Chapter V
Support Services

Chapter-V 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

Drugs and Cosmetic Rules, 1945 stipulate drug storage parameters to maintain efficacy of the drugs before they are issued to patients.

Audit found that the norms and parameters prescribed in the said Rules were, however, not adhered to in the test-checked DHs. It was observed that there was no system for maintaining and recording the pharmacy temperature below 30 degree centigrade in all sampled DHs. No designated area was found earmarked for the controlled, dangerous and restricted medicines. Drugs were found kept on the floor in DH Chandel and DH Bishnupur. Improper storage of medicines and drugs would have an adverse effect on their efficacy.

5.2 Infection control

5.2.1 Sterilisation

As per Hospital Infection Control Guidelines of the ICMR 113, disinfection and sterilisation help prevent growth of bacteria/viruses, *etc*. on the medical tools, linen and consumables in addition to reducing the chances of spread of infection to patients and staff of hospitals. NHM Assessor's Guidebook recommends boiling, autoclaving, high level disinfection (HLD) and chemical sterilisation process for disinfection/sterilisation in the DHs. As per Hospital Infection Control Guidelines of ICMR, HLD is the process of complete elimination of all micro-organisms in or on a device, with the exception of small numbers of bacterial spores.

Audit found that sterilisation facility using boiling, autoclaving and chemical sterilisation was available in all test checked DHs. However, none of them undertook HLD process.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that the matter will be looked into.

5.2.2 Hygiene

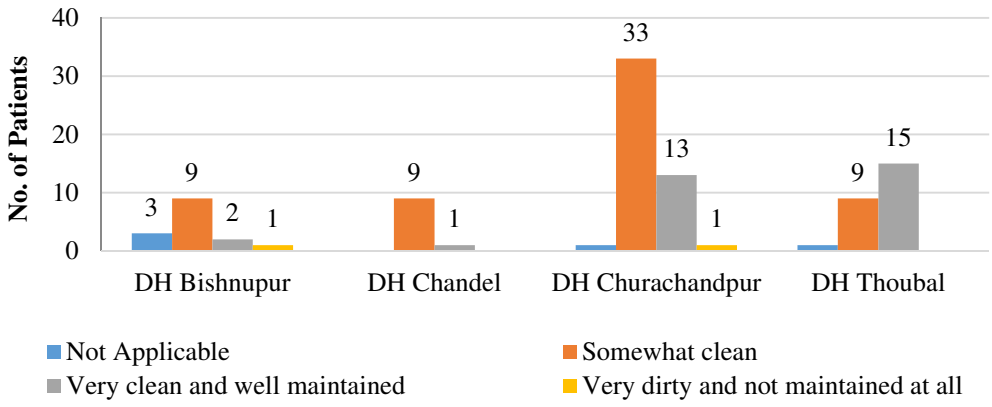
NHM Assessor's Guidebook prescribes that the hospital must have a system to take air and surface samples for microbiological survey for checking infections.

Audit observed that all the selected DHs had taken air and surface samples for checking microbial contamination in the OT.

In the patient survey, 91 (92.9 *per cent*) out of 98 respondents stated that the ward or rooms that they were admitted to were either somewhat clean or very

clean and well maintained. Only two respondents stated that the room was dirty and not well maintained. The survey details are shown in the following chart.

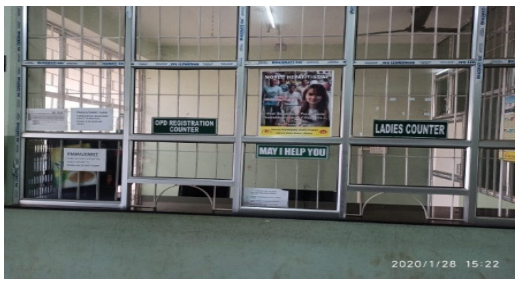
Chart 5.1: Cleanliness of ward or room admitted to



As can also be seen in the following photographs, the premises of the DHs OPD counters, seating area in OPD, *etc.* are clean, hygienic and well maintained.

Photograph 5.1: OPD Counters at the Sample DHs

DH Bishnupur

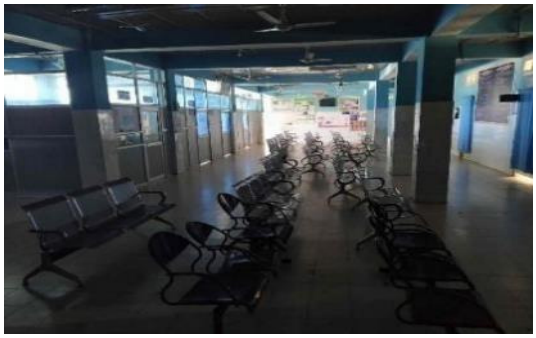


DH Chandel

DH Churachandpur

DH Thoubal

Photograph 5.2: Seating Arrangements in OPD area



DH Churachandpur

DH Thoubal

The Department apprised (September 2020) that all District Hospitals will now participate in Kayakalp Scheme of the Ministry of Health and Family Welfare, GoI which incentivises and recognises cleanliness in the hospitals.

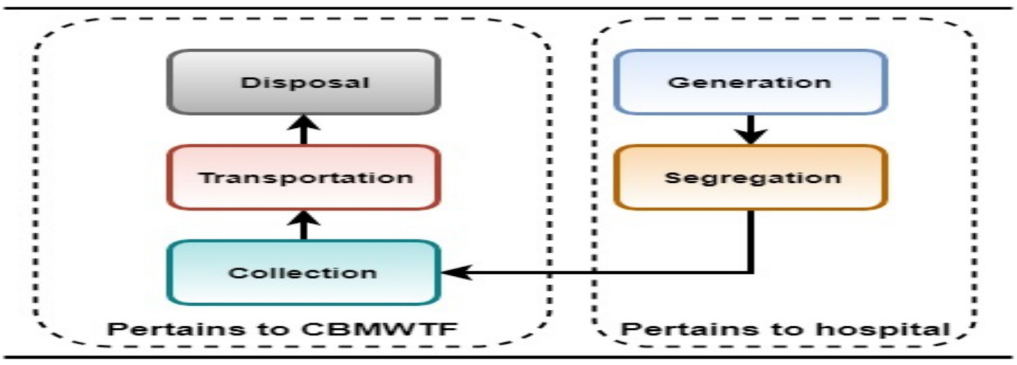
5.3 Hospital Waste management

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

5.3.1 Bio-Medical Waste management

Bio-Medical Waste (BMW) is generated during procedures related to diagnosis, treatment and immunisation in the hospitals and its management is an integral part of infection control within the hospital premises. The GoI framed Bio-Medical Waste (Management and Handling) Rules, 1998 under Environment (Protection) Act, 1986, which were superseded by Bio-Medical Waste Management Rules, 2016. These rules stipulate the procedures for collection, handling, transportation, disposal and monitoring of the BMW with clear roles for waste generators and Common Bio-Medical Waste Treatment Facilitator (CBMWTF) as shown in chart 5.2.

Chart 5.2: Procedures for collection, handling, transportation and disposal of BMW



Biomedical /hospital waste is any kind of waste containing infectious or potentially infectious materials. It may also include medical or laboratory origin waste like unused bandages, infusion kits, *etc*. Biomedical waste management, thus, becomes an integral part of the infection controlling activities of the hospitals.

5.3.2 Segregation of Bio-Medical Waste

Bio-Medical Waste Rules, 2016 require hospitals to segregate different categories of bio-medical waste in separate coloured bins or bags at the source of generation and collected by the Common Bio-Medical Waste Treatment Facilitator (CBMWTF). The CMMWTF refers to any facility which can carry out the treatment and disposal of biomedical waste as indicated in Rule 2(g) of Bio-Medical Waste Management Rules, 2016. In Manipur, this facility is provided by Shija Hospitals, a renowned private hospital in the State.

Audit observed that the segregation of bio-medical waste was done in all the test-checked district hospitals as shown in the following photographs:

Photograph 5.3 Segregation of bio medical wastes in the selected hospitals

DH Bishnupur

DH Chandel

DH Churachandpur

DH Thoubal

5.3.3 Collection of Bio-Medical Waste

As per Rule 8(7) of the Bio-Medical Waste Management(BMW)Rules, 2016, the total time taken from the generation of untreated human anatomical waste, animal anatomical waste, soiled waste and biotechnology waste to their collection, transportation and treatment shall not exceed 48 hours.

During audit, it was noticed that bio-medical waste was collected once a week from DHs except for DH Thoubal and JNIMS, where waste were collected every alternate day and on daily basis respectively. This is in violation of Rule 8(7) of Bio-Medical Waste Management Rules. Bio-medical waste is stored before they are collected by the staff of CBWTF except in case of JNIMS, which has its own Incinerator plant with a capacity of 100 kg./ hour as shown in the photograph placed alongside.

Photograph 5.4: Incinerator plant at JNIMS

5.3.4 Effluent Treatment Plant (ETP)

Hospitals consume large volume of water per day for different purposes and also generate large volumes of wastewater that needs to be treated. Further, in respect of liquid chemical waste generated in health care facilities, BMW Management Rules mandate segregation of the waste at source and its pre-treatment or neutralisation prior to mixing with other effluent generated from health care facilities. Proper treatment of hospital wastewater is very essential because improper treatment of effluent from hospitals will lead to environment and human health issues. Hence, the selection of suitable treatment technology called Effluent Treatment Plant (ETP) for hospitals is required.

Audit noticed that the DHs had not established ETPs in any of the test-checked hospitals for pre-treatment of the liquid biomedical waste, resulting in drainage of the waste directly into the sewerage system. This was not only a violation of the Bio-Medical Waste Management Rules but also hazardous to the public health at large. In case of JNIMS, construction of ETP is 90 *per cent* complete.

During Exit Conference (July 2020), the Department acknowledged the audit finding and stated that bio-medical waste are safely collected and stored and collection by CBWTF is made according to the amount collected. With respect to ETPs, although chlorination of waste is being done in the Hospitals, measures are being currently undertaken by the Department to have ETPs in the Hospitals.

5.4 Laundry services

As per DH guidelines, hospital laundry should be provided with necessary facilities for drying, pressing and storage of soiled and cleaned linens. It was observed that all these facilities were available in all the sample DHs.

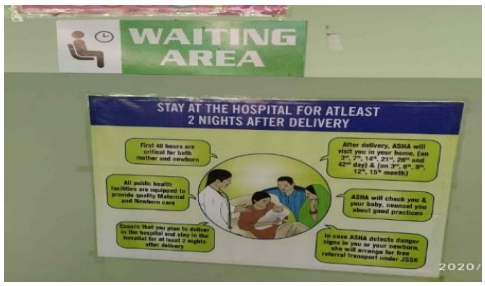
5.5 IEC Activities

Information, Education and Communication (IEC) is a public health system approach aiming at changing or reinforcing health-related behaviour in a target audience, concerning a specific problem and within a pre-defined period of time, through communication methods and principles. Under IEC, posters, flyers, leaflets, brochures, booklets, messages for health education sessions, radio broadcast or TV spots, *etc.* are printed, produced and circulated or broadcasted as a means of promoting desired & positive behaviours in the community.

IEC material were prominently visible in all the DHs. A few are shown in the following photographs.

Photograph 5.5: IEC activities visible in the DHs

DH Bishnupur



DH Chandel

DH Churachandpur

DH Thoubal

5.6 Ambulance services

As per guidelines, ambulance services are essential services. It was observed that ambulances were available in all the sampled hospitals. Free ambulance services for Pregnant Women and sick infants by calling 102 was available in all sampled Hospitals except DH Thoubal.

5.7 Power backup/UPS

It was observed that arrangements for power backup/ UPS were available in all the sampled hospitals.

Conclusion

The prevailing system of storage of drugs in the test-checked hospitals was not conducive for orderly storage and norms/parameters prescribed in the said Rules were not adhered to. No designated area was found earmarked for the controlled, dangerous and restricted medicines. Sterilisation facility for hospital equipment was available in all selected DHs.

Bio-medical wastes duly segregated were collected once a week from DHs except for DH Thoubal and JNIMS, where waste were collected every alternate day and on daily basis respectively. No ETPs had been established in any of the test-checked hospitals for pre-treatment of the liquid chemical waste, resulting in drainage of the waste directly into the sewerage system. Laundry services, IEC activities, ambulances and power backup/UPS were observed to be available at the sample district hospitals.

Recommendations

i. *Review of storage of drugs at DHs as per norms for proper storage and retrieval of drugs.*

ii. *Effluent Treatment Plants may be constructed in all the hospitals on priority. The incomplete ETP at JNIMS may be got completed urgently.*