Chapter-3
Healthcare Services

Chapter-3: Healthcare Services

Services that a health institution is expected to provide can be grouped as Essential (Minimum Assured Services) and Desirable (which we should aspire to achieve). The services include Out-Patient Department (OPD), Indoor and Emergency Services. Audit findings related to OPD services have been described in the succeeding paragraphs.

3.1 OPD Services

3.1.1 Availability of OPD services in GMCs/DHs/SDHs

As per IPHS norms, the OPD services like ENT, General Medicine, Paediatrics, General Surgery, Ophthalmology, Dental, Obstetrics and Gynaecology, Orthopaedic are essential for DHs and SDHs. Psychiatry is essential for DHs while it is desirable for SDHs. Dermatology & Venereology is desirable for both DHs and SDH.

As per minimum standards requirements for Medical College (NMC/MCI), every Medical College should also have all the above mentioned departments.

Details of availability/non-availability of OPD services in test checked Government Medical Colleges (GMCs), DHs and SDHs are as given below in **Table-3.1**:

Table-3.1: Availability of OPD services in test checked GMCs/DHs/SDHs (As of January 2022)

Speciality Services (OPD)	Dehradun				Nainital		
	GMC, Dehradun	DH, Dehradun	SDH, Premnagar	SDH, Rishikesh	GMC, Haldwani	DH, Nainital	SDH, Haldwani
ENT	A	A	A	NA	A	A	A
General Medicine	A	A	A	A	A	A	A
Paediatrics	A	A	A	A	A	A	A
General Surgery	A	A	A	A	A	A	A
Ophthalmology	A	A	A	A	A	A	A
Dental	A	A	A	A	A	A	A
Obstetrics	A	A	A	A	A	A*	A**
Gynaecology	A	A	A	A	A	A*	A**
Psychiatry	A	A	NA	NA	A	A	A
Orthopaedic	A	A	A	A	A	A	A
Dermatology & venereology	A	A	NA	A	A	A	A

Source: Information furnished by test checked GMCs/DHs/SDHs.

****Available in District Female hospital Nainital **Available in Government Female Hospital, Haldwani.***

Colour code — ***Available*** / ***Not available***

It is evident from the above table that all the above OPD services are available in the test checked GMCs and DHs. However, ENT OPD service was not available in SDH, Rishikesh while Dermatology & venereology was not available in SDH, Prem Nagar. Also, Psychiatry service was not available in SDH, Prem Nagar and SDH, Rishikesh.

On reverification of specialist doctors posted in various DHs of the state, it revealed that certain OPD services were not being provided due to unavailability/ postings of the specialist doctors (***Appendix-3.1)***. Details of such OPD services which were not available in following DHs are as under:

- ENT services in DH, Udham Singh Nagar, and Dental Services in DH, Chamoli & DH, Uttarkashi are not available.
- Psychiatry services are not available in any of the DHs except DH, Almora, DH, Nainital and DH, Uttarkashi.
- Dermatology &Venereology services are not available in any of the DHs except DH, Champawat, DH, Dehradun, and DH, Nainital.

3.1.2 Availability of OPD services in CHCs

As per IPHS norms, General Medicine, Surgery, Obstetrics & Gynaecology, Paediatrics, Dental and AYUSH Services, Emergency Services, Laboratory Services, and National Health Programmes should be available in CHCs.

The availability of OPD services in the test checked CHCs is given below:

Table-3.2: Availability of OPD services in CHCs

Sl. No.	Name of Health Facility	General Medicine	Surgery	Obstetrics & Gynaecology	Paediatrics	Dental	AYUSH	Emergency	Laboratory
1	CHC, Chakrata	A	A	A	NA	A	NA	A	A
2	CHC, Doiwala	A	A	A	A	A	A	A	A
3	CHC, Raipur	A	A	A	A	A	NA	A	A
4	CHC, Sahaspur	A	NA	A	NA	A	NA	A	A
5	CHC, Sahiya	A	NA	NA	NA	A	A	A	A
6	CHC, Betalghat	A	NA	A	NA	NA	A	A	A
7	CHC, Bhimtal	A	NA	A	NA	A	A	A	A
8	CHC, Kotabag	NA	NA	NA	NA	A	A	A	A
9	CHC, Ramgarh	A	NA	A	NA	A	A	A	A

Source: Information furnished by test checked CHCs.

	Available	*Not available*
Colour code		

Out of nine CHCs, six and seven CHCs had not surgery and paediatrics services respectively, General medicine and Obsterics & Gynaecology services were not available in CHC, Kotabag due to non-posting of specialist doctors. Further, dental service was not available in CHC, Betalghat whereas AYUSH services were not available in CHC, Chakrata, CHC, Raipur and CHC, Sahaspur.

3.1.3 Availability of OPD services in PHCs

As per IPHS norms, six hours of OPD services out of which four hours in the morning and two hours in the afternoon for six days in a week is required. No specific OPD services are prescribed in IPHS for PHCs. OPD services[1] were available in all the test checked PHCs. However, during physical inspection of PHC, Simlakha and PHC, Jolikot in Nainital

[1] In Summer 8 a.m. to 2 p.m. and in Winter 9 a.m. to 3 p.m.

district, it was found that doctors posted at PHC, Simlakha had proceeded for PG course while Doctor at PHC, Jolikot was attached to the CMO camp office.

3.1.4 Non-availability of infrastructure for AYUSH services in CHCs and PHCs

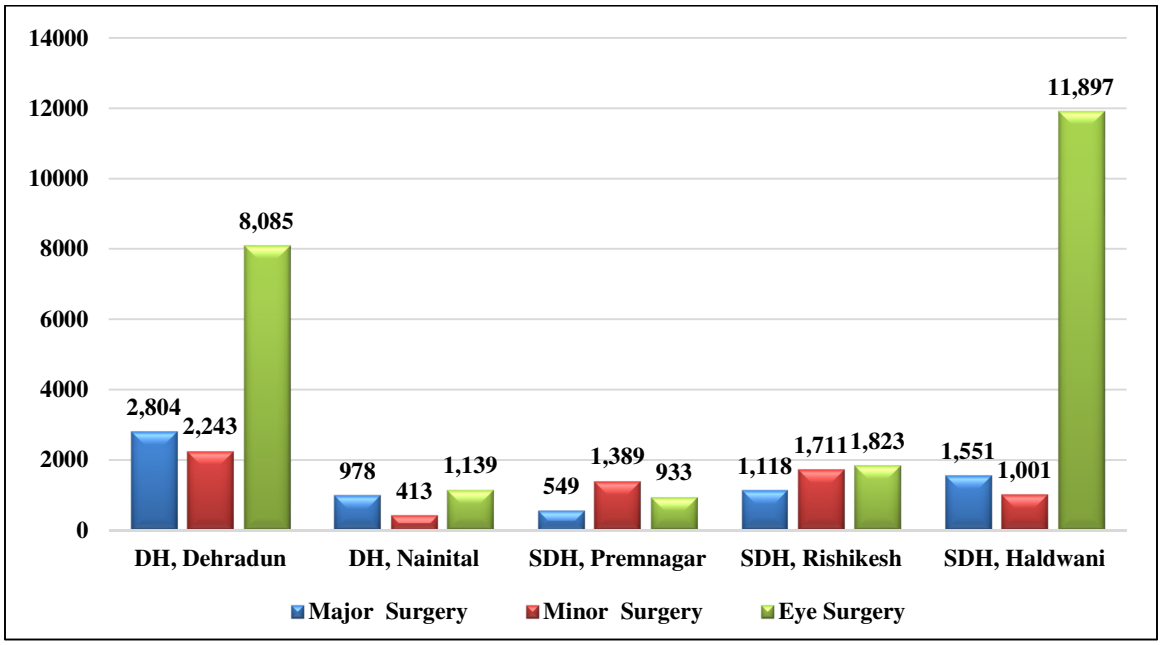
As per IPHS norms, CHCs and PHCs should have AYUSH doctor, necessary infrastructure such as consultation room for AYUSH Doctor and AYUSH Drug dispensing area should be made available.

AYUSH services were not available in three[2] out of nine test checked CHCs and two[3] out of eight test checked PHCs.

3.1.5 Availability of Major, Minor & Eye surgeries

As per NHM assessor's guidebook, 2013, surgeries related to General surgery, Obstetrics & Gynaecology, Paediatrics, Ophtalmology, ENT services and Orthopaedics should be available at District Hospital. In CHCs, surgeries related to General surgery services, Obstetrics and Gynaecology services and accident & emergency services should be available.

Chart-3.1: Major, Minor and Eye surgeries performed in DHs/SDHs during 2016-22



Source: Information furnished by selected DHs/SDHs.

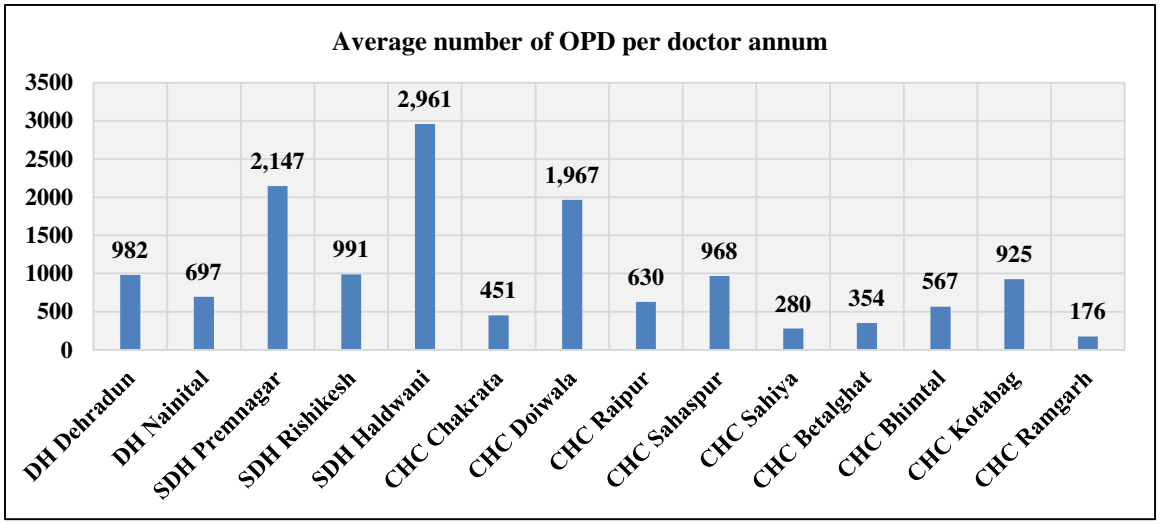
Major & Minor General Surgery and Eye surgeries were available in all selected DHs/SDHs.

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

The average OPD cases per doctor in test checked DHs/SDHs/CHCs is given in the chart below:

[2] CHC, Chakrata; CHC, Raipur and CHC, Sahaspur.
[3] PHC, Simlakha and PHC, Talla Ramgarh.

Chart-3.2: Average OPD cases per doctor per annum during 2016-22



Source: Information furnished by test checked HCFs.

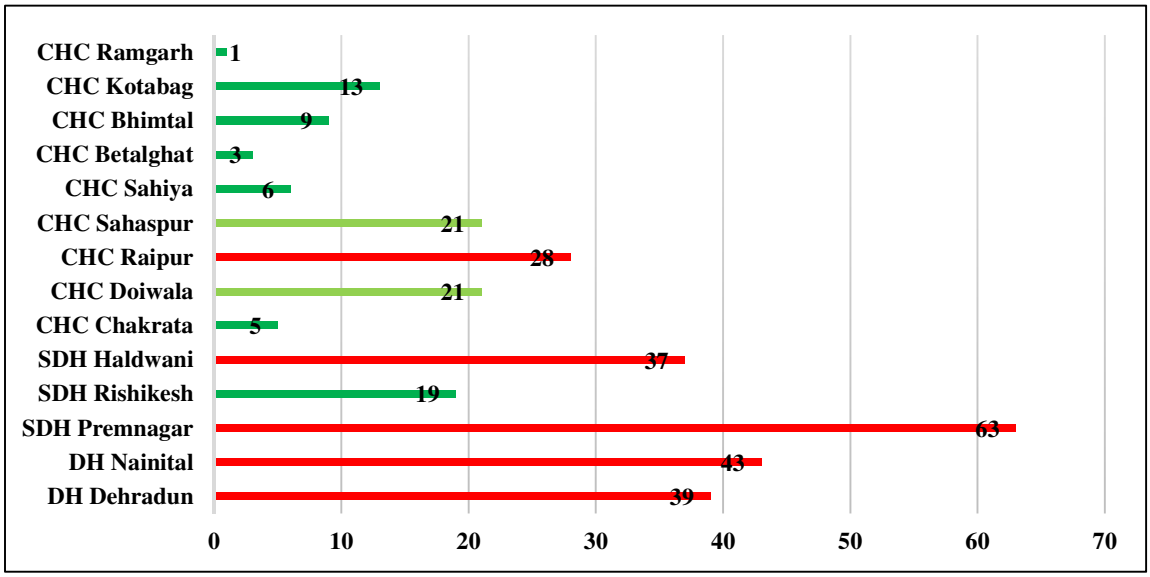
As can be seen in the chart above, the average OPD cases per doctor per annum[4] was highest (2,961) in SDH, Haldwani and lowest (176) in CHC, Ramgarh.

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

As per NHM assessor's guidebook for quality assurance in HCFs, number of counters should be such that there are 12-20 patients/ hour per counter. A total of 310 working days and six hours per day OPD have been considered during 2021-22.

Average number of patients per hour per counter in test checked DHs, SDHs and CHCs during 2021-22 is depicted in the given chart:

Chart-3.3: Average number of patients per hour per counter during 2021-22



Source: Information furnished by test checked HCFs.

[4] Total no. of OPD during the period/Total no. of clinical doctors available* Total Period.

As can be seen from above, DH, Dehradun, DH, Nainital, SDH, Haldwani, SDH, Prem Nagar and CHC, Raipur had more average number of patients per hour per counter than the norms during 2021-22. Thus, the HCFs having higher patient load against the norms should increase the number of counters.

3.1.8 Availability of seating arrangement, toilet facility and patient calling system (Digitalisation)

As per IPHS norms, a waiting area with adequate seating arrangement shall be provided. Main entrance, general waiting and subsidiary waiting spaces are required adjacent to each consultation and treatment room in all the clinics. Florescent Fire Exit plan shall be displayed at each floor, safety, hazard and caution signs should be displayed prominently at relevant places. HCFs should have patient calling system with electronic display. To avoid overcrowding, hospital shall have patient calling systems (Manual/Digital). The status of provision of the above features in test checked DHs/SDHs/CHCs/PHCs is given below:

Table-3.3: Availability of seating arrangement, toilet facility, etc

Name of service	DHs	SDHs	CHCs	PHCs
Total test Checked	**02**	**03**	**09**	**08**
Display of florescent fire exit sign	2	2	5	0
Enquiry/ May I Help Desk with staff fluent in local language	2	3	7	5
Directional signage for Emergency, Departments and Utilities	2	3	9	3
Display of safety, hazard and caution signs were displayed prominently at relevant places	2	3	6	4
Important contacts like higher medical centres, blood banks, and fire department, police and ambulance services were displayed	2	2	5	4
Mandatory information (under RTI Act, PNDT Act, etc.) was displayed	2	3	7	2
Adequate seating facility	2	3	9	7
Patient Calling System (Digitalisation)	2	1	3	1
Separate toilets for male and female	2	3	8	6

Source: Joint Physical verification of test checked HCFs.

Colour code ***Satisfactory*** ***Average*** ***Poor***

Audit noticed that:

- No display of florescent fire exit sign was available in all test checked PHCs.
- Hazard and caution signs to be displayed prominently at relevant places were not available in four out of eight test checked PHCs.
- Patient calling system (digitalization) was available in three out of nine CHCs and in one out of eight test checked PHCs. It was also not available in SDH, Premnagar and SDH, Haldwani.
- The mandatory information (under RTI Act, PNDT Act, etc.) was not displayed in CHC, Sahiaya, CHC, Betalghat and six[5] PHCs.

[5] PHC, Bhagwantpur, PHC, Thano, PHC, Similkha, PHC, Chakalua, PHC, Jolikot and PHC, Talla Ramgarh.

3.1.9 Patient satisfaction survey

During audit, joint physical survey was conducted and 170 patients[6] (for OPD services) were surveyed in selected HCFs (GMCs/DHs/SDHs/CHCs). The results are summarised below:

i. 59 *per cent* patients said that Enquiry/May I Help desk was not available with competent staff.

ii. 30 *per cent* patients stated that OPD hours for doctors was not displayed while 32 *per cent* patients stated that rate list was not displayed.

iii. 10 *per cent* patient said that number of registration counters were not adequate in HCFs.

iv. 45 *per cent* patients informed that patient calling system was not satisfactory.

v. 43 *per cent* patients said that all prescribed medicines were not made available by hospital pharmacy.

vi. 56 *per cent* patient stated that complaint box was not available in test checked HCFs.

The survey indicates that patient calling system, information display and availability of tests needs improvement across the hospitals.

3.2 IPD Services

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

3.2.1 Availability of IPD wards in DHs

As per IPHS norms for District Hospitals (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 test checked DHs is given below:

Table-3.4: Availability of IPD wards and beds

Sr. No.	Name of Ward	Requirement of Beds in DH as per IPHS	DH, Dehradun	DH, Nainital
1	General Medicine	30	23	10
2	General Surgery	30	14	14
3	Ophthalmology	5	20	07
4	Accident & trauma	10	18	NA
5	Paediatrics	10	12	10
6	Others		124	13

Source: Data furnished by test checked HCFs.

Colour code ***Satisfactory*** ***Average*** ***Poor & Non availability***

[6] 20 patients per GMC;15 patients per DH; 10 patients per SDH and CHC; five patients per PHC.

As per IPHS norms, allocation of beds for different specialities may be done as per local needs. It was found that an inadequate number of beds were available for General Medicine and General Surgery in both test checked DHs. Further, Accident and Trauma beds were not available in DH, Nainital. Besides this, as per the information provided by the MH&FW Department, total availability of beds in all the 13 DHs is 2,082, out of which 609[7] beds were functional for Maternal and Childcare Services ***(Appendix-3.2)***.

Further, details related to IPD beds in test checked CHCs have been given in ***Appendix-3.2 (A)***.

3.2.2 Availability of Isolation wards

As per IPHS norms and NHM Assessor's guidelines, the clinics for infectious and communicable diseases should be located in isolation, preferably, in remote corner of the hospital, provided with independent access. An isolation room should be available in DHs, SDHs and CHCs. Ordinarily, negative air pressure isolation rooms are used as prevention rooms, while positive air pressure isolation rooms are used for protection. For patients who test positive for airborne illnesses, negative pressure isolation prevents contaminants from escaping from the room. Availability of Isolation rooms in test checked GMCs/DHs/SDHs is given below:

Table-3.5: Availability of positive and negative isolation rooms

Name of hospital	Positive isolation room	Negative isolation room
GMC, Dehradun	A	A
GMC, Haldwani	A	A
DH, Dehradun	A	A
DH, Nainital	A	A
SDH, Premnagar	NA	NA
SDH, Rishikesh	A	NA
SDH, Haldwani	NA	NA

Source: Information furnished by test checked GMCs/DHs/SDHs.
Colour code: Green colour/A= Available; Red colour/NA=Not available.

In three test checked SDHs, Positive isolation room was not available in two SDHs whereas Negative isolation was not available in any of the SDHs.

3.2.3 Availability of surgeries

As per NHM assessor's guidebook, 2013 and IPHS norms for DH/SDH surgeries related to General surgery, Obstetrics & Gynaecology, Paediatrics, Ophtalmology, ENT services and Orthopaedics should be available at District Hospital. Further, as per IPHS norms for CHCs, 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

[7] Maternal and Childcare-527, Special Newborn Care Unit (SNCU)-62, Newborn Stabilisation Unit (NBSU)-20.

emergencies like Intestinal Obstruction, Haemorrhage, etc. and do fracture reduction and putting splints/plaster cast.

Availability of specific surgery procedures in test checked HCFs is given below:

Table-3.6: Availability of Surgical Procedures in test checked HCFs

Name of HCFs	Name of procedure (as per IPHS)											
	Hernia	Hydrocele	Appendicitis	Haemorrhoids	Fistula	Intestinal Obstruction	Haemorrhage	Nasal packing	Tracheostomy	Foreign body removal	Fracture reduction	Putting splints/ plaster cast
DH, Dehradun	A	A	A	A	A	A	NA	A	A	A	A	A
DH, Nainital	A	A	A	A	A	A	A	A	NA	A	A	A
SDH, Premnagar	A	A	A	NA	NA	NA	NA	A	NA	NA	A	A
SDH, Rishikesh	A	A	A	A	A	A	A	NA	NA	NA	A	A
SDH, Haldwani	A	A	A	A	A	A	NA	A	A	A	A	A
CHC, Chakrata	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHC, Doiwala	NA	NA	NA	NA	NA	NA	NA	A	NA	NA	A	A
CHC, Raipur	A	A	A	A	A	NA	A	A	NA	NA	A	A
CHC, Sahaspur	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	A
CHC, Sahiya	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHC, Betalghat	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHC, Bhimtal	NA	NA	NA	NA	NA	NA	NA	A	NA	A	NA	A
CHC, Kotabag	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHC, Ramgarh	NA	NA	NA	NA	NA	NA	NA	A	NA	NA	A	A

Source: Information furnished by test checked HCFs.
Colour code: Green colour/A= Available; Red colour/NA=Not available.

As can be seen from the above table, out of 14 test checked HCFs no facility for surgery related to above mentioned procedures were available in four CHCs.

3.2.4 Surgery load per surgeon

Audit analysed surgeries conducted per surgeon available in DHs and SDHs and observed huge variations across hospitals during 2016-17 to 2021-22 is as given below:

Table-3.7: Average number of surgeries per surgeon

Name of HCFs	Year	General		ENT		Ortho		EYE	
		No. of surgeons	Avg. No. of surgeries	No. of surgeons	Avg. No. of surgeries	No. of surgeons	Avg. No. of surgeries	No. of surgeons	Avg. No. of surgeries
DH, Dehradun	2016-17	03	88	2	28	1	128	5	110
	2017-18	03	169	2	52	1	284	5	143
	2018-19	03	336	2	118	1	272	5	284
	2019-20	04	403	3	280	2	136	5	377
	2020-21	04	258	3	201	2	235	6	320
	2021-22	04	156	3	397	3	122	6	215
DH. Nainital	2016-17	02	INP	1	INP	1	INP	2	159
	2017-18	02	73	1	586	1	95	2	105
	2018-19	02	98	1	606	1	109	2	52
	2019-20	02	164	1	323	1	145	1	165
	2020-21	02	94	1	260	2	47	1	168
	2021-22	02	150	1	350	2	80	1	275
SDH, Premnagar	2016-17	1	254	1	0	1	10	1	166
	2017-18	1	197	1	0	1	46	1	156

Name of HCFs	Year	General		ENT		Ortho		EYE	
		No. of surgeons	Avg. No. of surgeries	No. of surgeons	Avg. No. of surgeries	No. of surgeons	Avg. No. of surgeries	No. of surgeons	Avg. No. of surgeries
	2018-19	1	350	1	0	0	0	1	171
	2019-20	1	456	1	0	1	10	1	196
	2020-21	1	217	1	0	1	55	1	138
	2021-22	1	464	1	0	1	51	1	106
SDH, Rishikesh	**2016-17**	1	66	0	0	1	17	1	336
	2017-18	1	168	0	0	1	25	1	281
	2018-19	1	344	0	0	1	25	1	287
	2019-20	1	349	0	0	1	54	1	410
	2020-21	1	63	0	0	1	95	1	209
	2021-22	1	128	0	0	1	103	1	300
SDH, Haldwani	**2016-17**	1	396	1	202	1	570	3	1117
	2017-18	1	311	1	73	1	462	3	648
	2018-19	1	348	1	88	1	437	3	622
	2019-20	1	356	1	233	1	322	3	619
	2020-21	1	592	1	74	1	525	3	363
	2021-22	2	275	1	124	2	202	3	597

Source: Data furnished by HCFs.
INP- Information not provided

	Good	*Moderate*	*No surgeries or very less*
Colour code			

As can be seen from the above table, number of surgeries as well as surgeries per surgeon [8] were maximum in SDH, Haldwani. No ENT surgeon was posted in SDH, Rishikesh during the period 2016-22.

3.2.5 Operation Theatre

Operation theatre (OT) is an essential service that is to be provided to the patients. IPHS for DH and SDH prescribe OT for elective major surgery; Emergency services; and Ophthalmology/ENT for district hospitals. As per guidelines/ assessors' guidebook for quality assurance for hospitals, 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. The availability of various elements of quality OT services are given in the **Table-3.8** below:

Table-3.8: Availability of OT services in test checked DHs/SDHs

Description	DH, Dehradun	SDH, Premnagar	SDH, Rishikesh	DH, Nainital	SDH, Haldwani
OT have convenient relationship with surgical ward, intensive care unit, radiology, pathology, blood bank and CSSD.	Yes	No	Yes	Yes	Yes
Access to facility is provided without any physical barrier & and friendly to people with disabilities.	Yes	Yes	Yes	Yes	No
OT have piped suction and medical gases, electric supply, heating, air-conditioning, ventilation.	Yes	Yes	Yes	Yes	Yes
Patient's records and clinical information is maintained.	Yes	Yes	Yes	Yes	Yes
Has defined and established grievance redressal system in place.	Yes	No	Yes	No	Yes

[8] Average surgeries per surgeon= Total no of surgeries performed during the year/No.of surgeons available during the year.

Description	DH, Dehradun	SDH, Premnagar	SDH, Rishikesh	DH, Nainital	SDH, Haldwani
Whether all equipment are covered under AMC including preventive maintenance?	Yes	No	Yes	No	No
Whether the facility has established procedure for internal and external calibration of measuring Equipment?	Yes	No	Yes	No	No

Source: Information furnished by test checked DHs/SDHs.
Colour code: Green colour/Yes= Available; Red colour//No=Not available.

From above, it was observed that:

Convenient relationship with surgical ward, intensive care unit, radiology, pathology, blood bank and CSSD did not exist in SDH, Premnagar. Disabled friendly access and maintenance of patient's records and clinical information was being ensured by the all test checked hospitals except SDH, Haldwani. OT had piped suction and medical gases, electric supply, heating, air-conditioning and ventilation in all the test checked hospitals. The procedure for internal and external calibration of measuring equipment was not available in all the test checked hospitals except SDH, Rishikesh and DH, Dehradun.

3.2.6 Evaluation of IPD services through Outcome Indicators

The IPD services can be evaluated through Outcome Indicators viz. Bed Occupancy Rate (BOR), Bed Turnover Rate (BTR), Discharge Rate (DR), Referral Out Rate (ROR), Average Length of Stay (ALoS), Left Against Medical Advice (LAMA) Rate and Absconding Rate. The performance of the IPD services through Outcome Indicators in test checked GMCs/DHs/SDHs is given in the **Table-3.9** below:

Table-3.9: Outcome indicators of IPD services

Name of District	Name of HCFs	Average Bed Occupancy Rate *(per cent)*	Average Bed Turnover rate (No. of Patient per bed in a year)	Discharge Rate *(per cent)*	Average Referral out rate *(per cent)*	Average length of stay (No. of Days)	LAMA rate *(per cent)*	Absconding rate *(per cent)*
Dehradun	GMC, Dehradun	98.83	68.22	71.65	3.13	5.35	16.67	2.74
	DH, Dehradun	57.12	90.46	84.64	8.11	2.32	6.64	0.10
	SDH, Rishikesh,	34.15	66.59	75.90	7.72	1.91	15.29	0.52
	SDH, Premnagar	**Data Not maintained at SDH Level**						
Nainital	GMC, Haldwani,	59.41	NA	88.30	NA	NA	6.39	0.58
	DH, Nainital	59.41	55.57	90.46	4.67	2.65	9.48	0.26
	SDH, Haldwani,	55.25	59.77	80.63	7.57	3.38	10.41	1.38

Source: Information furnished by test checked Healthcare Facilities.

It could be observed that:

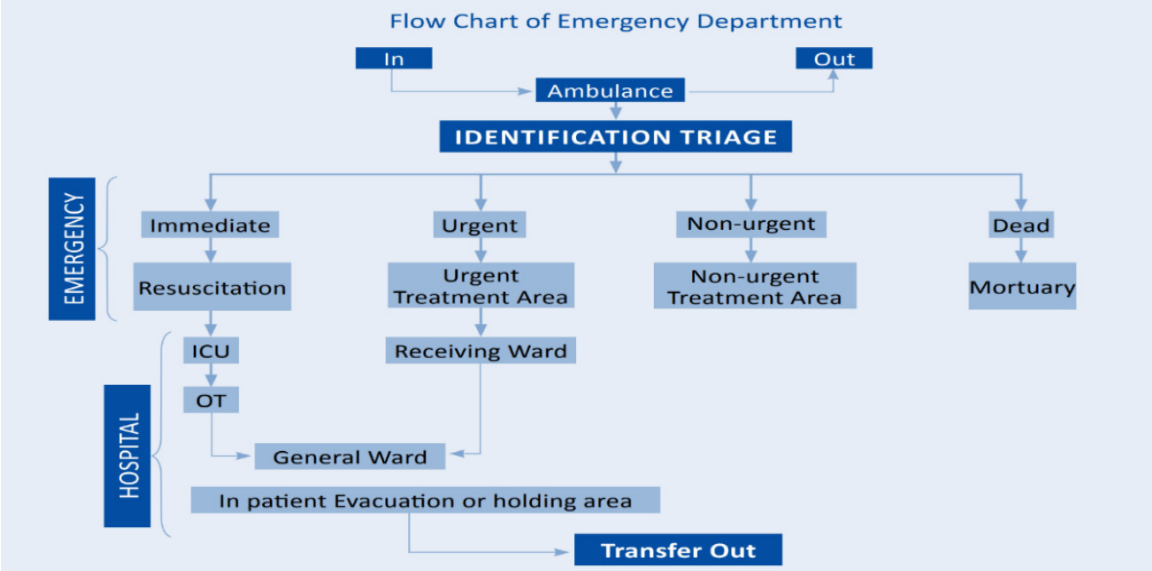
- As per IPHS guidelines for DH, it is expected that the hospital Bed Occupancy rate should be atleast 80 per cent. BOR of all of the test checked HCFs was well below 80 *per cent* except GMC, Dehradun. Low BOR of HCFs (except GMC, Dehradun) is a sign of poor productivity.

- Average Bed Turnover rate[9] of GMC, Dehradun, SDH, Rishikesh, DH, Nainital and SDH, Haldwani was quite low as compared to DH, Dehradun which shows low utilisation of IPD beds of the HCFs.
- Average Discharge rate of[10] GMC, Dehradun, DH, Dehradun, SDH, Rishikesh, and SDH, Haldwani remained low as compared to DH, Nainital which shows that rest of the HCFs are not providing health care facilities to the patients in a desired manner.
- Average LAMA rate of GMC, Dehradun, SDH, Rishikesh and SDH, Haldwani was substantially high as compared to DH, Dehradun, GMC, Haldwani and DH, Nainital which indicates that service quality of these HCFs remained lacking.
- Average Absconding rate in GMC, Dehradun and SDH, Haldwani was high as compared to DH, Dehradun, SDH, Rishikesh, GMC, Haldwani and DH, Nainital which shows that proper security services were not provided as per norms.
- Average Bed Turnover Rate, Referral Out Rate and Average Length of Stay was not maintained by the GMC, Haldwani.
- No data was maintained for outcome indicators by SDH, Premnagar.

3.3 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 given below:

Chart-3.4: Flow chart of Emergency Department



Source: IPHS Guidelines for DH.

[9] Average bed turnover rate=Total no of discharges from IPD/Total no of beds in IPD.
[10] Average Discharge rate= Total no of discharges *100/Total no of admissions.

3.3.1 Availability of Emergency Services

As per IPHS norms for DHs/SDHs, 24x7 operational emergency with dedicated emergency room shall be available with adequate manpower. Emergency shall have dedicated triage, resuscitation and observation area.

Emergency should have mobile X-ray/laboratory, side labs/plaster room/and minor OT facilities. Besides, separate emergency beds may be provided. Sufficient separate waiting areas and public amenities for patients and relatives should be located in such a way that it does not disturb functioning of emergency services.

One Emergency OT should be available. Separate emergency OT for Obstetrics, Minor OT by side of Gynaecology should be available. Further, procedures under Emergency Surgeries required for Assault injuries/Bowel injuries/Head injuries/Stab injuries/Multiple injuries/Perforation/ Intestinal obstruction should be available. Facility of emergency laboratory services should be available.

As per NHM Assessors' guidebook 2013, the hospital should provide Orthopaedics Services by ensuring availability of Emergency Orthopaedic procedures. Further, there should be an established procedure for admission of patients. Emergency department should be aware of admission criteria to critical care units like ICU, SNCU, Burn cases. Emergency protocols should be defined and implemented for head injury, snake bite, poisoning, drawing etc. The facility should have disaster management plan in place. The status of emergency services in test checked GMCs/DHs/SDHs is given in the **Table-3.10** below:

Table-3.10: Availability of emergency services in test checked GMCs/DHs/SDHs

Particulars	Dehradun				Nainital	
	GMC, Dehradun	DH, Dehradun	SDH, Premnagar	SDH, Rishikesh	GMC, Haldwani	SDH, Haldwani
Availability and functioning of Emergency OT	Yes	Yes	No	Yes	Yes	No
Availability of infrastructure hospital Emergency ward	Yes	Yes	No	Yes	Yes	Yes
Availability of infrastructure relating to trauma ward such as Bed capacity, machinery & equipment etc.	Yes	Yes	No	Yes	Yes	No
Availability of triage procedure to sort patients	Yes	Yes	No	No	Yes	Yes
Availability of surgical facilities for Emergency Appendectomy	Yes	Yes	No	Yes	Yes	Yes
Availability to diagnose and to treat for Hypoglycemia, Ketosis and Coma	Yes	Yes	No	No	Yes	Yes
Availability of assault injuries/Bowel injuries/Head injuries/Stab injuries /Multiple injuries/Perforation/Intestinal obstruction	Yes	Yes	No	No	Yes	No
Availability of emergency laboratory services	Yes	Yes	No	Yes	Yes	Yes

Availability of blood bank in close proximity to emergency department	Yes	No	No	Yes	Yes	Yes
Availability of mobile X-ray/ laboratory, side labs/plaster room in Accident and Emergency Service.	Yes	Yes	(Only plaster room available)	No	Yes	Yes
Availability of Emergency Operation Theatre for Maternity, Orthopaedic Emergency, Burns and plastic and Neurosurgery cases round the clock	Yes	Yes	No	No	Yes	No
Availability of facilities for Accidents and emergency services including treatment for poisoning and Trauma Care	Yes	Yes	Ante-Poisoning services available, Trauma care not available	Yes	Yes	Yes
Availability of sufficient separate waiting areas and public amenities in emergency ward for patients and relatives.	Yes	Yes	Yes	Yes	Yes	Yes
Availability of emergency protocols in emergency ward.	Yes	Yes	No	Yes	Yes	No
Availability of disaster management plan in emergency ward.	Yes	Yes	No	No	Yes	No

Source: Information furnished by test checked HCFs.

	Yes	*Partially*	*Not available*
Colour code			

Emergency Operation theatre was not available in SDH, Premnagar and SDH, Haldwani. Also, emergency laborataory services were not available in SDH, Premnagar.

Apart from the above, the availability of emergency services in DHs of the state is given in ***Appendix-3.3***.

3.3.2 Availability of routine and emergency care in CHCs

As per IPHS norms for CHCs, CHCs should provide care of Routine and Emergency cases in medicine. Specific mention is made of handling of emergencies like Dengue Hemorrhagic Fever, Cerebral Malaria and others like Dog & snake bite cases, Poisonings, Congestive Heart Failure, Left Ventricular Failure, Pneumonias, meningoencephalitis, acute respiratory conditions, status epilepticus, Burns, Shock, Acute dehydration etc. Further, essential and Emergency Obstetric Care including surgical interventions like Caesarean Sections and other medical interventions should be available. The availability of care of Routine and Emergency cases in Surgery in CHCs is given below:

Table-3.11: Availability of routine and emergency services in CHCs

Name of Routine and Emergency care service	Dehradun	Nainital
	Test checked CHCs (05)	Test checked CHCs (04)
Dengue Haemorrhagic Fever	3	1
Cerebral Malaria	2	0
Dog & snake bite cases	5	4
Poisonings	5	4
Congestive Heart Failure	1	0
Left Ventricular Failure	1	0
Pneumonia	5	3
Meningoencephalitis	0	0
Acute respiratory conditions	5	3

Name of Routine and Emergency care service	Dehradun	Nainital
	Test checked CHCs (05)	Test checked CHCs (04)
Status Epilepticus	2	2
Burns	5	2
Shock	3	1
Acute dehydration	5	4
Obstetric Care including surgical interventions like Caesarean Sections and other medical interventions	2	0

Source: Information furnished by test checked CHCs.

Colour code: Green colour depicts performance by good number of CHCs and red colour depicts performance by less number or nil number of CHCs.

It was observed that:

- Routine and Emergency care services for Dog & snake bite, Poisonings, acute dehydration were available in all the test checked CHCs and services for Acute respiratory was available in all test checked CHCs except CHC, Betalghat.
- Obstetric Care including surgical interventions like Caesarean Sections and other medical interventions was not available in any of the test checked CHCs except in CHC, Raipur and CHC, Sahaspur.
- Services related to treatment of Dengue Haemorrhagic Fever was available in four[11] out of nine test checked CHCs.
- Only two out of nine CHCs had routine and emergency care service for Cerebral Malaria.
- Only CHC, Raipur had routine and emergency care service for Congestive Heart Failure and Left Ventricular Failure.

3.3.3 Non availability of Intensive Care Unit

As per IPHS norms for District Hospitals, in ICU, critically ill patients requiring highly skilled lifesaving medical aid and nursing care are concentrated. These should include major surgical and medical cases, head injuries, severe haemorrhage, acute coronary occlusion, kidney, and respiratory catastrophe, poisoning etc. It should be the ultimate medical care the hospital can provide with highly specialised staff and equipment. The number of patients requiring intensive care may be about 5 to 10 *per cent* of total medical and surgical patients in a hospital. The unit shall not have less than four beds not more than 12 beds. Number of beds may be restricted to five *per cent* of the total bed strength initially but should be expanded to 10 *per cent* gradually. Out of these, they can be equally divided among ICU and High Dependency Wards (HDU). As per NHM Assessors' guidelines, the hospital should also provide intensive care service as part of curative services. The ICU facilities are desirable in SDH.

Availability of ICU services in test checked GMCs/DHs/SDHs are given in **Table-3.12** below:

[11] CHC, Doiwala, CHC, Raipur, CHC, Sahaspur and CHC, Kotabag.

Table-3.12: Availability of ICU services in test checked GMCs/DHs/SDHs

Particulars	Availability in						
	GMC		DH		SDH		
	Dehradun	Haldwani	Dehradun	Nainital	Premnagar	Rishikesh	Haldwani
Availability of various types of ICU services as prescribed by national standards	Yes	Yes	No (only Medicine ICU)	Yes	**ICU facility not available**	**ICU facility is available but not functional due to lack of specialized mampower**	**ICU facility is available but not functional due to lack of specialized mampower**
Functional in-patient beds in ICU	Yes	Yes	Yes	Yes			
Percentage of patients admitted in ICU who were monitored for fluid/electrolyte charting	100	100	100	100			
Percentage of patients admitted in ICU who were monitored for intake and output charting	100	100	100	100			
Percentage of patients admitted in ICU who were monitored for cardiac care monitoring	40	100	100	100			
Availability of ICU ventilators	Yes	Yes	Yes	Yes			
Facilities for curative services in ICU	Yes	Yes	Yes	Yes			
Facilities for diagnostic services in ICU	Yes	Yes	Yes	Yes			
User charges displayed in local and simple language and communicated to patients effectively	Yes	No	Yes	Yes			
Availability of adequate space and waiting area for ICU as per requirement	Yes	Yes	Yes	No			
Nutritional assessment of patient done was as required and directed by doctor	Yes	Yes	Yes	Yes			

Source: Information furnished by test checked GMCs/DHs/SDHs.

3.3.4 Emergency cases referred to other hospitals

Details of emergency cases referred to other hospitals from DHs/SDHs is given below:

Table-3.13: Emergency cases referred to other hospitals from test checked DHs/SDHs

(in per cent)

Year	DH		SDH		
	Dehradun	Nainital	Premnagar	Rishikesh	Haldwani
2016-17	0.51	21.93	1.80	8.64	4.52
2017-18	0.51	35.21	3.13	3.31	2.70
2018-19	0.44	70.82	11.76	1.17	2.09
2019-20	0.50	62.46	4.70	11.67	1.19
2020-21	0.78	22.35	5.37	3.15	1.94
2021-22	0.99	66.30	7.89	2.34	4.89

Source: Information furnished by test checked DHs/SDHs.

As can be seen from the above table that referral rate in all years was higher in DH, Nainital in comparison to other test checked HCFs for emergency cases.

3.4 Maternity services

Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) are important indicators of the quality of maternity services available. As per the Sample Registration System report by Registrar General of India, MMR for Uttarakhand was 103 during 2018-20, compared to 97 at National level. Further, as per National Family Health Survey-5, IMR was 39.1 for Uttarakhand, compared to 35.2 at National Level during the year 2019-21.

3.4.1 Achievement of required four Antenatal check-ups (ANC) and delivery of Iron folic Acids (IFA) tablets, Calcium tablets, Tetanus Toxoid to pregnant women

ANC involves general and abdominal examination and laboratory investigations to monitor pregnancies, management of complications, such as Reproductive Tract Infection (RTI)/Sexually Transmitted Infection (STI) and comprehensive abortion care. Antenatal Care and Skilled Attendance at Birth, 2010 Guidelines, stipulate that every pregnant woman should undergo general and abdominal examinations during each ANC visit.

Norms for provisioning of various maternal health services for different levels of hospitals and CHCs have been specified in Maternal and Neonatal Health Toolkit 2013 (MNH Toolkit), Guidelines for Antenatal Care and Skilled Attendance at Birth, 2010 and IPHS norms prescribed by the Government of India for delivery of quality maternal health services.

Ensure that every pregnant woman makes at least four visits for ANC, including the first visit/registration. It should be emphasised that this is only a minimum requirement and that more visits may be necessary, depending on the woman's condition and needs. Suggested schedule for antenatal visits is:

1st visit: Within 12 weeks—preferably as soon as pregnancy is suspected, for registration of pregnancy and first antenatal check-up, 2nd visit: between 14 and 26 weeks, 3rd visit: between 28 and 34 weeks, 4th visit: between 36 weeks and term.

Further, all pregnant women need to be given one tablet of Iron Folic Acid (IFA: 100 mg elemental iron and 0.5 mg folic acid) every day for at least 100 days, starting after the first trimester, at 14-16 weeks of gestation. IFA dose is given to prevent anaemia (prophylactic dose) and this dosage regimen is to be repeated for three months post-partum.

Further, as per IPHS immunization programme, Tetanus Toxoid (TT), TT-1 should be provided to early in pregnancy and TT-2 after 4 weeks of TT-1.

Percentage of pregnant women registered, and ANC, TT, and IFA tablets provided in the State of Uttarakhand as per NFHS report is given below:

Table-3.14: Indicators of Antenatal Care, TT administration and IFA tablets in the State

(in per cent)

Indicators	2015-16	2019-21
ANC received in the first trimester	53.5	68.8
Pregnant women received at least four ANC	30.9	61.8
TT administration	91.4	93.6
IFA (100 days)	24.9	46.6

Source: NFHS-4 & NFHS-5 survey report.

Note: Colour grading has been done on colour scale with Green colour depicting satisfactory performance, while Red colour depicting poor performance.

It is evident from the above table that:

- There is a progress in all indicators during the period 2016-17 to 2020-21.
- Only 68.8 *per cent* of pregnant women received ANC during their first trimester during 2019-21, while 61.8 *per cent* of pregnant women received four required ANC during their pregnancy period.

3.4.2 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 the State and in public health facilities as per NFHS reports is given below:

Table-3.15: Indicators of Institutional births and Home births by Skilled Health Personnel in the State

(In per cent)

Indicators	2015-16	2019-21
Institutional births	68.6	83.2
Institutional births in public health facility	43.8	53.3
Home births by Skilled health personnel	4.6	3.4

Source: NFHS-4 & NFHS-5 survey report.

Note: Colour grading has been done on colour scale with Green colour depicting satisfactory performance, while Red colour depicting poor performance.

Thus, institutional births have increased from 68.6 *per cent* during the period 2015-16 to 83.2 *per cent* during the period 2019-21. However, institutional births in public health facility increased from 43.8 during 2015-16 to 53.3 during the period 2019-21.

3.4.3 Labour room facilities in CHCs/PHCs

As per IPHS norms availability of labour room is essential in CHCs and PHCs. Availability of labour room facility in test checked CHCs/PHCs is given below:

Table-3.16: Availability of Labour Room in test checked CHCs/PHCs

Type of HCFs	Total Number of HCFs test checked	Availability of Labour Room in no. of HCFs
CHCs	09	08
PHCs	08	02

Source: Information furnished by test checked HCFs.

Note: Colour grading has been done on colour scale with Green colour depicting satisfactory performance, while Red colour depicting poor performance.

It is evident from the above table that Labour room was not available in CHC, Sahiya while out of eight test checked PHCs, labour room was available only in PHC, Jolikot and PHC, Tyuni.

3.4.4 Pathological investigations

ANC Guidelines 2010 prescribe conducting six[12] pathological investigations, depending upon the condition of pregnancy during ANC visits to identify pregnancy related complications. Availability of Pathological investigations for pregnant women in test checked HCFs is given below:

[12] 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).

Table-3.17: Availability of Pathological investigations for pregnant women in test checked HCFs

Name of test	Test checked DHs (02)	Test checked SDHs (03)	Test checked CHCs (09)
Blood group including Rh factor	02	03	09
Venereal disease research laboratory (VDRL)/Rapid Plasma Reagin (RPR)	02	03	09
HIV testing	02	03	09
Rapid Malaria test	02	03	09
Blood Sugar testing	02	03	09
Hepatitis B surface Antigen (HBsAg)	02	03	09

Source: Information furnished by test checked HCFs.

Audit observed that all pathological investigations related to pregnancy were conducted in all test checked DHs/SDHs/CHCs of two test checked districts.

3.4.5 Caesarean deliveries (C-Section)

Meternal & Newborn Health Toolkit designated all CHCs/SDHs/DHs as Centre for providing surgical (C-Section) services with the provision of specialised human resources (a gynecologist/obstetrician and anesthetist) and equipped operation theatre to provide Emergency Obstetric Care (EmOC) to pregnant women. The Janani Shishu Suraksha Karyakram (JSSK) entitles all pregnant women to C-Section services with a provision for free drugs, consumables, diagnostics, etc. The statement showing C-section deliveries as per NFHS-5 in state of Uttarakhand is given below:

Table-3.18: Status of Caesarean deliveries (C-Section) in the State

(In per cent)

Indicators	2015-16	2019-21
C-section deliveries	13.10	20.40
Private health facility C-section deliveries	36.40	43.30
Public health facility C-section deliveries	9.30	14.00

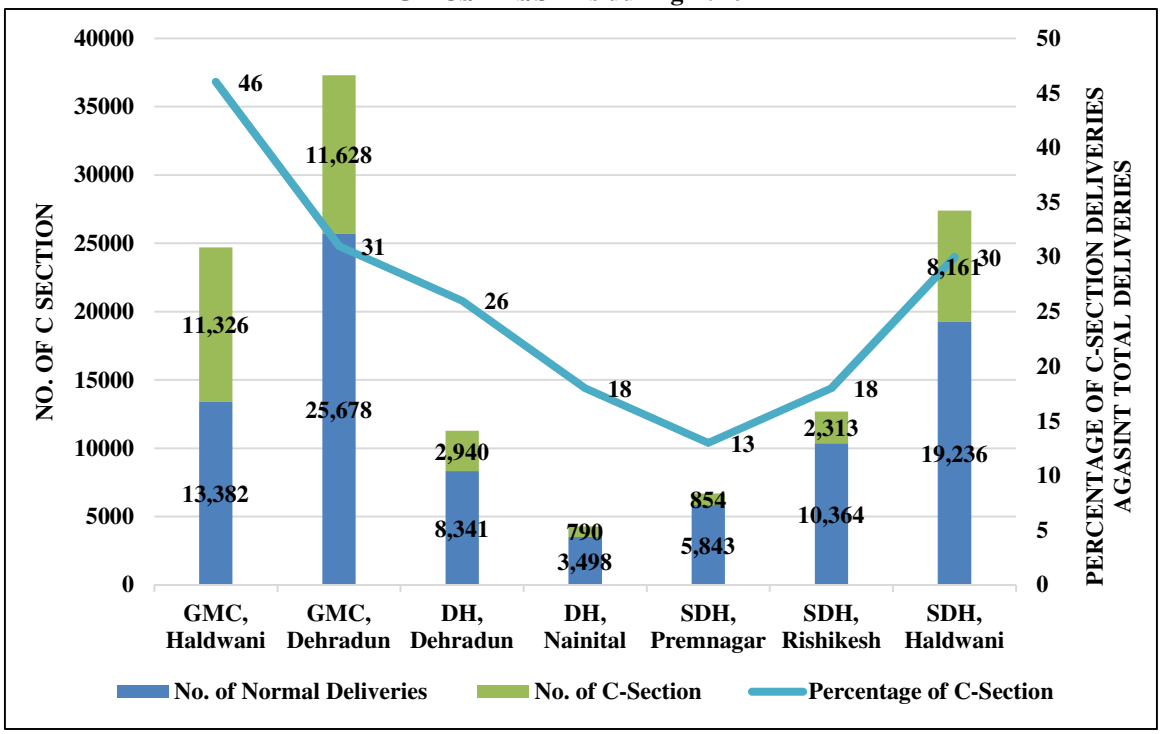
Source: NFHS-5 survey report.

Note: Colour grading has been done on colour scale with Green colour depicting satisfactory performance, while Red colour depicting poor performance.

It is evident from the above table that C-section deliveries have increased from 13.10 *per cent* in 2015-16 to 20.40 *per cent* in 2019-21 in the State of Uttarakhand. But the increase in rate of C-section deliveries was seen more at Private health facilities (43.30 *per cent*) as compared to public health facilities (14 *per cent*). Further, WHO also suggests that Caesarean sections are effective in saving maternal and infant lives, but only when they are required for medically indicated reasons. At population level, caesarean section rates higher than 10 *per cent* are not associated with reductions in maternal and newborn mortality rates.

C-section deliveries conducted in test checked two GMCs and five DHs and SDHs during 2016-17 to 2020-22 is given below:

Chart-3.5: Number and Percentage of C-Section deliveries conducted in test checked GMCs/DHs/SDHs during 2016-22



- It is evident that in all the above mentioned HCFs except SDH, Premnagar C-section deliveries conducted during the audit period were well above the WHO norms.
- No record of plotting of Partograph[13] was maintained by both the test checked GMCs and SDH, Haldwani for the period 2016 to 2022. The details of partographs plotted against the number of deliveries in test checked hospitals is given below:

Table-3.19: Number of Partographs plotted against the total deliveries in test checked GMCs/DHs/SDHs during 2016-22

Year	No. of Total Deliveries	No. of Partographs plotted
GMC, Dehradun	37,308	Information not provided.
GMC, Haldwani	24,708	Information not provided.
DH, Dehradun	11,281 (details not available for 2016-18)	6,014 (only during 2020-22)
DH, Nainital	4,288	505 (only in 2021-22)
SDH, Premnagar	6,697	494 (only in 2021-22)
SDH, Rishieskh	12,713	5,894 (after 2016-17)
SDH, Haldwani	27,397	Nil

Source: Information furnished by Test checked GMCs/DHs/SDHs.

3.4.6 Special Newborn Care Unit/ Newborn Stabilisation Unit

As per MNH Toolkit, 12 bedded Special Newborn Care Unit (SNCU) is essential to treat critically ill new-borns in a district hospital. During the test check of DHs and SDHs of both the selected Districts it was noticed that SNCU facility was not available in DH, Dehradun, and DH, Nainital. However, SNCU facility was provided in SDH, Rishikesh,

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

Dehradun and such facility was provided in SDH, Haldwani from the year 2019-20. SNCU facility was not available in SDH, Premnagar.

Total admission, Referral rate, LAMA rate, and neonatal rate in SDH, Rishikesh, Dehradun and SDH, Haldwani, Nainital is given below:

Tabl-3.20: Evaluation of SNCU services in test checked SDHs through Outcome Indicators

Year	SDH, Rishikesh, Dehradun				SDH, Haldwani, Nainital			
	Total Admission	Referral Out Rate	LAMA Rate	Neonatal Death Rate	Total Admission	Referral Out Rate	LAMA Rate	Neonatal Death Rate
2016-17	344	25.29	0.87	1.16	SNCU Facility was not available up to 2018-19			
2017-18	81	14.81	1.23	1.23				
2018-19	169	19.53	0	1.18				
2019-20	250	19.60	2.40	0.80	26	23.08	0	0
2020-21	176	21.00	2.84	0.00	131	16.79	2.29	0
Total	**1,020**	**20.05**	**1.47**	**0.87**	**157**	**19.94**	**1.15**	**0**

Source: Information furnished by test checked SDHs.

It is evident from the above table:

- In SDH, Rishikesh, Dehradun total number of 1,020 cases were admitted in SNCU during the period 2016-21. The rate of Referral cases ranged between 14.81 *per cent* and 25.29 *per cent*, LAMA rate ranged between zero *per cent* and 2.84 *per cent* and Neonatal death rate ranged between zero *per cent* and 1.23 *per cent* in SDH, Rishikesh, Dehradun during the year 2016-21.
- In SDH, Haldwani, Nainital total number of 157 cases were admitted in SNCU during the period 2019-21. SNCU facility was not available up to 2019 in SDH, Haldwani, Nainital. The rate of Referral cases ranged between 16.79 *per cent* and 23.08 *per cent*, LAMA rate ranged between zero *per cent* and 2.29 *per cent* and Neonatal death rate was zero *per cent* during the period 2019-21.

3.4.7 Maternity care outcomes

With a view to gauge the quality of maternity care provided by the test checked HCFs, Audit ascertained the outcomes in terms of still birth, referral, LAMA, Absconding rate, and neonatal deaths pertaining to 2016-21.

3.4.7.1 Still Births

The still birth rate is a key indicator of quality of care during pregnancy and childbirth, which is defined by WHO as: 'the extent to which health care services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care needs to be safe, effective, timely, efficient, equitable, and people centered. Still birth and/or intrauterine fetal death 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/ intrauterine death (IUD) in test checked two GMCs/two DHs/three SDHs is given below:

Table-3.21: Still birth rate in test checked GMCs/DHs/SDHs

(In per cent)

Year	GMC		DH		SDH		
	Dehradun	Haldwani	Dehradun	Nainital	Premnagar	Rishikesh	Haldwani
2016-17	3.44	5.03	Maternity Wing was not available	0.88	1.51	1.32	1.27
2017-18	2.88	3.98		1.11	0.67	1.06	0.52
2018-19	2.95	3.21	0.25	1.21	1.53	0.76	0.98
2019-20	2.74	3.03	0.78	1.18	0.82	1.05	0.78
2020-21	4.80	3.96	1.32	0.73	0.61	1.59	1.17

Source: Information furnished by test checked GMCs/DHs/SDHs.

Note: ***Colour grading has been done on colour scale with Green colour depicting satisfactory performance, Yellow colour depicting poor performance and Red colour depicting extremely poor performance.***

It was observed that:

- Still birth rate ranged between 2.74 *per cent* and 5.03 *per cent* in GMC, Dehradun and GMC, Haldwani during the year 2016-21.
- Still birth rate ranged between 0.25 *per cent* and 1.59 *per cent* in DHs and SDHs in these two districts during the year 2016-21.

3.4.7.2 Other indicators

Performance of the test checked DHs/SDHs on certain outcome indicators such as average Referral Out Rate (ROR), average Leave Against Medical Advice (LAMA) and average Absconding Rate (AR) for the period 2016-17 to 2020-21 given below:

Table-3.22: Average ROR/LAMA/AR in test checked DHs/SDHs

Name of Hospital	Total IPD in Maternity	Average ROR		Average LAMA		Average Absconding	
		Cases	Rate	Cases	Rate	Cases	Rate
DH, Dehradun	19,227	1,791	9.32	1,739	9.04	272	1.41
DH, Nainital	5,466	220	4.02	0	0	0	0
SDH, Premnagar	6,372	292	4.58	0	0	0	0
SDH, Rishikesh	12,270	1,353	11.03	196	1.60	0	0
SDH, Haldwani	29,477	6,379	21.64	0	0	0	0

Source: Information furnished by test checked DHs/SDHs.

Note: ***Colour grading has been done on colour scale with Green colour depicting satisfactory performance, Yellow colour depicting poor performance and Red colour depicting extremely poor performance.***

It is evident from the above table that the average ROR was lowest (4.02 *per cent*) in DH, Nainital and highest (21.64 *per cent*) in SDH, Haldwani, Nainital. There were no LAMA cases in DH, Nainital and SDH, Haldwani, SDH, Nainital but it was highest in (9.04 *per cent*) in DH, Dehradun. There was no absconding case in DH, Nainital, SDH, Rishikesh, SDH Premnagar and SDH, Haldwani while it was 1.41 *per cent* in DH Dehradun.

3.4.7.3 Death Review

As per IPHS norms, all the mortality that occurs in the hospital 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 taking place in a hospital. The Facility Based Neonatal & Post-Neonatal Death Review Forms (Forms 4a & 4b) should be filled for the child death (depending on the age category) by the DMO. The

Treating Medical Officer (Doctor under whose care the child was primarily admitted in the hospital) will assign the medical cause of death and add any other information that/he has regarding the social factors and delays associated with the death.

Details of maternal and neonatal death reviews conducted in test checked GMCs/DHs/ SDHs during 2016-22 are given below:

Table-3.23: Maternal Death Review/ Neonatal Death Review conducted in test checked GMCs/DHs/SDHs

Name of HCFs	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)*
GMC, Dehradun	61	61	0	345	66	81
GMC, Haldwani	184	70	62	1,524	934	39
DH, Dehradun	Nil			4	4	0
DH, Nainital	Nil			23	Nil	100
SDH Haldwani	Nil			Nil		
SDH, Premnagar	Nil			05	Nil	100
SDH, Rishikesh	2	2	0	16	16	0

Source: Information furnished by test checked GMCs/DHs/SDHs.

Note: Colour grading has been done on colour scale with Green colour depicting satisfactory performance, while Red colour depicting poor performance.

It is evident from the above table that:

- GMC, Dehradun and SDH, Rishikesh reviewed all maternal deaths but there was shortfall of 62 *per cent* in conducting review of maternal deaths in GMC, Haldwani during 2016-17 to 2021-22.
- No neonatal death review was conducted by DH, Nainital and SDH, Premnagar during the period 2016-22.

3.4.7.4 Monthly Satisfaction Survey and Form III register in Maternity Wing

As per NHM Assessors guidelines, the facility should establish a system for patient and employee satisfaction and the survey should be done on a monthly basis.

As per CAC training and service delivery guidelines, it is mandatory to fill in and record information for abortion cases, performed by any technique, in the Form III – Admission Register for case records.

Out of the test checked three SDHs and two DHs it was found that DH, Nainital and SDH, Premnagar had neither conducted monthly satisfaction survey in maternity wing nor maintained register in 'Form III Admission Register' (for case records for recording therein the details of the admissions of women for the termination of their pregnancies) during the period 2016-22.

3.5 Diagnostic services

Efficient and effective diagnostic services, both radiological and pathological, are amongst the most essential health care facilities for delivering quality treatment to the public based on accurate diagnosis. Many of the significant radiology and pathology tests were not performed in the test checked HCFs due to lack of required equipment and skilled manpower. Significant audit findings are discussed in the succeeding paragraphs:

3.5.1 Availability of Imaging (Radiology) Diagnostic Services in DHs of the state

Radiology, also called diagnostic imaging, is a series of different tests that take pictures or images of various parts of the body. Radiology is essential to the diagnosis of many diseases. Adequate availability of functional radiology equipment, skilled human resource and consumables are the key requirements for the delivery of quality radiology services.

IPHS 2012 prescribe radiology services for the district hospitals (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 in the DHs of the state is given below:

Table-3.24: Availability of Imaging (Radiology) services in the DHs (As on March 2023)

Name of Service	Name of Test/Diagnostic Service	Availability of Test/Diagnostic Service in all the DHs (A/NA)										
		Almora	Bageshwar	Chamoli	Champawat	Dehradun	Haridwar	Nainital	Pithoragarh	Rudraprayag	Udham Singh Nagar	Uttarkashi
Radiology	X-ray for chest, Skull, Spine, Abdomen, bones	A	A	A	A	A	A	A	A	A	A	A
	Dental X-ray	A	A	A	A	A	A	A	A	A	A	A
	Ultrasonography	A	A	A	A	A	A	A	A	A	A	A
	CT scan	NA	NA	NA	NA	A	NA	A	NA	NA	A	A
	Barium Swallow, Barium meal, Barium enema, IVP	A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	MMR (Chest)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	HSG	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cardiac Investigation	ECG	A	A	A	A	A	A	A	A	A	A	A
	Stress tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	A
	ECHO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENT	Audiometry	NA	NA	NA	NA	A	A	A	A	A	A	A
	Endoscopy for ENT	NA	NA	NA	A	A	NA	NA	NA	NA	NA	NA
Ophthal mology	Refraction by using Snellen's chart	A	A	A	A	A	A	A	A	A	A	A
	Retinoscopy	A	A	A	NA	A	A	A	A	A	A	A
	Ophthalmoscopy	A	A	A	A	A	A	A	A	A	A	A
Endoscopy	Laparoscopic (diagnostic)	NA	NA	NA	NA	A	NA	NA	NA	NA	A	NA
	Oesophagus	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Stomach	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Colonoscopy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Bronchoscopy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	A
	Arthroscopy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Hysteroscopy	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Respiratory	Pulmonary function tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Source: Information furnished by MH&FW Department. **A= Available, NA= Not Available.**

It was observed that:

i. Facility of CT Scan is not available in DH, Almora; DH, Bageshwar; DH, Chamoli; DH, Champawat; DH, Haridwar; DH, Pithoragarh; DH, Rudraprayag.

ii. Barium Swallow, Barium meal, Barium enema, IVP tests were not available in any of the District Hospitals except DH, Almora.

iii. MMR (Chest), HSG, Echo and Pulmonary function tests were not available in any of the DHs in the state.

iv. Facility for Stress tests was not available in any of the DHs except in DH Uttarkashi.

v. Audiometry was not available in DH, Almora; DH, Bageshwar; DH, Chamoli and DH, Champawat.

vi. Endoscopy for ENT was not available in any of the DHs except DH, Champawat and DH, Dehradun.

vii. Retinoscopy was available in all DHs except DH, Champawat.

viii. All the Endoscopy related tests were not available in any of the DHs except DH, Champawat and DH, Dehradun while Laparoscopic (diagnostic) tests were available only in DH, Dehradun and DH, Udham Singh Nagar and Bronchoscopy test was available only in DH, Uttarkashi.

3.5.2 Availability of Imaging (Radiology) Diagnostic Services in test checked GMCs

Though there are no norms for GMCs under IPHS 2012 which has prescribed standards from Sub centres to 500 bedded district hospitals. Accordingly, the status of Radiology related diagnostic services in the test checked GMCs is as follows:

Table-3.25: Availability of Imaging (Radiology) services in test checked GMCs

Sl. No.	Type of Diagnostic Services	Availability in GMC	
		Dehradun	Haldwani
1	**Cardiac[14](3)**	Yes	Yes
2	**Ophthalmology[15](3)**	Yes	Yes
3	**ENT[16](2)**	Yes	Yes
4	**Radiology[17](7)**	Yes	Yes
5	**Endoscopy[18](7)**	Yes	Yes
6	**Respiratory[19](1)**	Yes	Yes

Source: Information furnished by test checked GMCs.

[14] ECG, Stress Test, ECHO.
[15] Refraction by using Snellen's chart, Retinoscopy, Ophthalmoscopy.
[16] Audiometry, Endoscopy for ENT.
[17] X ray for chest, skull, spine, abdomen, bones; Barium swallow, Barium meal, Barium enema, IVP; MMR(Chest); HSG; Dental X-ray; ultrasonography; CT scan.
[18] Oesophagus, stomach, colonoscopy, Bronchoscopy, Arthroscopy, Laparoscopy (Diagnostic), Hysteroscopy.
[19] Pulmonary function test.

As can be seen from the above table all image services were available in test checked GMCs.

3.5.3 Availability of Imaging (Radiology) Diagnostic Services in test checked CHCs

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 a CHC. Availability of these services was checked in test checked CHCs during the course of audit and the data of availability of these services is given below:

Table-3.26: Availability of services related to Radiology and Cardiac investigation in test checked CHCs

Name of District	Name of CHC	Radiology			Cardiac Investigation
		X-ray for chest, skull, spine, abdomen, bones	Dental X-ray	Ultrasono-graphy (desirable)	ECG
Dehradun	CHC, Chakrata	Yes	Yes	No	Yes
	CHC, Doiwala	Yes	Yes	Yes	Yes
	CHC, Raipur	Yes	Yes	Yes	Yes
	CHC, Sahaspur	Yes	Yes	No	Yes
	CHC, Sahiya	Yes	Yes	No	Yes
Nainital	CHC, Betalghat	Yes	No	No	Yes
	CHC, Bhimtal	Yes	Yes	No	No
	CHC, Kotabag	Yes	Yes	Yes	Yes
	CHC, Ramgarh	Yes	Yes	No	Yes

Source: Information furnished by test checked CHCs.

It was observed that X-Ray service for Dental X-ray was not available in CHC, Betalghat whereas Ultrasonography (desirable) was available only three out of nine test checked CHCs. Further, ECG services was not available in one out of nine test checked CHCs.

3.6 Availability of services in HWCs

As per IPHS 2012 and Comprehensive Primary Health Care guidelines of the Ministry of Health and Family Welfare, GoI the availability of diagnostic services, essential medicines, the medicines which can be indented by MLHP, clinical materials, tools and equipment, linens, consumables and miscellaneous supplies, furniture and fixtures and lab diagnostic materials & reagents for screening should be ensured in order to ensure the delivery of comprehensive primary health care services by converting existing SHCs and PHCs into HWCs.

Government of India had fixed a target of transformation of 1,396 HCFs into HWC up to March 2022. Information provided by the Mission Director showed that 1,462 HCFs have been transformed into HWCs (March 2022) with all facilities. However, in the test checked and physically inspected HWCs Audit noticed as under:

The availability of equipment, consumables, etc. in the test checked HWCs was as under:

Table-3.27: Availability of essential services in test checked HWCs.

(In per cent)

Name of District	Name of HWC	Diagnostic Services (PHC: 22/ SC: 08)	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)
Nainital	Ranibagh	50	24	09	57	68	71	37
	Alchona	38	22	09	31	59	86	26
	Karanpur	38	15	05	22	49	71	21
	Himmatpur	38	16	09	30	59	71	26
	Mangoli	50	21	09	45	70	100	42
	Thapla	38	20	07	43	57	71	26
	Khurpatal	38	29	05	40	70	100	32
	Gethiya	25	10	07	22	51	71	16
	Shyamkhet	38	21	07	24	43	86	26
	Devidhura	50	29	09	48	59	86	16
Dehradun	Sewala Kala Raipur	50	21	12	32	38	71	16
	Sewala Khurd	25	11	09	28	35	71	11
	Soda Saroli	38	25	14	48	51	86	26
	Badowala	37	22	12	49	76	86	32
	Harrawala	37	19	09	17	30	86	11
	Kanharwala	50	31	09	35	54	86	42
	Rani pokhari	25	00	00	15	19	71	16

Source: Information furnished by test checked HWCs.

Note: Availability up to 30 per cent has been depicted in red, 31 to 49 per cent has been depicted in yellow, 50 and above has been depicted in green.

It is evident from the above table that there was a shortfall in the required number of equipment, consumables, miscellaneous supplies, Diagnostic Services, Essential Medicines, etc. The status was only satisfactory in case of Furniture and Fixtures. Although Mission Director has reported that 1,462 HCFs have been transformed into HWCs with all facilities but test checked HWCs showed that all required facilities were not fully available as required for operationalization of HWCs.

3.6.1 Database of family and individuals created by HWCs

As per operational guidelines Comprehensive Primary Health Care (2018) of Ministry of Health & Family Welfare, GOI, the objective of HWCs was to create and maintain the database of all families and individuals. Health Cards and Family Health Folders were to be made for all service users in an area served by an HWC. The family health folders are to be kept at the HWC or nearby PHC in paper and/or digital format. The objective was that every family knows their entitlement to healthcare through both HWC and the Pradhan Mantri Jan Arogya Yojana or equivalent health schemes of state and central government.

It was claimed by the test checked 17 HWCs that:

- Database of all families and individuals in the area have been created and being maintained.
- Family Health Folders for all service users were being kept at 16 HWCs.
- Health Cards were made at six HWCs.

3.7 Auxiliary and Support services

Auxiliary and support services which are provided by the personnel other than health professionals include services related to Ambulance, Dietary, Laundry, Waste management including Biomedical Waste, Security, Water supply, power supply, patient safety measures etc. These services are important for effective functioning of hospitals. Significant audit findings in the test checked health institutes for these services have been discussed in the succeeding paragraphs.

3.7.1 Ambulance services

As per IPHS 2012 norms, DHs are required to have three running ambulances with well-equipped Basic Life Support (BLS). It would be desirable to have one Advanced Life Support (ALS) ambulance. The SDHs are required to have one or two[20] running ambulances. There shall be a dedicated parking space separately for ambulances near emergency. Serviceability and availability of equipment and drugs in ambulance are required to be checked on a daily basis. Similarly, one Ambulance should be there for CHCs. Availability of ambulance services in test checked DHs/SDHs/CHCs is given below:

Table-3.28: Availability of Ambulance services in test checked DHs/SDHs/CHCs

Test checked HCFs	No. of ambulances required for each HCF as per norms	Total required ambulances	Availability of ambulance services 24X7	Availability of demarcated parking space
DHs (02)	03	2*3=6	08	Yes
SDHs (03)	1 or 2	3*2=6	08	Yes
CHCs (09)	01	9*1=9	10	Yes

Source: Information furnished by test checked health HCFs.

It was observed that out of the test checked hospitals, all the hospitals had ambulances as per norms. Demarcated area for parking of ambulances was available in all the test checked DHs/SDHs/CHCs.

Apart from the above, details related to availability of Ambulance services in all the DHs of the state have been given in ***Appendix-3.3***.

3.7.2 Oxygen services

As per IPHS norms, Double–outlet Oxygen Concentrator, one each for the labour room & OT should be available in a DH. Equipment for Eclampsia Room i.e., Oxygen Supply (Central) should be available. Special Newborn Care Unit (SNCU) should have oxygen reservoir & silicon round cushion masks – sizes 0 & 00 (1 set for each bed (essential)

[20] One ambulance for 31 to 50 bedded SDHs and two ambulances for 51 to 100 bedded SDHs.

+ 2). Further, Double Outlet Oxygen Concentrator one for every three beds (essential) should be available in SNCU. Oxygen cylinder with trolley and gas with one bed should be available in recovery room. The hospital should ensure the availability of Anaesthesia Equipment such as O_2 cylinder for Boyles, Pipeline supply of Oxygen, Nitrous Oxide, Compressed Air and suction (desirable).

Further, NHM Assessors guidelines provide that facility should ensure the availability of centralized /local piped Oxygen and vacuum supply (standard D5), ambulance/ transport vehicle have adequate arrangement for Oxygen (Standard E11.4). As per standard C5.1, the facility should ensure the availability of medical gases such as availability of oxygen cylinders / Piped Gas supply, Nitrogen. Standard D5.3 provides that there should be a procedure for prompt replacement of empty cylinders with filled cylinders and for periodic checking of all terminal units for malfunctioning. Instructions for operating different equipment should be clearly displayed. Availability of oxygen services in test checked HCFs is given below:

Table-3.29: Oxygen services in test checked DHs/SDHs

Name of service	Dehradun		Nainital	
	DH, Dehradun	SDH, Rishikesh	DH, Nainital	SDH, Haldwani
Whether the requirement of oxygen in the hospital was assessed and infrastructure created accordingly?	Yes	Yes	Yes	Yes
Whether the standard operating procedure for oxygen was available and was being followed?	Yes	Yes	Yes	Yes
Whether agreements were executed for the supply of uninterrupted oxygen?	Yes	No	Yes	Yes
Whether Centralised oxygen supply system was installed in the hospital?	Yes	No	Yes	Yes
If the Centralised oxygen supply system was not installed whether adequacy of required oxygen cylinders was assessed?	Yes	No	Yes	Yes
In all such cases, whether required buffer stock was assessed and maintained all the time?	Yes	Yes	Yes	Yes
Whether records of serviceability and availability of oxygen cylinders were maintained as per guidelines?	Yes	Yes	Yes	Yes
Whether required number Oxygen Supply (Central) are available in Eclampsia Room?	Yes	No	No	Yes
Whether oxygen reservoir is available for each bed at Special New-born Care Unit?	Yes	No	Yes	Yes
Whether the health institution have Double Outlet Oxygen Concentrator at Special New-born Care Unit?	Yes	Yes	No	Yes

Source: Information furnished by test checked DHs/SDHs.

Colour Code: ***Yes*** ***No***

It was observed that:

i. Assessment of required buffer stock and agreement for the supply of uninterrupted oxygen was executed by all test checked DHs and SDHs.

ii. Centralised oxygen supply system was installed in all the test checked DHs/SDHs except SDH, Rishikesh. In Eclampsia room oxygen supply (Central) was not available in DH, Nainital and SDH, Rishikesh.

iii. Records of serviceability and availability of oxygen cylinders were maintained as per guidelines by all test checked DHs/SDHs.

iv. Oxygen reservoir was not available for each bed at Special New-born Care Unit in SDH, Rishikesh.

v. Double Outlet Oxygen Concentrator at Special New-born Care Unit were not available in DH, Nainital.

3.7.3 Dietary services

As per IPHS 2012 norms for district and sub district hospitals, the dietary service of a hospital is an important therapeutic tool. It should be easily accessible from outside along with vehicular accessibility and separate room for dietician and special diet. The location should be such that the noise and cooking odours emanating from the department do not cause any inconvenience to the other departments. At the same time location should involve the shortest possible time in delivering food to the wards. Apart from normal diet, diabetic, semi-solid and liquid diets shall be available, and the food shall be distributed in a covered container. Quality and quantity of diet shall be checked by competent person on regular basis.

As per NHM Assessors' guidelines, standard D6 provides that "Dietary services are to be available as per service provision and nutritional requirement of the patients". Availability/non-availability of dietary services in test checked GMCs/DHs/SDHs is given below:

Table-3.30: Dietary services in test checked GMCs/DHs/SDHs

Particulars	Dehradun				Nainital		
	GMC, Dehradun	DH, Dehradun	SDH, Premnagar	SDH, Rishikesh	GMC, Haldwani	DH, Nainital	SDH, Haldwani
Availability of dietary service.	A	A	A	A	A	A	A
If available, in-house/ outsourced.	Outsourced	Outsourced	Outsourced	Outsourced	In-house	Outsourced	Outsourced
Availability of Kitchen	A	NA	A	NA	A	A	A
Availability of standard procedures for preparation, handling, storage and distribution of clean, hygienic and nutritious diet to the indoor patients as per their caloric requirement	A	A	NA	A	A	A	A

Particulars	Dehradun				Nainital		
	GMC, Dehradun	DH, Dehradun	SDH, Premnagar	SDH, Rishikesh	GMC, Haldwani	DH, Nainital	SDH, Haldwani
Availability of policy and procedure for regular quality checking of raw material, kitchen sanitation, cooked food etc.	A	NA	NA	A	A	A	A
Availability of Quality testing of diet supplied in health facilities	A	A	NA	A	NA	A	A
Evaluation of dietary services in health facilities	A	A	NA	A	A	A	A
Dietetic research on menu planning, preserving nutritional values, storage of food items, modern methods of cooking, etc. was conducted to improve the dietary services in the hospitals	A	A	NA	A	A	NA	A

Source: Information furnished by test checked HCFs.

A=Available, NA= Not Available.

It is evident from the above table that:

i. Dietary services were available in all test checked HCFs.

ii. Kitchen for dietary services was not available in DH, Dehradun and SDH, Risikesh.

Policy and procedure for regular quality checking of raw material, kitchen sanitation, cooked food etc. was not available in DH, Dehradun and SDH, Premnagar.

Apart from the above, details related to availability of Dietary services in all the DHs of the state have been given in ***Appendix-3.3***.

3.7.4 Blood Bank

As per IPHS 2012 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 should follow all existing guidelines and fulfil all requirements as per the various Acts pertaining to setting up of the Blood Bank. Separate Reporting Room for doctors should be there.

In the test checked DHs the Blood Bank facility was available in DH, Nainital while it was not available in DH, Dehradun. Besides this, details related to availability of Blood Bank in all the DHs of the state have been given in ***Appendix-3.3***.

3.7.5 Laundry services

As per IPHS 2012 norms, the hospital laundry should be provided with necessary facilities for segregated collection, drying, pressing and storage of soiled and cleaned linens.

As per Kayakalp Guidelines, the provision of clean linen is a fundamental requirement for patient care. Incorrect procedures for handling or processing of linen can present an infection risk both to staff and patients who subsequently use it. Hence, correct linen management is important to prevent Hospital Acquired Infection (HAI) and ensure a better hygienic hospital environment. Kayakalp Guidelines also provides that hospitals need to ensure that they have at least four sets of linen per day, even though six sets are preferable.

Further, NHM assessors' guidelines, standard D5 includes availability of adequate quantity of clean and usable linen, process of providing and changing bed sheets in-patient care area and process of collection, washing, and distributing the linen.

The availability of laundry services in all the DHs of the state have been given in ***Appendix-3.3.*** Further availability of laundry service in test checked DHs/SDHs/CHCs is given below:

Table-3.31: Laundry services in test checked DHs/SDHs/CHCs

Particulars	Dehradun				Nainital		
	DH	SDH, Premnagar	SDH, Rishikesh	CHCs (5)	DH	SDH, Haldwani	CHCs (4)
Availability of required linen sets	A	A	A	5	A	A	4
Availability of system of changing the patient/OT linen at the prescribed intervals to maintain hygiene	A	A	A	4	A	A	4
Availability of system to check the quality of cleanliness of the linen received from laundry	A	A	A	4	A	A	3
Availability of date wise and patient wise records against each entry of linen issued from linen stock	A	NA	NA	2	A	A	1
Availability of system for periodic physical verification of linen inventory	A	NA	A	4	A	A	3
Follow up of procedure for sluicing of soiled and infected linen	A	A	A	4	A	A	2

Source: Information furnished by test checked DHs/SDHs/CHCs.
A=Available, NA= Not Available.

It was observed that:

- System of changing the patient/OT linen at the prescribed intervals to maintain hygiene was not maintained by CHC, Shaiya and system to check the quality of cleanliness of the linen received from laundry was not available in CHC, Chakrata and CHC, Ramgarh
- Date wise and patient wise records against each entry of linen issued from linen stock was not maintained in SDH, Premnagar, SDH, Rishikesh. While only three CHC, Raipur, CHC, Sahaspur and CHC, Kotabag had maintained date wise patient wise records against each entry of linen issued from linen stock.

- Norms for washing and drying of the linens was not followed as per Kayakalp guidelines. During the process of drying of the linen it is to be ensured that the linen is kept off the ground and away from dust exposure to avoid infection, but it was noticed the linen were being dried on the ground in GMC, Haldwani, Nainital as well as in SDH, Haldwani, Nainital as depicted in the photographs below:

Linen are being dried on the ground in GMC, Haldwani

Linen are being dried on the ground in SDH, Haldwani

3.7.6 Bio-medical waste management

Bio-Medical waste means any waste, which is generated during the diagnosis, treatment or immunization of human beings or animal or in research activities pertaining thereto or in the production or testing of biological, including categories mentioned in the schedule of the Bio-Medical Waste rules.

As per rule 4 (r) of Bio-medical waste management rule, 2016, -It shall be the duty of every occupier[21] to establish a system to review and monitor the activities related to bio-medical waste management.

As per schedule IV under rule 8(3) and (5), bio-medical waste containers or bags should be labelled as biohazard or cytotoxic. As per rule 4 (m), occupier shall "conduct health check up at the time of induction and at least once in a year for all its health care workers and others involved in handling of bio- medical waste." As per rule 5 (g), occupier shall "immunise all its health care workers and others, involved in handling of bio-medical waste for protection against diseases."

Availability of services as per BMW rule in test checked DHs/SDHs/CHCs/PHCs as on March 2022 is given below:

[21] occupier" means a person having administrative control over the institution and the premises generating bio- medical waste, which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank, health care facility and clinical establishment, irrespective of their system of medicine and by whatever name they are called.

Table-3.32: Bio Medical Waste Management services in test checked DHs/SDHs/CHCs/PHCs

Name of Service	Dehradun				Nainital			
	Test checked DH (01)	Test checked SDH (02)	Test checked CHCs (05)	Test checked PHCs (04)	Test checked DH (01)	Test checked SDH (01)	Test checked CHCs (04)	Test checked PHCs (04)
Authorisation for generating bio-medical waste was obtained by the hospital from State Environment Protection and Pollution Control Board	Yes	2	5	4	Applied	Yes	3	1
Availability of Waste Management Committee under the Chairmanship of head of hospital	Yes	2	5	3	Yes	Yes	4	1
Waste Management Committee met regularly to review the performance of the hospital as regards waste disposal	Yes	2	5	3	Yes	Yes	4	1
Availability of proper system for disposal of bio-medical liquid waste	Yes	2	5	3	Yes	No	4	0
Plastics bags which contained bio-medical waste had been labelled as per guidelines i.e., symbols for biohazard and cytotoxic	Yes	2	5	4	Yes	Yes	3	1
The hospital and health care authorities had ensured that personal protective equipment was provided to waste handlers	Yes	1	5	4	Yes	No	3	0
Availability of barcode system, for bags or containers containing biomedical waste that were to be sent out of the premises, was ensured by the hospital	No	0	1	3	Yes	Yes	0	0
Periodic medical check-up and immunization of staff were carried out.	Yes	1	5	4	No	No	4	1
Effluent Treatment Plant (ETP) for treatment and disposal of liquid waste.	Yes	0	2	0	No	No	0	0

Source: Information furnished by test checked HCFs.

It is evident from the above table that:

i. Authorisation for generating bio-medical waste was obtained by all test checked hospitals, except DH, Nainital, and two PHCs[22].

[22] PHC, Simlakha and PHC, Chakulua.

ii. Waste management committee was available and met regularly to review the performance of the hospital as regards waste disposal in all test checked hospitals, except 4 PHCs[23].

iii. Periodic medical check-up and immunization of staff was carried out by all the test checked HCFs except DH, Nainital, SDH, Haldwani and three PHCs, PHC, Similkha, PHC, Chakulua and PHC, Talla Ramgarh.

Apart from the above, details related to availability of BMW services in all the DHs of the state have been given in ***Appendix-3.3***.

3.7.7 Effluent Treatment Plant (ETP) for treatment and disposal of liquid waste in HCFs

Bio Medical Waste Management Rules 2016 prescribes that every institution shall ensure segregation of liquid chemical waste at source and ensure pre-treatment or neutralisation prior to mixing with other effluent generated from health care institutions, ensure treatment and disposal of liquid waste in accordance with the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) and prescribes effluent treatment plant for liquid waste. Sludge from Effluent Treatment Plant shall be given to common bio-medical waste treatment facility for incineration or to hazardous waste treatment, storage and disposal facility for disposal.

Effluent treatment plant (ETP) for disposal of liquid waste was not available in any of the test checked DHs/SDHs/CHCs/PHCs except DH, Dehradun, CHC, Sahiya and CHC, Sahaspur.

3.7.8 Mortuary Services

As per IPHS norms, Mortuary provides facilities for keeping dead bodies and conducting autopsy. Post-mortem room shall have stainless steel autopsy table with sink, a sink with running water for specimenwashing and cleaning and cupboard for keeping instruments. A separate room for body storage shall be provided with at least two deep freezers for preserving the body etc. One mortuary van should be available. Further, as per NHM Assessors' guidelines, mortuary services such as 24x7 services (standard A1.14) facility for pathological postmortem (standard A5.8) should be available. As per standard E16, mortuary should have a system for categorizing the dead bodies before preservation. Mortuary has a system to provide identification tag/ wrist band for each stored dead body. Mortuary has a system for storage of unclaimed body for fixed duration as per state guideline. Standard F4 provides that the facility ensures standard practices and materials for disinfection and sterilization of instruments.

The availability of Mortuary services in all the DHs of the state have been given in ***Appendix-3.3***. Further, availability of health care infrastructure for mortuary services in test checked DHs is given below:

[23] PHC, Thano, PHC, Simlakha, PHC, Chakulua and PHC, Ramgarh.

Table-3.33: Mortuary Services in test checked DHs

Particular	DH, Dehradun	DH, Nainital
Availability of mortuary facility in the hospital 24x7	Yes	Yes
Stainless steel autopsy table with sink, a sink with running water for specimen washing and cleaning and cupboard for keeping instruments in post-mortem room	Yes	Yes
Availability of separate room for body storage provided with at least two deep freezers for preserving the body	Yes (Deep freezers not in working)	NA
Mortuary van	NA	NA
Availability of facility for pathological postmortem	NA	NA
System to categorize the dead bodies before preservation	NA	NA
System to provide identification tag/wrist band for each stored dead body	Yes	NA
System for storage of unclaimed body for fixed duration	NA	NA
Copy of death certificate accompanied with bodies sent to mortuary	Yes	NA
Facility of high-level disinfection by boiling or chemical done as per protocol at mortuary	Yes	Yes

Source: Information furnished by test checked DHs.
A- Available, NA- Not Available.

It was observed that:

(i) Both test checked DHs had 24x7 mortuary facility and Stainless-steel autopsy table with sink.

(ii) Facility of separate room for body storage provided with at least two deep freezers for preserving the body and facility for pathological post-mortem was available only in DH, Dehradun however deep freezer was out of order.

(iii) System to categorize the dead bodies before preservation was not available in any of the test checked DHs.

(iv) Mortuary van was not available in both DHs whereas death certificate did not accompany with dead bodies sent to mortuary in DH, Nainital. System for storage of unclaimed body for fixed duration was not available in both DHs.

3.7.9 Water supply

As per Kayakalp guidelines, availability of adequate water, sanitation and hygiene services are essential components of providing basic healthcare services in the healthcare institutions. Healthcare institutions need adequate supply of quality water. The water requirement in the hospital with bed strength not exceeding 100 is 340 liters/bed/day and for hospitals having more than 100 beds the requirement escalates to around 400 liters/ bed/day. Moreover, physical testing for hardness, TDS and other parameters (at least once in a year on samples obtained directly from the source e.g., well water and bore water) and microbiological testing (every three months and additionally when the source is changed/major repairs are done) are to be conducted.

All overhead tanks need to be cleaned manually at least at an interval of six months. The date of water tank cleaning needs to be written on the water tank for ready visibility and easy remembrance for the next schedule of cleaning. Adequacy of water supply at test checked GMCs/DHs/SDHs/CHCs is given below:

Table-3.34: Water Supply in test checked HCFs

Name of District	Name of health institute	Assessment of water requirement per bed per day after excluding requirements for firefighting, 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
Dehradun	GMC, Dehradun	Yes	Yes	Yes	Yes	Yes
	DH, Dehradun	Yes	Yes	Yes	Yes	No
	SDH, Premnagar	No	No	No	Yes	No
	SDH, Rishikesh	Yes	No	No	Yes	Yes
	CHC, Chakrata	No	Yes	No	Yes	Yes
	CHC, Doiwala	Yes	Yes	Yes	Yes	No
	CHC, Raipur	Yes	Yes	Yes	Yes	Yes
	CHC, Sahaspur	Yes	No	No	Yes	Yes
	CHC, Sahiya	Yes	Yes	No	Yes	No
	PHCs (04)	2	2	2	4	2
Nainital	GMC, Haldwani	Yes	Yes	Yes	Yes	Yes
	DH, Nainital	Yes	No	No	Yes	No
	SDH, Haldwani	No	No	Yes	Yes	No
	CHC, Betalghat	No	No	No	Yes	No
	CHC, Bhimtal	No	No	No	No	No
	CHC, Kotabag	Yes	Yes	Yes	Yes	No
	CHC, Ramgarh	Yes	No	No	Yes	Yes
	PHCs (04)	1	0	0	1	0

Source: Information furnished by test checked HCFs.

It was observed that:

i. Out of 24 selected HCFs**,** only 14 HCFs made the assessment of water requirement per bed per day.

ii. Ten out of 24 selected HCFs carried out Biological testing/ Physical testing of water samples.

iii. Water tanks were regularly cleaned by all test checked HCFs except CHC, Bhimtal and PHC, Similkha, PHC, Chakulua and PHC, Talla Ramgarh.

iv. Out of the test checked HCFs**,** AMC of water purifier was carried out in nine HCFs**.**

3.7.10 Power supply

As per IPHS 2012 norms, 24-hour uninterrupted power supply should be available in all HCFs. Back-up generator facility should also be available**.** Generator of 75 KV in Civil Hospital, 40/50 KV in subdivision/sub district hospital and generator of 5 KV in CHCs should be maintained. Further, AMC should be taken for all equipment which needs special care and preventive maintenance should be done to avoid break down and reduce down time of all essential and other equipment. Availability of power supply in test checked DHs/SDHs is given below:

Table-3.35: Power supply in test checked DHs/SDHs

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
Dehradun	DH, Dehradun	Available	Available	Available
	SDH, Premnagar	Available	Available	Not Available
	SDH, Rishikesh	Available	Available	Available
	CHC (05)	05	05	03
	PHC (04)	04	04	04
Nainital	DH, Nainital	Available	Available	Not Available
	SDH, Haldwani	Available	Available	Not Available
	CHC (04)	04	04	02
	PHC (04)	01	01	00

Source: Information furnished by test checked HCFs.

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 out of five test checked hospitals.

Availability of 24-hour uninterrupted stabilised power supply and installation of Generator back-up and inverters were available in all the test checked CHCs/PHCs except PHC, Simlakha, PHC, Chakalua and PHC, Talla Ramgarh. AMC of back-up facility was not available in four[24] out of nine test checked CHCs and four[25] out of eight test checked PHCs.

3.7.11 Citizen Charter and Grievance/ complaint redressal

As per IPHS 2012 norms, each HCF should display prominently a citizen's charter for the district hospital indicating the services available, user fees charged, if any, and a grievance redressal system. Citizen's Charter should be in the local language. There shall be provision of complaints/ suggestion box. There shall be a mechanism to redress the complaints.

Availability of citizen's charter and grievance/ complaint redressal facilities in test checked HCFs is as follows:

Table-3.36: Availability of services related to Citizen Charter and Grievance/Complaint Redressal

Particulars	Test checked DHs (02)	Test checked SDHs (03)	Test checked CHCs (09)	Test checked PHCs (08)
Availability of Citizen charter at OPD	2	3	8	4
Availability of Grievance Redressal Cell or Complaint cell to register patients' grievances regarding quality of supplied food to them	2	2	6	1
Availability of mechanism for receipt of complaints and whether suggestion boxes had been placed at appropriate places	2	3	8	3
Formation of Grievance Redressal Committee and redressal of complaints in a timely manner	2	3	7	2

Source: Information furnished by test checked HCFs.

[24] 1. CHC, Doiwala, 2. CHC, Sahiya, 3. CHC, Bhimtal, 4. CHC, Kotabagh.
[25] 1. PHC, Jolikot, 2. PHC, Chakalua, 3. PHC, Simlakha, PHC, Talla Ramgarh.

It was observed that:

- Citizen Charter was not available at OPD counter in CHC Sahiya and in four PHCs[26].
- Grievance Redressal committee was not formed in two CHCs[27] and six PHCs[28].

3.7.12 Infection Control Management

As per Kayakalp guidelines, hospitals need to designate personnel from the Infection Control Committee, to conduct the activities of monitoring of cleanliness. The person designated for monitoring will take daily rounds after each cleaning cycle and will also conduct surprise rounds of the hospital to ensure proper cleanliness and identify any areas for improvement in the current practices. He/She will also be responsible for supervision of housekeeping activities by counter signing the check lists used for monitoring. All the checklists should be displayed at relevant areas and should be customised to the particular area. Health institute needs to have an effective pest control plan for ensuring a pest and animal free environment in the institute. Availability of infection control services in test checked GMCs/DHs/SDHs is given below:

Table-3.37: Availability of services related to Infection control in test checked GMCs/DHs/SDHs

Particulars	Dehradun				Nainital		
	GMC, Dehradun	DH, Dehradun	SDH, Premnagar	SDH, Rishikesh	GMC, Haldwani	DH, Nainital	SDH, Haldwani
Checklist for Hygiene and infection control	Yes	Yes	Yes	Yes	Yes	Yes	No
Hospital Infection Control Committee (HICC)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Conducting meeting of HICC	Yes	Yes	Yes	Yes	Yes	Yes	No
Pest control	Yes	Yes	Yes	No	Yes	Yes	No
Rodent control	Yes	Yes	Yes	No	Yes	No	No
Availability of anti-termite treatment	Yes	Yes	Yes	No	Yes	No	No
Installation of cattle trap	Yes	Yes	Yes	Yes	Yes	No	Yes
Procedures for disinfection and sterilization (Total four procedures)							
i. Boiling	Yes	Yes	Yes	No	Yes	Yes	Yes
ii. High level disinfection	Yes	Yes	No	No	Yes	Yes	Yes
iii. Chemical sterilization	Yes	Yes	Yes	Yes	Yes	No	Yes
iv. Autoclaving	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: Information furnished by test checked HCFs.

It was observed that:

- All the test checked GMCs/DHs/SDHs had checklist for hygiene and infection control except SDH, Haldwani.

[26] PHC, Jolikot, PHC, Simlakha, PHC, Chakulwa and PHC, Talla Ramgarh.
[27] CHC, Bhimtal and CHC, Sahiya.
[28] PHC, Thano, PHC, Tyuni, PHC, Jolikot, PHC, Simlakha, PHC, Chakula and PHC, Talla Ramgarh.

- Pest control was done by all the test checked hospitals except SDH, Rishikesh and SDH, Haldwani.
- Rodent control and Anti-termite treatment was done by all test checked hospitals except DH, Nainital, SDH, Rishikesh and SDH, Haldwani.
- Cattle trap was not available in DH, Nainital.
- Out of the four[29] procedures for disinfection and sterilization boiling was not available in SDH, Rishikesh, high level disinfection was not available in SDH, Premnagar and SDH, Rishikesh, chemical sterlisation was not available in DH, Nainital.

3.7.13 Patient safety

3.7.13.1 Availability of patient safety services in test checked HCFs

IPHS 2012 norms for DHs provide that Hospital Management Policy should emphasize hospital buildings with earthquake proof, flood proof and fire protection features.

As per outcome 4.1 of National Disaster Management (NDM) Guidelines (Hospital Safety), 2016 "Once the detailed plans for preparedness, response and recovery have been developed, needs to be tested on ground and accordingly". Further, as per rule 8 (2), "Hospitals shall acquire No Objection Certificate from the Chief Fire officer". License for storing spirit should be available with the health facility.

Further, NHM assessor's guidelines provide that the facility should have a disaster management plan in place and the staff is aware of the disaster plan and their role and responsibilities in disaster is defined.

IPHS norms for CHCs provide that all health staff should be trained and well conversant with disaster prevention and management aspects. Surprise mock drills should be conducted at regular intervals.

Availability of patient safety services in test checked DHs/SDHs/CHCs is as follows:

Table-3.38: Availability of services related to Patient Safety

Name of service	DH		SDH			CHCs								
	Dehradun	Nainital	Premnagar	Rshikesh	Haldwani	Chakrata	Doiwala	Raipur	Sahaspur	Sahiya	Betalghat	Bhimtal	Kotabag	Ramgarh
SOP for patient safety is available in HCFs.	A	A	NA	A	A	A	A	A	A	NA	A	A	A	A
SOP is being followed in patient safety	A	A	NA	A	A	A	A	A	A	NA	A	A	A	A
Disaster management plan formulated for patient safety	A	NA	NA	NA	A	A	NA	A	A	NA	A	NA	NA	A
Formation disaster management committee	A	NA	NA	NA	NA	A	NA	A	A	A	A	NA	NA	A

[29] Boiling, High level disinfection, Chemical sterilization, Autoclaving.

Name of service	DH		SDH			CHCs								
	Dehradun	Nainital	Premnagar	Rshikesh	Haldwani	Chakrata	Doiwala	Raipur	Sahaspur	Sahiya	Betalghat	Bhimtal	Kotabag	Ramgarh
Facility assigned a space or ward to manage additional patient load in the event of a disaster	A	A	NA	A	A	A	A	NA	A	NA	A	NA	A	A
Follow a periodic plan to evaluate and manage disasters and mass casualty incidents	A	NA	NA	NA	NA	A	NA	NA	A	NA	A	NA	NA	A
Standard Operating Procedure for all concerned departments to act in an event of a disaster	A	A	NA	A	NA	A	A	A	A	NA	A	NA	A	A
Facility connected to network of referral facilities that will be necessary in a disaster	A	NA	A	A	A	A	A	A	A	NA	A	NA	NA	A
Provisions of detection, fire prevention, planning for isolation of fire and transfer of occupants to a place of comparative safety or evacuation of the occupants to achieve ultimate safety were in place	A	NA	NA	A	NA	A	NA	NA	A	NA	A	NA	NA	A
No Objection Certificates from the Fire Department	A	A	NA	A	A	NA	NA	NA	NA	A	A	NA	NA	A
Illuminated signage for fire exit was available	A	A	A	NA	NA	A	A	A	A	A	A	NA	NA	NA
Availability of underground static water tank which should remain full at all times to meet any contingency had been constructed and utilised for the said purpose	A	NA	NA	A	NA	NA	A	A	A	A	NA	NA	A	NA
Fire alarms and Hose reel had been installed to detect the fire and meet any contingency	A	NA	NA	A	NA	NA	NA	NA	NA	NA	A	NA	NA	NA
Excise permit to store spirit	A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Source: Information furnished by test checked HCFs.
A= Available, NA= Not Available.

It is evident from the above table that:

- SOP for patient safety was not available in SDH, Premnagar and CHC, Sahiya.
- Disaster Management Plan for patient safety was not formulated in seven out of 14 test checked DHs/SDHs/CHCs.
- NOC from Fire Department was not obtained by seven out of 14 test checked DHs/SDHs/CHCs.
- Excise permit to store spirit was not obtained by seven out of 14 test checked DHs/SDHs/CHCs.

3.7.13.2 Availability of fire-fighting equipment

As per IPHS 2012 norms, fire-fighting equipment should be available, maintained and to be readily available when there is a problem. Availability of fire-fighting equipment in test checked GMCs/DHs/SDHs/CHCs is given below:

Table-3.39: Availability of Fire fighting equipment in test checked GMCs/DHs/SDHs/CHCs

Name of District	Name of health institution	Fire hydrant	Smoke detector	Fire extinguisher	Sand buckets
Dehradun	GMC, Dehradun	A	A	A	A
	DH, Dehradun	A	A	A	A
	SDH, Premnagar	NA	NA	A	NA
	SDH, Rishikesh	A	NA	A	NA
	CHC, Chakrata	NA	NA	A	A
	CHC, Doiwala	NA	NA	A	NA
	CHC, Raipur	NA	NA	A	A
	CHC, Sahaspur	NA	NA	A	NA
	CHC, Sahiya	NA	NA	A	NA
Nainital	GMC, Haldwani	A	A	A	A
	DH, Nainital	NA	NA	A	NA
	SDH, Haldwani	NA	NA	A	NA
	CHC, Betalghat	NA	NA	A	NA
	CHC, Bhimtal	NA	NA	A	NA
	CHC, Kotabag	NA	NA	A	NA
	CHC, Ramgarh	NA	NA	A	NA

Source: Information furnished by test checked HCFs. ***A= Available,*** ***NA= Not Available.***

As it can be seen from above that:

- Out of 16 test checked HCFs only four HCFs had installed fire hydrants.
- Smoke detectors were available in both the GMCs and DH, Dehradun.
- Fire extinguishers were available in all the test checked GMCs/DHs/SDHs/CHCs. Moreover, sand buckets were available only in five HCFs only.

3.8 Healthcare Services through AYUSH

3.8.1 Availability of services in AH&WCs of test checked districts

As per AYUSH Health and Wellness Centre's guidelines, essential requirements for strengthening a facility to serve as a AHWC are: Infrastructure Strengthening including civil work, repair, renovation, addition, alteration, equipment, laboratory services, IT networking, creating awareness among the masses through IEC activities and herbal garden.

The availability of services in AHWCs of test checked districts is depicted in **Table-3.40** below:

Table-3.40: The availability of services in AHWCs of test checked Districts

Name of the Department	Name of District	Selected for upgradation	Infrastructure Renovation	Herbal Garden	Equipment	Diagnostic Equipment	CHO training	Panchakarma assistant	IEC	Yoga instructor
Ayurveda	Dehradun	6	6	6	6	6	6	0	6	0
	Nainital	4	4	4	4	4	4	0	4	0
Homoeopathy	Dehradun	3	3	3	3	3	2	NA	3	0
	Nainital	*No HWC was selected*								

Source: Information provided by the Department

Colour code:	*Available*	*Not available*	*Partially*	*Not applicable/not selected*

Thus, out of total 13 AHWCs selected for up-gradation in test-checked districts, infrastructure/renovation has been up-graded in 13 AH&WCs, Herbal gardens have been developed in 13 AH&WCs, equipment and diagnostic equipment have been supplied and IEC activities were carried out in all the 13 AHWCs. However, the created facility was not utilised due to non posting of assistants for Panchakarma and yoga instructors for yoga as against the requirement of 13 for executing each activity.

3.8.2 Number of hospitals with no indoor patients and without beds as per norm

Audit observed that more than 74 *per cent* hospitals had no IPD patient during 2016-22 as detailed in **Table-3.41** below:

Table-3.41: Details of Number of Hospitals[30] with no IPD (in numbers)

Year	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Hospitals	434	434	434	434	434	434
Hospitals with no IPD Patient	323	344	357	353	396	389
in *per cent*	***74***	***79***	***81***	***84***	***91***	***90***

Source: Information provided by the department.

Further, it was noticed that 345 (79.49 *per cent*) out of 434 Ayurveda hospitals[31] had less than prescribed number of beds. In the test checked districts of Dehradun and Nainital, the said shortfall was found 77 and 86 *per cent* respectively. Further, during physical inspection[32] only two out of nine hospitals had prescribed number of beds available. This was mainly due to inadequate[33] doctors and para medical staff for running three shifts. As a result, only day care facilities were being provided in the name of IPD services.

The Government replied (November 2022) that after works of Health Wellness Centre is completed it will help in increasing the IPD patients in hospitals.

3.8.3 Case study: Management of AYUSH healthcare facility on donated property

Functioning of dispensaries operating in donated buildings

A philanthropist donated (2019) land and building on Roorkee-Delhi National Highway to enable AYUSH department to provide Unani & Homoeopathy treatment facility to the public. From June 2019 to March 2021, a total of 13,073 patients (5,525-Unani and 7,548-Homoeopathic) availed facilities. On physical verification of said health care facility and on enquiry, Audit observed following shortcomings:

i. Dispensary is being run in an adhoc manner by attachment of one doctor and one pharmacist on alternate basis from nearby dispensaries of Unani & Homoeopathy. The Government and Department had jointly failed to create regular posts to man the said dispensary.

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30 Having IPD facility.
31 429- 04 bedded, 04-15 bedded and 01-25 bedded.
32 Dehradun and Nainital districts.
33 Sanctioned/available/deputed.

ii. No doctor was available for consultation in Homoeopathic dispensary since 21 May 2022. However, pharmacist was running the dispensary.

iii. The department was not maintaining the health care facility properly. Physical inspection of the buildings revealed that these were not in good condition. No maintenance work was undertaken by the department since inauguration and taking over.

iv. No sitting arrangements i.e. furniture (chair, bench etc.) was available for patients in both the hospitals.

v. Electricity connection was available in Unani Dispensary only. However, no electricity connection was availble in Homoeopathy dispensary and it was running without electricity.

vi. No arrangements for drinking water for medical staff and patients was available in the hospitals.

vii. It was reported by the doctors present in the dispensaries that funds were not provided for the maintenance of the buildings. Further, Ayurveda Department had not allocated any budget for electricity bills for the Unani dispensary and an amount of ₹ 16,111/- being charges of electricity bill was paid by the Unani doctor from her own pocket and adjustment was pending till the date of audit.

Above audit observations are corroborated by the following photographs of HCFs:


Donated building of Unani dispensary, Roorkee, Haridwar Audit visited on 11 July 2022


Donated building of Homoeopathy dispensary, Roorkee, Haridwar Audit visited on 12 July 2022

The Government replied (November 2022) that sanctioning of post of doctors and pharmacist was under process.

The above Case Study demonstrates the failure of the senior functionaries to even run a health care facility professionally which is gifted and located on prime location.

3.8.4 Public Health Outreach activity

Under AYUSH Mission it was proposed to focus on increasing awareness about AYUSH's strength in solving community health problems resulting from nutritional deficiencies, epidemics and vector-borne diseases, Maternal and Child Health Care etc. Medical camps, either general health camps or medical camps for a particular purpose could be undertaken as a part of the project.

GoI released ₹ 1.82 crore to Ayurveda (2017-18 to 2018-19) & Homoeopathy (2019-20) Departments for above activity. Scrutiny of records revealed that the Ayurveda and Unani Departments could conduct only 84 *per cent* of targeted camps and surrendered ₹ 81.92 lakh. Further, the Homoeopathy department instead of holding camps surrendered the allotted funds received in 2019-20 due to Covid-19 pandemic.

The Government replied (November 2022) that efforts will be made to complete the future targets.

3.8.5 Panchkarma services

As per Vision Document 2030 of Department of Planning, Government of Uttarakhand, Panchkarma therapy envisages five-fold measures[34] for internal purification of body system. Out of the above five karmas: Vamana (Emesis), Virechan (purgation) and Rakthamoksha (blood purification) measures were not performed in AYUSH HCFs as no Specialist Doctor (MD Panchakarma) is posted in these Centers. The state had 46 units where panchakarma therapy were partially provided to 1,64,802 patients[35] during 2016-22 at a cost of ₹ 2/- per patient. In contrast, the private sector was providing the facilities of these therapies in packages which costs around ₹ 1,600/- to ₹ 15,000/- that indicates there is high demand of above services but the department is unable to provide due to lack of specialists doctors.

The Government replied (November 2022) that Panchkarma facility will be provided in the HWC and the creation of post of Panchkarma assistant was under progress.

3.9 COVID-19 Vaccination in Uttarakhand

The COVID-19 vaccine was to be introduced once training of all workers involved in the process of vaccination was completed in the district/block/planning unit. The COVID-19 Vaccine Intelligence Network (CoWIN) system, a digital platform was also to be used to track the enlisted beneficiaries for vaccination and COVID-19 vaccines on a real-time basis. The projected population[36] 2021 of the state was 1.14 crore as per the report of National commission on population.

Audit found that Government of India (GoI) released ₹ 2.83 crore towards operational cost pertaining to enumeration & micro planning, logistics requirement for session planning, cold chain & vaccine distribution, IEC activities, monitoring etc.; for Covid 19 Vaccination for HCWs and FLWs during 2020-21 against which ₹ 1.93 crore was utilised by the State till March 2022. In the State, the population that was fully vaccinated were shown in **Table-3.42** given below:

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[34] Vamana (Emesis), Virechan (purgation), Basti (enema), Nasya (nasal application) and Rakthamoksha (blood purification.

[35]

Year	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Total
Number of Patients	18,557	22,967	27,670	36,044	5,230	54,334	1,64,802

[36] Population- 0-14 Age group – 27.09 lakh; 15-59 Age group -74.82 lakh; Age above 60- 12.09 lakh.

Table-3.42: Age wise population vaccinated

Year	Front line workers	Health Care Workers	Age wise Vaccinated			
			60+	45-59	18 to 44	15-17
Age wise population			12,09,000	74,82,000		
2020-21	56,297	69,726	2,034	252	0	0
2021-22	1,31,416	49,549	11,43,825	15,94,025	46,42,258	3,20,985
Total	**1,87,713**	**1,19,275**	**11,45,859**	**15,94,277**	**46,82,258**	**3,20,985**
Precautionary dose	**1,39,202**	**64,872**	**2,26,191**			
Full vaccinated (*in per cent*)			**94.78**	**88.18**		

Source: DG, MH&FW.

- ***Vaccination for Health Care Worker and Front-Line Workers***

As per COVID-19 Operational Guidelines (updated as on 28th December 2020) of Ministry of MH&FW, GoI, the vaccine was to be offered first to Health Care Workers (HCWs), Front Line Workers (FLWs), population above 60 years of age and 50 to 60 years of age for the phasing of roll out based on pandemic situation and vaccine availability, followed by population below 50 years of age with associated comorbidities based on the evolving pandemic situation, and finally to the remaining population based on the disease epidemiology and vaccine availability.

Good Practices
89 per cent of total population of age 15 years and above had fully received inoculation under COVID-19 up to March 2022.

Audit noticed that although 1.19 lakh HCWs and 1.87 lakh FLWs were fully vaccinated (administrated 2nd dose of vaccine) till March 2022, only 74 *per cent (*1.39 lakh FLWs) and 54 *per cent* (0.65 lakh HCWs) out of fully vaccinated received precaution dose[37]. It was further noticed that 5.22 *per cent* projected population of age group of 60 years and above were yet to be fully inoculated and only 2.26 lakh (20 *per cent*) against 11.46 lakh populations of age 60-year & above were administrated precautionary dose (March 2022).

The Government replied (November 2022) that a total of 0.88 lakh (72.8 *per cent*) of HCW and 1.89 lakh (100 *per cent)* of FLW had received precaution dose now. It was further stated that 5.82 lakh (50.2 *percent)* of the population of age group of 60 years and above which had received second dose had been administered precaution dose.

3.10 Conclusion

OPD services were available in all the test checked HCFs. However, Dermatology & Venereology was not available in SDH, Prem Nagar while Psychiatry service was not available in SDH, Prem Nagar and SDH, Rishikesh. Further the information provided by the Department of MH&FW revealed that despite availability of all OPD services in the DHs of the state certain OPD services such as Psychiatry, Dermatology and Venereology were not being provided in most of the DHs due to unavailability/postings of the specialist doctors.

[37] The precaution dose *is* the third dose of the vaccines that were administered to protect the population against COVID-19.

In test checked CHCs all specialist OPD services were not available whereas Ayush services were not available in three out of nine test checked CHCs. OPD services were available in six out of eight test checked PHCs. Adequate beds were not available in IPD for General Medicine and General Surgery in both test checked DHs. Further, accident and trauma beds were not available in DH, Nainital. Positive isolation room was not available in two SDHs whereas negative isolation room was not available in any of the SDHs. All the required OT services were not available in test checked DHs and SDHs except DH, Dehradun and SDH, Rishikesh.

BOR of all the test checked HCFs was well below 80 *per cent* except GMC, Dehradun. Average LAMA rate of GMC, Dehradun, SDH, Rishikesh, and SDH, Haldwani, was substantially high as compared to DH, Dehradun, GMC, Haldwani, and DH, Nainital which indicates that service quality of these HCFs remained lacking. ICU facilities were not being provided in all the three test checked SDHs. Institutional births have increased from 68.60 *per cent* during the period 2015-16 to 83.20 *per cent* during the period 2019-21. However, institutional births in public health facility increased from 43.80 *per cent* to 53.30 *per cent* only during the period 2015-21. Out of eight test checked PHCs, labour room was available only in PHC, Jolikot and PHC, Tyuni. GMC, Dehradun and SDH, Rishikesh reviewed all maternal deaths but there was shortfall of 62 *per cent* in conducting review of maternal deaths in GMC, Haldwani during 2016-22 whereas, no neonatal death review was conducted by DH, Nainital and SDH, Premnagar during this period.

Several diagnostic services, as required under IPHS norms were being conducted by the health institutions. However, None of the DHs of the state were conducting all the diagnostic services prescribed under IPHS. Further, 89 per cent of total population of age 15 years and above had fully received inoculation up to March 2022.

3.11 Recommendations

1. ***The Government may consider mapping the availability of infrastructure, services, and human resources against identified benchmark and create a centralised database of infrastructure and services available across government health institutions;***
2. ***The Government may ensure that all OPD, IPD, Emergency and Diagnostic services as prescribed under IPHS norms for different HCFs are made available to the public;***
3. ***The Government may ensure to take steps to improve and strengthen auxiliary and support services so that overall services of healthcare facilities may be improved.***