

CHAPTER-3

ESSENTIAL RESOURCES MANAGEMENT



Chapter - 3: Essential Resources Management

Adequacy of essential resources - manpower, drugs & consumables, equipment, and infrastructure for the effective functioning of the district hospitals

3.1 Standardisation of Service and Resources

For ensuring efficient operation of public sector hospitals, it is essential to prescribe norms for providing various resources in the hospitals. On the basis of these norms, requirement of resources should be assessed and provisions should be made accordingly. Further, facility development plans comprising of components such as infrastructure, equipment, human resources, drugs and supplies, quality assurance systems and service provisioning were to be prepared for each hospital. These plans were to be prepared on the basis of analysis of gaps in the health facilities *vis-à-vis* the norms. As per IPHS, human resources were to be provided with reference to the bed capacity of the hospitals.

It was seen in Audit that the State government had not standardised the bed strength of each DH based on the size of the population to be covered and the services to be delivered. No norms had also been laid out for allocation of human resources to the DHs. It was also seen that no sanctioned strength had been notified for various human resources to be deployed in the DHs. The Department did not follow the IPHS norms for deployment of manpower in the DHs.

3.1.1 Human Resources

The status of availability of human resources in the sampled DHs as compared to the IPHS norms is given in table-3.1:

Table-3.1: Shortage of specialist doctors, staff nurses and technicians in the selected DHs *vis-à-vis* IPHS norms

Sl. No.	Name of the Department	Aizawl CH (bed capacity 200-300)		Champhai DH (bed capacity 50-100)		Lawngtlai DH (bed capacity 31-50)	
		Requirement	Shortage (per cent)	Requirement	Shortage (per cent)	Requirement	Shortage (per cent)
1.	Medicine	3	0(0)	1	0(0)	1	0(0)
2.	Surgery	3	0(0)	1	0(0)	1	0(0)
3.	Obstetrics and Gynae	4	0(0)	1	0(0)	1	0(0)
4.	Paediatrics	4	0(0)	1	0(0)	1	0(0)
5.	Anaesthesia	3	0(0)	1	0(0)	1	0(0)
6.	Ophthalmology	2	0(0)	1	0(0)	1	1(100)
7.	Orthopaedics	2	0(0)	1	1(100)	1	1(100)
8.	Radiology	2	0(0)	1	1(100)	1	1(100)
9.	AYUSH ³ Doctors	1	0(0)	1	0(0)	1	0(0)
10.	Staff Nurse	135	14(10)	30	0(0)	18	0(0)
11.	ECG ⁴ Technician	3	0(0)	1	0(0)	1	1(100)
12.	Laboratory Technician (Lab + Blood storage)	12	0(0)	5	0(0)	4	0(0)

³ AYUSH - Ayurvedic, Yoga and Naturopathy, Unani, Siddha and Homeopathy

⁴ ECG - Electrocardiography

Sl. No.	Name of the Department	Aizawl CH (bed capacity 200-300)		Champhai DH (bed capacity 50-100)		Lawngtlai DH (bed capacity 31-50)	
		Requirement	Shortage (per cent)	Requirement	Shortage (per cent)	Requirement	Shortage (per cent)
13.	Radiographer/ X-ray tech	5	0(0)	2	0(0)	1	1(100)

Source: Records of DHs

In Champhai DH, Orthopaedic doctor and Radiologist were not available. In Lawngtlai, there was no Ophthalmologist, Orthopaedic Doctor, Radiologist and ECG Technician. The above shortages would impact provision of public healthcare services in districts. CH Aizawl had shortage of 14 Staff Nurses (10 per cent).

The Department accepted (October 2020) that there were no approved staffing norms and it does not follow IPHS norms. However, the Department rationalised posting of manpower in DHs based on requirement and size of population. During the Exit Conference (11 December 2020) the Principal Director, Health & Family Welfare Department stated that proposal for fixing sanctioned strength was submitted to the State Government. However, there was no positive outcome as on date. It was also stated that due to ban on creation of and filling up of posts imposed by the State Government, shortage of manpower could not be solved. Besides, there was no radiologist available for appointment.

Conclusion

The Department had not fixed sanctioned strength for deployment of manpower in DHs. There was shortage of one specialist doctor each in Ophthalmology, Orthopaedics and Radiology in Lawngtlai DH. Lawngtlai DH also did not have an ECG technician as per IPHS norms. No Orthopaedics and Radiologist were posted in Champhai DH while there was a shortage of 14 staff nurses in Aizawl Civil Hospital.

Recommendation

The State Government may prescribe/ adopt standards and norms for allocation of human resources for enhanced healthcare services and also undertake action to fill up the vacant posts.

3.1.2 Shortage of Equipments

Equipment is an important component for providing assured service by the DHs. The IPHS norms stipulate list of essential equipments required for the delivery of assured services by the DH. As per IPHS norms, every DH should have the essential equipment for various services. Numbers of essential equipment available in the sampled DHs as against the equipment required as per norms are given in table-3.2:

Table-3.2: Availability of essential equipment

Name of District Hospital (No. of beds)	No. of equipment required as per norms	No. of equipment actually available and operational as on date of audit (per cent)	Shortage (per cent)
CH, Aizawl (269)	338	236 (70)	102 (30)
DH, Champhai (75)	210	125 (60)	85 (40)
DH, Lawngtlai (34)	211	116 (55)	94 (45)

Source: Records of test-checked DHs

It was noticed in audit that:

- (A) **Aizawl CH:** Out of 338 essential equipments to be provided as per IPHS (200 to 300 beds), 236 essential equipments (70 *per cent*) were available while there was a shortage of 102 essential equipments (30 *per cent*). It was however observed that Computed Tomography scan (CT scan) facility was also available in the Aizawl CH.
- (B) **Champhai DH:** Out of 210 essential equipments to be provided as per IPHS (51-100 beds), 125 essential equipments (60 *per cent*) were available while there was a shortage of 85 essential equipments (40 *per cent*). It was however noticed that Champhai DH was equipped with desirable equipments like 500 Milli ampere (MA) X-Ray, (Imaging), applanation (eye equipment) and colposcope (surgical equipment).
- (C) **Lawngtlai DH:** Out of 211 essential equipments to be provided as per IPHS (31-50 beds), 116 essential equipments (55 *per cent*) were available while there was a shortage of 94 essential equipments (45 *per cent*). It was however, noticed that Lawngtlai DH was equipped with desirable equipments like 500 MA X-Ray, 300 MA X-Ray, 50 MA X-Ray (Imaging), proctoscopy set (surgical equipment), colonoscope and colposcope (Endoscopy equipment).

Photographs-3.1: Photographic images of various equipments in sampled DHs



500 MA X-Ray, Lawngtlai DH

500 MA X-Ray, Champhai DH

CT Scan, Aizawl CH

3.1.3 Calibration, repairs and downtime of equipments⁵

For smooth operation, timely repairs and maintenance of equipment is required to be done in order to ensure that the machines are functional in times of need; and to ensure accurate results, that show, calibration of equipment is required to be done periodically.

As per Meeting minute (November 2014) of the Executive Committee of Rogi Kalyan Samiti (RKS), Civil Hospital, Aizawl, calibration of medical equipment was done by Nutech Calibrators & Engineers, Kolkata in 2014. Further, it was seen that M/s Caltech Laboratory Services, Kolkata and Measures Techno Lab, Kolkata conducted calibration

⁵ Downtime of equipment refers to the amount of time that equipment is not operating whether due to unplanned equipment failure (faulty or broken part) or planned downtime (preventive maintenance)

of equipment in 2017. However, relevant records of calibration for the years 2015-16, 2016-17 and 2018-19 were not available.

For Champhai and Lawngtlai DHs, contract for calibration of equipment was awarded (April 2016) to HITES (HLL Infra Tech Services Limited), a fully owned subsidiary of HLL Lifecare Limited, Uttar Pradesh (A GoI enterprise under the MoH&FW) for the period from May 2016 to April 2021. However, relevant records (maintenance register, calibration certificates, *etc.*) for the five year period were not available at the DHs for verification. Hence, due to poor/ absent documentation of records, we could not verify how many calibration requirements were done and number missed out and the pendency in calibration during the five years period.

It was also seen in Audit that in the event of breakdown of equipment, the practice was that a complaint would be lodged to the designated officers (Medical Superintendent) who would, in turn instruct the service providers for necessary remedial action. Scrutiny of records pertaining to maintenance of equipment in Aizawl CH revealed that the downtime period for 21 equipments (ICU) ranged between one day and 56 days. Out of this, there were nine instances during the period where breakdown of equipment was for more than three days.

It was however noticed that relevant documents *viz.*, terms and conditions, job description, location and description of equipment, which form an integral part of the agreement was not furnished for audit scrutiny. In absence of such important documents audit could not ascertain the prescribed time-line for the service provider to attend to such complaints.

The Department stated (October 2020) that due to shortage of funds for procurement, essential equipments were not purchased. It was also stated that calibration of equipment was carried out regularly in Aizawl Civil Hospital. However, supporting records/ certificates of calibration was yet to be furnished as of date. The Department also stated that DHs would be instructed to maintain relevant records such as maintenance register, calibration certificates, *etc.* properly.

Conclusion

Medical equipment/ devices facilitate healthcare personnel to monitor patient health more accurately and help doctors perform various functions from the emergency room to the operating table. The bottom line is that to be able to administer quality health care services, medical equipment must always be available and functioning effectively.

Audit observed that the DHs did not have all the essential diagnostic equipments required by them. The maintenance of available equipment was unsatisfactory as seen from the delays/ downtime in their repairs. The hospitals had not kept any documentation of the services provided by the service provider. The maintenance contracts need to be strictly administered to ensure that costly equipments were available to assist the doctor and in turn the patients.

Recommendations

- i. State Government may ensure availability of full range of essential equipments in every DH, particularly in view of the increasing reliance on diagnostics for treatment of patients.
- ii. Proper maintenance of equipments through Annual Maintenance Contracts may also be ensured to reduce the breakdown time of critical equipments for diagnosis.
- iii. The DHs may ensure proper maintenance of record of periodic maintenance as well as calibrations of diagnostic equipments.

3.2 Drugs Management

Drugs were generally procured by the H&FW Department, GoM and stored centrally at Central Medical Store (CMS), Zemabawk, Aizawl. From CMS, Zemabawk, they are sent to the DHs, CHCs, PHCs and Sub-Centres from time to time. Drugs were also locally procured by the DHs from RKS fund as and when required.

3.2.1 Shortage of essential drugs

As per the Mizoram State Essential Medicine List-2013 (EDL) notified by the H&FW Department, GoM, a DH is required to have at least 280 essential medicines in order to provide minimum assured services. However, the District Hospitals stated that the Mizoram State Essential Medicine List-2013 was not circulated to the District Hospitals by the H&FW Department, GoM.

The status of availability of essential drugs in the sampled DHs during 2014-19 is depicted in table-3.3:

Table-3.3: Status of availability of essential drugs as per Mizoram State Essential Medicine List-2013

Hospital	Types of essential drugs for a DH	No. of essential drugs actually available on date of Audit	Stock-out period ⁶ during 2014-15 to 2018-19
Aizawl CH	280	26	Records not available
Champhai DH	280	106	Records not available
Lawngtlai DH	280	141	Records not available

Source: Records of test-checked DHs

It was noticed that:

- Against 280 different types of medicines required to be available as per Mizoram State Essential Medicine List-2013, only 26 (nine per cent), 106 (38 per cent) and 141 (50 per cent) essential medicines were available at the time of spot verification in Aizawl CH, Champhai DH and Lawngtlai DH respectively; and
- In addition, in all the three DHs, records pertaining to the Stock-out period during the audit period 2014-19 were not available since the hospitals did not monitor and compile the status of availability of medicines in the Indoor pharmacies.

⁶ Stock-out period is the complete absence of a specific formulation and/ or dosage of medicine at a given facility at a given period time

Further, it was seen that there was a system of outsourcing of drug store to private parties by the district hospital drugs canteen managing committees.

Audit observed that there is a high probability that the outsourced drug stores attached with the DHs would also not be having all the essential medicines as the DHs themselves which had outsourced the services to these stores did not have a copy of the EDL.

A survey of 58 IPD patients was conducted during December 2019 (Champhai DH - five patients), January 2020 (Lawngtlai DH - four patients) and March 2020 (Aizawl CH – 49 patients) regarding availability of essential services in the hospitals. Out of the 58 respondents, 13 patients (22.41 *per cent*) responded that all medicines prescribed to them were available in the DHs, 43 patients (74.13 *per cent*) responded that medicines were mostly available and two patients (3.45 *per cent*) responded that medicines were available on few occasions.

3.2.2 Generic medicines

As per NQAS guidelines for Assessment, prescription of medicine by medical officer should be in generic name only.

Internal prescription audit, by a Committee of doctors constituted internally, was done periodically on sampled OPD cards collected from various hospital departments in Aizawl CH in which prescription of medicine by generic name was one of the components analysed. Number of prescription of medicines in generic name at OPD clinics against the total number of prescriptions during the period January-July 2018 are given in table-3.4:

Table-3.4: Prescription of generic medicine in OPD Clinics of Aizawl CH

Period of Audit	No. of OPD cards collected	No. of prescriptions in generic name	No. of prescription without generic name	No. of prescription partly in generic name
January to April 2018	100	4	86	10
May 2018	38	5	29	4
June 2018	32	9	20	3
July 2018	23	0	23	0
Total	193	18	158	17
Percentage		9.33	81.86	8.81

Source: Hospital's record

It can be seen from the above that out of 193 prescriptions collected during January 2018– July 2018, generic names of the medicines were prescribed only in 18 cases (9.33 *per cent*) and 17 prescriptions (8.81 *per cent*) contained generic names of medicines written partly while in the remaining 158 prescriptions (81.86 *per cent*), medicines were not prescribed in generic name.

Comments of the reports of prescription audit on generic medicines are reproduced below:

“There is improvement in prescribing drugs by generic name but still needs to improve (January 2018 to April 2018). There is no improvement in prescribing drugs by generic name (May 2018-July 2018)”.

It was noticed in audit that generic medicines were neither procured nor prescribed in Lawngtlai and Champhai DHs.

The Department stated (October 2020) that proposal for purchase of essential medicines as listed in the EDL for all DHs would be submitted to the Government. A copy of the EDL would also be given to the outsourced Drugs stores attached to the DHs with a request to update the list. The DHs would also be instructed to maintain stock record of medicines properly. During the Exit Conference (11 December 2020), the Department stated that the practice of prescribing medicines in generic name could not be fully implemented due to technical problems in procuring generic medicines.

Conclusion

The shortage of essential drugs ranged from 50 to 81 *per cent* in the test checked DHs. The hospitals did not monitor and compile the status of availability of medicines in the Indoor pharmacies of the hospitals as such records pertaining to the Stock-out period during the audit period 2014-19 could not be verified in audit. Further, the availability of all essential medicines in the outsourced drug stores attached with the DHs was doubtful since the DHs which had outsourced the services to these stores themselves did not have a copy of the Essential Medicine List-2013. Medicines were not prescribed in their generic name, which was against the NQAS guidelines, leading to denial of low-cost medicines to patients.

Recommendations

- i. The State Government may put a sound and robust procurement system for timely supply of quality medicines as per the need of hospitals and ensure all time availability of essential drugs in each hospital.*
- ii. The State Government may streamline procurement of generic medicines and enforce the practice of prescribing medicines in generic name in line with NQAS guidelines.*

