

CHAPTER-5

SUPPORT SERVICES



Chapter - 5: Support Services

Whether support services like drug storage, sterilisation, hygiene, waste management, infection control, ambulance, power back-up/ UPS, etc. had aided the line departments in providing a safe and sterile environment

5.1 Storage of Drugs

As per Indian Public Health Standards (IPHS), Hospitals shall have standard operating procedure for stocking, preventing stock out of essential drugs, receiving, inspecting, storage and retrieval of drugs, checking quality of drugs, inventory management, storage of narcotic drugs, date of expiry, etc. In addition, the room temperature of the drug store should be below 30 degrees Celsius to maintain the efficacy and shelf life of the medicines.

It was seen in Audit that in all the sampled DHs except for Aizawl CH designated area for storing psychotropic, narcotics and concentrated solutions were not available. Similarly, there was no system in place in the indoor pharmacy for recalling expired medicines from “patient care areas” in the sampled DHs except for Aizawl CH. As such, safe environment was not ensured in all DHs.

The Department stated (October 2020) that the District Hospitals stored medicines where store room temperature was maintained at optimum temperature with ceiling fan during summer. There was no need to control the room temperature during winter and rainy season. Psychiatric concentrated solutions are kept according to the space available at the District Hospitals. However, the District Hospitals would be instructed to store them in a safe environment. The Department also stated that drugs procured by Central Medical Store were being screened regularly by Vigilance Committee chaired by Joint Secretary, Health & Family Welfare.

5.2 Dietary Service

IPHS norms envisage dietary service of a hospital as an important therapeutic tool. Apart from normal diet, diabetic diet, semi-solid diets, liquid diet shall be available based on patients’ requirements.

It was seen in Audit that-

- Diets were provided in all the sampled DHs at the rate of ₹ 80 per head per day as fixed by the DH&ME, GoM (21 May 2014);
- Dietician was not available in Champhai and Lawngtlai DHs. As dietician was not available in the two DHs there was no system of diet counselling, formulation of calorie requirement and setting of the patients’ diet accordingly;
- Dietician was available and system of diet counselling by the dietician was also available in the Aizawl CH. However, Audit observed that the advices/ recommendations of the dietician were not communicated to the kitchen-in-charge of the hospital which implied that the advices/ recommendations were not taken into account in the preparation of food for indoor patients; and

- The Janani-Shishu Suraksha Karyakram Guidelines envisaged that, care of the mother and baby (including immunisation) are essential immediately after delivery and at least up to 48 hours. During this period, mother is guided for initiating breast feeding and advised for extra calories, fluids and adequate rest which are needed for well-being of the baby and herself. It was noticed that separate diet register related to maternal women was not maintained in all the three sampled DHs. Moreover, records regarding advices for extra calories, fluids and adequate rest for maternal women were also not available.

Audit observed that the objective of providing diets based on patients' requirement was not fulfilled as similar diets were provided to maternal women as any other indoor patients as per the existing rate stated above.

The department stated (October 2020) that it was not possible to provide different varieties of diet for indoor and maternal ward patients at the current rate of ₹ 80 per patient per day. The issue is expected to be alleviated with the implementation of the revised rate of ₹ 120 per patient per day issued (October 2020) by the State Government. It was also stated that the district hospitals would engage Hospital dietician for special diets.

5.3 Infection Control

IPHS norms provide that each hospital should constitute an infection control team and develop SOP for septic procedures, culture surveillance and determination of hospital-acquired infections. Apart from safe injection administration practices, general cleanliness and adoption of hygienic practices are important tools in the prevention of infection.

It was seen in Audit that-

- Hospital infections control committee (HICC) was set up in all the three DHs and SOP for infection control management was also available with them;
- There was no system to monitor and measure hospital associated infection rates in all the sampled DHs. As such, the number of hospital associated infection rates could not be ascertained; and
- While hospital sterility test was conducted in all the sampled DHs, Air sampling was not found to be carried out in Lawngtlai and Aizawl DHs and fumigation was not found to have been done in Aizawl CH.

The Department stated (October 2020) that Air sampling is a sophisticated procedure requiring expert personnel and specific equipment which cannot be done in the district hospitals. There is a well-defined system to monitor and measure hospital acquired infections in the district hospitals. Every ward follows basic infection prevention practices and also document and record any infection occurring in their premises since October 2020. Corrective measures are taken as and when necessary. However, relevant supporting records were not available for verification.

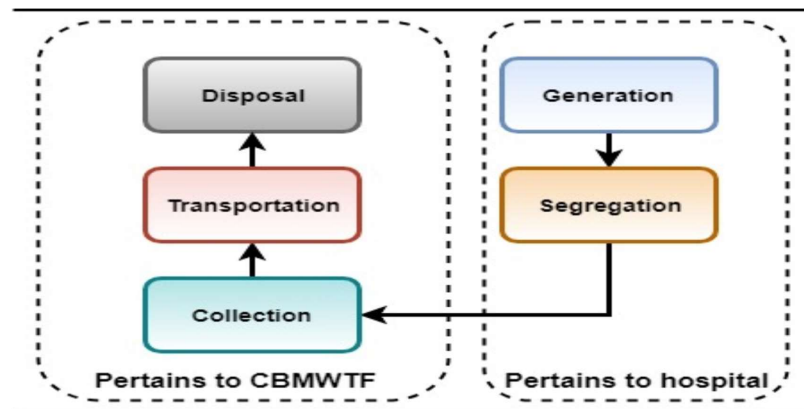
5.4 Hospital Waste Management

Hospital waste management, also known as medical waste management, is a system that handles hospital-generated waste, including infectious, chemical, expired pharmaceutical and radioactive items and sharps.

5.4.1 Bio-medical waste management

Bio-medical waste (BMW)/ hospital waste is any kind of waste containing infectious or potentially infectious materials. The BMW management is an integral part of infection control activities of the hospital. The GoI framed Bio-Medical Waste (Management and Handling) Rules, 1998 under Environment (Protection) Act, 1986, which was superseded by Bio-Medical Waste Management Rules, 2016. The Rules, *inter alia*, stipulate the procedures for collection, handling, transportation, disposal and monitoring of the bio-medical waste with clear roles for waste generators and Common Bio-Medical Waste Treatment Facility (CBMWTF) as shown in the chart below:

Chart-5.1 : Procedures for collection, handling, transportation, disposal and monitoring of BMW



Further, as per Rule 8(7) of Bio-Medical Waste Management Rules, 2016, untreated human anatomical waste, animal anatomical waste, soiled waste and biotechnological waste shall not be stored beyond a period of 48 hours. It shall be ensured that the total time taken from generation of bio-medical waste to its treatment, which also includes collection and transportation time, shall not exceed 48 hours.

It was observed that biomedical waste incinerator plant meant for three hospitals, including Aizawl CH was installed at State referral hospital (SRH), Falkawn. However, at the time of spot verification (March 2020), it was found that the incinerator had broken down and Bio-medical wastes, mainly untreated human anatomical waste or infectious waste from Aizawl CH were burnt in a temporary concrete open furnace behind the incinerator plant which is hazardous to public health as it can create



more air pollution as shown in the photograph placed alongside. Sharp pit and effluent treatment plant were, however, available in the Aizawl CH.

It was observed in Champhai DH that incinerator, sharp pit and effluent treatment plant were available. However, BMW was collected and disposed of once a week (Tuesday) in the DH which in addition to being violation of Rule 8(7) of Bio-Medical Waste Management Rules, 2016 also posed infection risk to the health care workers, patients and visitors of the DH.

It was observed in Lawngtlai DH that Sharp pit and effluent treatment plant were available. However, incinerator plant installation which was started in June 2017 was not completed till date (May 2020). Due to this, deep burial method was being resorted to for disposal of untreated human anatomical waste or infectious waste.

The Department stated that due to space constraint, incinerator at State Referral Hospital, Falkawn is being utilised for the purpose. It was stated that District Medical Superintendent, Champhai District Hospital was informed verbally to run the incinerator at least twice a week. It was further stated that the installation of incinerator at Lawngtlai District Hospital was completed, but commissioning was delayed due to Covid-19 pandemic.

5.5 Linen and Laundry Services

A proper service of linen and laundry is a recognised support service which not only ensures prevention and containment of hospital infection but also contributes to value addition to the image of the hospital in the eyes of public. Clean linen instils psychological confidence in the patients and the public and enhances their faith in the services rendered by the hospital. Simultaneously, an efficient linen and laundry service is of advantage for hospital marketing and speaks of ability of the medical care services.

The IPHS norms prescribe the number of different types of linen that are required for patient care services for hospitals. The availability of different prescribed linen in each test-checked DHs is as given in table-5.1:

Table-5.1: Availability of linens in sample DHs

Name of the Equipment	Aizawl CH (201-300 Bedded)			Champhai DH (51-100 Bedded)			Lawngtlai DH (31-50 Bedded)		
	R	A	in per cent	R	A	in per cent	R	A	in per cent
Bed sheets	1,200	751	63	400	318	80	200	125	63
Bedspreads	1,800	707	39	600	0	0	300	90	30
Blankets (Red & blue)	100	226	226	30	100	333	20	35	175
Towels	1,000	171	17	150	30	20	100	14	14
Table cloth	75	1	1	50	0	0	30	0	0
Draw sheet	150	375	250	75	242	323	30	23	77
Doctor's overcoat	90	134	149	30	15	50	20	28	140
Hospital worker OT coat	400	110	28	200	20	10	25	18	72
Patients house coat (female)	900	114	13	300	30	10	150	23	15
Patients Pyjama (male) Shirt	400	468	117	200	30	15	100	21	21
Pillows	450	464	103	150	85	57	60	48	80
Pillows covers	900	698	78	300	210	70	150	55	37
Mattress (foam) Adult	300	226	75	100	146	146	50	30	60
Paediatric Mattress	40	24	60	16	0	0	6	0	0
Abdominal sheets for OT	200	89	45	50	6	12	30	42	140
Pereneal sheets for OT	200	0	0	50	30	60	30	48	160

Name of the Equipment	Aizawl CH (201-300 Bedded)			Champhai DH (51-100 Bedded)			Lawngtlai DH (31-50 Bedded)		
	R	A	in per cent	R	A	in per cent	R	A	in per cent
Leggings	150	0	0	80	0	0	20	10	50
Mortuary sheet	70	0	0	30	0	0	10	0	0
Mats (Nylon)	200	0	0	50	0	0	30	36	120
Mackin-tosh sheet (meters)	300	30	10	150	80	53	100	29.3	29

Sources: records of test-checked DHs, R= Required, A= Available

From the table above, it can be seen that:

- None of the sampled DHs had all the types of prescribed linen. Out of 20 types of linen, there was shortage of six types in Champhai DH, four types in Aizawl CH and three types in Lawngtlai DH; and
- Even the available linens (except few, which were adequately available) were comprehensively less *vis-à-vis* the required quantity. The shortfall of the available linen in term of quantity ranged from one to 78 *per cent* in respect of Aizawl CH, 10 to 80 *per cent* in respect of Champhai DH and 14 to 80 *per cent* in respect of Lawngtlai DH.

Further, as per IPHS, Linen should be provided with necessary facilities for drying, pressing and storage of soiled and cleaned linens which may be outsourced by the DHs.

It was seen in all the sampled DHs that laundry services were outsourced to private parties to ensure uninterrupted supply of clean linen for patients. Infected and blood stained linens especially in respects of Operation Theatre were sterilized in-house using Autoclave in all the sampled DHs. In addition, Sodium hypo-chloride solution was also used for disinfecting the infected and fouled linen.

The Department stated (October 2020) that Linen and Clothing were procured for all the DHs as per recommendation of Hospital Administrative Committee. However, the requirement of set of six per bed could not be achieved due to paucity of funds.

5.6 Ambulance Service

IPHS stipulated that DHs should have well equipped Basic Life support (BLS) and desirably one Advanced Life Support (ALS) ambulances. These ambulances should be equipped with patients' bed, first-aid kit, essential medical equipment, should be fitted with Global Positioning System (GPS) and linked with one toll free number like 102/ 108 as required under National Ambulance Service (NAS) Guidelines so that patients may contact in their hour of need. Further, under the JSSK scheme, pregnant women are entitled to free transport facility to and from home to the facility and to higher facility in case they are referred further.

As per IPHS, every DH should have ambulance services with basic life support under its essential service. Further, as per the number of availability of bed in the DH, IPHS prescribed required number of ambulances.

It was seen in Champhai DH that two ambulances were available. However, out of two, one Ambulance was out of service at the time of spot inspection (December 2019). The matter

had not yet been reported to the higher authority. It was stated that the said ambulance was still being used as pool vehicle to collect indented materials within the town area though not being used as ambulance. Further, the in-service Ambulance, which was being used for referral cases to higher hospitals, was equipped with oxygen support and first aid box as basic life support.

In Lawngtlai DH, one ambulance was available however, except for First Aid Box, no other basic life support equipment was available inside the lone ambulance being used for referral cases to higher hospitals as depicted in the photograph placed alongside.

In Aizawl CH, eight ambulances were available against the normative requirement of three ambulances. These included two NAS ambulances, two ambulances meant for the Governor and the Chief Minister of Mizoram and four other ambulances which were being utilised for medical emergencies on hiring basis. It was also seen that oxygen support system was not available in three ambulances out of eight ambulances available in the Aizawl CH.



Ambulance at Lawngtlai DH

The Department stated (October 2020) that while the State did not have approved norms for ambulance service, IPHS norms could not be followed strictly. Some of the ambulances were quite old and required repeated repair works. Further, some ambulances needed to be equipped with the requirements for Advance Life Support (ALS) and Basic Life Support (BLS) which was currently not possible due to fund constraints. During exit meeting (11 December 2020) the department also stated that updated status on ambulances would be furnished to audit.

Conclusion

The prevailing system of storage of drugs in the test-checked hospitals was not conducive for orderly storage and as per norms/ parameters making the drugs susceptible to damage, contamination and theft. Dietician Services were not available in Champhai and Lawngtlai DHs, whereas the recommendations of the available dietician at CH Aizawl were not found implemented. Separate diet registers/ records for extra nutrition to be provided to women as part of maternal care services, were not found implemented in all DHs. Infection control was found implemented as per requirements and monitoring committees were in place in sampled DHs. Incinerator was yet to be made operational in Lawngtlai DH. None of the sampled DHs had all the types of prescribed linen.

Shortages in types of linen were seen in Champhai DH (six), Aizawl CH (four) and Lawngtlai DH (three), whereas the shortfall of the available linen in terms of quantity

ranged from one to 78 *per cent* in respect of Aizawl CH, 10 to 80 *per cent* in respect of Champhai DH and 14 to 80 *per cent* in respect of Lawngtlai DH. Ambulance services were not available satisfactorily in all DHs and were also not found equipped with essential equipment.

Recommendations

- i. The system of storage of drugs needs to be strengthened so as to ensure their orderly storage as per norms/ parameters.*
- ii. The BMW Rules should be adhered to and followed rigorously to provide an infection free environment in the hospital.*
- iii. The department may ensure availability of all types of prescribed linen in all the DHs.*

