 May 2023)

12. Proper seating arrangement in DH Bilaspur (Date 18 May 2023)

Positive features (GMCH Jagdalpur)

Audit observed that Enquiry/ 'May I Help Desk' with staff fluent in local language, Display of OPD services and doctors available in health institution and separate registration and pharmacy counter for male, female and old age persons were available in GMCH Jagdalpur as shown in *Photographs - 13 to 16*:



13. Separate registration counter for women and old age persons (Date: 29 December 2021)



14. Doctor duty roster in OPD displayed in TV screen (Date: 29 December 2021)



15. 'May I help you desk' in local language (Date: 29 December 2021)



16. Separate drug distribution counter for women and old age persons (Date: 29 December 2021)

3.10 Patient satisfaction survey

IPHS norms prescribes that a patient satisfaction survey is to be carried out by the HIs to monitor the patients' satisfaction and feedback for improvement of quality of service.

Audit observed that patient satisfaction survey was not conducted in three GMCHs⁷², in three CHCs⁷³ and in two PHCs⁷⁴ out of test checked five GMCHs, seven DHs, 14 CHCs and 14 PHCs during 2016-22.

3.10.1 Outcome of patient survey conducted at Healthcare Institutions

Patient survey was conducted in 41 HIs⁷⁵. In these HIs, survey of 450 patients⁷⁶ was conducted the outcome of which is mentioned in **Table - 3.53**:

Table - 3.53: Statement showing results of patient survey

Service	Non-Availability of services (per cent)				
	GMCHs (160)	DHs (178)	CHCs (70)	PHCs (42)	Total HIs (450)
Adequate seating arrangement was not available	9 (5.63)	34 (19.10)	15 (21.43)	07 (16.67)	65 (14.44)
Drinking water facility was not available	12 (7.50)	5 (2.81)	17 (24.29)	1 (2.38)	35 (7.78)
Signs for guidance were not available.	0 (0)	2 (1.12)	21 (30.00)	8(19.05)	31 (6.89)
Facilities for differently abled persons were not available	1 (0.63)	10 (5.62)	10 (14.29)	08 (19.05)	29 (6.44)
Neat and clean toilet facility was not available	93 (58.13)	67 (37.64)	12 (17.14)	0 (0)	172 (38.22)
Number of registration counter was not adequate	11(6.88)	23 (12.92)	0 (0)	0 (0)	34 (7.56)
Doctor did not explain the nature of ailment in an understandable way	68 (42.50)	4 (2.25)	0 (0)	0 (0)	72 (16.00)
All prescribed medicines were not made available by HI pharmacy	65 (40.63)	13 (7.30)	3 (4.29)	1 (2.38)	82 (18.22)
Complaint box was not available in OPD	79 (49.38)	0 (0)	5 (7.14)	6(14.29)	90 (20.00)

(Source: Compiled from patient survey conducted by Audit)

Colour code:

Non-availability range			
0 per cent	0-25 per cent	25-50 per cent	50-100 per cent

For OPD services, 450 patients were surveyed in test checked HIs (DHs/ GMCHs/ CHCs/ PHCs). Of these, 38 per cent patients said that neat and clean

⁷² Bilaspur, Raipur and Rajnandgaon

⁷³ Kota, Makdi and Vishrampuri

⁷⁴ Belpan and Salka

⁷⁵ five GMCHs, one super specialty hospital, seven DHs, 14 CHCs and 14 PHCs

⁷⁶ Patient were selected on random basis

toilet facility was not available, 18 *per cent* said that all prescribed medicines were not made available by HI pharmacy, 14 *per cent* patient stated that adequate seating arrangement was not available and seven *per cent* stated that drinking water facility not available.

During joint physical inspection in DH Baikunthpur and CHC Takhatpur, Audit observed that neat and clean drinking water facility and toilet was not available, as evident from the following **Photographs - 17 and 18**:



The survey indicates that there is need for improvement in the cleanliness of toilet facilities, proper seating arrangements, and availability of prescribed medicines across the HIs.

DHS replied (January 2023) that patient satisfaction survey is being conducted in most of the HIs. Directions will be issued to the concerned for compliance of audit observations.

Conclusion

All 10 specialist services as per IPHS norms were not available in 18 (78 *per cent*) out of 23 DHs in State, while in DH, Kondagaon only four specialist services were available. Similarly, Out-patient Department (OPD) services in General Medicine, General Surgery, Obstetrics and Gynecology and Paediatrics were not available in 104 (60 *per cent*) 148 (86 *per cent*), 126 (73 *per cent*) and 133 (77 *per cent*) CHCs respectively. In 282 (36 *per cent*) out of 776 PHCs, doctor (Medical Officer) was not available to provide OPD services as per IPHS norms.

OPD services in Cancer unit in GMCH Jagdalpur and Cardiology, Nephrology, and Neurology Departments in GMCH Rajnandgaon could not be started for more than eight years due to non-availability of specialist doctors.

OPD cases in test checked DHs ranged between 4,52,743 and 8,30,140; in CHCs it ranged between 3,44,561 and 4,84,671 and in GMCHs it ranged between 10,51,767 and 16,83,383 during 2016-22.

Average OPD cases per doctor per annum in DHs ranged between 10,437 and 3,834 and in CHCs ranged between 19,659 and 4,451. In GMCHs it ranged between 28,804 and 7,723. Against the national average of 28 OPD cases per doctor per day for DHs, one DH (Raipur) out of seven test checked DHs had more number of OPD cases (upto 35) than the national average. In 11 HIs (DHs/CHCs/GMCHs) number of patients per hour per registration counter was more than norms (20) during 2016-22.

IPD cases in DHs, CHCs and GMCHs ranged between 53,253 and 78,373; 27,753 and 38,409 and 1,65,459 and 2,80,755 respectively during 2016-22. Department wise IPD data was not maintained in test checked DHs/CHCs.

IPD ward/ beds as per IPHS norms were available for all five basic in-patient services (General medicine, General surgery, Ophthalmology, accident and trauma, Paeditrics) in only one out of seven test checked DHs. In two DHs, the number of beds were available as per IPHS norms in four out of five services. DH Balod did not have required number of beds in any of the five wards. Burn ward was not available in four out of seven test checked DHs.

Bed occupancy rate (BOR) of five out of seven DHs was below 80 *per cent* norms of IPHS. Average BOR of DH Surajpur and Baikunthpur was 137 and 185 respectively which shows inadequate number of beds against requirement.

Average Bed turnover ratio of DH, Sukma was 173 *per cent* during the period which shows requirement of additional beds. Bed turnover ratio of DH Raipur was quite low (16.50) as compared to other DHs.

Operation Theatre services were available in all test checked GMCHs and DHs. All 12 surgical procedures were available in only two DHs as per IPHS norms. In the remaining five DHs, non-availability of surgical procedures ranged between one and four.

All four surgery services (General Surgery, ENT, Orthopedics and Ophthalmology) were available in only three out of seven test checked DHs, three types of surgeries in two DHs and in one DH only two type of surgery was available.

Against the national average of 194 surgeries per surgeon in a year, in four DHs, average surgery per surgeon in Ophthalmology was more than national average. Similarly, in General Surgery and in Orthopedics departments, it was more than the national average in respective one DH.

OT services were available in three (21 *per cent*) out of 14 test checked CHCs and seven (50 *per cent*) of 14 test checked PHCs.

Emergency services were available in all test checked DHs, but all types of infrastructure and facilities as per IPHS norms were not available in four out of seven test checked DHs.

Routine and emergency care was not available in 25 (15 *per cent*) out of 172 CHCs in the State. Facility of 24 hours management of selected emergency services such as accident, first aid, stitching of wounds etc., were not available in two out 14 test checked PHCs.

Intensive Care Unit (ICU) facility was not available in four out of seven test checked DHs. In one DH, number of available ICU beds was less than the IPHS norm. Required number of ICU beds was available as per MCI norms in GMCHs but availability of beds (25) in NICU (GMCH Bilaspur) was less than the average patient load per day (33) and thus two neonates had to share a single bed.

As per NFHS-5 survey report only 60 *per cent* pregnant women received four ANC during pregnancy and only 26.30 *per cent* pregnant women were provided iron folic acid tablets for 180 days. Further, 66 *per cent* of pregnant

women received Ante Natal Care during their first trimester during 2020-21 which was one of the main reasons for higher MMR, NMR and IMR in the State.

Institutional birth increased from 70.20 *per cent* to 85.70 *per cent* during 2016-21 and C-section deliveries increased from 9.9 *per cent* in 2015-16 to 15.2 *per cent* in 2020-21, but it was much higher (57 *per cent*) in private healthcare institutions than the public healthcare institutions (8.9 *per cent*).

Special New Born Care Unit (SNCU) service was not available in five (22 *per cent*) out of 23 DHs in the State. Neonatal death rate was highest in DH Kondagaon and lowest in DH Bilaspur.

All Imaging (Radiology) services required under IPHS was not available in any of the test checked DHs/ CHCs. Stress test and ECHO facility was not available in five out of seven test checked DHs. In GMCHs, MRI services was not available in three out of five GMCHs. Ultra Sonography facility was available in only one out of 14 test checked CHCs. Full range of essential pathological investigations as per IPHS norms was not available in any of the test checked healthcare institutions (GMCH/ DHs/ CHCs).

Number of Advance Life Support (ALS) ambulances were insufficient in 15 districts as only 30 ALS vehicles were deployed under 108 *Sanjeevni Express* against the requirement of 52, as of March 2022. In 33.99 *per cent* cases, the response time of 108 ambulances was more than 30 minutes whereas in 57,398 cases (8.59 *per cent*) ambulance reached patients after one hour of receiving their calls. In nine districts response time was more than 30 minutes.

Dietary services in Healthcare Institutions were marred by inadequate facilities like lack of dedicated kitchens, dieticians and food safety registration certificates. Blood bank/storage facility was available in all test checked DHs/GMCHs but license to operate blood bank had expired in DH Baikunthpur (Korea). Laundry services were available in all test checked DHs. In three test checked CHCs records of linen services were not maintained. In two test checked GMCHs, linen were not changed every day and quality of bed linen was not checked on daily basis in any of the test checked GMCHs except GMCH Raipur.

All test checked DHs and GMCHs had 24x7 mortuary facility but availability of facility for pathological postmortem were not available in four DHs and one GMCH. System to provide identification tag/wrist band for each stored dead body were not available in two DHs and three GMCHs.

Biological testing/ physical testing of water samples were not carried out in nine healthcare institutions out of 26 test checked DHs/ CHCs/ GMCHs. Uninterrupted stabilised power supply was not available in CHC Dondilohara and PHC Chintagupha out of test checked 14 CHCs and 14 PHCs.

Citizen's charter was not displayed in nine out of 27 healthcare institutions (DHs/CHCs/GMCHs/DKSPGI). NOC / fire safety license was not obtained by 39 out of 41 HIs (DHs/CHCs/PHCs/GMCHs/DKSPGI). Healthcare Institutions also lacked smoke detection systems (36), fire hydrants (36) and

signage (31). Hospital Infection Control Committee was not formed in 30 out of 41 healthcare Institutions.

Patient satisfaction survey was not conducted in three GMCHs, in three CHCs and in two PHCs out of test checked five GMCHs, seven DHs, 14 CHCs and 14 PHCs during 2016-22. Audit conducted survey of 450 patients and non-availability of neat and clean toilet facilities, adequate seating arrangements and non-availability of prescribed medicines was expressed by 38, 14 and 18 *per cent* patients respectively.

Recommendations

The GoCG may:

7. *Ensure availability of all OPD/ IPD services in HIs for quality patient care as per regulatory norms.*
8. *Take initiatives to ensure availability of all pathological and imaging facilities such as USG, CT scan and X-ray machines in all HIs for early and proper diagnosis of diseases*
9. *Improve dietary services in healthcare institutions by providing dedicated kitchens, dieticians, regular quality checks, registration certificates.*
10. *Install fire safety systems comprising fire alarm/smoke detectors etc., in all healthcare institutions on a priority basis.*
11. *Consider to form Hospital Infection Control Committees in CHCs and PHCs and address deficiencies w.r.t Citizen's Charter and entitlements, grievance redressal mechanism and patient feedback in healthcare institutions.*