

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.

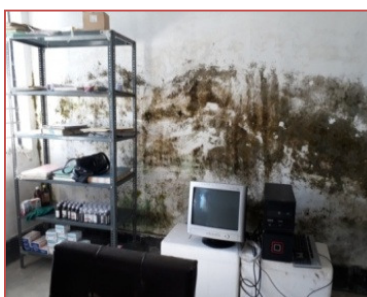
5.1 Storage of Drugs

As per IPHS, the pharmacy of the hospital should have a component of a medical store facility for indoor patients and separate pharmacy with accessibility for OPD patients. Hospitals shall have a standard operating procedure for stocking, preventing stock-out of essential drugs, storage, and retrieval of drugs, checking the quality of drugs, etc.

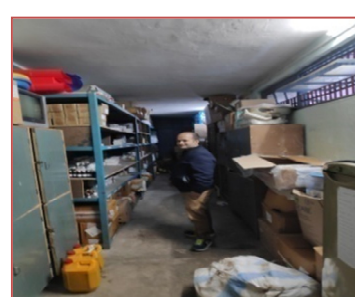
- Both DHs had central storage facility for drugs and consumables received from the Central Health Stores, Gangtok. There were separate pharmacies for OPD and IPD patients. Pharmacy functioned from 8 am to 2 pm. However, the drug stores and the pharmacies were not air-conditioned. The DHs had not prescribed standard operating procedures for stocking, preventing stock-out of essential drugs, storage, and retrieval of drugs, checking the quality of drugs, etc.
- The storage facility for storing drugs and consumables in Gyalshing DH (GDH) was provided on the first floor of a two-storied building close to the main hospital building. Seepage was noticed in the store room and medicines were found exposed to sunlight as no screen was provided in the windows of the store room of Gyalshing DH. Due to exposure to sunlight, some medicines were reduced to dust and change in colour was noticed. For storing injections including lifesaving ones, one small refrigerator was provided.
- Medicine and consumables Store room in respect of Singtam DH (SDH) was very congested and not sufficient to store all medicines and consumables and to facilitate free movement in and out.



Drugs exposed to direct sunlight (GDH)



Damp walls, Drug Store (GDH)



Congested Drug Store (SDH)

- Storage facilities for medicines and consumable at The New STNM Hospital were located at first floor of annex building below main hospital building with sufficient space.

5.2 Infection Control

Infection control practices are important in maintaining a safe environment for both patients and staff in the hospitals by reducing the risk of potential spread of hospital associated infections.

To prevent hospital-acquired infections in patients, visitors and staff, the NHM Assessor's Guidebook 2013 required each DH to frame a schedule of procedure to be followed by the health care facilities known as Standard Operating Procedures (SOP) for septic procedures, culture surveillance and determination of hospital-acquired infections (HAI).

Audit observed that both DHs had functional Infection Control Committees headed by CMO of the respective DH and had SOPs for septic procedures, culture surveillance and determination of hospital-acquired infections (HAI). However, no records of hospital acquired infections in the DHs during 2014-19 were available.

The New STNM Hospital had constituted the Hospital Infection Control Committee (ICC) under the Chairmanship of the Medical Superintendent. Monthly meetings were being held by the Committee to improve the infection control in the hospital and also for recommending appropriate measures for its improvement. No SOP, however, had been prepared for infection control so far.

5.3 Cleaning Services

5.3.1 Cleanliness in DHs

There were separate wash-rooms for male and female patients in the wards. Generally, the washrooms had running water and were regularly cleaned. Cleanliness and proper upkeep was found wanting in the Paediatric ward of Gyalshing DH. The water cistern, commode covers and faucets were found broken and unrepaired. The toilet / bathroom walls were damp and stained. The doors were stained, damaged and in need of replacement. Normal water taps were installed in the washrooms of both Hospitals instead of elbow taps (*except in the OT*) for facilitating touch free operation of the taps to prevent spread of infection. Soap or liquid soap dispensers were, however, not provided in the hand washing area for patients to ensure hygiene.

5.3.2 Cleanliness in New STNM Hospital

Joint physical verification of the Hospital on management of cleanliness of the Hospital revealed the following:

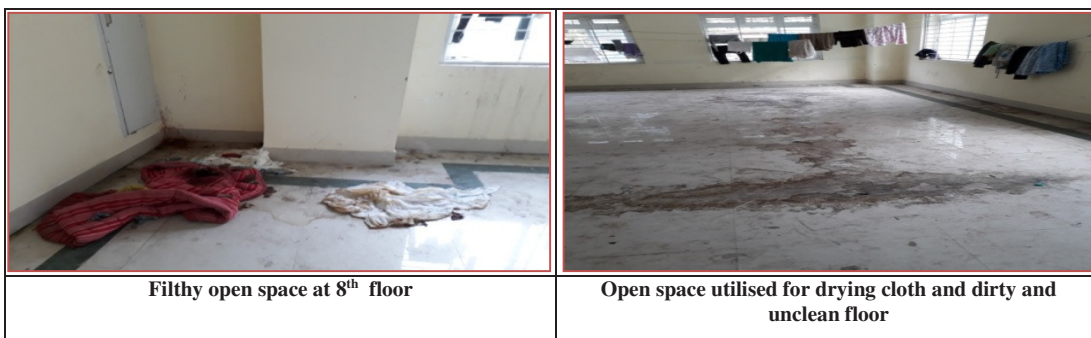
- Hospital wards were clean and well maintained. However, cleanliness of stairs, hospital ramps and washrooms/ toilets were not up to the mark. General/ common toilets of almost all floors were very dirty, unclean and unhygienic with blockage of toilets, filthy toilet floors, *etc.* as depicted in the picture below:



Filthy common/general toilet

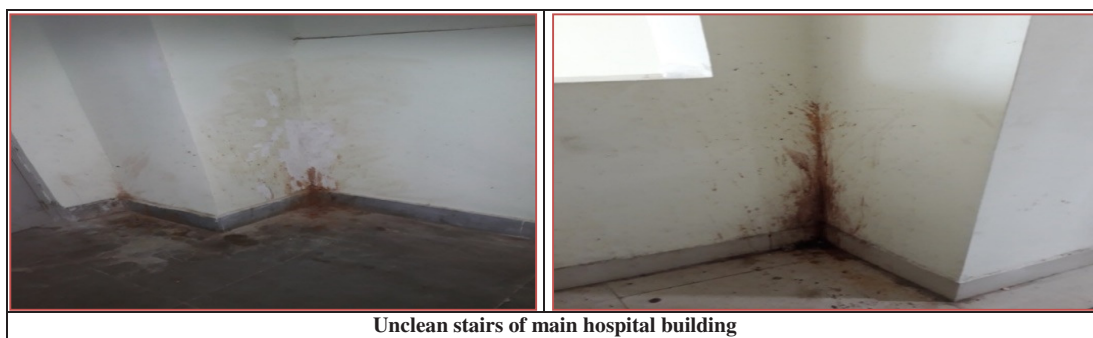
Dirty & unclean toilets of wards

- Open space at 8th floor of main hospital building was empty and unutilised. It was being used by the patients/ patient attendants for drying clothes. The space was unclean and very filthy as shown below:

Filthy open space at 8th floor

Open space utilised for drying cloth and dirty and unclean floor

- Staircase leading to different wards and hospital ramps of the main hospital building were unhygienic and unclean. The corners of ramps and stairs were unclean and filthy with chewed pan (betel nut) stains.



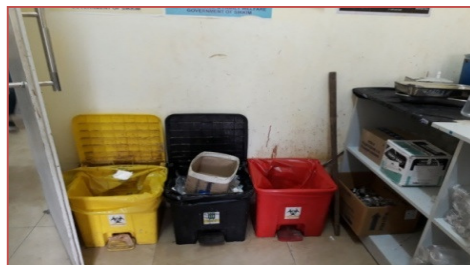
Unclean stairs of main hospital building

- Huge quantities of construction debris were found dumped in and around hospital premises by the contractor. No action had been taken by the concerned Department to remove the debris from the hospital premises.



Scrap building materials dumped at hospital premises

- It was observed that only three different coloured plastic containers were being utilised by the Hospital.
- Hospital waste collected for incineration and disposal, required to be incinerated and disposed of within 48 hours, had not been disposed of for more than 22 days (22 February 2020 to 16 March 2020).



Colour plastic used for collection of hospital waste at different wards.



Wastes collected in different coloured plastic bags to be incinerated and disposed off within 48 hours, waiting to be disposed off for more than 22 days.

- The bio-degradable hospital waste, not required to be incinerated, was collected and lifted by the Gangtok Municipal Corporation (GMC) on daily basis. The sampled DHs had functional incinerators and all wastes requiring incineration were treated (burnt). For collecting the hospital waste, a specified area with necessary safety measures was required to be arranged to avoid spread/contamination of disease. During physical verification, it was observed that no such designated area for dumping such waste was provided. The waste was being dumped at the basement of the main hospital building in a non-functional Ambulance, as depicted in picture below:



Hospital waste dumped in the basement in a damaged ambulance

5.4 Hospital Waste Management

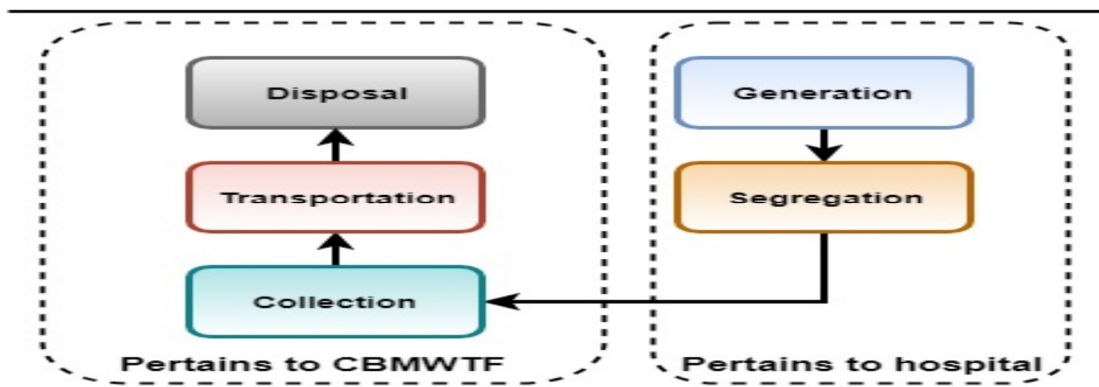
Hospital waste management, also known as medical waste management, is a system that handles hospital-generated waste, including infectious, chemical, expired pharmaceutical and radioactive items, and sharps.

5.4.1 Bio-medical waste management

Bio-medical waste (BMW) 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 (BMW Rules). 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 the chart below.

Chart 5.1



5.4.2 Authorisation for generating BMW

The BMW Rules required the hospitals generating BMW to obtain authorisation from the State Pollution Control Board (SPCB). The category-wise quantity of BMW generated and their disposal were to be forwarded to SPCB in a prescribed format annually.

Audit observed that two test-checked DHs had obtained authorisation from the SPCB for generation and disposal of BMW.

5.4.3 Segregation and collection of BMW

As per Biomedical Waste (Management and Handling) Rules, 2016, it is the duty of every occupier of an institution generating biomedical waste to take all steps to ensure that such waste is handled without any adverse effect to human health and the environment. Further, no untreated biomedical waste should be stored beyond a period of 48 hours. Hazardous and toxic bio-medical waste has to be separated for its safe transportation to a specific treatment. In terms of the Biomedical Waste (Management and Handling) Rules, 2016, colour coded plastic containers of four different colours¹ were to be used for collection of different types of hospital wastes.

Audit however observed the following:

- Singtam DH was found observing prescribed norms for segregation and disposal of biomedical waste., whereas Gyalshing DH had not adopted the prescribed procedure for segregation of wastes due to non-availability of required plastic bags. At the time of physical verification (September 2019), only black and yellow plastic bags were

¹ **Red** - disposable contaminated waste which can be recycled-will be disposed by autoclaving treatment followed by shredding; **Yellow** – human anatomical wastes, body parts, tissues, cotton dressings, plaster casts, gauze pieces, antibiotics and other drugs, microbiological waste, culture devices, stock or specimen of micro-organism etc.; **Blue** – broken glassware, contaminated glass, medicines vials and ampoules; **White** – wastes sharps including metals, needles, syringes with fixed needles etc.

available. The bio-medical waste to be collected in blue and red containers were being collected in cardboard cartons.

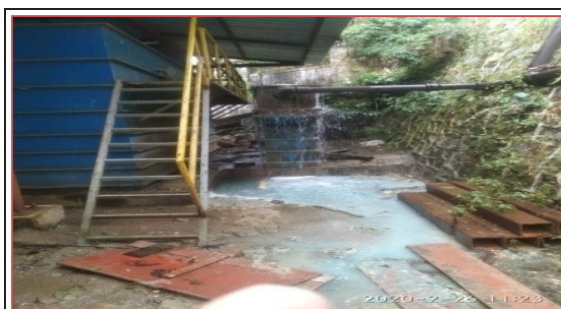
- Bio-medical waste from Gyalshing DH such as infected plastic, etc. were collected and kept in the hospital to be lifted by waste disposal vehicles of Gyalshing Municipal Council which visited only twice or thrice a week, instead of disposing them within 48 hours.
- Both DHs had sharp pits for deep burial of sharp used objects like cut needles etc. and functional incinerators for burning wastes categorised for incineration.

The Department stated (June 2020) that separate budget provision has been made for management of biomedical waste, hence, problem in its management will be solved with the provision of funds.

5.4.4 Effluent Treatment Plant (ETP)

For treatment of hospital effluent, the Department proposed three ETPs in the New STNM Hospital. Out of the three ETPs, only one was functional. The construction of other two ETPs was still under progress. Joint physical verification of the ETPs revealed the following:

The functional ETP for treatment of effluent from the main hospital was not maintained properly. Water was found leaking out of the plant and flowing directly into open area in the hospital premises leading to health hazard and environmental pollution. All three ETPs were within close proximity of the hospital building and private households.



Water leakage from ETP connected with main hospital



ETP close to human habitation and households

Construction of ETP close to hospital and private households was also fraught with the risk of contamination of air/ water and spread of diseases to patients and general public.

While accepting the Audit observations, the New STNM Hospital authority stated (May 2020) that the contractor “Civil Engineers Enterprises Private Limited”, (CEEPL) Kolkata, who was awarded the work for construction of New STNM Hospital on turnkey basis, had proposed that they will handover the plant to the Hospital only when a minimum of six skilled technicians are provided for running the ETPs. Proposal for the same has been submitted to the Government and is under process. Construction of ETP close to the Hospital and private households was as per the design of the Hospital.

However, the Hospital could not provide the NOC of the State Pollution Control Board for construction of ETP close to the Hospital.

5.5 Linen and Laundry Service

As per IPHS, the number of linen (OT coat, bed sheets, bed covers, pillow, blankets, pillow covers) required in DHs has been quantified as per the bed strength of the DH. Records relating to supply, issue and receipt of linens were not maintained properly in the DHs. Audit could not ascertain the status of availability of linen in the two DHs. A dedicated laundry service facility was available at New STNM Hospital.

During physical verification, use of hospital issued linen like bed sheets, blankets and pillows by the patients was found very rare. There was no provision for providing dresses to the in-patients. The patients preferred to use their own linen and blankets rather than that provided by the hospitals. Washing machines and ironing facilities were not available in both the DHs and laundry services for washing patients' bed sheets, blankets and other linen were outsourced to local washer men. In the New STNM Hospital one iron roller machine was not put to use and two tumble drier machines were idle due to want of repair.

Patients using own bedding



The authorities of STNM Hospital stated (May 2020) that proposal for repairing of the tumble dryer machine has been forwarded to the company and will be repaired once the lockdown is over.

5.6 Ambulance Service

IPHS specify the number of ambulances required for each DH according to the number of beds. Further, IPHS envisage that the ambulances should be provided with basic life support/ advanced life support equipment and communication system.

Audit noticed that there were two stand-by Ambulances in Gyalshing DH for referral services in case of emergencies. These two ambulances were fitted with basic life support system (oxygen support and suction machines). The ambulances were used for transferring patients referred from the DH to higher medical facilities at Gangtok. Besides, there were additional eight ambulances in the PHCs of West District which could be availed through Call Centre Nos. 102 (delivery cases) and 108 Ambulance services (other emergencies) were available for carrying patients from the PHCs to Gyalshing DH.

As regards, Singtam DH though the DH had two ambulances, they did not have basic life support system of oxygen, suction machine etc. Apart from these, there were at least one ambulance in each of the six PHCs and two ambulances in one CHC under Singtam DH that were used for transferring patients to higher centres. The ambulances under Singtam DH were not linked with the Call Centres 102 and 108.

There were four functional ambulances in the New STNM Hospital for providing referral transport service to the patients.

The ambulances in the two DHs and the New STNM Hospital did not have GPS communication system.

5.7 Power Backup

As per IPHS, a 100 bedded DH should have 24-hour uninterrupted stabilised 3-Phase power supply. For uninterrupted supply of power during power cuts, one DG set of 75 KV and a portable Set of 2.5 KV have been prescribed. Gyalshing DH had a standby DG set of 40/50 KV capacity while Singtam DH had DG set of 75 KV capacity. Both DHs did not have any portable DG set. The indoor patient wards in the DHs were provided with power invertors.

It was observed that the DG sets had not been integrated with the electrical supply system of the DHs for auto-start in case of power failures from the regular public supply. Absence of power supply would risk the lives of patients in emergent conditions.

5.8 Quality Assurance and Monitoring

IPH Standards advocate that hospitals should develop and implement standard operating procedures for the administrative and clinical processes to ensure quality of all services provided by the hospitals. The details of implementation of IPH Standard recommendations in the two DHs are shown below:

Table 5.1: Status of District Hospitals in Quality Assurance and Monitoring

Sl. No.	IPH Standards envisage	Status at DHs
1	Check List – For proper monitoring and delivery of services, hospitals would develop and implement checklist for various processes viz. Housekeeping, Bio-Medical Waste, Surgical Safety, etc.	Not implemented in both DHs.
2	Internal Audit – Internal Audit of the services available in hospital should be done on regular basis. Findings are to be discussed in meeting of hospital management /monitoring committee and take corrective action.	Not implemented in both DHs.
3	Medical Audit – A medical audit committee shall be constituted in all hospitals. The committee shall select records of patients randomly. Records shall be evaluated for completeness against standard content format and clinical management.	Not implemented in both DHs.
4	Mortality Review – Review of all mortality that occurs in hospitals shall be done on fortnightly basis. All maternal deaths in hospital shall come under this review.	Implemented and being done in both DHs
5	Hospital Management Information System (HMIS) – A standard format for capturing key performance indicators should be developed and reviewed regularly.	Implemented in both DHs

The Department stated (June 2020) that though the check list was available, it was not followed properly. Staff would be trained on the same for better compliance. Internal Audit was being done through KAYAKALP activities and RKS and added that there was need for revival of the concerned Committee. Further, the Department had initiated the process for constitution of medical audit committee.

Conclusion

No standard operating procedures for stocking and preventing stock-out of essential drugs was in place. Storage of drugs was deficient exposing them to damage and the stocking was not conducive for easy retrieval of the drugs in the DHs. The quality of drugs was not checked, despite the requirement. Audit noticed that in the test checked DHs the Cleaning services and hygiene practices were not satisfactory to provide an assurance regarding an infection free environment to the medical staff and patients. Though Singtam DH was observing prescribed norms for segregation and disposal of biomedical waste, Gyalshing DH had not adopted the prescribed procedure for segregation of wastes due to non-availability of required plastic bags. No designated place for BMW had been assigned and the Gyalshing Municipal Council lifted the waste of the DH, only twice or thrice a week, instead of disposing them within 48 hours. The ETPs in the new STNM hospital was close to the hospital and private housing, exposing the patients/citizens to infection risks. Quality control and assurance monitoring of services was not implemented in the test-checked hospitals.

Recommendations

- *The stocking and retrieval of drugs be reviewed and improved and quality testing be implemented.*
- *The BMW Rules should be adhered and followed rigorously to provide an infection free environment in the hospital. The DHs may improve their coordination with the Municipal Authorities for lifting of the BMW in time.*
- *Effluent Treatment Plants may be constructed in all the hospitals and State Government may ensure the completion two ETPs at the New STNM Hospital.*
- *Quality control Assurance and monitoring arrangements be implemented.*

