



सत्यमेव जयते

Ministry of Urban Development  
Government of India

# Swachh Hospitals

## Standard Operating Procedures





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# Swachh Hospitals

Standard Operating Procedures





## **M. Venkaiah Naidu**

Minister of Urban Development, Housing & Urban Poverty Alleviation and Parliamentary Affairs

The Swachh Bharat Mission, which aims to make India a clean and open defecation free nation by October 2019, needs to become a 'jan andolan' with participation from every stakeholder.

We have taken up a multi-pronged strategy for making the Mission a people's movement. In its second year since launch, it is heartening to note that the Swachh Bharat Mission has caught the imagination of citizens.

The increased participation from citizens, be it as part of our thematic drives, or voluntary 'swachhata' activities from inspired individuals and organizations, is slowly but surely pushing the Mission towards becoming a 'people's movement'.

I am pleased to see the Standard Operating Procedures for "Hospitals" being released by my Ministry, which lays out the infrastructure norms, assessment & inspection procedures and checklists, and sanitation and waste management best practices to be followed, by hospitals. It is my firm belief that this will go a long way in making citizens active participants in our collective journey towards a "Swachh Bharat" by 2<sup>nd</sup> October 2019.





## **Rao Inderjit Singh**

Minister of State, Ministry of Urban Development  
Government of India

On 2<sup>nd</sup> October 2014, the Hon'ble Prime Minister Shri Narendra Modi launched the Swachh Bharat Mission to clean India's cities and towns. He also called out to every citizen to voluntarily contribute 2 hours every week to the cause of the Mission.

It gives me immense pleasure to see people from different sections of society participating actively in cleanliness drives across the country. This vision of clean India can be achieved only through the efforts of each and every citizen, working hand-in-hand with the government towards the common vision of 'swachhata'.

The thematic drives in past have helped us increase participation from citizens in this mass movement by inspiring them to play a more active role in maintenance of hygiene and sanitation.

We present the Standard Operating Procedures for "Swachh Hospitals". It enlists various infrastructure norms, assessment & inspection procedures and checklists, and sanitation and waste management best practices to be followed by hospitals.

It is my firm belief that movements like these will enable our country to move towards a clean and a sanitized India.



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## Background, Objectives & Scope

### Background

Cleanliness along with maintaining good hygiene is one of the most important requirements for good health. The importance becomes more significant in a hospital setting, where sick people come to restore their health. Hospitals provide cure for all types of diseases, thereby serving the most vulnerable people. However, they also play host to the most powerful germs. They can become potential sources of spreading infection, if the people concerned are not vigilant enough. Every hospital has an effective infection control program, which should be implemented appropriately for maintaining cleanliness and good hygienic conditions in the hospital premises.

Health-care waste contains potentially harmful microorganisms, which can infect hospital patients, health workers and the general public. Every year, an estimated 16 billion injections are administered worldwide, but not all of the needles and syringes are properly disposed afterwards. Health risks associated with waste and by-products also include radiation burns, sharps-inflicted injuries, poisoning and pollution through the release of pharmaceutical products, poisoning and pollution through waste water; and by toxic elements or compounds such as mercury or dioxins that are released during incineration.<sup>1</sup>

The Hon'ble Prime Minister launched the Swachh Bharat Mission on 2<sup>nd</sup> October, 2014 with a target to make the country clean and sanitised by 2<sup>nd</sup> October, 2019. As a part of the Swachh Bharat Mission mandate, it is imperative for all hospitals to be well-maintained & clean, and to move towards the larger goal of a healthy, unpolluted environment.

### Objectives

For uniformity in cleanliness guidelines, it is essential to have a Standard Operating Procedure (SOP) to ensure that all the hospitals set standards of cleanliness in their respective premises.

The purpose of this SOP is to improve current cleanliness level in the hospitals of India and

- ✓ All staff including medical and non-medical, patients, attendants and visitors are responsible for the cleanliness of the hospitals
- ✓ The Standard Operating Procedures for Cleanliness in Hospitals provides detailed best practice guidelines for all aspects of cleaning except for biomedical waste
- ✓ All hospitals should comply with the guidelines set out in the Standard Operating Procedures

<sup>1</sup> Health-care waste, WHO Fact Sheet 2015

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provide a healthy atmosphere to staff, patients and visitors. The first and foremost step towards achieving such clean environment in the hospitals is ensuring sanitation and hygiene practices amongst the staff, patients and visitors. Things like lack of awareness about health hazards related to healthcare waste, inadequate training in waste management and absence of reliable waste management and disposal systems are the most common problems connected with healthcare waste.

This SOP targets to ensure proper waste management through recycling and processing of waste, and establish systems in the hospitals for cleanliness. It lays emphasis on the fact that the management of healthcare waste requires increased attention and diligence to avoid the exposure to infectious agents and toxic substances. An assessment framework has also been defined in this document which can help the concerned hospital to improve its cleanliness maintenance processes and achieve an exemplary level of cleanliness.

These directions will be updated continually to incorporate new procedures and products. As it is dynamic in nature, the printed version of this document or part thereof should not be relied upon as a current reference document, hence, it is advisable to periodically check for updated version on the [swachhbharaturban.gov.in](http://swachhbharaturban.gov.in) portal. Any amendments to the procedures based upon requirement should be identified and incorporated as per the requirement. This document serves as the base document. The actual allocation of resources and the actual frequency of cleaning may vary according to the local situations.

It is important that all aspects of cleaning and sanitation provision are aligned with the Swachh Bharat Mission Guidelines and other relevant environment-related guidelines issued by the Government of India. The Standard Operating Procedures are set out in a detailed format to cover the issues required to implement proper cleaning of hospital premises. Since bio-medical waste is an integral part of the waste generated by health-care facilities, a brief reference related to its maintenance and treatment has been mentioned in this document. However, in case of detailed guidelines for the management and treatment of the biomedical waste generated, the *Bio medical waste (Management and Handling) Rules 2016* and any other *amendments or notifications of the state pollution control board* can be referred to.

### Scope

This SOP for 'Swachh Hospitals' is applicable to all hospitals being maintained by government and private entities, in states and cities, across India.

## Responsibilities

### *Overall Responsibility*

The respective hospitals, through their facility management/service provider would be responsible for ensuring compliance to the SOP for the hospitals under their management.

Each hospital should have a committee overseeing sanitation and cleanliness in the hospital premises to monitor and supervise the works being carried out by the responsible party (Management/Contracted Agency) and ensure compliance to the SOP. In case of a contracted agency, it is important that there is an internal committee with both medical and non-medical staff representations monitoring the overall cleanliness of the hospital complexes.

The committee should also ensure compliance to infrastructure requirements as laid out in this SOP. Further, in case of contracting an external agency to carry out the cleanliness works, Service Level Agreements (SLAs) should be drafted and signed by both parties.

### *Responsibilities of the Hospital Management & Staff /Contracted Agency*

It is the responsibility of the Hospital Management/ Contracted Agency to carry out the cleaning of the hospital premises on a regular basis, and comply with the following guidelines:

- Ensure a clean environment for the patients and hospital staff through proper selection of agencies required for the job
- Conduct regular surprise inspection of the hospital premises to ensure compliance with the SOP
- Attain and maintain high standards of cleanliness and general upkeep
- Train, control and supervise staff under its establishment
- Control the issue of cleaning materials and equipments
- Maintain official records on staffing, cleaning materials and equipments
- Ensure that cleaning standards, frequency and accountability for cleaning are clearly defined (i.e., who cleans, what and how do they clean and when do they clean it, etc.)
- Cleaning schedules should ensure that no area is missed from routine cleaning and additional rounds are conducted as and when required

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- Statutory requirements are met in relation to solid waste management, Environment Protection Act, food hygiene and pest control among others

### ***Responsibilities of other stakeholders (Patients, visitors, etc.)***

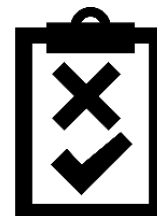
Maintenance of hygiene and cleanliness is not just associated with aesthetics and patient satisfaction, but also reduces incidence of Hospital Acquired Infections and ensures a clean and sanitised environment. All this is crucial for healing and recovery. Not just the hospital management but patients and visitors are also expected to contribute in maintaining the cleanliness of the hospital environment, either directly or indirectly:

- By using waste bins
- Washing hands before and after visiting the hospital
- Following hospital norms
- Not spitting and littering
- Not smoking within the premises, etc.

## Assessments & Inspections

### Self-Evaluation

Three broad parameters viz. infrastructure availability, maintenance of hospital premises and equipment, and feedback from patients, staff and faculty members – are being proposed here for assessing/rating hospitals on overall cleanliness. The parameters for these ratings may also be utilized for conducting self-evaluation by the concerned authority to identify areas of improvement and intervention. The proposed parameters and their scoring are given below:



| INFRASTRUCTURE (MAX. SCORE- 60) |   |  |  |                      |
|---------------------------------|---|--|--|----------------------|
| 1.                              | Hospital infrastructure is well maintained (No major cracks, seepage, chipping plaster, chipped floors in hospital) | In good condition                              | In a fair condition                                | In broken condition  |
|                                 |   | 4  | 2  | 0                    |
| 2.                              | Entrance/exit gate  | In good condition                              | In broken condition                                | No gate              |
|                                 |   | 4  | 2  | 0                    |
| 3.                              | Corridors in the Hospital   | In good condition                              |  | In broken condition  |
|                                 |   | 4  |  | 2                    |
| 4.                              | Dustbins (Refer 'Cleaning Equipment' section)   | Available as per requirement in good condition | Available as per requirement but in poor condition | Not available        |
|                                 |   | 4  | 2  | 0                    |
| 5.                              | Waste collection equipment (wheeled trolleys/handcart)  | Available                                      |  | Not available        |
|                                 |   | 2  |  | 0                    |
| 6.                              | Composting equipment/compost pit  | Available                                      |  | Not available        |
|                                 |   | 4  |  | 0                    |
| 7.                              | Cleaning equipment/brooms   | Available in good condition                    | Available in poor condition                        | Not available        |
|                                 |   | 4  | 2  | 0                    |
| 8.                              | Toilets and baths with washbasins available for clinical and non clinical staff                                     | Available in good condition                    | Available in poor condition                        | No toilets available |
|                                 |   | 4  | 2  | 0                    |
| 9.                              | Toilet and bath facilities available for IPD patients   | Available in good condition                    | Available in poor condition                        | No toilets available |

|   |   |                              |                             |                      |
|---|---|------------------------------|-----------------------------|----------------------|
|   |   | 4                            | 2                           | 0                    |
| 10  | Toilet facilities available for visitors and OPD patients | Available in good condition  | Available in poor condition | No toilets available |
|   |   | 4                            | 2                           | 0                    |
| 11  | Stair Case/ Lift as applicable                            | Available in good condition  | Available in poor condition | Not available        |
|   |   | 4                            | 2                           | 0                    |
| 12  | Covered sources of drinking water                         | Available in good condition  | Available in poor condition | Not Available        |
|   |   | 4                            | 2                           | 0                    |
| 13  | Facility for parking of vehicles                          | Available in good condition  | Available in poor condition | Not Available        |
|   |   | 4                            | 2                           | 0                    |
| 14  | Sterilization facility                                    | Available in good condition  | Available in poor condition | Not Available        |
|   |   | 4                            | 2                           | 0                    |
| 15  | Garden/Park/Lawn/Recreation Rooms for IPD patients        | Available in good condition  | Available in poor condition | Not Available        |
|   |   | 4                            | 2                           | 0                    |
| 16  | Ambulance   | Well maintained and equipped |                             | Poorly maintained    |
|   |   | 2                            |                             | 0                    |
| <b>SUB-TOTAL (INFRASTRUCTURE SCORE)-A</b> |   |                              |                             |                      |

| <b>SERVICE/MAINTENANCE (MAX. SCORE- 40)</b> |   |                      |                        |                        |
|---|---|----------------------|------------------------|------------------------|
| 1.  | Cleaning within Hospital premises           | Swept daily          | Swept periodically     | Never swept            |
|   |   | 4                    | 2                      | 0                      |
| 2.  | Toilet and bath cleaning                    | Cleaned regularly    | Cleaned sometimes      | Never cleaned          |
|   |   | 4                    | 2                      | 0                      |
| 3.  | Toilet and bath water availability          | Available            |                        | Not available          |
|   |   | 3                    |                        | 0                      |
| 4.  | Cleaning of water tanks wherever applicable | Cleaned regularly    | Cleaned sometimes      | Never cleaned          |
|   |   | 4                    | 2                      | 0                      |
| 5.  | Cleaning of drinking water coolers          | Cleaned regularly    | Cleaned Once in a week | Never cleaned          |
|   |   | 4                    | 2                      | 0                      |
| 6.  |   | Maintained regularly |                        | No regular maintenance |

|  |  |  |  |
|--|--|--|--|
|  | Maintenance of infrastructure like special care rooms, operation theaters, labor rooms, ICUs, laboratories, etc. | 4  | 0  |
| 7.                                     | Cleaning of special care rooms, operation theaters, labor rooms, ICUs, laboratories, etc.                        | Cleaned regularly or as and when required                                | Not cleaned on a regular basis           |
|  |  | 4  | 0  |
| 8.                                     | Collecting waste from dustbins   | Daily  | Fortnightly                              |
|  |  | 4  | 2  |
| 9.                                     | Segregating waste collected  | At the point of waste generation   | Daily                                    |
|  |  | 4  | 2  |
| 10.                                    | Bio-degradable waste processing  | Processed at compost pit/ compost equipment within the hospital premises | Sent for composting outside the hospital |
|  |  | 5  | 3  |
| <b>SUB-TOTAL (MAINTENANCE SCORE)-B</b> |  |  |  |

| <b>FEEDBACK FROM MEMBERS (MAX. SCORE- 30)</b> |   |   |   |
|---|---|---|---|
| 1.  | Availability of toilet facilities for patients                    | Adequate number available for use                         | Inadequate number available for use                           |
|   |   | 4   | 0   |
| 2.  | Availability of toilet facilities for visitors, staff             | Adequate number available for use                         | Inadequate number available for use                           |
|   |   | 4   | 0   |
| 3.  | Availability of sufficient number of dustbins for disposing waste | Adequate number available                                 | Inadequate number available for use                           |
|   |   | 4   | 0   |
| 4.  | Waste collection done daily                                       | Yes   | No  |
|   |   | 4   | 0   |
| 5.  | Cleaning of drinking water coolers and surroundings               | Sources of drinking water and surroundings are kept clean | Sources of drinking water and surroundings are not kept clean |
|   |   | 4   | 0   |
| 6.  | Cleanliness and maintenance of special care rooms including       | Well-maintained and clean                                 | Poorly-maintained and not clean                               |
|   |   | 4   | 0   |

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|   |   |                           |                                 |
|---|---|---------------------------|---------------------------------|
|   | labs, Operation theatres, etc.                        |                           |                                 |
| 7.  | Hospital premises overall cleanliness and maintenance | Well-maintained and clean | Poorly-maintained and not clean |
|   |   | 3                         | 0                               |
| 8.  | Cleanliness and maintenance of cafeteria premises     | Well-maintained and clean | Poorly-maintained and not clean |
|   |   | 3                         | 0                               |
| <b>SUB-TOTAL(FEEDBACK SCORE)-C</b>          |   |                           |                                 |
| <b>TOTAL SCORE (A+B+C): MAX. SCORE: 130</b> |   |                           |                                 |



### Gap Assessment

Apart from self-evaluation as described above, a periodic assessment of infrastructure gaps is also essential in order to maintain the standards of sanitation and cleanliness in the hospital premises. The format given below could be used for the same:

| S.No. | Parameter  | Standard   | Actual |
|-------|--|--|--------|
| 1.    | Toilets  | As per need (user specific as per requirement)   |        |
| 2.    | Toilets with bath facility   | As per need (user specific as per requirement)   |        |
| 2.    | Ablution taps  | 1 water tap with every toilet seat   |        |
| 3.    | Water taps   | With adequate drainage arrangement   |        |
| 4.    | Light bulbs and switch   | One for each toilet and bath facility seat (fused bulbs to be changed immediately)   |        |
| 5.    | Doors and latches in toilets                                       | One door with functional latch for every toilet seat and bath facility   |        |
| 6.    | Wash basin with mirror   | At least one in each toilet block  |        |
| 7.    | Dustbins   | <ul style="list-style-type: none"> <li>• Premises - Every 250 meters</li> <li>• Toilets - 1 per toilet</li> <li>• Kitchen - As per need</li> <li>• Main hospital reception - 1</li> <li>• Bath facility - 1</li> <li>• Rooms/wards - 1 per room/ward</li> <li>• Special care rooms (Operation theatres, Labor rooms. Laboratories, ICUS) - as per need, but should have color segregation</li> <li>• OPD and visitor area - As per need</li> </ul> |        |
| 8.    | Vacuum cleaners  | As per need  |        |
| 9.    | Storage closet   | As per need  |        |
| 10.   | Brooms, mops, duster and other equipments                          | 1 set per cleaning staff + Backup sets   |        |
| 11.   | Specialized cleaning infrastructure (for operation theatres, labor | As per need  |        |

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|     |                            |             |  |
|-----|----------------------------|-------------|--|
|     | rooms, ICUs, laboratories) |             |  |
| 12. | Parking spaces             | As per need |  |

### *Periodic Inspection*

#### Within 24 hours

| <b>To be conducted by:<br/>Supervisor of the Maintenance Staff</b> |   |
|--|---|
| <b>S.no.</b>   | <b>Area and Activity</b>  |
| 1.   | Check if the hospital premises have been swept/cleaned and waste removed appropriately. (After every three hours or as per the need)                          |
| 2.   | Check if corridors inside the hospital have been regularly cleaned. (After every three hours or as per the need)  |
| 3.   | Check if special care rooms including operation theatres, labor rooms and ICUs are clean. (After every three hours or as per the need)                        |
| 4.   | Check if the kitchen is maintaining adequate standards of cleanliness and hygiene. (After three hours for special care facilities and twice a day for others) |
| 5.   | Check if all the dustbins have been emptied and cleaned. (Thrice a day for special care facilities and twice a day for others or per the requirement)         |
| 6.   | Check if all the batch facilities and toilets are cleaned. (After every two hours or as per the requirement)  |
| 7.   | Check if bio-medical waste is being segregated and handled safely as per the recommendations. (After every three hours or as per the requirement)             |
| 8.   | Check that the garbage is being segregated, collected and disposed regularly. (After every three hours or as per the requirement)                             |
| 9.   | Check that all stairs/lifts have been properly cleaned (thrice a day or as per the requirement)   |
| 10.  | Check that no shoes are being taken inside the restricted area  |

#### Daily inspection

| <b>To be conducted by:<br/>Supervisor of the Maintenance Staff</b> |   |
|--|---|
| <b>S.No.</b>   | <b>Area and Activity</b>  |
| 1.   | Check all the hourly reports  |
| 2.   | Check if the hospital premises have been swept/cleaned and waste removed appropriately. |

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|     |  |
|-----|--|
| 3.  | Check if corridors inside the hospital have been regularly cleaned.  |
| 4.  | Check if the kitchen is maintaining adequate standards of cleanliness and hygiene.   |
| 5.  | Check if all the dustbins have been emptied and cleaned.   |
| 6.  | Check if special care rooms including operation theatres, labor room and ICUs are clean.   |
| 7.  | Check if towels, etc. are being cleaned after one use.   |
| 8.  | Check that the garbage is being segregated, collected and disposed regularly.  |
| 9.  | Check that all stairs/lifts have been properly cleaned.  |
| 10. | Ensure that there are no open sewers, gutters, damaged drain pipes, sewage blockages; and if there are, address them immediately.  |
| 11. | Check if cleaning and scrubbing of toilets and baths along with their wash basins, sanitary fittings, glasses and mirrors and toilet floors have been done.  |
| 12. | Check if toilets and baths are clean and dry, and all fixtures (light bulbs, wash basin, exhaust fans etc.) are functional.  |
| 13. | Check if cleaning and disinfecting of all vitreous fixtures including toilet bowls, urinals, sinks, toilet seats, containers etc. have been done properly. Check below water level and under rims including areas at hinges and cistern handles.<br>Check if restock of toiletries, including liquid hand soap/soap, toilet paper, air freshener and sanitary cubes & naphthalene balls in toilets have been done. |
| 14. | Check if one maintenance staff is present in front of every common toilet.   |
| 15. | Check if any kind of water logging is present at hand washing, utensil washing areas in canteen, lab sinks and toilets. If yes, clear them immediately.  |
| 16. | Check whether dusting of general storage, furniture, patient cupboards and exterior of stock cupboards is done.  |
| 17. | Check if bed sheets, pillow covers of the diagnosis rooms, patient wards are changed daily or as per the requirement.  |
| 18. | Check if laundry is being sterilized properly.   |
| 19. | Check if all the shoe covers are washed and sterilized daily.  |
| 20. | Check if all the foot mats are cleaned every day.  |
| 21. | Check if all the procedural equipments are sterilized as per the need.   |
| 22. | Check if patient utensils are cleaned and sterilized as per the need.  |

**Weekly Inspection**

| <b>To be conducted by:<br/>Sanitary Committee appointed by hospital management having adequate representation of clinical and non-clinical staff</b> |   |
|--|---|
| <b>S.No.</b>   | <b>Area and Activity</b>  |
| 1.   | Check all daily reports since past few weeks for compliance. Check all items as outlined in daily inspection report during weekly inspection as well. |
| 2.   | Check past 3 weekly reports for areas identified for improvement/corrections and check if the same have been addressed.                               |
| 3.   | Check for any damages in the premises and ensure that they are addressed.   |
| 4.   | Check for cleaning of electrical fittings and ensure they are in good, working condition.   |
| 5.   | Check if there are potholes or spaces where stagnant water is collecting and immediately address them.  |
| 6.   | Inspect drinking water fountains/taps and ensure they have been cleaned.  |
| 7.   | Check if waste generated is being segregated, collected and stored appropriately.   |
| 8.   | Check whether mowing, hedge clipping has been done and waste from the ground has been adequately removed.   |
| 9.   | Check if construction, renovation waste has been adequately disposed.   |
| 10.  | Check if laundry being sterilized properly.   |
| 11.  | Check for any sort of leakage.  |
| 12.  | Check mattresses and beds are in usable conditions.   |
| 13.  | Check if all the ambulances, stretchers, wheelchairs, diagnostic machines etc. are properly cleaned and sterilized.                                   |
| 14.  | Check if all the foot mats are being washed every third day or as per the need.   |

**Monthly Inspection**

| <b>To be conducted by:<br/>Hospital Management</b> |  |
|--|--|
| <b>S.No.</b>                                       | <b>Area and Activity</b>   |
| 1.   | Check all daily and weekly reports since last few months for compliance. Check all items as outlined in daily and weekly inspection reports during monthly inspection as well. |
| 2.   | Check past 3 monthly reports for areas identified for improvement/corrections and check if same have been addressed.   |
| 3.   | Conduct self-evaluation as per parameters given in assessment tool above. Identify areas of improvement and delineate action items.  |

|    |   |
|----|---|
| 4. | Check for any associated painting or civil work.  |
| 5. | Conduct infrastructure gap assessment (as outlined previously in this document) and identify action items (can be done quarterly as well, depending on the need). |
| 6. | Check all major infrastructural items and fittings to ensure that they are in good condition.   |
| 7. | Check if all buildings, roads, boundary walls, entry-exit points, fittings, fixtures in toilets and grounds are in good condition.                                |
| 8. | Check roster/daily register of cleaning staff to see that the deployment is adequate and timely.  |
| 9. | Check if pest control and fumigations rounds are done adequately and effectively.   |

### Quarterly Inspection

| <b>To be conducted by:<br/>Hospital Management</b> |  |
|--|--|
| S.No.  | Area and Activity  |
| 1.   | Check and organize thorough cleaning of the roof, water outlets, checking for cracks, coping, chhajja etc. including civil repairs such as checking and repairing of leaky roofs                                       |
| 2.   | Check the water tank thoroughly for leakage etc. Seal it with water proof cement or sealant and clean it at regular intervals.   |
| 3.   | In case of an underground tank, check if the cover and the brim of the tank are intact and sufficiently raised from the surrounding ground level.  |
| 4.   | Check the electrical lines and earthing (if applicable).   |
| 5.   | Check if all the fans, tube lights etc. are dusted properly.   |
| 6.   | Check if coolers (if any) and water tanks are cleaned properly.  |
| 7.   | Check the functioning of hinges, bolts and other hardware of all doors and windows.  |
| 8.   | Check if drinking water is safe as per World Health Organisation (WHO) <sup>2</sup> guidelines for drinking-water quality or national standards and acceptance levels concerning chemical and radiological parameters. |
| 9.   | Check if the temperature regulatory system is working properly   |

### Annual Inspection

| <b>To be conducted by:<br/>Hospital Management</b> |   |
|--|---|
| S.No.  | Area and Activity   |
| 1.   | Check past 2 quarterly reports for areas identified for improvement/corrections and check if these have been addressed. |

<sup>2</sup> [http://www.who.int/water\\_sanitation\\_health/dwq/gdwq0506.pdf](http://www.who.int/water_sanitation_health/dwq/gdwq0506.pdf)

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|    |   |
|----|---|
| 2. | Check for thorough cleaning of sewage and waste water lines.                  |
| 3. | Check for cleaning of septic tanks and leach pits (if applicable).            |
| 4. | Check whether any electrical or civil repair is required.                     |
| 5. | Check if any sort of training and capacity building of the staff is required. |
| 6. | Check if all the sterilization machines are working properly.                 |

# Infrastructure Set-Up and Good Practices

## Water and Drainage Infrastructure

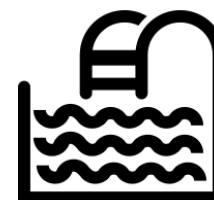
The fitments requirements for drainage and sanitation, in case of Hospitals shall comply with requirements of **Indian Standards IS 1172:1993 (Reaffirmed 2007)**.



All premises shall be provided with supply of clean water (with adequate provision of potable water), and shall ensure it is nowhere connected with unsafe water subject to the hazards of backflow or back siphonage. All structures for use on premises abutting on a sewer or with a private sewage disposal system shall have adequate sanitary facilities.

### Water Features:

Overhead water tanks must be regularly cleaned and any complaints about the quality of water must be immediately addressed.



### Drainage:

Adequate arrangements shall be made for satisfactory drainage of all sewage and waste water. Efforts should be made to install environment-friendly mechanisms like, rain-water harvesting, to prevent rain water from flowing off and being lost. All the drains should be covered.

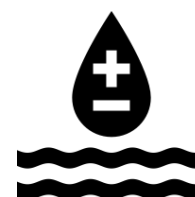
### Water Requirements:

Adequate supply of water must be ensured for all cleaning activities. Average requirement of a general hospital are as follows<sup>3</sup>:

- For a hospital with 25-100 beds: 350 litres of water per day per head
- For a hospital with 101-300 beds: 400 litres of water per day per head
- For a hospital with 301-750 beds: 450 litres of water per day per head

### Water Quality:

Drinking water should be at a safe distance of at least 10 meters from the leach/soak pits attached to toilets or nearby toilets or from the community sewage water drain. Wherever there are existing facilities, these must be reviewed from the perspective of patient and user



<sup>3</sup> Swachhta Guidelines for Public Health Facilities, Ministry of Health and Family Welfare, Govt. of India

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friendliness and afterwards repaired/augmented, rather than creating new one. It is important to make sure that water used is safe as per the purpose intended, such as medical or non-medical treatment procedures, drinking, cooking, personal hygiene, cleaning, laundry etc.

### Water Quality Indicators:

- a. **Microbiological quality of drinking water:** Escherichia coli or thermo tolerant coliform bacteria are not detectable in any 100-ml sample<sup>4</sup>
- b. **Treatment of drinking water:** Drinking water from unprotected sources should be treated to ensure microbiological safety.
- c. **Chemical and radiological quality of drinking water:** Water should meet WHO Guidelines for drinking-water quality or national standards and acceptance levels concerning chemical and radiological parameters.
- d. **Acceptability of drinking water:** There are no tastes, odors or colors to be added that would discourage consumption of the water.
- e. **Water for other purposes:** Water that is not of drinking water quality should be utilized only for cleaning, laundry and sanitation.

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<sup>4</sup> WHO drinking water values of bacteriological quality of drinking water (WHO 1993)



**Sanitary Infrastructure**

The following table details out the general sanitary infrastructure requirements for hospitals<sup>5</sup>:

|    |  |  |
|----|--|--|
| 1. | Water Closet   | 1 for every 8 beds (male)  |
|    |  | 1 for every 6 beds (female)  |
| 2. | Ablution Taps  | 1 for each water closet plus 1 water tap with drainage arrangement in the vicinity of water closet |
| 3. | Urinals  | 1 for every 12 beds (Male only)  |
| 4. | Wash Basin   | 1 for every 12 beds  |
| 5. | Baths  | 1 bath with shower for every 12 beds   |
| 6. | Bed pan washing sink                                   | 1 for each ward in dirty utility and sluice room   |
| 7. | Cleaner's sinks and sinks/slab for cleaning mackintosh | 1 for each ward in dirty utility and sluice room   |
| 8. | Kitchen sinks  | 1 for each ward in ward dishwashers, pantry etc.   |

a) Design adaptations which must be taken in account:

- Patients have less physical strength in comparison to healthy normal adults. It is important to have the facilities designed in a way that adults/hospital/nursing staff can supervise and help when patients use the toilets, hand-washing facilities or water points.
- Facilities must also provide ways for women to dispose of sanitary pads without interruption and other bio-medical wastes safely

b) Essential components for toilets and baths:

- Squatting area, with adequate availability of water for washing within toilet block
- Orientation and opening for natural light and ventilation
- Door with user-friendly latch
- Floor with adequate slope and maintainable durable finish
- Hooks within WC area for hanging clothes

<sup>5</sup> IS 12433 (Part 2) : 2001 (Reaffirmed 2006) Indian Standard; Basic Requirements for Hospital Planning

- Graphics/messages and visuals depicting key hygiene messages
- Use of water conserving techniques
- Call button for emergency situations

### **Solid Waste Management Infrastructure**

#### **Waste Identification:**

|                           |   |
|---------------------------|---|
| Wet Waste                 | Cooked and uncooked food, plant leaves, compostable materials, coffee powder, tea powder, meat and poultry waste etc.   |
| Sanitary Waste            | Menstrual cloth (used), disposable diapers, sanitary napkins, bandages, etc.  |
| Dry Waste (paper)         | All types of paper, paper plates, tickets, bills, telephone bills, wrappers, leaflets, flyers, etc.   |
| Dry Waste (plastic/glass) | All types of plastic, plastic bags, coke bottles, water bottles, garbage packs, milk packets, pouches, bangles, crockeries, etc.  |
| Dry Waste (hazardous)     | Used syringes, discarded medicines, insecticides and containers, battery cells, household chemicals, etc.   |
| Biomedical waste          | Human anatomical waste, animal waste, microbiology and biotechnology waste, water sharps, solid waste (items contaminated by blood waste, body fluids, catheters, etc.), etc. |
| E-Waste                   | Mobile phones, batteries, pen drives, CDs, electronic equipments, CFL, Tube lights, etc.  |
| Dry Waste (others)        | Metal items, tetra packs, aluminum foils, aluminum cans, thermocol, bottles, plates, utensils, packaging materials etc.   |
| Garden Waste              | Plant leaves, dry and wet cut branches, kitchen waste etc.  |
| Inert Waste               | All types of construction materials, cement, mud, sweeping dust, etc.   |

For easy identification, colour coded dustbins are useful and must be as indicated on the right side. Colour segregated dustbins should be placed at a maximum distance of every 250 meters. These dustbins should be emptied thrice every day (or more frequently in case of heavy



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use) and should be cleaned periodically as per requirements.



### Biomedical Waste:

It is recommended to segregate general waste into biodegradable and recyclable at the point of generation to facilitate disposal as per guidelines contained in *BMW (management & handling) Rules 2016*<sup>6</sup>.

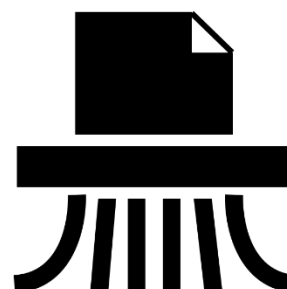
It is the duty of the head of the hospital cleanliness and hygiene facility to ensure that the disposal is done properly without harming human health and environment. Segregation of general waste into biodegradable and recyclable should be done at the point of generation to facilitate disposal.



### Shredder:

Used for volume reduction of specific wastes that is capable of being slit by rotating knife blades. Typical wastes that can be shredded are cans, plastic bottles, steel barrels, tires, etc. In addition, confidential papers including old biomedical and pathology reports may also be shredded.

A shredder requires an electrical power source and should be sited to provide convenient and safe feeding of the waste and should be placed away from patient ward premises. The shredded waste to be collected in suitably sized containers situated under the shredder, which can be removed manually.



### Food waste disposer (For hospital kitchen/visitor cafeteria):

Food waste disposers are easily installed and eliminate the need to store biodegradable kitchen waste on the premises; they can deal with 15% to 20% (by weight) of the total average output of household waste. They are a complimentary tool to methods of waste storage and collection. The units are designed to grind biodegradable kitchen waste in a safe, clean and efficient manner to tiny particles by the food disposer's shredding blades. When a small amount of water is run into the disposer, the remaining particles of material are easily flushed down the drain into the sewage system or septic tank.



Food waste disposers enable segregation of waste types at source, without which recycling of different types of waste is not possible. The potential for hygienic collection

<sup>6</sup> Bio medical waste (Management and Handling) Rules 2016

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and recycling of various dry recyclables such as paper, glass and metals is increased with the reduction of contamination of food waste.

### Segregation, Collection and Storage:

There are three stages of segregation, collection and storage of waste to be done within hospitals:

- a) Primary level i.e. at ward or operation theatre level (to elaborate, segregation of the biomedical waste should be done at the point of generation of waste)
- b) Secondary level i.e. at corridor or floor level
- c) Tertiary level i.e. at building level

### Processing & Disposal:

Organic waste, which includes – food waste, meat waste and garden/agriculture waste is considered as best raw material for rich organic compost. Compost can be rich in nutrients and can be used in gardens, landscaping, horticulture and agriculture. Compost is generally recommended as an additive to soil, or other matrices such as coir and peat, as a tilt improver, supplying humus and nutrients.

The main composting methods that can be implemented in hospitals are as below:

- a) Pit composting
- b) In vessel composting
- c) Organic waste composter

a) **Pit Composting:** Holes or trenches are dug to bury the waste, where organic materials gradually break down over longer periods. This method is effective for institutions with big lawns/playgrounds. The trench is also a good place to bury weeds and dead/semi-dead plants. If buried deep enough, the weed seeds will not regerminate and keep the playground away from unwanted growth of plants. This method is zero cost but requires labor for digging.

b) **In Vessel Composting** has three stages before the compost is screened for use. The wet waste is delivered to an enclosed reception area. Any contamination such as plastic bags or metal cans is removed before it is shredded to a uniform size. The composting process is kick started by naturally occurring micro-organisms already in the waste. They break down the material,



releasing the nutrients and in doing so they increase the temperature to 60-70<sup>0</sup> C, which is needed to kill the pathogens and weed seeds.

The second stage normally lasts 21 days. The material is transferred to second barrier, where the composting process continues. The O<sub>2</sub> level, moisture and temperature are carefully monitored and controlled during both composting stages, till the material is fully sanitized. Once the sanitization process is complete the compost is left to mature in an open wind-row or an enclosed area for approx.10-14 weeks to ensure stabilization. Screening usually takes place pre or post maturation, to produce a range of product grades suitable for various end uses such as soil conditioning. The Capex ranges from Rs. 4-5 Lakhs for a capacity up to 2-3 tons with operational cost ranging between Rs. 10,000 - 15,000 per cycle.

- c) **Organic Waste Converter (OWC)** unit in hospitals can be installed in the basement or on the ground floor. It needs a room of 10'-12' and some open space outside for the waste collection and segregation if required. The wet waste from the black color bin and the garden waste collected by the cleaning members of the communities should be fed into the Organic Waste Converter (OWC) unit.



Compost stock along with garden waste as well as kitchen waste is fed into the compost-mixing machine. After the components are well mixed, the mixture is kept in crates for fermentation. A little water is added to the mixture after every 3 hours. The process of fermentation takes place naturally in about 15 days. After 15 days, the compost is ready to be used in gardens. The capital cost is approx. Rs. 5-7 Lakhs with processing capacity up to 300-1 ton. The operational cost is approx. Rs. 10,000 - 12,000 per month.

**Biomedical waste** consists of human anatomical waste, animal waste, microbiology and biotechnology waste, water sharps, solid waste (items contaminated by blood waste, body fluids, catheters, etc.), etc. All collection, storage, transportation and disposal of hospital waste should be in accordance with *BMW (Management & Handling) Rules 2016*<sup>7</sup> and any other amendments or notification of the state pollution control board.



<sup>7</sup> Bio medical waste (Management and Handling) Rules 2016



### *Good Practices*

- Providing clear signs in the bin rooms and consistent wording, symbols and colors on all bins
- Providing clean bins and bin rooms that are free of dumped and undisposed waste since dirty and untidy waste facilities will demotivate patients, visitors and staff to use the facilities
- Closed-circuit television (CCTV) monitoring of waste rooms and bin storage areas
- Educating medical and non-medical staff on importance of adequate waste management and sanitation facilities
- Putting Information, Education and Communication (IEC) materials like posters on display for providing information on various aspects of cleanliness and hygiene for the use of patients and visitors
- Repairing signs, labels, bins and equipment and promptly replacing damaged equipment using the same designs
- Following strict sterilization routines, wherever applicable and required
- Drinking water coolers, filters should be periodically cleaned and the waste collected from them should be disposed off appropriately
- Providing/availing a collection service for waste and recycling
- Training of all maintenance staff in the use of the waste system and any equipment
- Orientation of hospital staff on the importance of maintaining cleanliness and good water, sanitation and hygiene practices
- The hospital management should have full control over:
  - What is being disposed of and how it is being done
  - Separation of waste and recyclables
  - Correct use of waste and recycling bins
  - Use of the waste storage facilities
  - Use of bins and other equipment

Implementing these strategies may seem like a lot of effort initially, but they become easier to manage as the entire hospital including patients and visitors, management and staff gets used to working with the system. However, infrastructure development alone cannot bring about the change hoped for. It has to be complemented by creating awareness and interest, and motivating people to want to change their behaviour. Activities and events which help in creating this awareness should be made part of the sensitization and awareness drives at hospital.

Some other things to be kept in mind on the issue of hospital waste management:

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- a) Frequency of waste collection
- b) Identifying waste storage requirement/points
- c) Color identification of garbage bins
- d) Ensuring patient, management and staff's health and safety
- e) Legal obligations associated with contracting staff proper disposal of waste
- f) Preparing checklists
- g) Providing signage boards/posters on bins and important area of waste generation and handling
- h) Compliance to the SOP for maintaining cleanliness standards in the hospital

### Creating Awareness in an Organized & Comprehensive Manner:

It is important to sensitize all stakeholders on the importance of maintaining a high level of cleanliness and hygiene in hospitals. All awareness drives should focus on the prime fact of a hospital being a place for medically unwell and physically vulnerable people, who are incapable of taking care of themselves. A clean and hygienic environment is therefore necessary to enhance and facilitate speedy recovery.



The hospital management, including all doctors, nurses, and other staff must be trained on some of the following aspects:

- Occupational hazards at work place
- Personal hygiene
- Methods of cleaning in general areas of the hospital
- Methods of cleaning in special areas of the hospital including Operation theatre, Labor room, Intensive Care Units (ICU), Laboratory, etc.
- Management of body fluid
- Disinfection and fumigation
- Hospital Infection Control Policy
- Handling of biomedical waste etc.

Not only the staff, but the visitors and community should also be sensitized and be made aware on the importance of keeping the health facility clean. Moreover, the sensitization and awareness drives should also focus on maintaining personal hygiene.





## Manpower Requirement

An estimation of manpower requirement should be made on an annual basis by the relevant authority. This should take into account the following:

- Area of the entire hospital
- Area of the open, common spaces
- No. of rooms/wards
- Number of toilets and baths
- Kitchen and cafeteria area
- Laboratories, operation theatre, labor rooms, ICU infrastructure needing special cleaning



A single person can manually clean up to 250 sq. m. per work shift. More importantly, it is necessary that the required staff should be available on 24 x 7 basis and on call basis for all the special care facilities. Adequate number of supervisors should be employed. Supervisors responsible for monitoring and supervision of standardized and timely cleaning as per SOP should be identified and names displayed prominently. Adequate number of backup staff may also be provisioned for.

The staff employed must be sensitized enough on the relevance and importance of clean hospital and its surroundings. They must be trained on prevention of Hospital Acquired Infections and occupational hazards and its appropriate reporting.

It is very important to deploy the cleaning staff based on prior planning in shifts, to ensure that cleanliness is maintained throughout. All those areas with minimal patient interaction and visitors should be cleaned once a day grouped with other such areas. However, more critical areas should be cleaned more frequently and as and when required.

## Cleaning Practices

All corridors, common spaces like the OPD and visitor area (both external and internal), special care rooms (operation theatres, labor rooms, ICUs, laboratories etc.) should be cleaned as and when required. The following cleaning routine should be adhered to:

### Sweeping and Mopping of Floor:

- a) Sweeping of corridors with disinfectant at least twice a day; for special care facilities whenever required
- b) Frequent brooming of the corridor through the course of the day
- c) Vacuum cleaning of carpets at least daily using appropriate vacuum cleaning equipment

### Garbage Bins:

- a) Remove garbage from dustbins and clean them if required
- b) Provide separate dustbins for biodegradable and non-biodegradable materials
- c) Segregate, collect and store waste according to the type of waste carefully
- d) Transport waste with care; biomedical waste must be handled and transported with utmost care
- e) Replace cleared dustbins to original spot
- f) If any trash is found anywhere in the complex, pick up immediately

### Toilets and Baths:

- a) Fixtures including toilets and sinks should be free of streaks, soil, stains and soap scum
- b) Premises should have good quality basic fitments like ablution taps, wash basins, etc.
- c) Mirrors and windows should be free of dust and streaks
- d) Dispensers should be free of dust, soiling, residue, etc. and replaced/replenished when empty
- e) Waste should be disposed appropriately on a daily basis
- f) Provisioning of soap, toilet paper, hand towel/dryer, sanitary pads dispenser, dustbins, and other necessary items should be adequate
- g) Toilet bowls, urinals and adjoining bathing areas (if applicable) should be cleaned with disinfectant on a daily basis, and the use of acid-based disinfectants should be avoided
- h) Toilet floors should be kept dry to the extent possible/feasible

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- i) There should be a well functioning drainage system

### Common spaces:

- a) Sweeping of corridors, pavements and other external areas at least twice a day
- b) Cleaning internal common spaces like lift, stair areas, indoor parking areas, etc. on a regular basis
- c) Composting leaves and biodegradable waste (if feasible)

### Lab and Special Care Rooms' Equipments:

- a) Labs, operation theatres, ICUs, labour rooms' equipment should be cleaned as and when required and should be well maintained
- b) A list of all chemicals and medicines present must be regularly updated and safe disposal of chemicals and body fluids should be ensured
- c) Operation theatres and labour rooms must be cleaned every morning and before and after every surgery
- d) All equipments, OT tables, walls and floors should be sterilised
- e) Linen and waste material should be appropriately handled and segregated

### Laundry Services

- a) Following items must be cleaned in the laundry:
  - Hospital patient's linen
  - Hospital curtains
  - Kitchen linen, staff uniforms and other protective covers
  - Other ward items like blankets, mattresses, pillows, etc.
- b) All soiled linen must be appropriately segregated, collected and sterilised (as per the need).

### Hospital Kitchen/Visitor's Cafeteria:

- a) They should be regularly cleaned.
- b) Dustbins should be placed at easily accessible spots to prevent littering.
- c) There should be hand washing facility in the kitchen as well as in the OPD and visitors' cafeteria (Utensil washing sinks in case of attached kitchen).
- d) Segregation and composting of food waste (if feasible) should be carried out.

### Doors, Windows and Walls:

- a) Spray windows and glass surfaces with water or appropriate cleaning solution
- b) Removal of all cobwebs and stains

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- c) Extensive cleaning of outer-surface of windows to be carried out by contracted agency at least once a month
- d) If any fingerprints, smudges or stains are found on the corridor wall, the same is to be cleaned immediately

### **Vents and Fixtures:**

- a) Dusting of light fittings, wall decorations, other fixtures using feather brush and duster
- b) Air conditioning vents and sprinklers should also be dusted and checked for proper functioning

An intensive cleaning of the hospital premises is to be carried out at least once every month, which should also involve participation of hospital staff for disposal of redundant/unused hardware and furniture which can be added to inventory and re-allocated as per demand.

Weeding and recording of files including pathology reports, etc. should be resorted to at least once in 6 months. The old patient records, prescriptions, etc. in the record room should be reviewed once a year and destroyed as per guidelines. This would ensure that constant space is created for keeping more recorded files. If necessary, extra manpower for this purpose should be resorted to.

## Do's and Don'ts

| DOs  | DON'Ts   |
|--|--|
| Collect waste, rubbish and debris within the hospital and dispose as per the set frequency.  | <b>DO NOT</b> let waste and trash accumulate within the premises.  |
| Dispose all waste as per guidelines.   | <b>DO NOT</b> dispose waste outside or near parking lots, drainage, ditches or any other location where they can damage the environment. |
| Keep all equipment clean; do not allow a build-up of wastes.   | <b>DO NOT</b> let equipment get damaged or rusted; replace if unsuitable for further use.  |
| Oversee contractors to ensure that correct procedures are followed and SOP guidelines are complied with.                                     | <b>DO NOT</b> let contractors conduct maintenance in conflict with proper procedures and guidelines; monitor closely.                    |
| Impose penalty on defaulters for littering/spitting/smoking within the hospital premises or near the boundary walls.                         | <b>DO NOT</b> allow littering, spitting, smoking or any other practices that affect the cleanliness and aesthetics of the premises.      |
| Conduct surprise inspections of the hospitals to ensure a clean, hygienic and healthy environment for members, staff, patients and visitors. | <b>DO NOT</b> allow accumulation of unnecessary wastes anywhere.   |
| Involve management, staff and visitors in such a manner that they voluntarily contribute towards cleanliness.                                | <b>DO NOT</b> overcharge patients in the name of providing cleaner and hygienic surroundings.  |

In case cleaning services are to be outsourced, sample Scope of Work and bid evaluation parameters are given as reference in Annexure 1.

## Cleaning Equipment

The Hospital Management / Contracting Agency are required to procure appropriate and necessary cleaning and processing equipments as per the norms laid down below:

### Dustbins

| Area   | No. of dustbins required                        |
|--|---|
| External Area  | 1 set of color-segregated bins every 150 meters |
| Toilets and Baths  | 1 per toilet                                    |
| Parking Spaces   | As per need                                     |
| Kitchen/Cafeteria  | As per need                                     |
| Entrance/Reception Area  | As per need                                     |
| Rooms/Wards  | 1 per room/ward                                 |
| Corridors  | As per need                                     |
| Special Care rooms (Operation theaters, labor rooms, ICUs, laboratories) | As per need (but should be color segregated)    |

### Brooms, Dusters, Staff Uniforms

| No. of cleaning staff | No. of sets required           |
|-----------------------|--------------------------------|
| As per need           | 1 per cleaning staff personnel |

### Cartage Equipment

| Equipment   | No. of units required |
|---|-----------------------|
| Baskets/collection equipments for gathering garbage | 1 per worker          |
| Hand carts  | As per need           |
| Trucks/mini-trucks                                  | As per need           |

### Vacuum Cleaner

|                       |                             |
|-----------------------|-----------------------------|
| <b>Wings/Building</b> | <b>No. of sets required</b> |
|                       | 2 per building              |

### Storage Units

|                       |                             |
|-----------------------|-----------------------------|
| <b>Wings/Building</b> | <b>No. of sets required</b> |
|                       | 2 per building              |

## Waste Management

A strategy needs to be in place to ensure proper management of waste generated and reduction of waste through recycling and reusing.

### Types of waste generated

- a) Bio-degradable (dry) waste (green waste, food waste, paper waste, biodegradable plastics etc.)
- b) Hazardous wastes
- c) Biomedical wastes (Human anatomical waste, animal waste, microbiology and biotechnology waste, water sharps, solid wastes, items contaminated by blood waste, body fluids, catheters, etc.)
- d) Construction and demolition waste
- e) Bulk garden and horticulture waste including recyclable tree trimmings
- f) All other non-biodegradable (dry) waste (recyclable and non-recyclable), etc.

### Management of Waste

1. Bio-degradable solid waste if not composted by the generator, should be stored by generators of such waste within their premises and its delivery shall be ensured by every such generator to the municipal vehicle or to the bio-degradable waste collection vehicle provided for specified commercial generators of bulk bio-degradable waste. Local composting of waste shall be promoted to minimize transportation of waste. The municipal body shall collect the bio-degradable waste from inside the hospital building keeping up with their duties of door to door collection for buildings as well.



2. Hazardous waste shall be scientifically disposed as per municipal solid waste management norms. Good management practice should ensure that hazardous wastes are stored, collected, transported and disposed separately, preferably after suitable treatment to render them innocuous.



3. Biomedical waste including all chemicals, infected items, radiation items, cytotoxic healthcare waste, etc. should be segregated, collected, stored, transported and disposed in accordance with the set guidelines of safety, ensuring that at no stage





it gets mixed with general waste. Different colored bags/containers namely red, yellow, black, blue and puncture proof or stainless steel, lead containers shall be used depending on the category of waste. Covered trolleys should be used for transportation of waste within the hospital premises.

4. Construction and demolition waste shall be stored only within the premises of buildings or in containers where such facility of renting out containers is available, till finally removed from the premises. No person shall dispose construction waste or debris on the streets, public spaces, footpaths or pavements. If contractors have the obligation to collect the C&D waste, it should be done immediately after all work is finished. Failure to do so will attract penalty (for example CPWD does not pick up the waste on time and leaves the unused cement bags etc. lying for months. As a result the C&D waste gets spread around. While, in normal course, all the waste is picked up together, but it should also be done in piecemeal manner).



5. Bulk garden and horticultural waste shall be kept un-mixed and composted at source. The Director (Horticulture) or the concerned officer shall notify instructions/ guidelines with regard to pruning of trees and storage and delivery of tree trimmings including collection schedules.



6. All other non-biodegradable (“Dry”) waste – both recyclable and non-recyclable – shall be stored and delivered by every generator of waste to the dry waste collection vehicle.

7. Burning of waste - disposal by burning of any type of solid waste is prohibited.

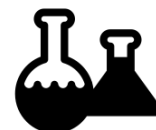
8. The Hospital Administration/Contracted Agency must ensure that officials do not throw any waste on the streets, footpaths, open spaces, drains or water bodies and instead store the waste at source of waste generation in two bins/bags, one for food waste/bio-degradable waste and another for recyclable waste such as papers, plastic, metal, glass, rags etc. as listed below:



- Types of wastes to be put in the bin meant for food wastes & bio-degradable wastes:
  - a. Food wastes of all kinds, cooked and uncooked, including eggshells, etc.
  - b. Flower and fruit wastes including juice peels and house-plant wastes



- Types of recyclable and other non bio-degradable wastes to be kept separately:
    - a. Paper and plastic, all kinds
    - b. Cardboard and cartons
    - c. Containers of all kinds excluding those containing hazardous material
    - d. Packaging of all kinds
    - e. Glass, all kinds
    - f. Metals, all kinds
    - g. Rags, rubber, wood, etc.
    - h. Foils, wrappings, pouches, sachets and tetrapak (rinsed) etc.
    - i. Pen drives, CDs, cassettes, computer diskettes, printer cartridges and electronic parts, etc.
    - j. Discarded clothing, furniture and equipment, etc.
9. Wastes such as used batteries, containers for chemicals and pesticides, discarded medicines and other toxic or hazardous waste if and when produced, should be kept separately from the above two streams of waste



## Annexure 1: SOW and Evaluation Parameters for Outsourcing

### *Sample Scope of Work*

<<Hospital>> is located <<Address>>. It has <<details of buildings with floors, rooms, wards, corridors, plot size etc. >>.

The scope of work would encompass cleaning the specified area so that the area is always clean and presentable. This area in <<Hospital>> includes the following:

- 1) Rooms/wards, Corridors, Special care rooms/units: <<No.s>> (Occupied Areas).
- 2) Lobby and Staircases: <<No.s>> & <<No.s>>.
- 3) Toilets and baths: <<No.s>>
- 4) Surroundings: Pathways within premises and pathways around the perimeter of premises.
- 5) Roofs, Terrace, Kitchen, Cafeteria, Reception, OPD and visitor areas, Pump House and Porches etc.
- 6) Any other area of <<Hospital>> not specifically mentioned above.

### **Cleaning Services**

The aim and objective is to provide a clean, hygienic and presentable look to the entire hospital area. Pre-designated manager/supervisors of the successful bidder will supervise the awarded work. General Administration of <<Hospital>> will monitor the cleanliness of the entire work, staff deployed by the successful bidder. The successful bidder has to ensure that the staff deployed is well-dressed in neat and clean uniform and carrying photo identity cards displayed properly.

### **Daily & Weekly Services**

Cleaning services should be done daily from Monday to Sunday. The working timings are 24 X 7; however, deployment into shifts basis prior planning will be required. The cleaning in occupied area should be done, as and when, the wards/ rooms/ special care areas remain open and in the presence of the

authority concerned, twice in a day and in addition on call basis by the management/staff concerned during office hours on all working days only.

The in-depth cleaning of the entire area will be done by the successful bidder once in a week.

The details of daily and weekly cleaning services are given as under:-

### Schedule of Cleaning Services

| S.no                                     | Activity                                | Frequency  |
|--|---|--|
| <b>Operation Theatre/ICU/Labor Rooms</b> |   |  |
| 1.                                       | Garbage removal                         | Thrice a day or more when bags are full                    |
| 2.                                       | Cleaning of instruments                 | After every procedure                                      |
| 3.                                       | Cleaning of corridors                   | Twice a day or as and when required                        |
| 4.                                       | Mopping                                 | Thrice a day and after every procedure                     |
| 5.                                       | Fumigation                              | One a month/after every infected case surgery              |
| 6.                                       | Cleaning of OT table or stretcher       | Twice a day/after every surgery                            |
| 7.                                       | Doctor's/nurses technicians room        | Twice a day  |
| 8.                                       | Washroom and Washbasins cleaning        | Thrice a day and as and when required                      |
| 9.                                       | Collection of soiled linen and sluicing | As and when required                                       |
| <b>Moderate Risk Area Wards</b>          |   |  |
| 1.                                       | Garbage Removal                         | Twice a day and more/ when bags are 3/4 <sup>th</sup> full |
| 2.                                       | Mopping a floor                         | Once a day   |
| 3.                                       | Washroom and Wash basin                 | Thrice a day and as and when required                      |
| 4.                                       | Dusting and cleaning of equipments      | Once a day   |
| 5.                                       | Collection of soiled linen and sluicing | As and when required                                       |
| <b>Kitchen and Visitor Cafeteria</b>     |   |  |

|                                     |                              |  |
|-------------------------------------|------------------------------|--|
| 1.                                  | Garbage removal              | Thrice a day and more when bags are 3/4 <sup>th</sup> full |
| 2.                                  | Mopping of floor             | Once a day   |
| 3.                                  | Washrooms and Wash basin     | Once a day   |
| 4.                                  | Dusting                      | Once a day   |
| <b>TOILETS AND BATHS</b>            |                              |  |
| 1.                                  | Cleaning                     | Every two hours or as and when required                    |
| 2.                                  | Washrooms and Wash basins    | Thrice a day or as and when required                       |
| <b>Reception and OPD Area</b>       |                              |  |
| 1.                                  | Garbage removal              | Thrice a day and more when bags are 3/4 <sup>th</sup> full |
| 2.                                  | Mopping of floor             | Once a day   |
| 3.                                  | Washrooms and washbasin      | Once a day   |
| 4.                                  | Dusting                      | Once a day   |
| <b>Administration Record/Office</b> |                              |  |
| 1.                                  | Garbage removal              | Thrice a day and more when bags are 3/4 <sup>th</sup> full |
| 2.                                  | Mopping of floor             | Once a day   |
| 3.                                  | Washrooms and washbasin      | Once a day   |
| 4.                                  | Dusting                      | Once a day   |
| 5.                                  | Dry mopping                  | Once a day   |
| <b>Radiology and Laboratory</b>     |                              |  |
| 1.                                  | Garbage removal              | Thrice a day and more when bags are 3/4 <sup>th</sup> full |
| 2.                                  | Dusting of infrastructure    | Once a day   |
| 3.                                  | Cleaning of equipments       | Once a week  |
| 4.                                  | Mopping and washing of floor | Twice a day  |
| 5.                                  | Washing of slippers          | Once a week  |
| 6.                                  | Washrooms and Washbasins     | Once a day   |

**Source: Practical guidelines of Infection Control by WHO****On call meetings**

The staff of the successful bidder will arrange the conference rooms and also remove garbage, wastage etc. immediately after the event is over.

**Polishing (Weekly):**

All the door/window handles/knobs, other brass fittings and items/statues, planners etc. are required to be polished and kept in shining condition

**Other Tasks:**

- a. Sweeping, mopping, machine scrubbing of all specified floors
- b. Removing all garbage and replace cleaned bins. Garbage will be segregated and taken to the designated site from where the contractor will arrange for its disposal
- c. Wipe/clean of all glass doors and windows regularly
- d. Maintain high standards of cleanliness and hygiene at all assigned areas throughout the premises

**Other Works:**

- a. The Bidders supervisory staff should be available at site every day during office working hours. In case of emergency complaints, the Bidder is to ensure rectification of defects immediately
- b. The Bidder will immediately attend the complaint and complete the same on its receipt on the same day
- c. The Bidder will have to maintain all types of records for consumption and receipt of material as desired by <<Hospital>> and instructions issued from time to time in this regard should be complied with by the Bidder

**Evaluation Parameters**

Bids should be evaluated on the basis of total tender value for a supervisor and required number of cleaning personnel as may be estimated.

| S.no. | Particulars                                  | Description                                 | Cleaning Personnel (Rates per person per month) | Supervisor (Rates per person per month) |
|-------|--|---|---|---|
| A     | b  | c   | d   | e                                       |
| 1     | Basic pay + VDA                              | Minimum wages must be followed as per rules |   |   |
| 2     | Employees Provident Fund                     | 12% of Basic plus VDA                       |   |   |
| 3     | Employees State Insurance                    | 4.75% of Basic plus VDA                     |   |   |
| 4     | Bonus  | Ceiling of Rs.7,000 per year                |   |   |
| 5     | Total cost per employee                      | Sum of Sr. No.1 to Sr. No.4                 |   |   |
| 6     | No. of Employee                              | As per tender document                      |   |   |
| 7     | Total Cost                                   | S.no. 5 x S.no.6                            |   |   |
| 8     | Total Cost of <<No>> employee                | S.no. 7 (d) & S.no. 7(e)                    |   |   |
| 9     | Cleaning material cost                       | -   |   |   |
| 10    | <b>Total Cost</b>                            | <b>Sum of S.no. 8 &amp; S.no. 9</b>         |   |   |
| 11    | Service Charge in %age (on Sr.No.10 in %age) |   |   |   |
| 12    | <b>Sum Total</b>                             | <b>Sum of S.no. 10 &amp; S.no. 11</b>       |   |   |
| 13    | Service Tax @<<>>%                           | On S.no. 12                                 |   |   |
| 14    | <b>Total Cost of Service per month</b>       | <b>Sum of S.no. 12 &amp; S.no. 13</b>       |   |   |
| X)    | <b>Tender Value (One Year):-</b>             | <b>S.no. 14 x 12months</b>                  |   |   |



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