



# HOUSEKEEPING IN EYE CARE SERVICES

- A PRACTICAL GUIDE

TESSs

Training in Eye Care Support Services Series



A R A V I N D E Y E C A R E S Y S T E M





*The Training in Ophthalmic Assisting Series and Training in Eye Care Support Services Series were born from the vision and inspiration of one very special man, Dr. G. Venkataswamy, founder of Aravind Eye Hospitals and guiding light in the world of eye care and community ophthalmology.*

*We dedicate this effort to him.*

*Intelligence and capability are not enough. There must also be the joy of doing something beautiful. Being of service to God and humanity means going well beyond the sophistication of the best technology, to the humble demonstration of courtesy and compassion to each patient.*

*- Dr. G. Venkataswamy*

## **Training in Eye Care Support Services Series (TECSS)**

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## ***Foreword***

*The discipline of eye care requires a number of appropriately trained personnel working as a team to deliver comprehensive eye care. The services that are delivered must include the promotion of eye health, the preservation of sight and the prevention of vision loss, restoration of sight when it is lost, the enhancement of vision and functional vision, where feasible and facilitation of rehabilitation through vision substitution. Various cadres of trained personnel, with complementary skills contribute to the work of the team.*

*In an ideal world, with infinite resources there would be a temptation to use the most highly trained personnel to carry out these tasks. This is neither appropriate nor cost effective, given that human resources for health care comprise the most expensive component of the recurring health budget.*

*It has been possible to select, train and deploy different cadres of human resources, to carry out tasks in a safe and effective manner to help achieve the goal of eliminating avoidable blindness. One of such cadres is variously referred to as Ophthalmic Assistants, mid level personnel or by their primary functions, such as Nurses, Refractionists etc. Where they exist and function in a stipulated manner, it is acknowledged that they constitute an effective backbone for eye care services. However a critical element to their success lies in the adequacy and appropriateness of the training imparted to them.*

*There have been several training programmes put in place around the world to train such mid-level personnel depending on the one hand, on the human resource needs for eye care in the country, and the local human resource policies, rules and regulations, on the other.*

*The Aravind Eye Care System, over the years has developed a cadre of Ophthalmic Assistants who have specific job descriptions. To enable them to perform effectively as part of the eye care team, their training has been task oriented with defined requisite knowledge, skills, competencies and attitudes, to carry out the tasks.*

*This manual sets out in several sections a step by step method for imparting such task oriented training through didactic, hands on and practical training in real life situations. The sections relate to tasks required of such personnel in different settings in the eye care delivery system such as the out-patient department (general and specialist clinics), wards, operating rooms, optical departments etc. Considerable emphasis has been paid to diagnostic technology, which is increasingly a part of the armamentarium in eye care practice.*

*Finally the manuals include sections for self assessment as well as for continuing monitoring of the achievements of task oriented objectives. The manual lends itself to translation into local languages where required proficiency in English may not exist. The Human resource Development team at Aravind Eye Care System need to be complimented on their efforts to share there wide and successful experience in this field with others who are already involved in or are planning to venture into such training programmes, particularly in the context of VISION 2020: the Right to Sight.*

***Dr. Ramachandra Pararajasegaram MB., FRCS., FRCP, FRCOphth. DSc. (Hon)***  
*Past President, IAPB, Co Chair,*  
*Human Resource Programme Committee, IAPB.*

## *Preface*

*In recent years there have been significant advances in eye care, both in technology and in the increasing resolution to address the scourge of needless blindness. Achievements in medical technology have vastly improved diagnosis, treatment and surgery in all aspects of eye care, and efforts like the global initiative "VISION 2020: The Right to Sight" -- which calls for the elimination of avoidable blindness by the year 2020 -- have galvanized support for those working to improve the quality of eye care at the grassroots level around the world.*

*It has become increasingly evident that trained personnel is one of the most important elements in achieving this goal, and that the effective practice of eye care is a team effort that must combine the talents of ophthalmologists, ophthalmic assistants, ophthalmic technicians, orthoptists, counsellors, medical record technicians, maintenance technicians, and others.*

*Currently the focus in human resource development continues to be on the training of ophthalmologists. But in many successful eye hospitals it has been shown that four or five trained ophthalmic assistants are engaged to supplement and support the work of an ophthalmologist. When such assistants are used effectively by eye care centres, doctors can treat more patients in less time while still ensuring a high standard of care. It is therefore vital that more attention be paid to the structured training of other ophthalmic personnel.*

*Over the past three decades, Aravind Eye Hospital has developed and refined a system of structured training programmes for ophthalmic assistants and support services personnel. These series were created to bring together the lessons we have learned over the years, and to share our insights with other eye care programmes and the community at large.*

Dr. G. Natchiar

Vice-Chairman, Aravind Eye Care System

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## Blindness Prevalence

World wide it is estimated that at least 38 million people are blind and that an additional 110 million have severely impaired vision. In all, about 150 million people are visually disabled in the world today, and the number is steadily increasing because of population growth and aging. Overall, the data shows that more than 90% of all blind people live in developing countries and that more than two-thirds of all blindness is avoidable (either preventable or curable). Unfortunately, little information is available on the incidence of blindness around the world; it seems probable, however, that there are some 7 million new cases of blindness each year and that despite every intervention, blindness in the world is still increasing by 1 to 2 million cases a year. Thus, trend assessment points to a doubling of world blindness by the year 2020 unless more aggressive intervention is undertaken.

A major cause of preventable blindness is cataract. Presently, an estimated 7 million cataracts are operated on each year. There is a backlog of 16 million cases that have not yet been operated on. If this backlog is to be eliminated in the next two decades... a staggering 32 million cataract operations must be performed annually by the year 2020.

In addition, there must be an improvement in technology because more than 50% of cataract surgeries in the least developed countries today are still performed without intraocular lens implantation. Thus, most of the developing countries need more surgery facilities, supplies and equipment, and an increased number of trained surgeons. Furthermore, particularly in sub-Saharan Africa, India, China and other parts of Asia, the volume of cataract surgeries must increase greatly. Although considerable progress is being made in some of these countries, the provision of good quality, affordable cataract surgery to all those in need will nevertheless remain the main challenge for ophthalmology world wide for many years to come.

An important aspect of combating cataract blindness is human resource development. To increase the efficiency of ophthalmologists in clinical work, further training of support staff such as paramedical ophthalmic assistants, ophthalmic nurses and refractionists is essential.



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## **Introduction**

Eye care in the past three decades has grown with complexity and many divisions. The core product being offered in eye hospital is clinical care; however clinical care by itself is not complete unless it is enhanced by supportive services. This includes services such as housekeeping, medical records, optical dispensing and delivery.

Housekeeping services are of paramount importance in providing a safe, clean, pleasant, orderly and functional environment for both patients and hospital personnel. The medical record department helps in rendering good service to patients, medical staff and hospital administration. Optical delivery and dispensing department helps in timely delivery of glass prescription to patient making an impact in their vision. Training people in these cadres make vital contributions to the achievement of high quality, high volume and financially sustaining eye care in large volume setting.

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## About Training in Eye Care Support Services Series (TECSSS)

The Training in Eye Care Support Services Series (TECSSS) responds to the desire of many organisations and institutions around the world to train support services personnel to provide high quality and high volume eye care.

The Training in Eye Care Support Series is a set of manuals explaining the principles and techniques for the effective procedures to be followed by the support services personnel.

Each module is based on the practices of Aravind Eye Hospitals in South India.

The intent of this series is to provide a format for Training in Eye Care Support Services based on Aravind Eye Hospital's "best practices", based on over 30 years of growing, changing, and learning from mistakes.

### The three modules of TECSSS

- 1. Housekeeping in Eye Care Services - A practical guide :** The invisible "bottomline" for patient safety and satisfaction. Cleanliness, appearance, maintenance, attitude are all essential for the entire hospital and OPD. Duties, responsibilities and specific tasks are covered.
- 2. Medical Records Management in Eye Care Services - A practical guide :** A complete guide to establishing and running an efficient medical records department: information retrieval, generating statistics, personnel requirements, importance of accuracy.
- 3. Optical Sales and Dispensing - A practical guide :** This gives clear guidance about the various spectacle lenses and frames, how to fit the lens into frame, the technical measurement and sales procedure.

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## About the Ophthalmic Assistant Training Series (OATS)

The Ophthalmic Assistant Training Series responds to the desire of many organisations and institutions around the world to provide high quality and high volume eye care.

The contribution of the ophthalmic assistants to this work is fundamental.

The Ophthalmic Assistant Training Series is a set of manuals explaining the principles and techniques for increasing high quality and high volume eye care through the use of paramedical staff.

Each module is based on the practices of Aravind Eye Hospitals in South India.

The intent of this series is to provide a format for Ophthalmic Assistant Training based on Aravind Eye Hospitals' "best practices", based on over 30 years of growing, changing, and learning from mistakes.

### The five modules of OATS

**1. Introduction to Basics of Ophthalmic Assisting :** This is the foundation of the entire Ophthalmic Assistant Training. All the trainees are given general knowledge and training for the fundamentals necessary for their duties, as well as specific information about all activities required in their work.

**2. Handbook for Clinical Ophthalmic Assistants, Principles & Techniques of Clinical Ophthalmic Procedures:** Out-patient Department (OPD): This includes theory and practice of initial patient evaluations. An introduction to refraction is presented as well as steps for assisting the doctor.

Ward: This contains all the information necessary for the smooth running of a Ward. Pre and post operative procedures and patient instructions, as well as management of emergency and post operative complications are discussed. Ward set-up and management and laboratory functions are covered.

**3. Handbook for Surgical Ophthalmic Assistants (Operation Room Services):** Contains background and practical steps to the smooth running of a sterile theatre. Personnel requirements, roles and duties of theatre personnel including management of emergencies and medications, and assisting in specific procedures are detailed.

**4. A text book on Optics and Refraction:** All aspects of refractions are covered, including step- by step instruction for subjective and objective refraction, room set up, and equipment required. All types of refractive errors are described as well as the methods of assessing them. The theories and practice of visual fields, ultrasonography, contact lens fitting, low vision aids and optical dispensing are included.

**5. Role of Counselling in Eye Care Services - A practical guide :** Helping patients help themselves. The importance and types of patient interaction are discussed in detail. Basics of communication and specific examples are presented.

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Training in Eye Care Support Services Series

## ***Acknowledgements***

*We take great pleasure in presenting the Training in Eye Care Support Services Series (TECSSS) which is the consummation of many years of experience and tireless efforts by Aravind's ophthalmic assistant training department.*

*We acknowledge Seva Foundation's help through a series of volunteers who coached our team, helped in designing the structure, edited the contents, ensured academic rigor and making it relevant for transfer to a larger global audience, under the initiative of Dr.Suzanne Gilbert. In addition Seva Foundation is covering a part of the production costs. Sight Savers provided the initial stimulus and support for understanding the role of ophthalmic assistants in a broader context and in the development of a draft curriculum. We express our gratitude to Ms. Sachiko Yoneyama for editing the manual.*

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*Finally we sincerely thank the senior leadership team of Aravind Eye Care System particularly our Vice - Chairman Dr. Natchiar for the constant support and encouragement.*

The Ophthalmic Assistants team

Aravind Eye Care System

# HOUSEKEEPING IN EYE CARE SERVICES

## - A PRACTICAL GUIDE

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### CONTENTS

- CHAPTER 1      HOSPITAL HOUSE KEEPING  
Housekeeping  
Housekeeping Department  
Dress code for house keepers  
Requisite skills of house keepers
- CHAPTER 2      HOUSEKEEPING DEPARTMENT AND COMMUNICATION  
Methods of communication  
Means / medium of communication  
Oral communication  
Written communication  
Housekeeping department and communication
- CHAPTER 3      CLEANLINESS AND HYGIENE  
A brief introduction to different microbes  
Methods of infection control  
Odour control  
Waste disposal  
Personal hygiene
- CHAPTER 4      BODY MECHANICS
- CHAPTER 5      EQUIPMENT REQUIRED FOR HOUSE KEEPING AND THEIR USES  
Purchasing equipment  
Maintaining equipment  
Equipment and supplies commonly used in Housekeeping
- CHAPTER 6      CLEANING PROCEDURES - PART I  
Basic cleaning
- CHAPTER 7      CLEANING PROCEDURE - PART II  
Cleaning a room  
Cleaning a room vacated by an infected patient, or where a patient has died  
Cleaning the operation theatre

---

CHAPTER 8	MAINTAINING A FLOOR Removing stains Cleaning different types of stains Polishing the floors
CHAPTER 9	CLEANING SPECIAL AREAS Cleaning classrooms and conference hall, stores, library using vacuum cleaner Cleaning the elevator Cleaning glass
CHAPTER 10	CLEANING THE HOSPITAL KITCHEN AND DINING AREA
CHAPTER 11	SAFETY AND SECURITY
CHAPTER 12	MAINTENANCE OF DRINKING WATER SUPPLY SYSTEM Cleaning the drinking water tank Cleaning the water filter and cooler Chlorination
CHAPTER 13	CLEANING THE SEPTIC TANK
CHAPTER 14	LINEN MANAGEMENT Setting up of a linen department Selecting cleaning agents and detergents Stain removing Sample format for systematic running of the linen department
CHAPTER 15	WASTE MANAGEMENT What is waste management? Impact of poor waste management system Segregation Collection Transportation Disposal
CHAPTER 16	PEST CONTROL Cockroach Fly Silverfish Lizard Bees, wasps and spiders Bed bug Mosquitoes Rats Termites



- 
- CHAPTER 17    **INFECTION CONTROL**  
Infections and precautions in a hospital  
Housekeeping and infection control  
Infection control in the linen department  
Housekeeping in the isolation ward  
Housekeeping in the operation theatre
- CHAPTER 18    **GENERAL MAINTENANCE DEPARTMENT**  
Maintenance of electrical equipment  
Maintenance of taps, pipes and drains  
Maintenance of wooden fixtures/furniture
- CHAPTER 19    **CREATING GOOD AMBIENCE IN THE HOSPITAL AREA**  
Factors that decide the interiors  
Components that make up interiors  
Colours  
Making beautiful articles for interiors
- CHAPTER 20    **HORTICULTURE AND GARDENING**  
Cultivating a garden  
Maintenance of a garden  
Expanding the garden  
Plants in interior decoration
- CHAPTER 21    **HOSPITALITY AND EVENT MANAGEMENT**  
Administration  
Publicity and promotion  
Financial management  
Accommodation and meals  
Post-conference wrap-up
- CHAPTER 22    **HOUSEKEEPING MANAGEMENT**  
Organising a housekeeping department  
Job descriptions  
Responsibilities of the housekeeping department  
Qualities required for housekeeper  
Recruitment, selection and training of manpower  
Supervision and evaluation of staff  
Organisation of work  
Inter departmental communication  
Housekeeping and other departments
-

# CHAPTER 1 HOSPITAL HOUSEKEEPING

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## CONTENTS

Housekeeping  
Housekeeping department  
Dress code for housekeepers  
Requisite skills of housekeepers

## GOAL

To familiarize the housekeeper trainee with the concept of housekeeping, its importance and its role in a hospital

## OBJECTIVES

- To give the trainees a clear understanding of
- Housekeeping and housekeeping department
  - Organisation structure
  - Objectives of the housekeeping department
  - Dress code for housekeepers
  - Skills required for a good housekeeper
  - Attitude towards other staff
  - Evaluation of workers
  - Organisation of work

## CHAPTER 1

# Hospital Housekeeping

### Housekeeping

Housekeeping is one of the basic functions essential to the operation of a health care institution. Housekeeping services, also called environmental services, are of vital importance in providing a safe, clean, pleasant, orderly, and functional environment for both the patient and the hospital personnel. A clean and hygienic environment has a tremendous psychological impact on the patients and the visitors, and speaks volumes of the quality of service the hospital provides. Since it is difficult for lay people to judge the quality of medical practice in a hospital, opinion about a hospital is often formed on the basis of its appearance and cleanliness. However, bacteriological cleanliness should not be neglected.

Good housekeeping is an asset and a powerful tool for public relations. It has a direct bearing on the prestige and reputation of a hospital. As housekeeping serves all departments and areas of the hospital, minimizing the risk of cross infection and providing a clean, safe and comfortable environment are fundamental to any good housekeeping service. The housekeeping department is essential to quality service and needs to concentrate on both bacteriological cleanliness and outward cleanliness.

The housekeeping department's work has advanced rapidly in recent years and requires not only knowledge of technical skills but also an understanding of the "Tools of Management". A large part of the house keeper's time is taken up by personnel management, as it is the housekeeper's responsibility to manage the cleaners, the largest and most difficult class of human resource to manage. The aim should be to have an efficiently run department with operating cost as low as possible. The housekeeping department should not be considered in isolation, as it is an important source of information for many other departments. Hence a co-operative and pleasant staff helps to provide a cordial and congenial atmosphere in the hospital.

The housekeeping department is a non-revenue producing service department. However, a poorly run department results in money needlessly spent, creates a negative impression on the patients, visitors and staff, and adversely affects their perception of the quality of care provided by the hospital. This in turn will adversely affect frequenting of patients to the hospital that would indirectly affect the revenue.

### Housekeeping department

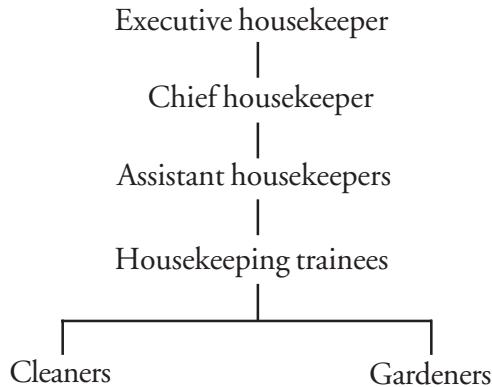
The main objective of the housekeeping department is to keep the hospital clean, safe and infection-free, yet maintain a pleasant and friendly atmosphere. The housekeeping department works closely with other departments in making the hospital a pleasant and safe place for the patients. It ensures a good ambience, makes sure that the patients are comfortable and the staff has a pleasant environment to work in. It also controls physical facilities and individual activities to minimize patient, employee or visitor injury and exposure to infectious disease.

As the patients enter the hospital, they come through the reception hall, and as the prescribed basic examinations are carried out, the patients are taken to several areas in the hospital. At each of these places the patient notices various aspects of cleanliness and interior design that creates a tasteful and pleasant atmosphere.

Housekeepers not only need to pay attention to the basic cleanliness and hygiene, but also help in the efficient functioning of the various sections such as linen, pest control, waste management, garden maintenance, electricity, water supply, carpentry and food distribution.

It is a difficult but important task to set up a housekeeping department in a hospital. The staff in other departments can help to lessen the housekeeping department's workload by maintaining cleanliness in their respective areas and co-operating with the housekeepers in their day to day work. This can be achieved easily with the housekeeper's ability to communicate effectively.

## Administrative set-up of the housekeeping department



Administrative set-up of the department may vary according to the size of the hospital. The chart given above is a model. The housekeeping department, as already mentioned, has multiple functions to perform. Housekeeping services may be requested at any time of the day or night. Hence the staff structure must be arranged so as to provide all necessary services. Personalised services remain an important part of quality health care and are also largely provided by the housekeeping department.

The executive housekeeper, as head of the department, must coordinate the performance of these functions to develop the most efficient department possible. However, the executive housekeeper cannot single-handedly discharge all housekeeping functions such as supervision, requisition, scheduling, and budgeting. Therefore, delegation of authority through a clear chain of command is necessary to ensure a thorough completion of each function/job. It must



Fig. 1.1 - Housekeeper

however be remembered that although authority is delegated, the executive housekeeper retains full responsibility for the department.



Fig. 1.2 - Cleaner (lady)



Fig. 1.3 - Cleaner (Male)

## Dress code for housekeeping staff

### Ladies

- Hair should be neatly combed into a bun, neatly tied back or cut short
- No make-up
- Uniform should be neat and clean
- No jewellery, except watch and ring or chain that denote wedded status
- Clean footwear (Fig. 1.1 & Fig. 1.2)

### Gents

- The hair should be worn short and neatly combed
- Should be clean shaven
- Uniform should be neat and clean
- Clean footwear (Fig. 1.3)

## Objectives of the housekeeping department

- To ensure a comfortable and infection-free environment for the patients
- To create a pleasant and friendly atmosphere
- To ensure that everything under their supervision is kept neat and clean
- To train and supervise effectively those who are working with them

- Establish a good working relationship with all other departments.
- Ensure that all staff is informed of hospital safety and security regulations.

## Requisite skills of housekeepers

In order to work effectively, one must know how to work efficiently.

### Management

**Delegation:** Work should be delegated to the staff as per their capabilities. The staff should be supervised regularly, and their work evaluated periodically.

**Work management:** If several tasks need to be completed on a particular day, the tasks need to be prioritised, so as to complete the tasks in order of their importance.

**Time management:** In order to complete a given work in the stipulated time, the materials required for the task should be kept ready and at hand.

**People management:** It is an art to work with others. A good and efficient housekeeper must develop good communication skills, and a pleasant attitude.

### Budgeting

A well-run housekeeping department runs at minimum cost to the institution. Hence the good housekeeper has to be good at planning and selecting equipment and supplies that are high in quality and moderate in price.

### An eye for beauty

Creating a beautiful and pleasant ambience is one of the housekeeping objectives. A housekeeper should therefore have good artistic sense to be able to decorate the area appropriately.

New recruits should undergo training before they are put on the job. The housekeeper can then delegate work to them, and check the work once it is completed. It is rude to watch the workers while they are working. This attitude indicates that you do not trust them, and will make them uncomfortable. If the workers commit an error, do not criticise them

in front of others or yell at them. Call them aside and correct them. If however, they continue to work in the same unsatisfactory manner, immediate disciplinary action can be taken.

Building good relationship is essential to develop a good and loyal staff. This can be done by taking an interest in their well-being. Greet them every morning with a smile, and make polite enquiries about their families. Try and help them to sort out their problems with work or inter-personal problems with any other staff member. Being pleasant to people you are working with makes them feel a part of the “Organisation family”, and will result in their giving their best to the organisation.

### Evaluation of workers

In order to ensure continuing efficiency, it is important that the staff is evaluated from time to time. This exercise will be effective, if the following points are kept in mind:

- Pay individual attention to each worker and supervise the work
- Observe if the worker completes the work in the stipulated time
- Help the worker if there is a problem related to the work
- If needed, plan additional training for the worker and give him on the job training
- Observe attitude of worker toward other workers in the department

*For demonstration on the dress code of housekeepers and cleaners, please watch the video of the CD.*

### Student exercise

#### Answer the following

1. Why is it necessary to have a housekeeping department in a health care institution?
2. What are the basic qualities you would look for when appointing a housekeeper?
3. Why is periodic evaluation of workers necessary for efficient functioning of the department?

## CHAPTER 2 HOUSEKEEPING DEPARTMENT AND COMMUNICATION

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### CONTENTS

Methods of communication  
Means / medium of communication  
Oral communication  
Written communication  
Housekeeping department and communication

### GOAL

To help the trainees communicate effectively

### OBJECTIVES

To give the trainees a clear understanding of

- Methods of communication
- Means of communication
- Skills required for effective communication
- Importance of communication in the housekeeping department

## CHAPTER 2

# Housekeeping Department and Communication

### Communication

Communication is the process of transmitting ideas. Effective communication is an essential requirement for efficient functioning. Hence having good communication skills is a must in the Housekeeping department. A housekeeper must be able to effectively communicate with all administrative personnel, heads of departments, staff of various departments, patients, and other staff and workers of the Housekeeping department.

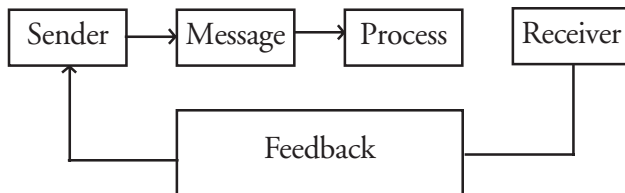
### Methods of communication

There are two basic methods of communication

#### One way communication



#### Two way communication



For effective communication, the following points need to be kept in mind;

- Before sending a message, the sender should understand why the message is being sent
- Collect the relevant data
- Compile the collected data in a concise manner which can be clearly understood
- Select an appropriate means or medium of communication
- Send the message through the selected medium

- Ascertain that the message has been received and clearly understood by the receiver.
- The receiver, on their part, should receive the message carefully, and understand it. If the message is not clear, ask the sender for clarification

Before communicating any information, the means or medium for communication should be considered. This is very important.

### Means/medium of sending messages

- Direct conversation
- Group discussions
- Telephone
- Written or typed letter
- Memo
- Handouts

### Skills required for effective communication

Since the housekeeper must communicate with all different levels of hospital staff she must follow an effective oral and written communication process and must have good skills in listening and observation.

### Oral communication

Successful communication through the spoken word requires careful planning. The speaker must think about what she wants to say, concentrate on communicating one idea at a time, and present the idea in a logical sequence. The speaker must also be aware of the effect of her tone of voice, and the expression on her face, for all these lend colour and meaning to her words.

### For effective oral communication

- Think through what you want to say before starting to talk
- Put the listener at ease; speak in low, pleasant tones

- Speak distinctly in words the listener can understand
- Concentrate on communicating one idea at a time; avoid rambling
- Look for signs of understanding or confusion
- Ask questions to ensure that the listener has understood the message
- Encourage the listener to ask questions to achieve clarity of understanding
- Stick to ideas appropriate for the occasion
- Look at the person to whom you are speaking and avoid actions that may distract him
- Use terms that are persuasive rather than argumentative
- Remember that ridicule or derision as well as argument stops the flow of communication
- Recapitulate the conversation and confirm the conclusion that has been reached

### **Written communication**

Factors important in oral communication are important in written communication as well. When communicating through writing, it is important to choose words and phrases carefully, as the writer cannot gauge the response to the message as can a speaker in a face-to-face situation; nor does the writer usually have the opportunity to clarify what is said by answering questions.

#### **For effective written communication**

- Present one idea at a time
- Phrase the idea in simple words
- Present ideas in a logical order
- Avoid sentences that average more than 20 words
- Make paragraphs short
- Engage interest in the first paragraph
- Retain the reader's interest by explaining how the idea will help him
- Use repetition to reinforce the idea
- Give examples to clarify the idea
- Use action words, but spare long adjectives and adverbs that may obscure the action words

### **Listening and observing**

Being a good listener is an art and requires practice.

#### **To be a good listener**

- Stop talking; it is impossible to listen while you are talking
- Concentrate on what the other person is trying to say; listen also to what he is not saying or what he avoids talking about by observing the body language and his facial expression
- Sift facts and avoid hasty judgment. Wait until the speaker has finished and you can evaluate what he has said before you draw conclusions

#### **For good observation**

Good observation requires that the observer concentrates on the person, avoids distractions, and avoids unsupported assumptions and hasty actions. The observer must appear passive though his mind must be very active. If the observer reacts strongly or hastily in any way, the subject may feel inhibited or threatened and the communication may be distorted.

The housekeeper must often use observation in the performance of duties. Observation is an important part of supervision; it is a major factor in inspection.

#### **Summing up the above discussion**

The sender and the receiver require certain basic skills, to make the communication effective.

#### **For sender**

- Send clear information
- Select the best means for communication
- Ensure that the receiver has understood the message

#### **For receiver**

- Listen to or read the message carefully, when receiving it
- When the message is given directly, face to face, watch the body language
- Ensure that the complete message has been received and understood

Communication with senior officers of an organisation plays a vital role in the efficiency of the



organisation. This communication can take place in the following ways:

Chief of administration → Manager → Staff

### Senior level to junior level

The message is sent from the Chief of Administration to the Manager or from the Manager to the staff.

Chief of administration ← Manager ← Staff

### Junior level to senior level

For example, in the housekeeping department, if the sweepers wish to express problems related to their job, the message is sent through the housekeeping staff to the manager and through him to the chief of administration.

### Intermediate communication

This deals with communication between the housekeeping department and other departments.

Housekeeping staff → Staff of other departments → Housekeeping Manager

### Reasons for ineffective communication

- Not planning the message to be sent
- No clear idea about the message
- Using difficult words
- Language problem
- Speaking without facing one another
- Anxiety on account of nervousness with a senior staff member causes one to listen to and understand the message wrongly
- Lack of attention on the part of the receiver causes him to misunderstand the message

### Effective measures for good communication

- Speak clearly in order to be heard and understood.
- Improve listening skills
- Do not interrupt when the message is being given
- Observe the body language of the speaker
- If there is difficulty in understanding the message, ask for clarification

## Housekeeping department and communication

The housekeeping department is not an isolated department. It is a responsible department which has to function in co-ordination with the reception, medical and other departments. Communication with the staff of these departments, and the patients coming to the hospital should be a two way communication. A one way communication will lead to waste of time, material and manpower. Communication should not only be effective with other departments, but also within the department. For example, if a manager simply asks for a room to be arranged to conduct a meeting, the message is incomplete and the result is confusion and delay in starting the meeting. In order to avoid this, the manager should have indicated the place, time, date and purpose of the meeting to be conducted. If something is not clear, the staff should get it clarified with the concerned manager. On the other hand, the manager should ensure that the staff has understood the message completely.

### Key points to remember

- *Ensure that the message is sent clearly*
- *Ensure that the message is received and understood*
- *Listen attentively when the message is being given*
- *Observe the body language of the speaker*
- *Do not fear to ask for clarification if the message is not understood*

### Student exercise

#### Answer the following

1. *Why is effective and clear communication important for efficiency?*
2. *What are the different means of communication?*
3. *What are the factors contributing to effective oral communication?*
4. *What do we need to keep in mind when using written communication?*

## CHAPTER 3 CLEANLINESS AND HYGIENE

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### CONTENTS

A brief introduction to different microbes  
Methods of infection control  
Odour control  
Waste disposal  
Personal hygiene

### GOAL

To emphasize the importance of cleanliness and basic hygiene

### OBJECTIVES

To give the trainees a clear understanding of

- Sanitation
- Bacteriology
- Disinfection and disinfectants

## CHAPTER 3

# Cleanliness and Hygiene

Many people visit a hospital. They are affected by various infections and come for treatment. These infections can spread to others through water, air and through direct and indirect physical contact.

Sanitation and institutional housekeeping can both be defined as the practice of eliminating agencies injurious to health. Microbiology, the study of microscopic living beings, including bacteria, viruses, yeasts and molds, is the biological science on which sanitation is based. The housekeeper, therefore, should have some knowledge of microbiology to develop routine cleaning procedures, such as odour control methods, waste disposal operations and pest control methods. More importantly, the housekeeper should be familiar with organisms which produce diseases in man.

### A brief introduction to different microbes

#### Microbiology

Organisms which can be seen only through a microscope are called micro-organisms. The study of micro-organisms is called Microbiology. We are affected by many diseases such as cholera, malaria, pneumonia and fever which are all caused by micro-organisms because microorganisms often grow rapidly in dark stagnant air. A hospital should let in maximum sunlight and be well ventilated. Basic cleaning such as dusting, sweeping and mopping should be carried out several times a day.

Among the different kinds of microorganisms, only some are disease causing microorganisms. These are classified as bacteria, fungi and virus.

#### Bacteria

Bacteria are unicellular living microorganisms. These are reproduced by the process of bifurcation.

Conditions favourable for the growth of bacteria are temperatures of about 37° C, humidity, food and acidity in a human body. Some bacteria require oxygen to multiply. These are called 'Aerobes'. Others that do not need oxygen to multiply are called 'Anaerobes'. Some bacteria produce spores when conditions are unfavourable.

#### Conditions that cause bacteria growth

**Humidity:** Bacteria live by sucking moisture from food. They absorb the moisture from food particles and produce an enzyme or toxin.

**Oxygen:** This applies only to certain bacteria.

**Darkness:** Bacteria grow rapidly in dark areas. Certain disease causing bacteria produce toxins that circulate through blood and cause toxemia.

#### Fungi

Ordinarily fungi cause diseases in the hair, nails, skin and mucous membranes. They can cause corneal ulcers and also affect the mouth region. Fungi are responsible for pus formation in the body. *Fusarium* and *Aspergillus Contida* cause ulcers in the cornea. Stye, Madras eye, and preorbital pus formation around the eye is also caused by fungi. Diabetics and those who use excessive antibiotics are easily affected by fungi.

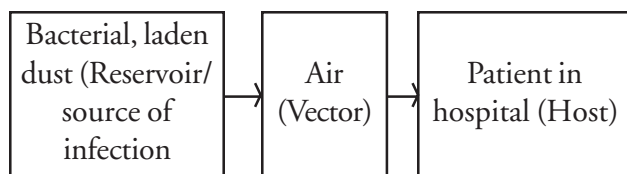
#### Virus

Viruses are smaller than bacteria and are visible only through an electron microscope. They cause diseases like cold, influenza, pox, herpes zoster, jaundice, AIDS. A virus kills healthy cells by using the cell to get multiplied. To control viruses, anti-viral medicines are used. Viruses spread in different ways - for example, the influenza virus spreads through blood vessels to different parts of the body.

## Methods of infection control

Control of infection caused by these micro-organisms depends upon breaking what is called the “chain of infection”. This chain consists of the reservoir or the source of infection, such as bacteria laden dust, the vector or the means of transmission such as air, and the host or the patient who becomes infected while in the health care unit. The object of infection control measures is to eliminate reservoirs and to block the means of transmission.

Disinfectants, when properly used, are very helpful in infection control. Their usefulness goes beyond the normal cleaning process - for example, the use of germicide in mop water. It must be emphasized however, that there is no substitute for careful cleaning.



## Disinfection

Disinfection destroys both the microbes that cause diseases and those that do not. It is very important to keep the disinfected materials sterilised under the same conditions until they are ready to be used.

### Anti-microbe disinfectant (Antiseptic)

Chemicals that destroy the growth and prevent the multiplication of microbes.

### Asepsis

A condition in which there are no disease causing germs. There are three methods of disinfection - natural method, physical method and chemical method.

## Methods of disinfection

### 1. Natural method of disinfection

**Sunlight** : Direct and continuous exposure to sunlight kills many disease producing organisms. The ultra violet rays of the sun kills the bacteria.

### 2. Physical method of disinfection

#### a. Moist heat

- Boiling
- Passing vapour/steam
- Compressed steaming
- Pasteurization: In this method, certain articles are brought to a certain temperature, then rapidly cooled and maintained at this cooled temperature

#### b. Dry heat

- Exposure to heat
- Burning the articles that contain germs

#### c. Boiling

Boiling articles for five minutes in water kills the microbes. It takes 30 minutes for microbes with sperm to die. Before boiling, the articles should be washed and cleaned; otherwise blood and tissue will clot and provide protection for the microbes. Instruments should be put into the water only after reaching the boiling point. Glass articles should be immersed when starting to heat the water.

By this method, the microbes are destroyed because their protoplasm is reduced or changed.

#### d. Compressed steam

The principle behind using compressed steam: When steam is pressurized it increases to 100°C from its original temperature. There are two parts in the autoclave - the inner chamber and the outer chamber. The autoclave is made up of heavy

metal. The materials to be disinfected are put in the inner chamber. The autoclave is then closed tightly and heated.

When it is heated, the water from the outer chamber enters the inner chamber as steam. Since there is no outlet, the pressure and the temperature of steam increases to 15lb. and 120°C respectively.

Articles that are disinfected using an autoclave:

1. Blunt instruments used for surgery and other purposes.
2. Clothes that are used in the operation theatre, such as the mask, cap, and the surgical gowns worn by doctors and nurses.

### 3. Chemical method

This involves killing germs using chemicals such as:

- Carbolic acid
- Lysol
- Dettol
- Spirit
- Bleaching powder
- Formalin
- Potassium permanganate

#### Properties of a good disinfectant

- Has the potential to destroy microbes
- Must not harm human tissues or the articles that have to be disinfected.

The following are properties and uses of some disinfectants used in hospitals:

- **Formalin:** Used to disinfect operation theatres and patients' rooms. Formalin is available in the form of tablets and as a liquid. In the vapour form it is used to destroy air borne microbes. Formalin should be handled carefully as it produces a burning sensation on the skin.
- **Potassium permanganate:** This is used to cleanse sores and as a mouth wash.

- **Spirit:** Pure spirit is not a disinfectant; hence spirit as a disinfectant is used in concentrations of 50% or 70%. It takes one hour to destroy ordinary germs, and is used as a hand scrub.
- **Bleaching powder:** This is used to clean places which are dirtied by faeces and urine.
- **Iodine:** This is used as 7% tincture iodine to kill germs that are present in the skin.
- **Dettol:** 10-20 drops of dettol are added to a glass of water to wash and disinfect a room. It is also used to wash hands.
- **Lysol:** This is a germicide, which contains carbonic acid and soap.

#### Procedures that will help to control the spread of infection

1. Give top priority to the cleaning of horizontal surfaces and also give proper attention to cleaning of walls and other vertical surfaces. Harmful bacteria are air borne only for a short distance before attaching to both horizontal and vertical surfaces, especially the floor.
2. Use wet-cleaning methods such as damp-wiping, damp-mopping, and wet-mopping. Dry-dusting may only redistribute the bacteria laden dust. However, the use of properly filtered vacuum cleaners is acceptable for cleaning.
3. Add effective germicides or chemicals to the wet-cleaning solutions. The strength of the combination of detergent and chemicals should be sufficiently concentrated to combat both dirt accumulation and contamination. While germicide has some value on the floor, its real value is in the reduction of bacteria levels in the mop bucket. Unless checked, the bacteria multiply rapidly in the warm and moist environment of the mop water and may actually contaminate the floor while it is being cleaned.
4. Issue sufficient mops and dust cloths to the employees so that they may use fresh cloths and mops as required.

5. Launder the used wet mops and dust cloths every day. Do not leave soiled and moist mops and cloths overnight in the work closet.
6. Clean the equipment and storage closet every day.
7. Provide plastic film or waxed paper bags for the disposal of infected materials. Contaminated linen should be handled with care.

## Odour control

Odour problems arise as a result of poor sanitation in toilet areas, utility rooms and work closets. Deodorizer blocks or sprays which mask the odour are a mark of poor housekeeping. The most effective way to deodorize these areas is with fresh air, removal of the causes, and frequent cleaning with a detergent-disinfectant solution.

Garbage collection areas and soiled linen storage areas may be sites where bad odours arise. Frequent removal of garbage, cleansing of garbage cans, use of tight lids, and the use of waxed papers or plastic liners in the garbage cans will help minimise the odours. Daily washing of walls and floors in both the garbage and soiled linen rooms will be helpful. Frequent cleaning of drains and weekly flushing with a germicide solution will help reduce the problem.

## Waste disposal

Waste constitutes a problem; the size of the problem varying with the size of the institution. The waste must be disposed of in an economical, efficient and sanitary way. Safety against fire, prevention of cross contamination by infectious materials, odour control and pest control are all included in waste disposal procedures. A carefully planned procedure of waste disposal will safeguard not only the patients and personnel, but also the community.

Waste may be classified into non-combustible waste, combustible waste and chemical waste. In general, the methods of handling waste will depend on the facilities of the institution, the community and the regulations of the health board. Wet waste such as waste from the kitchen may be disposed off

in disposal units in the kitchen, if such a facility is available. Wet as well as dry waste can also be burned in an incinerator or placed in special containers for removal by the commercial service. Waste chemicals can be disposed off in the sewer after being neutralized. Burning waste on hospital premises has some advantages over other methods of waste disposal. It eliminates the collection of refuse dumps, thus preventing the breeding of rodents and insects, as well as the cost of commercial services.

Whatever methods are used, the housekeeper is responsible for developing waste disposal methods. In developing these procedures, various other pertinent factors such as time schedules, equipment required, sanitation standards, problems of odour and noise control, must be taken into consideration. The safety of the housekeeping personnel should not be neglected. They should be furnished with safety gloves and goggles for use while working at the incinerator, caps for the protection of the hair and scalp, masks to keep them from inhaling noxious gases, and rubber aprons or overalls to protect their uniforms. While emptying or sorting out any kind of refuse the personnel should be cautioned against any kind of injurious material such as broken bottles or syringes.

The housekeeper should make regular tours of the waste disposal area to be sure that the procedures are being followed correctly and that safety measures are being taken.

## Personal hygiene

It is always necessary to keep yourself clean. A person who is sloppy in dress, unclean, and emits body odour is not only unhygienic but also aesthetically unpleasant.

When you are working in hospitals where you are surrounded with patients, you tend to become a carrier of disease causing germs which can harm others as well as harmful to yourself. Thus it is very important to follow simple rules of hygiene. Wash your hands thoroughly after your work is done, or

before your tea and lunch break. It is advisable to wear gloves when cleaning dirty areas or when disposing waste. Wear clean and washed clothes every day. Preferably dry the clothes in sunlight, as the sun is a natural disinfectant.

### Hand washing procedure

Eight step procedure for washing hands:

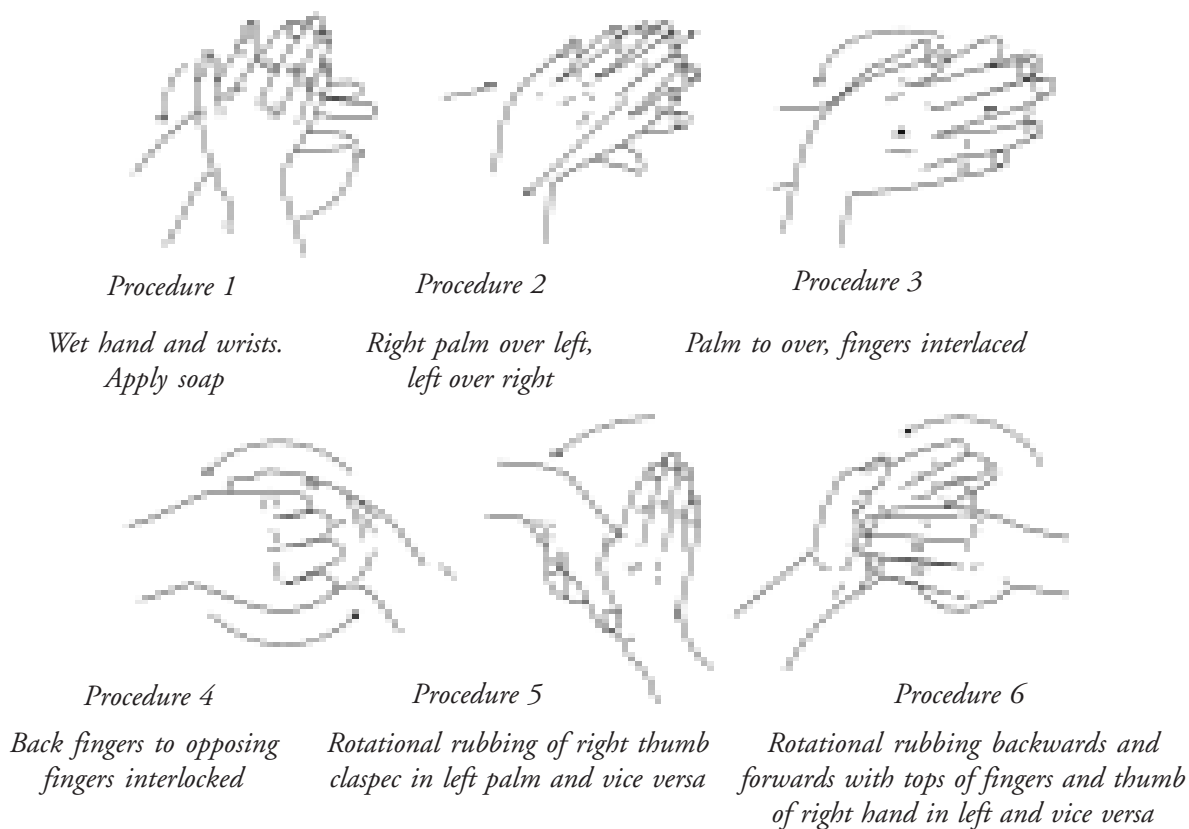
1. Wet hands
2. Apply soap thoroughly; get under the nails and between fingers
3. If necessary, use a brush to remove any substance offering resistance
4. With a rotating frictional motion, rub hands together while you count 20. Wash at least 2-3 inches above the wrist.
5. To wash fingers and the spaces between them, interlace the fingers and rub up and down.

6. Rinse well
7. Dry thoroughly
8. Make certain that the sink is clean before you leave it (Fig. 3.1)

### Student exercise

#### Answer the following

1. Briefly mention the harm caused by bacteria, virus and fungi
2. Why is disinfection necessary in a hospital? Name some of the disinfectants used in the hospital
3. What are the different methods of disinfection? Write briefly about each of them
4. What are the points you need to remember in order to control infection?
5. What are the aspects to be borne in mind during waste disposal, in order to avoid infection?



*Note: Repeat procedures 1-6 until the hands are clean. Rinse hands and pat dry*

Fig. 3.1

## CHAPTER 4 BODY MECHANICS

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### GOAL

To enable housekeepers and other staff do their work without fatigue

### OBJECTIVES

To teach the trainees the harm caused to their body by wrong movements and the fatigue caused by unplanned work



## CHAPTER 4

# Body Mechanics

Housekeeping is, without doubt, a strenuous and stressful work. The housekeeper is expected to be alert at all times, looking after multiple functions. The housekeeper has to ensure cleanliness and hygiene, keep the hospital premises free of rodents and other pests, ensure safety and security, and keep a constant eye on the cleaners to make sure they are doing their work to perfection. The housekeeper juggles multiple tasks while keeping a calm exterior, and regularly interacts with the patients to make sure that patient comfort and needs are met.

This kind of job is bound to cause strain and stress, affecting the mental and physical well-being

of the housekeeping personnel. It is therefore necessary for the housekeeping department to teach the staff work methods that will reduce fatigue. It is also helpful to introduce meditation or yoga as part of their routine activity. This will help them to always feel energetic, which, in turn will keep them looking and feeling cheerful.

### **Student exercise**

#### **Answer the following**

1. *What do you understand by Body Mechanics? Why is knowledge of this important to housekeeping?*

## CHAPTER 5 EQUIPMENT REQUIRED FOR HOUSEKEEPING

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### CONTENTS

Purchasing equipment  
Maintaining equipment  
Equipment and supplies commonly used in housekeeping

### GOAL

To give the trainee knowledge about the equipment and supplies used in housekeeping

### OBJECTIVES

- The trainee will know
- How equipment and supplies are selected
  - How equipment is maintained to last long
  - Where and how the different equipment and supplies are used

## CHAPTER 5

# Equipment required for Housekeeping

Various equipment and supplies are used to keep the hospital clean and hygienic. The housekeeper must make a careful selection of equipment based on its suitability for a health care institution, appropriate design and size, rugged construction and finish, easy availability of materials for maintenance, initial and operating costs, pre-tested on-the-job performance, safety, and overall efficiency. The housekeeper should also research supplies and develop basic procedures on how to effectively use them to maintain desired standards of cleanliness.

Housekeeping property is broadly classified as either equipment or supplies. Generally, equipment such as brooms, mops, stools, vacuum machines, are reusable, and supplies such as dusters, detergents, germicides, are consumables. (Fig. 5.1 & Fig. 5.2)



*Fig. 5.1 - Equipment needed for cleaning*



*Fig. 5.2 - Supplies needed for cleaning*

### Purchasing equipment

Poor economy is buying anything below high quality and time consuming equipment. Buying good equipment and letting it lay idle or buying a product of better quality than is needed is also poor economy. Comparing the results of a trial use (in case of equipment), or sampling, (in case of supplies) to the performance of similar items already in use is beneficial before placing an order for a new one.

The housekeeper is responsible for selecting new equipment. The housekeeper may obtain advice from any personnel involved with the equipment, be they the purchasing agent, maintenance superintendent, laundry manager, or microbiologist, but the final decision rests with the housekeeper. If the housekeeper discovers that any equipment is inadequate, it must be personally observed and research the market to obtain knowledge about the different advancements and technology that is available for that one equipment. Only then can they understand the limits of expectation from one such equipment. A general checklist can be formulated to help the housekeeper and other personnel involved in the purchase of the equipment to remember every factor pertinent to the purchase of the equipment.

The housekeeper also needs to evaluate a product before purchase. Very often the employees who use the product are the best people to consult for this. In the initial stages of introducing a new type of equipment the general trend should be monitored. Making a checklist can help in this process. For example when monitoring a new type of mop, list who the distributor is, the cost, how often it needs to be replaced. If the mop is being used in different areas, monitor whether the durability, usability varies from one area to another and investigate why.

For ensuring long life of a machine it is necessary to provide appropriate storage space and create awareness among the users to put it back into its place as soon as they complete their work.

## Maintaining equipment

When an employee is provided with high quality equipment, he must be trained in its proper care, use and storage. All equipment should also be inspected daily by the housekeeper or by a representative for cleanliness, indications of wear and tear, neglect or abuse. In case of heavy machinery, ask the distributor to agree on a contract for periodic detailed inspections to forestall breakdowns.

Some institutions hold workers responsible for the equipment assigned to them. Other equipment that is used by the department for general work, and which is shared by all the staff, is cared for and inspected regularly by the senior housekeeper, or a person assigned for the purpose. One method to ensure regular inspection is to set aside a specific room where equipment is turned in at the end of the day and made ready for use the next day. Another method is the systematic tagging of machines that have been inspected. This makes it easy for the housekeeper to make a quick check of machines that have not been inspected.

A card file with separate cards for each equipment's service history should be kept in the housekeeping department which will provide the department with important data whenever replacement of equipment is being considered. In case of failure, a tag stating "defective" should be attached to the equipment, and the equipment should be checked by the maintenance department. Space should be provided on the tag for a brief description of the defect, the department from which it was sent, the date on which it was sent, and the name of the person who discovered the defect.

The manufacturer's instructions concerning the operation, maintenance and adjustments of the equipment should be permanently kept in the

housekeeper's file. Copies should be given to the maintenance department for making repairs and to use the parts list for stockpiling small replacement parts. Each employee should be given individual instruction in handling the equipment they use, and should have a set of instructions framed and hung in the immediate work area. When training an employee to use new equipment, observe the employee as he uses the equipment to evaluate how closely he adheres to the instructions.

If the maintenance department does not have workers with the skills required to repair particular equipment, using the services of the manufacturer's local representative for systematic maintenance and overhauling is advisable. By contracting his services, the institution need not stock up any spare parts, and it can avoid loss of time, as he can provide substitute equipment while repairs are being made.

## Equipment and supplies needed for housekeeping

**Duster :** To clean dust from tables, chairs, and other articles.

**Broom (hard bristle):** To clean the surroundings, the toilets, and to remove water after washing the floor. It is also used to sweep rough flooring.

**Softbroom :** To sweep dust and waste on a smooth floor.

**Waste Basket :** Placed in the patients' rooms, office area and common areas of the hospital for dropping waste materials.

**Dust bin :** All the garbage collected from different areas of the hospital is put into the dust bin.

**Dust pan :** To pick up and remove dust and waste collected at a place.

**Rugs :** Placed at the entrances to absorb all the dust particles from peoples footwear when they come in from outside.

**Door mat :** Placed in front of the entrance, operation theatre, laboratory, other rooms, toilets and bathrooms, in order to absorb moisture and dust.

**Disinfectant** : Different disinfectants for disinfection are used for cleaning floors and toilets.

**Floor cleaning liquid** : To clean and remove dirt from the floor.

**Bucket** : To carry water and while swabbing the floor and also to carry cleaning equipments from one place to other.

**Thread mop** : To clean and mop the verandah and rooms.

**Swabbing cloth** : To wipe bathrooms and small areas and keep them dry.

**Washing liquid / powder** : To clean bathrooms, toilets and washbasins.

**Liquid soap / Soap solution** : To clean walls and tiles.

**Bleaching powder** : To clean moss-covered places, sewage tanks and water tanks.

**Scrubber** : To scrub washbasins, vessels and remove stains.

**WC brush** : To clean the outlet for sewage water.

**Wooden brush** : To clean the footrests and tiled flooring in the toilets and to clean water tanks.

The wooden brushes that are used to clean toilets should not be used for any other purpose.

**Curved brush** : To clean the inside of the commode and toilet bowl, as well as corners and edges.

**Nylon sponge** : To clean walls and tiles.

**Nuvon** : An insecticide that is sprayed to prevent cockroaches, mosquitoes, ants and flies, and placed in septic tanks to prevent breeding of cockroaches

**Insecticide** : Sprayed or used in powder form to prevent cockroaches, flies, and other insects.

**Naphthalene balls** : Placed in the drains of washbasins to prevent insects from coming up through the drains, and to prevent bad odours.

**Air freshener** : Placed in the toilet, stalls or in rooms to drive away odour

**Hydrochloric acid** : Used to remove stains on washbasins and toilets and to remove any clogs in the washbasins and sinks.

**Harpic / Toilet cleaner** : To remove stains on tiles and in toilets and make them sparkle .

**Brasso** : To polish brass articles.

**Mansion polish** : To polish floors.

**Stain remover** : To remove stains and dirt from clothes.

**Varnish** : To polish wooden furniture and protect them from termites.

**Floor stain removing stone** : To remove salt stains from mosaic flooring.

**Toilet paper** : A roll of toilet paper is placed in the toilets.

**Vaccum cleaner** : A machine used to remove cobwebs and dust from places that are not easily reached, such as corners of walls, and ceilings, window grills, and mosquito mesh

**Scrubbing machine** : A machine used to scrub the floors and keep them clean

**Polishing machine** : To polish floors and keep them shining

**Multi-action mop** : To clear water from the floor. It is used in the bathrooms to dry up the floor, as well as to clean it thoroughly.

*For a demonstration on the equipment and supplies used for cleaning, please watch the video of the CD.*

### Student exercise

#### Answer the following

1. *What are the important factors to be kept in mind when purchasing equipment?*
2. *What are the different ways that maintenance of equipment can be organised in the housekeeping department?*

## CHAPTER 6 CLEANING PROCEDURES - PART I

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### CONTENTS

Basic cleaning

- Dusting
- Sweeping
- Mopping
- Scrubbing
- Washing

### GOAL

To train the trainee in methods of keeping the interiors and surroundings clean

### OBJECTIVES

To teach the trainees the correct procedures in

- Dusting
- Sweeping
- Mopping
- Scrubbing
- Washing

# CHAPTER 6

## Cleaning Procedures - Part I

### Basic cleaning methods - part I

Dust can be airborne; one must remember the importance of removing dust rather than shifting dust from one place to another.

Dust can be removed by

- **Dusting:** When a surface is dusted by rubbing, the electro-static charge caused by the friction attracts dust faster than before. Hence, as soon as the dusting is over, the dust rapidly settles on the surface again. Though frequently used, this method is not satisfactory. This activity needs to be carried out immediately after sweeping, and should be done with a wet duster, followed by a dry duster
- **Sweeping:** Sweeping merely circulates the fine particles of dust into the air and is an unsatisfactory method. For this reason sweeping should be done just before dusting
- **Mopping:** This is a fairly efficient method provided the mop is clean and the water is regularly changed during the cleaning process. However, most times the cleaner continues to use the same water, which is dirty, and does not care to wash the mop after the cleaning process. Thus the mopping done with dirty water and a greasy mop makes the whole exercise futile
- **Suction:** This is probably the most efficient method of dust removal, as the dust is collected in a bag placed inside the vacuum cleaner. Once the bag is full, it can be disposed off

### Dusting

In different areas of the hospital, especially in the patients' rooms, on doors, windows, tables, chairs, cupboards, fans, lights and beds, dust settles down and this poses a health hazard as dust is a major cause for infection. Dusting is the process of removing this

dust. To minimize the dust spread through the air, the housekeeper should have one or two treated dusters in hand. To properly treat a duster, fill a tray or pan with mineral oil and lightly place the duster in the tray to let it soak overnight. Care should be taken when treating a duster that it does not become greasy. The duster should be folded in 4, 8 or 16 folds, depending on the size of the duster, so that the cloth can be unfolded and refolded to prevent the same dusty side of the cloth from being re-used on different surfaces (Fig. 6.1).

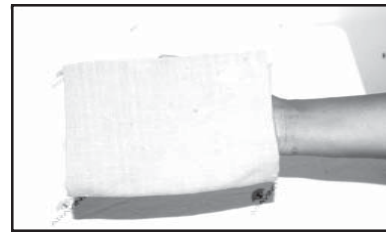


Fig. 6.1 - Folded duster cloth

### Equipment and supplies

- Duster - 2nos
- Dry cloth
- Cotton
- Spirit
- Water

### Method of dusting

- Collect all items required for dusting
- Fold the duster so as to be able to dust a number of surfaces
- Commence work from the entrance of the room and proceed in a clockwise direction
- Start with the highest point to be dusted and work down towards the floor
- Prevent overlapping and skipping edges. Hold the cloth loosely so that it can absorb dust easily

- Do not shake the dust off the cloth
- Inspect the work after it is done. A well dusted area will be bright and free of dust
- After the work is complete, wash the duster and put it back in its place

### Dusting a room

All rooms should be dusted daily. When dusting a room, the following points need to be remembered:

**Doors and windows:** When cleaning the door of a room, wipe the door with a wet duster from top to bottom in a left to right direction. Then wipe it again with a dry duster.

When wiping a window, the window frame, the glass panes and the frame around the glass panes, with all its corners should be wiped with a wet duster breadth-wise, and then again with a dry duster.

**Tables, chairs, cupboards:** The table top, its underside, drawers, and legs should be wiped with a dry duster. Similarly, a chair should also be wiped, starting with the backrest, the seat, under the seat, the legs, and the arms. All sides of a cupboard should be wiped daily, starting from the top. Then the inside of the cupboard should be cleaned thoroughly. The cobwebs should be removed, and the shelves should be cleaned. This should be done only in the absence of the patient.

**Cots:** The mattress should be dusted thoroughly. After folding the mattress, the cot should be wiped with a wet duster, and then thoroughly with a dry duster. If it is not wiped dry, the mattress will start to smell. Care should be taken to wipe the edges, the legs, and the underside of the cot.

**Switchboards, lights, fans:** Fans and lights should be dusted only after switching them off. This may be cleaned periodically, once a week. First they should be wiped with a wet duster and then with a dry duster. The switchboard should be wiped with spirit, and, if a wet cloth is used, there is a risk of an electric shock.

**Other articles :** The verandah balustrade, photos, and decorative articles in the room and other common places should be wiped daily.

### Key points to remember

- Always knock and politely ask permission before entering an occupied room
- Fold the cloth into 4, 8 or 16 folds
- The fold should be changed after dusting each surface
- First wipe with a wet cloth and then with a dry cloth. By doing this, the dust will not fly about



Fig. 6.2 - Correct method of sweeping



Fig. 6.3 - Wrong method of sweeping

### Sweeping

Sweeping is a task that is carried out daily. People are always moving about in all the areas and rooms of the hospital. Their footwear brings in mud and dust particles from the outside. Sweeping is the process to remove this dust and dirt by using a brush or a broom. Sweeping is always done before mopping. The frequency of sweeping depends on the amount of traffic and the type of service. The out-patient section, in-patient section, and registration are the



areas with maximum movement of people. Hence these areas should be cleaned several times a day (Fig. 6.2 & Fig. 6.3).

The wards should be swept twice a day. The office and administrative areas of the hospital should be dusted and swept after working hours.

### Equipment and supplies

- Soft broom
- Dust pan
- Dust bin

### Selecting the equipment

- The brush of the broom should be long and dense
- Do not use a broken dust bin or a broken dust pan

### Method of sweeping a patient's room

- Before entering the room for cleaning, keep all the required materials ready
- Enter the room only after knocking and getting the patient's permission to clean
- Switch off the fan
- If the room is dark, switch on the light
- Look around the room
- Handpick the solid waste lying around on the floor and put it in the dust bin before starting to sweep
- Keep the windows wide open
- Latch the doors and windows to avoid them from banging
- Do not shake the dust from the doormat in front of the patient. Take it to a corner of the room, bend and dust it thoroughly
- Bend and sweep the room thoroughly, including all the edges and corners
- After sweeping the room, put the doormat in its place
- Do not drag the tables and chairs. The sound will disturb the patient, and moreover, dragging furniture will create scratches that will collect additional dust

- Every nook of the room, including under the cupboard, under the cot and area behind the doors should be swept thoroughly
- The dust collected from the room should be swept outside and piled against the wall
- After sweeping the room the dust should immediately be collected into a dustpan and put into the dustbin
- Switch the fan back on and thank the patient for the co-operation
- All areas of the hospital should be swept in the same manner.
- After sweeping, store the broom, pan and dustbin in their allotted place

### Key points to remember

- *The articles removed from the patient's room to facilitate cleaning, should be put back in their respective places after the cleaning is complete.*
- *While sweeping, the person should bend and use the broom, in order to sweep thoroughly.*

### Mopping

To disinfect all the areas of the hospital, we need to mop with a mixture of clean water and an anti-microbe disinfectant. Mopping will also remove any dust that remains after sweeping, and any stains on the floor. This is a routine task.

### Equipment and supplies

- 2 Buckets
- Water
- Disinfectant
- Mop

It is wrong to carry two full buckets of water in one hand.

Two buckets filled with water should be carried separately in each hand.

### Method of mopping the patient's room

- Mop only after the room has been thoroughly swept

- The mop should always be clean or else it will stain the floor
- Before mopping, all the required materials should be at hand
- Depending on how dirty the mopping area is, divide the room into imaginary portions
- Fill two-thirds of one bucket with water mixed with detergent, and two-thirds of the other bucket with plain and clean water.
- Place both the buckets on a mat to prevent staining of the floor
- Set aside light furniture to clean the floor well.
- Rinse the mop in clean water, dip it in the bucket containing the detergent, squeeze it well, and then mop
- Mop by drawing a figure “S” from left to right
- After mopping each small portion, rinse the mop in clean water, and repeat the process (Fig. 6.4)



*Fig. 6.4 - Mopping of the floor by cleaner*

- If the water becomes dirty, replace it with clean water
- The dirty water should be poured directly into the bathroom outlet, otherwise the dirty water may stagnate and cause floor stains
- Inspect the work. A well-mopped floor should have a clean surface. The corners should be clean and the floor should have no watermarks
- After completing the work, wash the mop thoroughly and dry it in the sun. A wet mop breeds bacteria

### **Key points to remember**

- *Before mopping check whether the mop is clean and dry*
- *Divide the room into small portions. Thoroughly rinse the mop after each portion and dip the mop in detergent before beginning a new portion*
- *The dirty water should be poured directly into the bathroom outlet*

### **Scrubbing**

Scrubbing is done on surfaces that are extremely dirty. More water is needed for scrubbing than for mopping. This activity is carried out whenever necessary.

### **Equipment and supplies**

- 2 Buckets
- 2 Mops
- Brush with a long handle
- Cleaning agent

### **Method of scrubbing a floor**

- First, sweep the area to be scrubbed, and then dampen it with water
- Sprinkle/spray the cleaning agent on the damp area
- Start scrubbing, using the long handled brush. If the whole room needs to be scrubbed, start from the far corner and move towards the door. If a small area, start scrubbing from the outer area and end at the center, to avoid spreading dirt. If the stain is stubborn use steel wool
- Remove the dirty solution using a mop
- Dip the second mop in clean water and mop the floor
- Repeat the scrubbing and mopping process until all the dirt is removed
- Inspect the area. A well-scrubbed area should look clean and dry
- Clean all the equipment and store them back in place

### **Washing**

Washing of floors is done to remove the soil and dirt brought in from the outside with the use of water. Sometimes scouring powder is used to remove tough

stains. Walls are washed at least once a month to ensure that they remain clean and stain free. Wash as often as necessary to maintain cleanliness and hygiene.

### Equipment and supplies

- 2 Containers
- Cleaning agent
- Sponge
- 2 Swabbing cloths
- A ladder to reach high places

### Method for washing

- Fill one container with a cleaning agent and the second container with water. Place them on a mat to prevent staining
- Wipe away loose earth from the area to be cleaned.
- Dip the sponge in the cleaning solution. Squeeze out the excess solution to prevent dripping
- Apply the solution on a small area using a circular motion
- Dip a cloth in the clean water and wash the area using an up-down motion
- Dry the area with a dry cloth
- Repeat the process until the entire area has been cleaned
- Change the water and solution frequently
- Inspect the work. A well-washed area will have no scratches or patches
- Clean the equipment and store them back in place

### Cleaning the surroundings

Cleaning the surroundings means maintaining the cleanliness and hygiene at the hospital entrance, around the hospital building and the area surrounding the hospital compound. This is a daily activity. (Fig.6.5).

The entrance is the face of the hospital and should be spotless to make a positive impression on the visitors.

Since the entrance has the most human traffic, it needs to be swept frequently. Visitors may throw away bus tickets; cigarette butts, paper scrap, plastic bags, and flowers on the path leading to the hospital. Housekeepers assigned to the out-patient section



*Fig. 6.5 - Cleaning the sunshade*

should regularly check for waste lying at the entrance and remove it immediately. A dustbin with the caption “please put waste in the dust bin” should be placed at the entrance.

The area outside the hospital compound should be swept daily and the waste should be removed immediately. The night shift workers should then dispose this off.

The parking area in front of the entrance should be checked regularly for diesel and oil stains caused by vehicles. These should be removed immediately, by scrubbing using a scouring powder, otherwise they form stubborn stains.

Waste thrown out of the windows by the patients and visitors accumulates on the ground and windowsills, creating an unseemly look clogging the drains during the rainy season. The fringes and backyard of the hospital building should also look tidy. The dry leaves and litter should be swept away and the windowsills, sunshades and outer walls of the hospital should be swept daily and washed once a week.

Maintaining cleanliness and hygiene in the area surrounding the hospital is as important as maintaining the interior.

### Student exercise

#### Answer the following

1. *What are the different ways of keeping the hospital premises clean?*
2. *Under what conditions are scrubbing and washing preferred to ordinary sweeping and mopping?*
3. *Write a detailed note on how you would dust a patient's room*
4. *How would you sweep a patient's room?*
5. *Why do we mop after sweeping? How is this done?*

## CHAPTER 7 CLEANING PROCEDURES - PART II

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### CONTENTS

Cleaning a room

- Cleaning the wash basin and sink
- Cleaning and removing stains from bath rooms and toilets, washing walls
- Cleaning the waste bucket, bed making and telephone cleaning

Cleaning a room vacated by an infected patient, or where a patient has died

Cleaning the operation theatre

### GOAL

To teach the trainees to keep the hospital stain free and odour free

### OBJECTIVES

To train the trainees in methods of

- Bed making
- Cleaning a room vacated by an infected patient, or in which a patient has died
- Cleaning the Operation theatre

## CHAPTER 7

# Cleaning Procedures - Part II

### Cleaning a room

#### Cleaning the wash basin or sink

A washbasin is used to wash face and hands, and a sink is used to wash vessels (Fig. 7.1). Washbasins are present in bathrooms, toilets, the catering section, patients' rooms, and doctors' rooms. Due to frequent use the washbasins become dirty leading to stain formation and disease causing bacteria growth in the drains. Therefore a washbasin should be cleaned thoroughly twice a day - once in the morning and once after lunch. Remnants of food may clog the catering section wash basin and emit a bad odour or cause dirty water to fall on the floor. The blocks in the drain should be removed immediately, the washbasin should be cleaned, and the dirty water on the floor should be mopped.



*Fig. 7.1 - Cleaning washbasin*

#### Equipment and supplies

- Cleaning agent
- Scrubber
- Swabbing cloth

#### Method of cleaning a washbasin / sink

- Make a solution using the cleaning agent
- Clean the washbasin/sink with a nylon brush while keeping the tap running to flush the drain.
- Turn off the tap
- Soak the scrubber in the solution and scrub the washbasin/sink thoroughly. Do not forget to scrub the outside and underside of the washbasin or sink
- The sieve area should be thoroughly scrubbed; otherwise moss will form causing it to appear dirty and stained
- Rinse everything thoroughly with water
- Wipe dry with a cloth
- If tiles are fixed on the wall above the wash basin/sink, they should also be scrubbed and wiped
- Water splashed on the floor should be wiped with a cloth. Then the floor should be scrubbed and again wiped dry with a clean cloth
- Inspect the work. A well-washed washbasin will look as good as new

#### Hydrochloric acid

Hydrochloric acid is highly caustic and care should be taken to ensure that it does not come into contact with the skin. Housekeepers should ensure that the cleaner is wearing gloves when using hydrochloric acid.

- Hydrochloric acid is used if tough stains such as salt stains cannot be removed with soap and water
- A small piece of cotton attached to a stick should be used to apply hydrochloric acid. Apply it directly on the stain to be removed
- Wash the area with water after the stain is removed

### **A clogged / blocked sink**

Sometimes various solid particles or matter that goes down the drain will clog the sink and the water will not drain quickly or will not drain at all. Remove the waste matter and food particles by hand and clean the small holes in the drain with fine wires. Check if the blockage has been removed by running the water.

If the block has not been removed, remove the drain pipe and check for the cause of the blockage. When removing the drain pipe, place a bucket under the sink to collect the dirty water that flows out.

A caustic soda stone can be placed in the sink to prevent clogging. Be careful when handling the stone, for it causes a burning sensation on the skin.

If none of the above methods work for removing the block, call a plumber.

### **Cleaning the bathroom**

#### **Equipment and supplies**

- Cleaning agent
- Scrubber
- Sponge
- Acid solution
- A multi-action mop

#### **Method of cleaning a bathroom**

- Before cleaning the bathroom, shake the bathmat out and beat it against the floor
- Place the bathmat outside the bathroom and using a bucket and a mug pour water on the walls of the bathroom
- Wet the door, window and ventilator and wash it with water. Any dirt should be scrubbed using a scrubber and the cleaning agent, and washed with water
- Clean the wash basin in the toilet
- Scrub the floor of the bathroom and wash it with clean water

- Remove the water from the floor using the multi-action mop and wipe the floor with a dry swabbing cloth
- Inspect the work. A bathroom should look clean, and should always be kept dry

### **Cleaning a bathroom / toilet**

The number of bathrooms and toilets depend on the size of the hospital and the number of patients. Separate toilets are provided for male and female patients or visitors in the out-patient and in-patient sections. Since out-patient toilets are used by many people, they should be cleaned several times a day. The frequency of cleaning will depend on the usage. The in-patient toilets should be cleaned twice a day. Toilets should always be dry because people who exit a wet bathroom or toilet will leave footprints and dirty the corridors. Puddles can be a health hazard because germs breed in wet places and patients can slip and injure themselves. Toilets that are dirty will smell and are unhygienic. Hence they should be cleaned several times a day. A notice requesting patients and visitors to flush the toilets may be posted in the toilets, and housekeepers should maintain toilets with frequent and thorough cleaning

#### **Equipment and supplies**

- Gloves
- Cleaning agent
- Scrubber
- Wooden brush
- Round brush
- Harpic or toilet cleaner
- Phenol or disinfectant
- Odonil or air freshener
- Stick broom
- Multi-action mop

### Method of cleaning an Indian toilet

- Gloves should be worn when cleaning the toilet
- Form a solution with the cleaning agent
- Sprinkle this solution on the floor of the toilet and scrub thoroughly
- Rinse the floor with water
- Remove any stains on the floor when scrubbing it
- Wet the walls, and scrub using a scrubber and the cleaning agent
- Wash the walls and wipe dry
- Scrub the footrest with the soap solution and a wooden brush and wash it
- Squeeze “Harpic” (or any liquid toilet cleaner) on the inside of the toilet and scrub it with the round brush
- Clean the outlet thoroughly, again using the round brushes
- After the toilet is completely cleaned and washed, pour a disinfectant, inside the toilet and the outlet
- Finally wipe the door, window, ventilator and mirror with a wet cloth
- Wipe again with a dry cloth to clean out any dust and dirt
- Remove any water from the floor of the toilet, using a multi-action mop
- Inspect the work. There should be no stains, and the floor should be dry
- Place “odonil ” near the toilet to absorb bad odour and leave a pleasant fragrance

### Method of cleaning a western toilet

- Gloves should be worn when cleaning the toilet
- Form a solution using the cleaning agent
- Flush the commode using a bucket of water, so that the stagnant water is emptied out
- Scrub the outer walls of the flush tank with the soap solution using the scrubber
- Scrub the outside and the top of the commode with the soap solution

- Squeeze “Harpic” on the inside of the toilet bowl and scrub it with the round brush to remove any stains in the bowl
- Wash all the scrubbed areas with water and wipe the flush tank, and the outside of the commode (pedestal, seat, lid and the surrounding area) with a dry swabbing cloth
- Scrub the tiles on the walls and wipe the windows and door
- Remove the water that has spilled on the floor with the multi-action mop
- Wash the floor of the toilet, and wipe it dry with a swabbing cloth
- Inspect the work. The toilet should be stain-free and dry
- Place “odonil ” in the toilet to absorb bad odour and leave a pleasant fragrance

### Washing the walls

Although less dirt collects on the walls in comparison to the floors, it is just as important to keep the walls spotlessly clean. When the patients and attendants lean on the walls, oil from their hair and dirt from their hands leave stains on the wall. Betel juice that is spat in corners also forms stains on the wall. Walls should be washed once a fortnight, when there are no patients in a room,. The walls of the corridors and common areas should also be cleaned when the patient flow is less (Fig. 7.2).



*Fig. 7.2 - Wiping the wall with a swabbing cloth*

**Equipment and supplies**

- Cleaning agent
- Sponge
- Duster
- Bucket
- Cup
- Ladder
- A soft broom
- A stick broom

**Method of washing a wall**

- Remove the curtains, bed, chair, photos and miscellaneous items from the room and keep them in a safe place outside the room
- Using a soft broom, remove the dust and cobwebs from the walls
- Use the cleaning agent to form a soap solution
- Dip the sponge in this solution and start wiping the wall
- The wall should be wiped length wise, from top to bottom
- Divide the wall into imaginary sections
- After every section is cleaned with the soap solution wash it with water
- Repeat this process until all sections of the wall are cleaned
- Finally when the bottom is reached, wipe breadth wise
- After the wall is completely washed with water, wipe the wall with a clean and dry swabbing cloth. Any droplets of water will leave unsightly watermarks on the wall
- Inspect the work. A clean wall will not have any marks on it
- Remove the dirty water that has collected on the floor, and wash the floor with clean water
- Remove all the water from the floor and mop it dry

**Cleaning the waste bucket**

Residue of water and dust leave stains in buckets, mugs and trash cans. These stains cannot be removed with soap and water. We need to clean the waste buckets at least once a week.

**Equipment and supplies**

- Hydrochloric acid
- Cleaning agent
- Water
- Scrubber
- Stick broom

**Method of cleaning a waste bucket**

- The housekeeper must ensure that the cleaner is wearing gloves when performing this task
- Remove the garbage from the waste bucket. Pour water in the bucket and let it soak for at least 30 minutes
- Remove the water and use the stick broom to remove remnants of food and other waste from the fringes of the bucket
- Using the cleaning agent and the scrubber, scrub the inside and outside of the bucket
- Apply hydrochloric acid on stains and leave it for 30 minutes
- Wipe the hydrochloric acid using a piece of cloth torn from a damaged bed sheet
- Wash the waste bucket with the cleaning agent and let it dry in direct sunlight to remove the bad odour and germs from the bucket
- Inspect the work. A bucket that has been washed well will look clean and stainless

**Bed making****Equipment and materials needed**

- Cloth duster -2nos
- Pillow cover



- Bed sheet
- Additional sheet

### **Making a bed**

A patient requires a comfortable bed to take rest and recover and a well- made bed will not only provide comfort but also add to the pleasant ambience of their room.

### **Changing dirty linen**

#### **Method**

- Take clean bed sheets and clean pillow covers
- Knock on the patient's door and politely ask permission to enter and make the bed
- Make polite enquiries about the patient's health, and say a few comforting words
- Help the patient get out of bed and sit on the chair
- Remove the outer cover of the pillow by gently untying the knots
- If the inner cover is not clean, remove it as well.
- Gently remove the used sheets from the bed by carefully folding it into four, so that the dust does not fly around. Place this along with the pillow covers with the dirty linen outside the room

### **Spreading a clean bed sheet**

#### **Method**

- Fold the mattress into two and wipe the dust under the mattress with a wet cloth
- Wipe the bed thoroughly with a dry cloth. A damp bed will cause the mattress smell
- Clean and dust the legs and the underside of the bed in a similar manner
- Make sure that the bed sheet to be spread has no stains and is not torn
- Fold it uniformly and place it in the centre of the bed
- Lift the mattress breadth wise above the bed, and tuck one end of the bed sheet under the mattress

- In a similar manner tuck the opposite end. Make sure that there are no creases in the bed sheet after it is tucked
- The four corners of the bed sheet which remain unfolded should be mitered. (To miter a corner, tuck in along the foot or the head of the mattress, lift a point along the sheet 30cm from the corner and tuck in the remaining portion. Next drop the flap and tuck in) (Fig. 7.3).
- Tuck in the sides along the length of the bed (Fig. 7.4).
- Pat the bed sheet to remove any creases
- Inspect the work



*Fig. 7.3 - Mitering the bed sheet*



*Fig. 7.4 - Tucking the bed sheet in the corner*

### **Putting on a pillow cover**

#### **Method**

- Change the inner cover only if it is dirty
- Fold the pillow in half, slip it into the cover, then unfold to fill out the pillow cover
- Slip the knotted side of the inner cover into the outer cover first
- The opening of the pillow cover should not be visible

### Arranging the bed

- Place the pillow at the head of the bed
- After the bed sheet has been neatly spread and the pillow cover has been put on, fold the additional sheet neatly and put it at the foot of the bed
- Settle the patient comfortably on the bed again, thank him, and then leave the room

### Cleaning the telephone

Phones are used by a wide variety of people and are a common source of indirect infection. Germs on people's hands transfer onto the receiver's handle and oral microbes spread onto the mouthpiece. Daily thorough disinfection of the phone is necessary (Fig. 7.5)

### Equipment and materials

- Cotton cloth
- Spirit

### Method of cleaning and disinfecting the phone

- Wipe the mouthpiece and the receiver of the phone with a clean cloth
- Wipe all the parts of the phone with cotton soaked in spirit
- Wipe the numbers on the phone with spirit
- Stretch the wire and wipe with spirit
- Re-wipe all these parts with a clean, dry lint-free cloth
- Inspect the work. There should be no marks on the phone



*Fig. 7.5 - Cleaning the telephone*

### Key points to remember

- *The washbasin should be cleaned twice a day*
- *A lot of caution needs to be exercised when using hydrochloric acid, as it burns the skin and causes sores*
- *Always wear gloves when cleaning the toilet*
- *Bathrooms and toilets should always be kept dry*
- *Clean the wall from top to bottom working length wise*
- *Divide the wall into small portions for the purpose of cleaning*
- *When the bottom of the wall is reached, scrub and wipe the wall both length wise and breadth wise*
- *Torn or stained bed sheets and pillow covers should be replaced immediately*
- *The bed sheet should be spread so that there are no creases, and the corners should be tucked in firmly and neatly*
- *The receiver and the mouthpiece of the phone should be cleaned thoroughly*
- *While cleaning the phone ensure that the spirit on the cotton does not get into the holes on the mouthpiece and the receiver*

### Cleaning a room which is vacated by an infected patient, or in which a patient has died

A room that has been occupied by a patient who had an infection cannot be occupied without thoroughly disinfecting it. The same rule applies when a patient has died in the room. If proper disinfecting is not done there is every chance that the next person occupying the room will get the infection. When disinfecting such a room, care should be taken to see that the person disinfecting and cleaning the room follows all the safety measures, and is well protected.

### Equipment and supplies

- A strong disinfectant
- Gloves and face mask
- Cotton swabs
- Plastic sheets
- Gum tape

### Method

#### Fumigation

- Ensure that the person who enters the room is wearing gloves and a face mask
- Leave all items in the room undisturbed,
- Seal all outlets except the main door with gum tape to prevent any noxious gases from escaping the room
- Spread plastic sheets around the room
- Pour concentrated disinfectant on cotton swabs and place on the plastic sheets
- Seal the main door immediately from the outside with gum tape and lock it. Put gum tape on the lock to indicate that the room is sealed
- Keep the room sealed for 24 – 72 hours, depending on the severity of the infection

#### Opening and cleaning the room

- Wear gloves and face mask
- Open the windows and let in as much sunlight to naturally disinfect the room
- Remove the plastic sheets by folding them and placing them in an airtight dust bin
- Clean the room by wiping every item in the room with a disinfectant
- Clean the room again as you would a vacant room

### Cleaning the operation theatre

Operation theatre (OT) deals with open wounds during surgery, and so it is a high risk area for infections in a hospital. It is extremely important that

the OT is kept not only clean but absolutely germ free. Unlike the other areas of the hospital, which are cleaned using a disinfectant, the OT is cleaned using a stronger disinfectant.

Cleaning the OT can be divided into daily cleaning and weekly cleaning.

#### Daily cleaning

- Walls
- Floors
- Doors
- Overhead lamps & Fan
- OT Tables
- Tables
- Microscopes

#### Weekly cleaning

- Furniture and equipment
- Air conditioner filter

The cleaning procedures are the same as that of cleaning the rooms. However the cleaner and housekeeper should take extra care to protect themselves with gloves and face mask when handling strong disinfectants.

*For a demonstration on cleaning a patient's room and operation theatre, please watch the video of the CD.*

### Student exercise

#### Answer the following

1. *How would you unclog a blocked washbasin?*
2. *How would you wash a toilet?*
3. *Describe the procedure for washing walls*
4. *What do we need to do to keep the hospital odour free?*
5. *Why is it important to provide fresh linen to the patients daily?*
6. *Why is it necessary to wipe the portion of the bed under the mattress every time we make the bed?*
7. *Describe the method of spreading the bed-sheet*

## CHAPTER 8 MAINTAINING A FLOOR

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### CONTENTS

Removing stains  
Cleaning different types of stains  
Polishing the floors

### GOAL

To enable the housekeeper to distinguish the different types of stains and keeping the floors stain free

### OBJECTIVES

- To teach the trainees
- Different types of stains
  - Different methods of removing stains
  - Method of polishing the floor
  - Methods of maintaining different kinds of flooring

# CHAPTER 8

## Maintaining a Floor

### Removing stains

#### Stains

##### Floor stain

Floors that are used every day such as in rooms, corridors, stairs, bathrooms and toilets tend to get heavily stained.

##### Simple stains

Examples of simple stains are dust, soil, foot prints, betel juice and salt stains, which, if left unattended, can result in tough stains. Simple spills such as tea, coffee or oil are also easy to remove, but if not cleaned quickly can accumulate dust and leave stubborn stains. Seemingly harmless spills such as water can form moss and leave permanent damage on the floor as well. Avoid unnecessary work by removing stains and spills at the earliest possible stage.

##### Tough stains

Tough stains are often the result of neglected simple stains. However, a few stains are difficult to remove even if attended to quickly and can become impossible to remove if left for too long. Petrol, oil, and diesel leaks from vehicles should be removed immediately by scrubbing. Thick stains, such as tar and chewing gum, should be removed by scrubbing toward the centre of the stain to prevent the stain from spreading.

##### Methods to remove stains

There are two methods to remove floor stains. – By hand, and by machine.

Stains in smaller areas can be removed by hand, while very tough stains, or stains in large areas can be removed using a machine.

#### Equipment and supplies

- Small wooden brush
- Cleaning agent
- Swabbing cloth
- Multi - action mop
- Buckets - 2nos
- Water

#### Method of removing floor stains by hand

- Fill one bucket with a solution using the cleaning agent and the other bucket with clean water. Place both the buckets on mats to prevent soiling of the floor
- Sweep the floor, sprinkle the soap solution and scrub with a small wooden brush
- Brush out all the stains
- Mop up the excess water with the multi-action mop
- Wipe dry with the swabbing cloth
- Rinse the cloth in the bucket of clean water and wipe again
- Repeat this process until the stains are completely removed
- Inspect the work. There should be no marks or patches
- Clean the equipment and put them back in their place

#### Removing the stain with a machine

Stains on the floor can be removed using an electric polishing machine, but this should be reserved for stains that cannot be removed by any of the methods mentioned above, because it can be used only once in six months. The machine has different brushes for removing the stains and for floor polishing. Stains

should be removed before the floor is waxed and polished, so ensure that the right brush is attached before beginning each task.

### **Equipment and supplies**

- A stain removing machine
- A bucket
- Cleaning agent
- Multi-action mop,
- Swabbing cloth.
- Water

### **Method of removing floor stains using a machine**

- Form a solution using the cleaning agent in the bucket. Place the bucket on a mat to prevent staining the floor
- Clean the floor thoroughly
- Divide the floor on which the stains have to be removed into small portions
- Sprinkle a portion with the cleaning solution
- Attach the brush used for removing stains, to the machine
- Use the machine to remove the stain
- Remove excess water using the multi-action mop
- Wipe the area dry with the swabbing cloth
- Repeat this process until all the stains are removed
- Inspect the work. There should be no patches or marks
- Clean the brushes and put the machine back in its place

### **In order to keep the machine in good condition**

#### **Dos**

- Keep the machine erect so that the brushes do not touch the floor when the machine is not in use
- Change the direction of the brushes every 15 minutes when using the machine

- Check if there is enough electric supply to function this machine
- Use the cleaning agent prescribed for the machine

#### **Don't**

- Use cleaning agents that cause excess lather or that have high acid content
- Use cable wire exceeding 20m in length
- Use a brush that is worn out. Change it immediately
- Change the direction of the brushes more than 4-5 times in an hour. The motor may burn out due to excess heat

The following points should be remembered before using the stain-removing machine:

1. Switch on the machine
2. Check if the indicator light is on and whether it goes off automatically after 5 seconds
3. If the indicator light does not come on immediately when the machine is switched on, look into the matter promptly by calling the electrician
4. If the indicator light does not go off after 5 seconds, switch off the motor for one minute and switch it on again. If the light still does not function properly, check the centrifugal switch to see if there is a fault in the switch

### **Method of changing the brushes**

- All three brushes should be changed at the same time. If any one brush is damaged, change all the three brushes
- The machine should always be kept erect so that the brushes that are fitted on the round wooden frame do not touch the floor
- Slowly pull the brushes out one at a time, using both hands
- Fix new brushes to the spokes in the wooden frame
- The brushes can be used until the nylon bristles are 10-12mm in length. If the bristles are smaller, the brush may become worn out on one side

- The direction in which the brushes rotate should be changed every 15 minutes

### **Points to be remembered when changing the direction of rotation of the brushes**

- The switch that is used to turn on the machine is the same switch used to change the direction of rotation of the brushes
- Turn off the switch and wait for the brushes to stop rotating
- Switch on the machine again and the brushes will rotate in the opposite direction

### **Cleaning different types of stains**

The different types of stains are - floor stains, fringe stains, salt stains, stains on the stairway, stains on tiles.

#### **Fringe stains**

When swabbing a room or a corridor, the dirt gets deposited at the fringes and the sides of the walls appear dirty. Fringe stains are formed in places between the walls and the floor by the accumulation of dirt. The work of removing fringe stains should be done weekly.

#### **Equipment and supplies**

- Cleaning agent
- Scrubber
- Swabbing cloth
- Water
- Buckets- 2nos.

#### **Method of cleaning fringe stains**

- Form a solution with the cleaning agent in the bucket. Place the bucket on a mat to avoid soiling the floor
- Using a spray bottle, spray the solution in the edges that are to be cleaned
- Thoroughly scrub the narrow line between the wall and the floor with the scrubber
- The dirty water that results from this scrubbing should be wiped carefully with a swabbing cloth

- Rinse the cloth in the bucket of clean water and wipe again
- Repeat this process until the edges are sparkling clean
- Inspect the work. The edges should be spotlessly clean

#### **Stains on the stairway**

The stairway is used frequently by patients, visitors and staff. It therefore gets stained with the dust and soil brought in from outside. There are also stains made by tea and coffee spills. All these stains need to be attended to immediately, and regularly. Stains from the stairways need to be removed weekly.

#### **Equipment and supplies**

- Scrubber
- Cleaning agent
- Swabbing cloth
- Buckets - 2nos
- Water

#### **Method of cleaning stains on the stairway**

- Form a solution with the cleaning agent in the bucket. Place the bucket on a mat to avoid soiling the floor
- Put up a sign both at the top and at the bottom of the stairs saying  
“Caution: the stairs are being washed. Inconvenience is regretted”
- The stairs are used frequently, so it would be best to first work on the left of the steps and then on the right, so that people may continue to use the stairs even when the work is in progress
- Sweep the stairs clean, and start the stain removing from the top of the stairs
- Wipe the scrubbed portion with a swabbing cloth rinsed in clean water
- Repeat this process until all the stains are removed.
- Inspect the work. The stairs should appear bright and clean

### Salt stains

Salt stains are white salt deposits from hard water that are difficult to remove. They are common in places like the bathroom or on items like buckets and cups, which hold water for long periods. Scrubbing with an ordinary cleaning agent can remove the stains to some extent. However, stain removing stones or polish stones is used to remove these stains completely.

Special measures should be taken when dealing with marble, since marble is a relatively soft material. Cleaning with a smooth stone or a non-acidic liquid will avoid marble damage.

In toilet bowls, use “Harpic” (or any stain removing liquid) to remove salt stains. Before using this liquid, the bowl should be cleaned thoroughly as already discussed in chapter 7. Then scrub the bowl with “Harpic”, and leave it for 30 minutes. Flush the toilet and the stains will disappear.

### Stains on tiles

Salt water, soap water or dirty water form stains on tiles. In order to prevent stains, the tiles should be regularly washed with soap.

### Equipment and supplies

- Cleaning agent
- A sponge
- A bucket
- Water
- Swabbing cloth - 2 nos.

### Method of removing stains from tiles

- Make a solution with the cleaning agent in the bucket
- Dip the sponge in the solution and squeeze out the excess liquid
- Wipe the tile with the sponge, starting from the top and working towards the bottom. A sponge is used to wipe the tile, to prevent scratches
- Wash the tiles with clean water
- Wipe the tiles with a clean wet cloth

- Wipe again with a clean dry cloth
- Inspect the work. Tiles that are washed well will be shining clean

### Polishing the floor

There are two types of floors - rough and smooth. Rough materials such as cement do not need polishing. Smooth materials such as cuddapah, mosaic, marble and tiles need to be polished at least once a year. Although floors are cleaned and swabbed several times a day, waxing and polishing provides a protective covering and added shine that cannot be achieved through regular cleaning. In fact, polishing reduces the necessity for frequent cleaning because the wax protects the surface from dirt penetration. The material of the floor being polished should be considered carefully before choosing a polishing method because the selection of a faulty method will result in permanent damage.

### Equipment and supplies

- White mansion polish
- Wax
- Petrol
- Cotton cloth – 2nos.
- Small bucket
- Small mug
- Polishing machine

### Method of waxing a floor

- Put up a notice, requesting people not to use the area and apologize for the inconvenience
- Divide the area to be polished into smaller portions
- Sweep and clean one such portion thoroughly
- Remove the stains
- Check the condition of the polishing machine. If the brushes are not in a usable condition, replace them with new ones (Fig 8.1)
- To make a wax mixture, mix the required quantity of white wax and petrol in a bucket to form a smooth paste. The petrol allows for an



easy application of wax on the floor, and gives the floor a good shine

- Pour a little wax mixture into the small cup. Apply the wax in small circular motions with a cloth
- Leave this polish for 30 minutes
- Operate the machine on this area



*Fig. 8.1 - Using a polishing machine*

- The direction of the brushes should be changed every 5 minutes
- Every 30 minutes, turn off the machine for 15 minutes and allow the motor to cool down
- Inspect the area that has been polished. A properly waxed floor should not have heavy buff marks
- Do not allow anyone to walk over this area for at least 6 hrs
- Repeat this process until the entire area has been waxed
- Clean and wipe the machine after use
- Store the machine in a vertical position so that the brushes are not touching the floor
- If waxing is done properly the floor will always appear like new

### **Machine maintenance**

- After the work is completed, the machine should be in an upright position so that the brushes are

not touching the floor. If this is not done, the bristles will bend and fall off (Fig. 8.2).

- Clean the bristles thoroughly with a cloth dipped in kerosene. If this is not done, leftover wax and polish will clump the bristles together and the brush will have to be changed, and it will become difficult to use a brush whose bristles are stuck together



*Fig. 8.2 - Polishing machine in the upright position*

- The wax and polish on the bristles can be cleaned using kerosene. Wipe the bristles with a cloth dipped in kerosene
- Store the equipment and materials in a safe place

### **Key points to remember**

- *Confirm the availability of a plug point to run the machine before using it*
- *Wax should be applied in circular motion*
- *Let the wax soak in for 30 minutes*
- *Do not allow anyone to walk over the polished area for at least 6 hours*
- *On completion of the work, keep the machine in an upright position so that the brushes are not touching the floor*

### **Methods of maintaining different types of flooring**

Floors made of non-porous material are termed as “sealed floor”, and those made of porous material are “unsealed floors”

Kind of floor	Harmful substances	Sweeping	Cleaning
<p><b>Cement:</b> Used where need for appearance and infection control are secondary. Highly porous</p>	<p><b>Flammable solvents:</b> Drive soil further into cement</p> <p><b>Soaps:</b> react with lime in cement and form a scum which speeds soiling</p> <p><b>Alkaline salts:</b> damage cement</p>	<p><b>For unsealed floor:</b> Use fibre brush For sealed floor use treated or damp mop</p>	<p><b>For unsealed floor:</b> Use neutral synthetic detergent in warm water</p> <p><b>For sealed floor:</b> use neutral synthetic detergent in hot water</p> <p><b>Wet mopping:</b> To remove stains use poultice treatment of powder cleanser and water.(ie. Prepare a poultice of a mixture of the powder cleanser and water to treat the floor. For oil stains, use whiting and trisodium phosphate (only as a last resort). Rinse after use.</p>
<p><b>Marble:</b> Can be maintained with very little effort</p>	<p><b>Acids:</b> React with marble and dissolve it</p> <p><b>Soaps:</b> Leave a gummy deposit</p> <p><b>Ammonia water:</b> Causes yellowing</p> <p><b>Compounds containing oil, sand or abrasives</b></p> <p><b>Metal:</b> Scratch the surface</p>	<p>Treated mop - use wax base only</p> <p>Damp mop</p>	<p>Flush with water before cleaning</p> <p>Use neutral detergent solution</p> <p>Vacuum or mop up the solution</p> <p>Rinse thoroughly with clean water and wipe dry.</p>

Kind of floor	Harmful substances	Sweeping	Cleaning
<p><b>Terrazzo:</b> Composed of 70% marble, 30% cement. It is smooth beautiful and easy to maintain.</p>	<p><b>Acids</b>  <b>Alkaline Salts</b>  <b>Soaps</b>  <b>Oils</b>  <b>Steel wool</b> - leaves rust stains  <b>Paints</b> - epoxies, lacquers etc.</p>	<p>Treated mop - use wax base only  Damp mop</p>	<p>To remove cleanser build-up use mildly abrasive cleaners periodically. For stubborn stains use the poultice method  Scrubbing machines should be used very carefully to avoid scratches.  Use only neutral detergent solutions only  Mild abrasives: use with care; marble component is easily scratched  To remove stains use poultice treatment of powder cleanser and water. For oil stains, use whitening and trisodium phosphate, only as a last resort. Rinse after use.</p>
<p><b>Ceramic Tile:</b> A very durable surface. The cement between the tiles and under the tiles is most susceptible to wear and tear.</p>	<p><b>Alkaline salts</b>  <b>Soaps</b>  <b>Oils</b>  <b>Steel wool:</b> leaves rust stains  <b>Paints:</b> epoxy, lacquers, etc.</p>	<p>Treated mop: use wax base only  Damp mop</p>	<p>Use only neutral synthetic detergents  Pre-wet tile before cleaning  Wet mop as required  Machine scrub with abrading nylon pads weekly, if necessary  <b>Fine abrasive cleaners:</b> use occasionally to remove firm or stubborn soil. Grit from between tiles is hard to remove.</p>

Kind of floor	Harmful substances	Sweeping	Cleaning
<p><b>Slate and quarry tile:</b> Resists staining by grease, soap, food, water Best to use for kitchen areas</p>	<p>Tile is impervious Avoid agents that might damage the cement grout</p>	<p>Treated dust mop</p>	<p>Use synthetic detergent for heavy soils Remove light soil with mop moistened with water.</p>
<p><b>Magnesite:</b> Extremely durable surface. Especially serviceable in kitchens and similar areas-excellent resistance to grease and oils.</p>	<p>Excessive amounts of water and salts cause the floor to become porous.  Strong alkaline salts Acids</p>	<p>Treated mop: use wax base only Damp mop</p>	<p>Damp mop when this method is sufficient. Use neutral synthetic detergents. Rinse and dry after cleaning. Pre-wet floor to keep solution out of pores. Use a liquid cleaner for stubborn soil or grease only on sealed floor.</p>
<p><b>Linoleum:</b> A thermostat material more resistant to temperature changes and indentation than other floorings. Somewhat porous.</p>	<p>Heavy furniture <b>Moisture</b>-avoid frequent cleaning. Allow the floor to dry completely before opening to traffic <b>Alkaline solutions</b> - they attack the binder <b>Scouring powders</b> - damage the surface when the floor is wet</p>	<p>Treated mop - use wax base only Damp mop</p>	<p>Use clear water in as small an amount as possible. Use neutral synthetic detergents. Use dry cleaning methods with steel wool pads in non-patient areas.</p>
<p><b>Vinyl:</b> Good wear resistance, smooth,glossy surface, free of damage by oil and grease Excellent resistance to acids, alkalies and moisture.</p>	<p><b>Solvent floor polishes</b> <b>Abrasives, grit, sand</b> - keep the floor well swept</p>	<p>Treated mop - use wax base only Damp mop</p>	<p>Use clear water. Use neutral detergent Buff with fine steel wool to restore gloss or to remove stains and heel marks Use alkaline cleaners only if needed</p>

Kind of floor	Harmful substances	Sweeping	Cleaning
<b>Hardwood:</b> Not suitable for patient areas, unless plastic coated. If so, it should be treated as vinyl.	Water – use only treated or damp mops, vacuum cleaners or solvent cleaners	Treated dust mops	Use dry cleaning methods such as sweeping Spot clean with damp mop- use synthetic detergent solution Rebuff cleaned areas and if necessary, refinish lightly

*For a demonstration on stain removing and polishing floors, please watch the video of CD*

### **Student exercise**

#### **Answer the following**

1. *What are the different types of stains? How will you deal with each of these types?*
2. *Why is a floor polished? Describe the procedure of polishing the floor*

## CHAPTER 9 CLEANING SPECIAL AREAS

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### CONTENTS

Cleaning classrooms and conference hall, stores, library using vacuum cleaner  
Cleaning the elevator  
Cleaning glass

### GOAL

To impart knowledge about maintaining other utilities in the hospital

### OBJECTIVES

- To train the trainees to clean
- Classrooms and conference halls
  - Stores and library
  - The elevator
  - Glass items
  - Brass and other items

## CHAPTER 9

# Cleaning Special Areas

### **Cleaning classrooms, conference halls, stores and library using a vacuum cleaner**

Classrooms are heavily used; lectures for trainees are held everyday, officers and managers conduct meetings or discussions with their staff, and multiple workshops and training courses are held during various training programmes. Sometimes, classrooms are used even for non-hospital related discussions and training. The much used classrooms and conference halls need to be neat and well arranged so that sessions can run comfortably and smoothly.

#### **Equipment and supplies**

- Cloth
- Cleaning liquid
- Soft broom
- Mop
- Waste basket
- Maintenance handbook

#### **Method of cleaning a classroom or conference hall**

- As with ordinary rooms, dust, sweep and mop the room
- Tables, chairs and other items in the room should be dusted and cleaned every day. The table and chairs should be arranged neatly in rows unless instructed otherwise

#### **Pay attention to the following details**

- All parts of the room should be dusted
- Tables and chairs should be wiped thoroughly
- Window grills and frames should be wiped first
- The white board, used for writing should be wiped clean, and it should be ensured that the wet duster used for wiping does not leave any

stains on it. Wipe the metal strip used for placing the marker pens thoroughly

- Clean the overhead projector carefully by wiping it with a dry cloth
- Clean the LCD screen and ensure that there are no marks on it by wiping it with a clean dry cloth
- Now sweep and mop the room thoroughly
- The lights and fans should be kept clean. Ensure that they are in good working condition
- Check if the doors close properly and smoothly. Make sure that the hinges do not squeak. If there is a problem, call the carpenter and have it rectified immediately
- Make sure the door-stoppers are in good condition, otherwise have them replaced
- Make sure the air conditioner is functioning. If not, inform the electrician
- Ensure that the doors and windows are closed tight when the AC is in operation
- An attractive flower arrangement should be kept in an appropriate place
- Ensure that drinking water and glasses are made available in the classroom / conference hall
- The waste-baskets should be emptied everyday and placed in the class / conference hall
- When the class / meeting is over, ensure that the lights, fans and other electrical equipment are switched off

#### **Using a vacuum cleaner**

The vacuum cleaner is an expensive electrical machine that must be handled with care. However, if used properly, the vacuum cleaner is an efficient cleaning tool that is well worth the investment. Housekeepers can clean rooms such as the library, the medical records department, rooms with carpets, and store rooms.

These rooms need to be cleaned by vacuum cleaner as it is time consuming to manually clean the rooms. Manually cleaning requires all the books, records, and items stored on the shelves to be removed, cleaned and put back. Though manual cleaning can make a room clean, a vacuum cleaner can remove particles that are not visible to the naked eye, such as dust and cobwebs. They are especially useful in cleaning appliances such as AC units, AC grills, computers, and keyboards. Accessories suited to these different tasks are provided with the vacuum cleaner (Fig. 9.1).



*Fig. 9.1 - Vacuum cleaner and its parts*

### **Equipment and materials**

- Vacuum cleaner
- Paper bag to collect the waste

### **Assembling the different parts before using the vacuum cleaner**

Insert the tube into the equipment and tighten like a screw (Fig. 9.2 & Fig. 9.3).



*Fig. 9.2 - Inserting the tube into the equipment*



*Fig. 9.3 - Attaching an additional pipe to increase the length*



*Fig. 9.4 - Keeping the disposable bag inside the canvas bag*



*Fig. 9.5 - Closing the machine after placing the bag inside*



### Method of cleaning with a vacuum cleaner

- A vacuum cleaner can be used in two ways - as a vacuum device and as a blower. When used as a vacuum device, dust and waste is sucked into the waste paper bag. When used as a blower, the pipe blows pressured air into forcefully to reach places to blow dust or waste out. Unlike the blower, the vacuum can remove dust, cobwebs, and litter rather than spreading them around. Therefore, the vacuum is often preferred over the blower. However, there are a few situations when a blower is more useful such as the grooves in a sliding window or door, and shelves stacked with books and files (Fig. 9.6).



Fig. 9.6 - Cleaning the grill with vacuum cleaner

- The pipe can be elongated or shortened as required
- The strength of suction or blowing can be adjusted according to need. There are three settings: high, low, and medium
- The vacuum cleaner should be switched off for five minutes every half an hour to prevent the motor from overheating
- The vacuum cleaner comes with accessories that can be used for different jobs like dusting,

sweeping, cleaning the carpet, cleaning the sofa and mattress, spraying, spray painting, and cleaning the ACs

- Accessories should be chosen carefully and appropriately. These should be attached properly because loose attachments can break during cleaning

### Method of attaching the waste collection bag

When the waste bag is full, it should be discarded and replaced by a fresh bag. Open the vacuum cleaner lid and a waste collection pocket should be visible. The waste collection bag is fitted here. Follow the directions below to exchange the bag. (Fig 9.4 & Fig 9.5).

### The method of attaching the bag is given below

- Stop the device and open the lid by pressing the button
- Remove the plastic ring
- Insert a new paper bag inside the canvas bag
- Grasp the top of the paper bag and fold the upper portion of the paper bag and keep it inside the machine
- Close the lid

### Maintenance of the vacuum cleaner

- After use, the different parts should be removed, wiped thoroughly and stored safely
- The machine should always be kept in a vertical position and the pipe should be hung in the shape of the number 8
- Place a cover over the machine to prevent the accumulation of dust

### Key points to remember

- *The appropriate accessory should be used to do an appropriate job*
- *Stop the machine for 5 minutes every half an hour*
- *Fix the pipe tightly onto the machine. The air pressure can blow the pipe off*

- *Discard the waste paper bag when it is full and replace it with a new one*

## Cleaning the elevator

In a hospital, several people use the elevator (lift) everyday. It is used to carry patients and their attendants to different floors of the hospital building. The lift is also used to carry operated patients, elderly people who have difficulty in walking, wheelchairs, heavy or bulky loads, and garbage disposal carts. The heavily used multi-purpose elevator quickly becomes dusty and dirty; hence it needs to be thoroughly cleaned every day (Fig. 9.7).



*Fig. 9.7 - Cleaning the elevator*

### Equipment and supplies

- Soft broom
- Dust pan
- Coir brush
- Vim
- A blunt knife
- Swabbing cloth
- Cleaning liquid
- Scrubber

### Method of cleaning an elevator

- Place a notice outside the elevator on each floor stating “The elevator is under cleaning. You are requested to use the stairway. Inconvenience is regretted.”
- The elevator should be switched off during cleaning
- Have all the necessary materials and equipment at hand
- Dust the ceiling and the walls and remove all cobwebs from the corners
- Sweep the floor and remove the dust
- Rinse a swabbing cloth in cleaning liquid and wipe the lift
- If any pictures adorn the walls of the elevator, remove them, wipe them clean and put back neatly
- Wipe away any oil or grease on the door
- Remove the dust and loose soil from the door groove with a brush
- Any stains on the floor of the lift should be removed using the cleaning solution and a scrubber. If any glue-like substance is stuck to the floor, remove it with the blunt knife carefully to avoid damaging the floor
- The fan and light should be wiped thoroughly
- The switchboard should be wiped with spirit
- Check if the light and fan are working. If not, inform the electrician
- Inspect the work. Ensure that there are no stains or marks on the walls and floor of the lift
- When cleaning is completed, switch the elevator back on
- Remove the notice placed on each floor
- All the articles used for the cleaning should be returned to the store-room

### Key points to remember

- *Place a notice outside the elevator before starting to clean*
- *Switch off the elevator before cleaning*

## Cleaning glass

Glass is present all over the hospital. Windows, doors, photo frames, mirrors, aquarium tanks, cupboards, tabletops and notice boards all have glass material that look beautiful only if they are kept spotlessly clean. Thus glass needs to be cleaned every day.

### Equipment and materials

- Glass-cleaning liquid
- Lint-free cloth
- Sponge (Fig. 9.8)



Fig. 9.8 - Materials needed for cleaning glass

### Method of cleaning glass

- Wipe the glass with a wet sponge to remove the dust
- Spray the glass-cleaning liquid on the glass
- Wipe the glass horizontally from left to right, using a lint-free cloth
- Wipe again, vertically, from the top to the bottom
- Clean the other side of the glass in the same way.
- Marks will appear if the glass is not wiped uniformly in one direction, and the glass will appear dirty
- Inspect the work. Stand at a distance and see if both sides look clear and clean
- Wipe away any remaining marks on the glass (Fig. 9.9)



Fig. 9.9 - Cleaning the glass

### Key points to remember

- *The glass-cleaning liquid should be used in the required quantity. If it is used in excess, it will stain the glass*
- *Tinted glass should be wiped with a sponge to remove the dirt*
- *The dust in corners of the window frames including glass frames on doors should be wiped with a wet cloth and the dust should be removed*
- *Both sides of the glass should be wiped in a uniform manner*

## Cleaning and polishing brass

### Equipment and supplies

- Cloth
- Brasso- brass polish
- Cup
- Toothbrush
- Cleaning liquid
- Scrubber
- Polythene paper

Brass articles are used to decorate the rooms. These articles become dull and tarnished due to chemical changes over time. They need to be polished once a

week. Each brass article should be cleaned with the utmost care using brasso, a brass cleaning liquid. When cleaned, the article should shine like new. (Fig. 9.10)



Fig. 9.10 - Brass cleaning

### Brass articles in the hospital

- The kuthuvizhakku (brass lamp) and its stand are used as decorative pieces in the reception area and as puja lamps in the meditation room in some hospitals
- Large and small brass articles are used as decorative pieces in the reception area of hospitals
- Flowerpots are placed inside large brass vessels
- Brass flower vases, plates, “kumkum” container, and small idols also adorn the meditation room
- Brass flower vases are in rooms such as the dining hall
- Some nameplates are also made of brass

### Method of polishing brass articles

#### 1. The kuthuvizhakku

- Remove the oil in the kuthuvizhakku
- Dismantle the lamp and place the different parts of the lamp in a line
- Scrub all parts of the lamp using the cleaning liquid
- Use the toothbrush to scrub corners and any engraved figures on the lamp
- Fold the cloth into 4 or 8 folds, depending on the size of the cloth. Wipe all parts of the lamp to remove the dirt

- Wipe the lamp dry using a clean cloth
- Pour the required quantity of Brasso into a cup
- Dipping a clean cloth into the Brasso liquid, wipe the lamp starting at the bottom and working your way to the top
- Let the liquid soak into the lamp for 5-10 minutes
- Wipe the lamp by rubbing it vigorously. Repeat the wiping process three times, each time using a clean cloth
- Assemble the polished and shining lamp
- Holding the lamp at the top, very carefully remove any finger marks on the polished surface with a dry cloth
- Inspect the work. Ensure that there are no marks left on it
- Holding it with a clean duster or paper so as to avoid finger marks, lift and put it back in its place

#### 2. Immovable and heavy brass articles

Brass items that are heavy and cannot be moved should be polished in its place. Follow the same procedure as above, but polish the article from the top to the bottom. Move the cloth in one direction; otherwise, it will leave marks.

#### 3. Brass plates/Name plates/idols

The brasso and dirt runs into the crevices and grooves of brass articles with designs on them. Follow the same polish procedure as above and take care to remove the dirt and excess brasso with a toothbrush.

#### 4. Brass flower vase

After the brasso is applied to a vase, wipe vertically from top to bottom. When wiping it the second time, wipe horizontally, starting at the bottom. The third wipe is for removing any remaining fingerprints.

#### 5. Brass vessel

A few more steps are required to clean a brass vessel

- Wash the inside and outside of the vessel with the cleaning liquid

- Wipe the vessel dry (particularly on the outside) with a clean cloth
- Apply brasso on the outside and let it soak in for 5-10minutes
- Polish it uniformly, using the same procedure given above
- Remove any finger marks in the final polish
- If a potted plant has to be placed inside the vessel, spread a polythene paper inside. Then place some bricks on the polythene paper, and place the pot carefully on the bricks
- If water is used in a vessel, scrub the inside everyday with the cleaning liquid and a nylon brush. Wipe the outside with a dry cloth to prevent moss formation
- Avoid spilling water on the polished surface

### **Key points to remember**

- *Must to have at least 3 dusters for polishing. If a cloth duster is used for one coat of polish do not use it again*
- *Brasso is expensive. Do not waste it. Take only the required amount in the cup*

- *If a brass article has not been cleaned for a long time, scrub it with a lemon, wash it with the cleaning liquid and polish it with Brasso*
- *If marks are still present after polishing and wiping, the article should be wiped again*
- *Brasso will not polish alloys such as copper and bronze*

*For a demonstration on the using of vacuum cleaner, cleaning the elevator, glass and brass items, please watch the video of the CD.*

### **Student exercise**

#### **Answer the following**

1. *What are the advantages of using a vacuum cleaner for cleaning?*
2. *What are the points to bear in mind when cleaning the elevator?*
3. *When cleaning glass, why is it important to move the cloth only in one direction?*
4. *Describe the procedure of polishing brass.*
5. *Explain the important points to keep in mind when preparing a conference hall for a meeting.*

## CHAPTER 10 CLEANING THE HOSPITAL KITCHEN AND DINING AREA

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### GOAL

To ensure clean and hygienic cooking and dining areas

### OBJECTIVES

To teach the trainees

- How to clean up a kitchen after the work is done
- Setting up the dining hall for a meal
- Cleaning up the dining area after a meal

## CHAPTER 10

# Cleaning the Hospital Kitchen and Dining Area

Food should not only be good, but it should also be clean, safe, and healthy. Therefore, one must pay extra attention to maintaining cleanliness and hygiene in the kitchen (Fig. 10.1). This task should not be taken lightly because cooking large volumes for a hospital can easily make the kitchen one of the messiest rooms, if not well maintained. Daily cleaning of the kitchen, stove, utensils, washbasin and dirty water outlet is necessary. Keeping a clean kitchen is an art.

Since the food is consumed in the dining hall, the dining hall should also be scrupulously cleaned.

### Equipment and materials

- Cleaning agent
- Trays
- Plates
- Glasses
- Sponge

### Cleaning a stove

- Disconnect the stove from the gas cylinder
- If the stove is movable, set it aside, apply the cleaning agent under and around the stove and scrub it well

- Clean all the other parts of the stove except for the burners, and remove any oil or food stains
- Wipe the top of the stove with a sponge dipped in the cleaning agent
- Wipe it with a clean cloth
- Wipe the stove dry using a clean dry cloth

### Arranging the dining hall

- Clean the dining hall thoroughly. Remove any dust or cobwebs from the walls. Sweep and mop the floor well, and remove any stains that may be there on the floor
- The dining room should be spacious and well ventilated. Arrange the hall neatly to create a spacious atmosphere
- The windows should be opened and the curtains should be clean and neatly draped
- The dining table should be neat and clean. Place a simple flower arrangement on the table, but make sure it does not inconvenience those who sit at the table
- A neatly written and artistically designed menu card can be printed and placed at the table



*Fig. 10.1 - Hospital kitchen*

- The walls can be adorned with beautiful pictures. (Fig. 10.2)
- A jug of clean drinking water and well washed glasses should be placed at every table (Fig. 10.3)
- The wash basin in the dining hall should always be kept clean and stain free

### Arranging food at the table

- Serving bowls and dishes should be adequate for the food being served
- Only  $\frac{3}{4}$  of the bowl should be filled with food
- Cover every dish with a lid
- Serving spoons should also be chosen depending on the food to be served
- Place the serving spoons on the right side of the bowl so that it is convenient to handle
- Napkins, plates, table spoons, forks and glasses should be placed at the corner of the table

### Serving at the table

- Those serving at the table must wash their hands before serving. Their nails should be clean, and they should be dressed in neat and clean clothes
- If two persons are serving at the same table, clearly assign their duties to avoid any confusion
- Preplan the order in which the dishes are served to avoid confusion

### Cleaning up after a meal

- Remove the food from the table
- Take the serving bowls, plates, glasses, spoons, forks, and trays to the sink
- If the table cloth is stained, remove the stain before sending it to the laundry
- If the table is stained, remove the stain with cleaning liquid
- The food on the floor should be swept up and the floor should be wiped clean. Stains should be removed immediately
- The windows should be left open to allow sunlight into the room. Open windows and let in fresh air, and let out any odour from the room
- Switch off the lights and fans
- Leftovers from the serving bowls and dishes can be served to the cleaners and other kitchen staff.
- Leftovers on the plates should be thrown into the dustbin immediately
- Wash all the dirty vessels and dry them out
- Wash and clean the sink with the cleaning agent. Remove any drainage clogs. Dry the sink thoroughly to prevent any water marks.
- Empty the dustbin, wash it and put it in the sunlight to dry



Fig. 10.2 - Table arrangement for special occasions



Fig. 10.3 - Arrangement in the patient dining hall



## CHAPTER 11 SAFETY AND SECURITY

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### GOAL

To ensure a safe and accident free atmosphere to the patients and staff of the hospital

### OBJECTIVES

- To teach the trainees
- The various hazards in the hospital
  - Prevention of accidents
  - Methods of ensuring safety from thefts

# CHAPTER 11

## Safety and Security

### Housekeeping and security

The housekeeping department is responsible for maintaining a peaceful atmosphere in the hospital. If the patients and staff always fear for their safety and the safety of their belongings, the atmosphere will be very tense. Hence every housekeeper should be aware of ways to protect herself and others, especially the patients around her and the property of the hospital from accidents and theft.

Several accidents could occur at the place of work. These include fire accidents, falls, sprains, muscle cramps, wounds, injuries, negligence in handling electrical equipment, inhaling certain chemicals, handling chemicals and articles falling off the top shelf. Even simple injuries should not be neglected. Immediate treatment should be given / taken.

### How to avoid accidents

- To avoid a fall, take care while walking on a wet floor, oily surfaces or mossy areas
- When one part of the stairway is being cleaned, the other half should be used
- Do not place furniture or buckets, mops, and brooms in the way
- If there is any breakage, the debris should be removed immediately. Any electric wires or nails in the way should be removed
- Broken glass pieces should be removed using thickly folded wet paper
- While handling electric devices, ensure that your dress and hands are dry
- Some chemicals cause injuries to bare hands. Hence always wear gloves when handling them
- When arranging things on the shelves, heavier objects should be placed at a lower level, and the lighter articles on the top

- While climbing the stairs, climb one step at a time, and keep to your left. Do not leap and jump on the stairs
- Leave place for people on the opposite side to come through at the same time when passing through spring doors
- Be brisk, not hasty

### Protecting patients and materials of the hospital

- Do not discuss hospital matters in public places
- Spreading rumours and careless talk in public places is dangerous
- Outsiders should not handle hospital documents and case sheets
- The belongings of the hospital should not be taken out or mishandled
- If a suspicious person is spotted in the premises of the hospital, the matter should be reported to the security personnel at once
- Patients should not be allowed to accept tea, coffee or any eatables from strangers
- If the patients leave their room even for a short time, they should be asked to lock their room
- Smoking and use of intoxicants are prohibited in the hospital premises

A major accident hazard in the hospital is fire. Fire accidents cause loss of life and property on a large scale. They occur because of negligence on the part of a few people. The staff should have knowledge about the different types of fire accidents and first aid.

### What causes a fire accident?

- Negligence in throwing burning cigarette butts or match sticks into a dustbin containing paper waste, or throwing them carelessly where they

may be fanned by air to spread into a full-fledged fire

- Chemicals placed close to each other may react to cause a fire
- A short circuit in an electric connection may erupt into a fire
- Carelessness in the kitchen, such as overheating oil may cause a fire, or a gas leak in the kitchen may be the cause of a fire

### Methods of extinguishing a fire

- **Starvation:** isolating the burning object and thus starving the fire
- **Blanketing:** preventing oxygen supply to the fire
- **Cooling:** cooling the heat of the fire by splashing water forcefully on it.

### Important points to be kept in mind

- Fire will spread from one place to another in no time
- Fire tends to spread in the direction of the wind. It will spread through wooden articles and electric wires to other parts of the room
- Leaving cotton cloth near a pooja lamp should be avoided
- It is dangerous to leave petrol or kerosene near a lighted gas stove
- Chemicals should be kept away from one another. For example, turpentine and chlorine gas
- Machines should not be operated continuously without a break

### Types of fire accidents and methods of extinguishing the fire

- Fire caused on trees, clothes and thatch can be extinguished by pouring water or throwing sand over it. This is called the cooling method
- Liquid fire: Fire caused on account of petrol, diesel, kerosene, rubber, can be extinguished by using a fire extinguisher. Splashing foam is like covering with a blanket and is called the blanket method. Water should not be used here

- **Cooking:** Fire caused by gas, acetylene, hydrogen methane, the valve of the source of supply should be switched off. Open up all the doors and windows. Dry sand should be used to extinguish this fire
- **Chemical fire:** Phosphorous, and sulphur require a heat at a high temperature for burning. But metals like sodium, magnesium, and uranium are easily combustible. Sand and dry powder (Sodium bicarbonate (baking soda)) can be used to extinguish the fire
- **Electrical fire:** When fire is caused due to defects in electrical equipment or electrical fittings, first cut off the electric supply. Non-conductors should be used. Dry powder and sand should be used to extinguish this fire. Water should never be used here

Apart from the above methods, any kind of fire can be extinguished by the starvation method. If an oil container burns, the oil drums nearby should be removed immediately. If a vessel on the stove catches fire due to overheating, do not pour water. Instead cover the vessel with a lid to put out the fire.

### Steps to be taken by a housekeeper on seeing fire

- Caution others by shouting “fire! fire!” Easily combustible material should be removed immediately. The remaining areas should be cooled with water
- The administrator and fire service should be informed immediately
- The work should be divided among the staff
- It is important to be alert but calm

### General safety rules for the housekeeping

1. Report every injury to the supervisor
2. Understand the job thoroughly so that it can be carried out safely. When there is a doubt ask the supervisor
3. Help and guide new employees to do their jobs safely and correctly

4. Report any defective or broken equipment or machine to the supervisors at once
5. Always use a ladder for high reaching jobs. Never use a chair or a table
6. Wear safe, comfortable and sensible clothing at work
7. Arrange the stores in a safe manner so that no one is injured when taking things from the shelves. Do not overload shelves
8. Lift heavy loads carefully. Never try and lift heavy loads alone
9. Turn on the light before entering a dark room
10. Do not touch switches with wet hands
11. Never pick up broken glass, blades and other sharp objects with bare hands. Always use a broom and dust pan
12. Never put your hand in the bin when emptying it
13. Always wear a mask and use gloves when cleaning bathrooms or when dealing with waste
14. Store brooms, mops, baskets, cleaning equipment in a safe place. Do not leave them in places where people trip over them and fall
15. Ensure that all areas are kept dry. People may slip if there is water on the floor and injure themselves
16. Never run on the stairs - always walk
17. Fire escapes must be kept free and open at all times
18. Always observe the 'No Smoking signs'
19. Store oily rags in tightly covered metal tins to prevent them from catching fire
20. Inflammable liquids should be stored in small quantities in metal containers away from heat and flames

### **Student exercise**

#### **Answer the following**

1. *What are the various accidents that can occur within the hospital?*
2. *How can you prevent these accidents?*
3. *What are the causes of fire?*
4. *What are the different methods of putting out the fire?*
5. *List any 5 important safety points.*

**Key points to remember**

- *It is very important to maintain cleanliness in the kitchen, dining hall and the surrounding areas to keep them free of rats and cockroaches*

*For a demonstration on cleaning the kitchen and dining hall, please watch the video of the CD*

**Student Exercise****Answer the following**

1. *Why is it important to maintain cleanliness in the kitchen and dining area?*
2. *What are the points to keep in mind when arranging the table?*
3. *How do you clean up after a meal?*

## CHAPTER 12 MAINTENANCE OF DRINKING WATER SUPPLY SYSTEM

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### CONTENTS

Cleaning the drinking water tank  
Cleaning the water filter and cooler  
Chlorination

### GOAL

To ensure a safe and accident free atmosphere to the patients and staff of the hospital

### OBJECTIVES

To train the housekeepers in the method of

- Cleaning the water tank
- Cleaning water filters and water coolers
- Chlorination

## CHAPTER 12

# Maintenance of Drinking Water Supply System

### Maintenance of drinking water

#### Equipment and supplies

- Wooden brush
- Bleaching powder
- Cleaning liquid
- Scrubber

#### Clean and safe drinking water

Water is a basic necessity for man. It is therefore important to provide safe and hygienic drinking water, as 80% of all diseases are spread through water. Normally, only boiled and filtered water is given to the patients. It is equally important to supply safe and clean drinking water to the visitors and staff of the hospital.

#### Cleaning the drinking water tank

It is very important to protect and cover the water tank properly to prevent dust, other impurities and living creatures from falling into it. Closing the water tank properly prevents breeding of mosquitoes, and formation of algae.

It is important to note that the articles and materials used for cleaning a water tank should be kept exclusively for this purpose and should not be used for any other purpose.

#### Method

- Empty the tank
- Sprinkle bleaching powder in the tank and scrub thoroughly with the wooden brush
- Leave the bleaching powder on the surface of the walls and bottom of the tank for 30 minutes
- Wash the tank thoroughly with clean water

- Leave the tank open to dry in the sun
- Close it tight after it is dry and fill it with water
- Clean the water tank in this manner at least once a month
- This method of thorough cleaning will prevent moss formation
- If the tank is kept free of dust and other particles, the pipes can be prevented from getting clogged

#### Cleaning of the water filter attached to a water cooler

A water filter is used to filter invisible germs and dust particles. A water cooler is used to provide cold water during summer. Hence, to provide cold and pure drinking water, the water cooler is connected to a water filter. Both these are electrical appliances, and should be handled with care. Both should be cleaned together once a month.

It is important to note that the materials used to clean the water filter and water cooler should not be used for any other purpose.

Cleaning of this equipment should be done with the help of a plumber. You can be present to help him and ensure that the job is done hygienically.

The process of cleaning the water system starts with checking the pipes that supply the water.

#### Method of cleaning drinking water pipes

Drinking water pipes should be clean and free of any blockages. Water pipes may get clogged due to moss, dust and salt formation in the pipes. If there is a block, it is absolutely necessary that the cause is found and the block is removed immediately.

### Equipment and materials

- Water
- A wire or a stick
- Hydrochloric acid.

### Cleaning a pipe which is blocked with collection of dust / waste / moss

#### Method

Pour a small quantity of water into the pipe and thrust a stick or iron rod and scrub. This may remove the block and clean the pipe.

### Cleaning a pipe which is blocked on account of salt deposits

#### Method

Mix hydrochloric acid and water in the ratio 1:3. Pour this solution into the pipe till it is full and close it. Leave it in this condition for about 30 minutes. The acid solution will dissolve the salt in the pipe and clean it. If necessary, the process may be repeated. After the pipe is absolutely clear, it should be washed twice with clean water.

### Cleaning the water filter

#### Equipment and supplies

- Cleaning liquid
- Scrubber
- Clean cloth

Sometimes, if the drinking water is hard water, salt deposits will block the filter. These deposits need to be removed before washing the filter

#### Method

- Close the valve to stop the flow of water from the tank to the filter
- Remove the lid of the filter by unscrewing it
- Remove the lower tank of the filter in the same manner
- Remove the candles from the tank and place them safely in a plate along with their respective screws

- Pour out any water that is in the filter, and clean the filter using the cleaning solution and a scrubber
- Ensure that the dirt and salt deposits are completely removed, and the tank is sparkling clean
- After washing it with clean water, wipe it with a clean dry cloth
- Now wash the candle very carefully. Hold it in the palm while washing, and scrub it using the cleaning liquid and the scrubber till it is absolutely clean
- Wash the candle thoroughly with clean water and wipe with a clean dry cloth
- Fix the candle carefully in the lower part of the filter
- After all the parts are wiped, let the filter dry for about 30 minutes
- Fix the filter with the help of the plumber. Ensure that the lid is properly fixed

### Cleaning the water cooler

#### Procedure

- Disconnect the water cooler from the electric power supply
- Open the lid of the upper portion of the water cooler
- The two black belts at the rim of the upper portion of the water cooler should be removed and cleaned with a scrubber
- Wipe them with a clean dry cloth
- Scrub the inside of the water cooler with the cleaning liquid
- Remove the salt deposits and dirt thoroughly
- Wash it with clean water. Wipe thoroughly with a clean dry cloth to remove any droplets of water that may be present
- Wipe the outside of the water cooler and its lid with the cleaning liquid
- Wipe these surfaces again with a wet cloth and then with a clean dry cloth



- The remaining water at the bottom of the pipe and outer areas of the water cooler should be wiped dry
- Clean the attachment plate, wash it with the cleaning liquid and wipe dry with a clean dry cloth
- After all the parts are washed and wiped, allow them to dry for 30 minutes
- Assemble the water cooler
- Press the ball like part at the top of the cooler to allow the water to fill the tank of the cooler
- Fix the black belts in place, and shut the lid tight.
- Fix the wire to the water cooler
- If there is any leak in the filter or the water cooler, inform the plumber immediately

## Chlorination

Microbes causing diseases spread from one person to another through water, air, hard particles and food. 80% of diseases such as diarrhoea and cholera are spread through water. Therefore water has to be purified using a chemical called chlorine which is a germicide. This method of purification is called chlorination.

### Method of mixing chlorine in the water tank

- Find out the capacity of the water tank
- Mix chlorine in appropriate proportion – 1 litre chlorine to 10,000 litres of water
- It is dangerous if chlorine is in excess as the water becomes poisonous
- Also, if the quantity of chlorine is less, it is ineffective, and the process becomes futile

- Pour chlorine uniformly in all the four corners of the tank

### Key points to remember

- *Materials used to clean the water filter and water cooler should not be used for any other purpose*
- *Inform the plumber a day before the cleaning and keep all the required materials ready at hand*
- *The different parts of the water cooler such as the candles and the screws should be kept safely in a plate*
- *Cleaning of the water filter, water cooler and water tank should be undertaken on holidays when the number of patients is less*
- *To prevent living creatures such as the rat, squirrel, crow, from falling into the tank, as well as to prevent the breeding of mosquitoes, the tank should remain closed at all times*

*For a demonstration on cleaning the drinking water tank, the water filter, cooler and chlorination, please watch the video of the CD.*

### Student exercise

#### Answer the following

1. *Why is it important to get safe drinking water?*
2. *What are the steps we can take to ensure safe drinking water to all in the hospital?*
3. *Describe the method of cleaning a water filter*
4. *How would you clean a water cooler?*
5. *What is chlorination? How would you chlorinate water in the hospital?*

## CHAPTER 13 CLEANING THE SEPTIC TANK

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### GOAL

To clean and maintain the septic tank

### OBJECTIVES

To teach the housekeepers the method of

- Cleaning the septic tank

# CHAPTER 13

## Cleaning the Septic Tank

There are two types of septic tanks – septic tanks connected to a public drain and septic tanks without any drain. Septic tanks connected to a drain should be cleaned every week and septic tanks without drains should be manually drained and cleaned as per the procedure given below. The size of the septic tank depends on the number of toilets in the hospital. Depending on the size, a septic tank can store a large quantity of sewage and sewage water. Thus cleaning is necessary to prevent bad odour and breeding of cockroaches.

### Equipment and supplies

- Stick broom
- Bleaching powder
- Nuvon or any other insecticide
- Iron rod, cotton
- Mug, bucket
- Hosepipe
- Water

### Method of cleaning a septic tank connected to a public drain

- The cleaner must wear gloves and galoshes when cleaning the septic tank
- Attach a hosepipe to a tap and make a path for the water to flow into the tank
- Remove the lid of the tank and spray water to rinse the lid
- Splash water into the tank with the help of the hosepipe
- Sprinkle bleaching powder into the tank
- Using the stick broom, scrub vigorously to clean all the edges and corners of the tank and remove any moss that has formed
- Wash the tank with water
- Place nuvon into the tank
- Close the tank (Fig. 13.1)



*Fig. 13.1 - Cleaning the septic tank connected to a public drain*

### Method of placing nuvon in the tank

- Nuvon is an insecticide, which kills cockroaches and other insects
- Mix 100ml of Nuvon in a cupful of water.
- Take an iron rod about 1 foot in length
- Attach a one-inch piece of cotton firmly to one end of the rod
- Dip the cotton in the Nuvon solution
- Bend the rod into a hook and place it in a corner of the tank

### Method of cleaning a septic tank not connected to a public drain

- Water collected in the upper portion of the tank should be manually removed once a month using buckets
- Waste and excreta should be removed once a year. The Sanitary department of the Municipal Corporation comes and does this using a suction pump
- Clean the tank using the procedure given above
- Place Nuvon in the tank using the above procedure

*For a demonstration on cleaning the septic tank, please watch the video of the CD.*

### Student exercise

#### Answer the following

1. *Why do we need to clean a septic tank? How is it done?*

# CHAPTER 14 LINEN MANAGEMENT

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## CONTENTS

Setting up of a linen department  
Selecting cleaning agents and detergents  
Stain removing  
Sample format for systematic running of the linen department

## GOAL

To provide clean and fresh linen in the hospital at all times, and to ensure a maximum life for linen

## OBJECTIVES

- To teach the trainees how to
- Set up a linen department
  - Select linen at the time of purchase
  - Setting up a system for linen management
  - Selecting the right detergents and cleaning agents
  - Washing the clothes

## CHAPTER 14

# Linen Management

### Setting up a linen department

Linen forms an integral part of any hospital. Providing clean and fresh linen is an important task of housekeeping. Maintaining linen is a full-time job, and hence the linen department may be looked upon as a department in itself.

The linen department needs a large area, where the entire linen of the hospital is stored. This should be situated near the laundry so as to make it easy to control the movement of linen from different areas of the hospital to the laundry and back.

The cupboards storing the linen should be neatly labeled, both on the inside and outside, indicating the linen and the area to which the linen belongs. To ensure the smooth functioning of the linen department, par stock should be maintained. (Par stock means three to four times the quantity of linen required for the hospital.) Regular stocks have to be maintained in a register specially designed for this purpose.

The linen that comes for washing should be scrutinized daily for damage. The regular life of linen is about 250 washes, or 2-3 years, after which the linen should be condemned, and new linen bought to replace the condemned linen. This condemnation should be carried out monthly, and a record maintained in the stock register. The condemned linen can be recycled as cloth dusters.

The housekeeper assigned to this department has the following role to play:

- Maintaining a daily account of soiled linen received from the different areas of the hospital, and the fresh linen issued to the different areas.

- Ensuring that infected and stained linen is sterilized and washed separately
- Ensuring that the linen is washed under hygienic conditions and returns stain-free from the washing area
- Maintaining the stock register
- Repairing damaged linen immediately
- Checking linen every month and separating the linen which needs to be condemned
- Regularly checking on the detergents and cleaning agents available in the market to ensure that the detergents used are good and cost-effective
- Stocking all the linen systematically in cupboards provided for the purpose

### Selecting linen for the hospital

When setting up a linen department, the first thing to look into is the requirement of linen for the hospital. In the wards, for a multi-speciality hospital, the ratio is 1:4 (4sets per bed) while in a single speciality hospital 1:3 (3 sets per bed). Then comes the requirement for the OT, OP and other areas.

Colour coding and quality of the linen is next in the decision making process. Colour coding may be done department-wise, or room-wise, as the management deems fit. Choose colours that will not bleed. Choose colours that are soothing to the eye. The quality of linen should be good, so that it is easy to maintain. By cutting costs and opting for cheap linen we may be the losers in the long run. The cloth will give way soon, or may become rough and difficult to use. When purchasing linen it is always best to first obtain samples that may be tested for quality and strength.

### Setting up a system for linen management

One of the important jobs of the housekeeping department is clothes and linen management. In a hospital different types of clothes are used. The outer gowns worn by doctors and patients, the bed sheets, blankets, pillow covers and pillows are to be washed, cleaned and maintained properly. This is one of the most important jobs of a housekeeper. Other than this, napkins, curtains and seat covers have to be laundered. Maintaining the cleanliness of clothes and linen will prevent the spread of disease

Dirty bed sheets should be folded to prevent dust from flying about. The clothes that need to be washed from different rooms should be put into their respective laundry bags and brought to the laundry.

In the laundry they should be sorted out according to their condition and type. Torn clothes, good clothes, clothes with blood stains, clothes with rust stains, should be sorted out and kept separately. Torn sheets and clothes should be mended. In case they are very badly torn and cannot be mended, they should be condemned. These condemned clothes should be recycled and used as dusters.

Clothes should also be separated type-wise, that is, bed sheets, pillow covers, towels, curtains, doctors' gowns and coats, and then sent to the washing machine.

Clothes stained with blood or body fluids should be washed separately by hand and the stains should be removed. Deal with this kind of stain as soon as possible, the longer you wait the more time the stain has to soak in /or dry, making it more difficult to remove. After that the linen should be soaked and rinsed in dettol or disinfectant mixed water and then dried in direct sunlight. Only then they should be sent to the laundry for the regular wash.

After the clothes are washed and returned to the linen room, they have to be sorted out according to area, and type, and sent to the different user departments. The extra clothes have to be put back into the cupboard in the allotted places. Both when receiving the clothes and while distributing them a

clear record of clothes given and received should be maintained. This helps in tracking the missing clothes.

### Selecting the right cleaning agents and detergents

As with materials and equipment, care should be taken to select detergents that are not harsh on the clothes, yet clean well. Avoid the use of bleaching agents as they tend to corrode the cloth and the clothes wear out faster than they should. While selecting detergents, the cost factor should also be kept in mind, although it is wiser to go for a costlier detergent if it is giving you better results and helps in making the clothes last longer.

### Washing the clothes

The washing machine in the hospital is an electrical device. At a time, 30 bed sheets, 70 pillow covers, or 25 curtains can be washed in the machine (Fig.14.1).



Fig. 14.1 - Washing machine

### Equipment and materials

Detergent as recommended for washing a load of 30 bed sheets.

### Procedure

- Remove all stains on the clothes before loading them into the washing machine. The chart below gives different methods adopted to remove different kinds of stains
- Take the required amount of detergent and dissolve it in water

- Pour this solution into the machine
- The clothes that have been sorted out should be put into the machine type-wise
- The first round of washing should not exceed 25 minutes
- In the second round the clothes should be rinsed with an adequate amount of water. This round should not exceed 10 minutes
- In the third round rinse the clothes again with clean water for 10 minutes
- Now put the clothes into the extractor and remove them
- Put the washed clothes out to dry in direct sunlight
- When the clothes are absolutely dry, they should be ironed, folded and neatly stored in the cupboard (Fig. 14.2 & Fig. 14.3)
- Clothes such as napkins, doctors' coats and gowns should not be put into the machine. They should be hand washed
- A stock register of the clothes in the cupboard must be maintained. Entries should be regularly made

### Cleaning mats and pillows

In the free section of some eye hospitals, mats and pillows are provided to the patients to rest. These mats and pillows can get stained on account of vomit, loose motions, or blood. This provides an excellent breeding ground for germs. To avoid this and to keep these mats and pillows clean and hygienic, mix 100ml of dettol in 5litres of water. Rinse the mats and

pillows and wash them with clean water every time a patient is discharged. Then rinse them in this dettol solution. Dettol helps to kill the germs present and makes the mats and pillows hygienically clean. After rinsing the mats and pillows in the dettol solution, dry them thoroughly in direct sunlight. The dried mats and pillows should be piled together and tied until required.

### Dry cleaning

Silk clothes, clothes with glass work, and other costly clothes should be dry cleaned.

### Time allotted for washing

- Each type of cloth should be washed according to its usage
- The bed sheet, pillow covers, bed spread in the in patient's room should be changed every alternate day. Used linen should be removed and replaced with fresh linen
- Linen should be changed immediately if it is stained with blood or body fluid
- For patients with ulcers and oozing sores, the linen should be changed every day
- Table cloths and doctor's coats should be washed once a week
- Hand towels should be washed daily
- Curtains should be washed once a month
- The mattress cover should be washed once in six months or whenever stained



*Fig. 14.2 - Pressing and folding machine*



*Fig. 14.3 - Linen storage*

## Removal of stains on clothes

Sr. no	Condition	Colour of the cloth	Method of removal
1.	Tea, coffee, and cocoa stains		
	a. Wet stains	White	Wash with boiling water and immediately rinse with warm water
	b. Dried stains	White	Soak over night. Then apply borax on the stain and rinse in hot water
2.	Fruit stains		
	a. Wet stains	White Other colours	Soak the stain in hot saline solution and then wash Soak in warm hydrogen peroxide solution and wash.
	b. Dry stains	White Other colours	Sprinkle borax on the stain and pour boiling water on it Soak in warm sodium peroxide solution and wash.
3.	Blood stains	White colour	Soak in enzyme stain remover. Then dry for a short time in sunlight.
		Other colours	Soak in enzyme stain remover, then soak in cold saline solution and wash.
4.	Stains due to iron instruments(rust)	White	Apply a mixture of lime juice and salt on the stain and wash it with hot water. Rust removers can also be used.
		Other colours	Soak in a mixture of warm lime juice and salt. Now use rust removers that are available in the market.



**Format for recording the number of clothes washed daily**

Date	Bed sheet	Pillow cover	Towel cover	Curtain	Bed	Inner cover of pillow	Table cloth	Total
Total number of Clothes								
Cost of washing each piece								
Total Cost								

**Format of the clothes/linen stock register**

Types of linen colour-wise	Old	Torn	In hand
Green bed sheet			
Green pillow cover			
Blue bed sheet			
Blue pillow cover			
Yellow bed sheet			
Yellow pillow cover			
Grey bed sheet			
Grey pillow cover			
Pink bed sheet (suite room)			
White bed sheet			
White usable pillow cover			
Meditation room carpet			
Black bed sheet			
Special pillow cover			
New inner cover of pillow			
Old inner cover of pillow			



**Linen - Daily Transaction - OP**

Date:	Unit		Clinical OP																
	I		II		III		Retina		Glaucoma		Uvea		Paediatric		Cornea		Orbit		
	Given	Recd	Given	Recd	Given	Recd	Given	Recd	Given	Recd	Given	Recd	Given	Recd	Given	Recd	Given	Recd	
<b>Bedsheet</b>																			
Grey																			
Camp																			
<b>Pillow</b>																			
<b>Cover</b>																			
Grey																			
Camp																			
<b>Curtains</b>																			
<b>C, Cover</b>																			
<b>M.Cover</b>																			
<b>In.Cover</b>																			
<b>Table Cloth</b>																			
<b>Coat</b>																			
<b>Towel</b>																			
<b>Napkin</b>																			
<b>Sign:</b>																			

### A sample format for daily transaction of linen in the ward and OP

#### Linen-Daily Transaction - Ward

Date:	Floor								Lasik Room		Eye Bank	
	I		II		III		IV					
Item	Given	Recd	Given	Recd	Given	Recd	Given	Recd	Given	Recd	Given	Recd
<b>Bedsheet</b>												
White												
Blue												
Yellow												
Addl												
Suite Room												
White												
Suite Room												
Colour												
White												
Cover												
Colour												
Cover												
<b>Pillow Cover</b>												
White												
Blue												
Yellow												
Addl												
Suite Room												
White												
Suite Room												
Colour												

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**Linen-Daily Transaction - Ward**

Date:	Floor								Lasik Room		Eye Bank	
	I		II		III		IV		Given	Recd	Given	Recd
Item	Given	Recd	Given	Recd	Given	Recd	Given	Recd				
Curtains												
C, Cover												
M.Cover												
In.Cover												
Divan set												
Towel												
Gown												
Cap												
Mask												
Pant												
Shirt												
Sign:												

**Student exercise****Answer the following**

1. *What is the role of the linen department?*
2. *Why do we need bedsheets in the ratio 1:4 in a multispeciality hospital, but 1:3 in an eye hospital?*
3. *What are the factors to be kept in mind when selecting detergents?*
4. *What is the system to be followed from bed making to sending the soiled linen to the laundry?*

# CHAPTER 15 WASTE MANAGEMENT

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## CONTENTS

What is waste management?  
Impact of poor waste management system  
Segregation  
Collection  
Transportation  
Disposal

## GOAL

To manage the waste generated in the hospital in a hygienic manner and prevent the spread of disease

## OBJECTIVES

- To teach the trainees
- Proper handling of bio-medical waste
  - The importance of segregation of waste
  - Proper methods of waste disposal

## CHAPTER 15

# Waste Management

A lot of things are used everyday in the hospital and then discarded. Care should be taken to see that the items are not strewn about everywhere, but are thrown into the dustbins. Dustbins should be provided in all areas of the hospital, and should be emptied daily, and in some areas where the waste generation is more the dustbins should be cleared twice a day. If decaying matter is not disposed of immediately, it emits a bad odour, and generates disease causing germs. This will affect the environment and our health. Hence it is very important to ensure that waste in a hospital is cleared and disposed daily. It is also important to ensure that the waste bins are washed daily and disinfected with dettol ( any disinfectant) and then put out to dry in direct sunlight.

In this lesson we shall study the importance of a good waste management system.

### What is waste management?

The process of collecting, transporting, processing and disposing of waste is known as waste management. Nowadays waste management has gone one step ahead. It not only deals with planning of disposal but also attempts to see how we can reuse or recycle certain materials from the waste.

The waste from health care facilities is categorised into 2 main categories

#### General solid waste

This is the majority of all waste found in health care facilities and is similar to waste generated in other places. This includes:

- Paper
- Polythene
- Food waste
- Kitchen Waste
- Garden Waste

#### Bio medical waste

This is waste that is generated during diagnosis, treatment, and immunisation of humans or animals or during research activity. By implication, solid waste other than cotton, dressing, linen etc. which are contaminated with blood are considered as municipal waste, unless they come in contact with other bio medical waste. Bio medical waste includes:

- Cotton
- Swabs
- Infectious plastics
- Plastics
- Glass
- Syringes
- Needles
- Blades

Of the above, the last 4 come into the category of “sharps”, as they can easily cut or get into the skin of the person handling the waste, causing immediate infection.

The general waste can be further classified into 2 groups:

#### Recyclable waste

This is waste that can be re-used, such as

- Cardboard
- Paper
- Plastic bottles, covers and cups
- Ropes and strings
- Rubber items
- Shoes & slippers
- Thermocol
- Wood
- Coconut shells
- Cloth pieces

- Dry batteries
- Glass bottles
- Leather items
- Metal

### Bio - degradable items

These are items that easily decompose and mix into the soil.

- Dust
- Food waste
- Kitchen waste
- Garden waste
- Coal and ash
- Hair
- Insects and rodents
- Tea and coffee powder
- Egg

### Impact of poor waste management systems

#### On people

1. **Infections:** This is the most common health hazard associated with poor hospital waste management. Those exposed to this hazard are-
  - a) Patients attending the health care institution
  - b) People visiting the patients in the health care institution
  - c) Medical and paramedical persons who are providers of medical care
  - d) Sanitation staff involved in collection, segregation, transportation and final disposal of waste
  - e) Staff working in support services of the hospital
2. **Physical injury:** This occurs due to the improper handling of various biomedical wastes at various stages of waste management. Out of various categories of waste, the sharps are the most prone

to cause physical injury, especially when intermixed with other waste

3. **Chemical injury:** This results from hazardous, toxic, corrosive, flammable, reactive and genotoxic wastes which can produce burns on accidental exposure, or cause toxicity to cells
4. **Radiation injury:** This occurs due to exposure to various forms of radioactive waste such as that from the chemotherapy and X-ray rooms

#### On environment

1. **Water pollution:** Measures should be taken to reduce the quantity and strength of incompatible pollutants in wastewater flow. If not connected to municipal wastewater treatment plant, an on-site treatment should be started. Sludge from such a plant should be managed with the same precautions as for municipal waste sludge ie. it should not be put on food crops unless treated properly. For chemicals, which are a potential source of pollution, an on-site chemical waste survey is a pre-requisite to the development of an effective waste management system. Waste chemicals, as far as possible should be recycled, and more hazardous chemicals should be substituted wherever possible with less hazardous chemicals. Use of disinfectants should be limited and alternatives used wherever possible
2. **Air pollution:** Most of the air pollution results from incineration. It should be ensured that incinerators for health care institutions be designed specifically for that purpose and must comply with the accepted norms of emission. Fume hoods, which are another outlet for air pollution should be fitted with filters
3. **Soil pollution:** General waste along with properly treated infectious waste can safely be disposed of in a specialised landfill. Properly operated incinerators produce sterile ash, which can safely be put in a specialised landfill



### Generation and segregation of waste

Generation of Waste refers to activities and procedures, which result in the production of waste. In a hospital scenario generation of bio-medical waste is done at all levels and in all areas, starting from the highly trained specialists to the class IV sanitation staff. It is the first step in hospital waste management.

**Source of waste** refers to those areas or sites where wastes are generated.

**Segregation of waste** is defined as separation of different types of wastes by sorting.

It is the most important prerequisite in the entire process of waste management as it allows special attention to be given to the relatively small quantities of infectious and hazardous waste thereby reducing the risk and the cost of handling and disposal. Segregation of waste is the key to the entire process of scientific waste management, as proper sorting into different categories will entail right treatment and disposal. Segregation of waste should be done at source, and hence becomes the responsibility of the generators of waste, viz. doctors, nurses and paramedics. Sensitising the generators of waste to properly segregate the waste at source is the key to successful implementation of scientific waste management. It is important to put the waste in respective colour bin which is accepted by the management.

### Collection, storage and transportation of waste

Collection of hospital waste is the process, which is done after segregation, and in a way, both can be considered as being complementary to each other.

Several guidelines have been suggested for categorisation of hospital wastes enunciated by various authorities. One of these is the colour coded classification for developing countries by WHO:

S.No.	Category of waste	Recommended colour code
1.	General Non- hazardous waste	Black
2.	Sharps (infected or not)	Yellow
3.	Infected waste (not containing sharps)	Yellow
4.	Chemical and Pharmaceutical waste (other than cytotoxic drugs, radioactive wastes, high pressure containers)	Red
5.	Clinical wastes that need autoclaving	Blue

Storage is the duration of time the wastes are kept in the areas of generation and transit, till the point of disposal. One should be very careful about storage, as unless the waste is securely stored, unscrupulous elements and rag pickers may gain access to the waste and cause problems. Under the provisions of Biomedical Wastes (Management and Handling) Rules, 1998, the following section pertains to the storage of waste:

Authorised persons handling biomedical wastes shall ensure that:

1. No untreated biomedical waste shall be stored beyond a period of 48 hours
2. If, for any reason it becomes necessary to store waste beyond such period, the authorized person must take permission of the prescribed authority and take measures to ensure that the waste does not affect human health and the environment

No waste shall be stored where it is generated beyond a period of 48 hrs.

### **Characteristics of waste storage containers**

Containers for interim waste storage must have the following characteristics:

1. Made up of hard plastics / metal which should be sturdy and leak proof
2. The size of the containers will depend upon the quantity of waste generated
3. Should have a secure lid which can be shut after the waste is collected. It should not allow insects and animals to go inside
4. Should be puncture proof, reusable, colour coded, labeled and not easily destroyed by rodents and other animals
5. The inner surface should be smooth and rounded without any sharp edges which can tear the plastic bags kept inside

It is preferable to have three sizes – for collection, storage and transportation

### **Plastic bags used for waste collection, storage and transportation**

1. Should be large enough to accommodate all the waste of that particular category. It should completely line the container and a portion of it should be outside
2. Should be sturdy enough to withstand the weight of the load of waste without tearing or giving way
3. Should be leak proof and water proof, without any weak areas or tears
4. Should be colour coded. Labeled and marked clearly with labels

In case the bags are to be incinerated they should be made up of non-chlorinated plastics

### **Waste collection area / centre should have the following characteristics**

1. Should be an area specifically marked for collection and storage of waste, pending treatment and final disposal
2. Should be covered and protected from all sides against humans and animals

3. There should be a proper facility for locking of the area to prevent tampering by rag pickers. The key should be kept with a responsible person at all times
4. There should be a clear warning sign with symbols
5. Location should be away from public places and food preparation areas
6. Construction should be robust with drainage system, lights and ventilation

### **Transportation**

Waste disposal is a multiphase activity, in which the different stages (ie. generation, segregation, collection, interim storage, transportation, treatment and final disposal) are highly interdependent, both technically and organisationally. In this entire spectrum of activities, collection and transportation form a vital link between the point of generation and final disposal.

#### **Types of transportation**

##### **Internal**

This refers to the transportation of waste from the point of generation and storage in the wards to a point outside the building premises, where it is kept, pending the transport to the actual site of disposal.

##### **External**

This refers to the transportation of waste from the central collection point outside the building to the site of final disposal.

#### **Vehicles for transportation**

##### **Internal transportation**

1. Push cart - An open push cart designed so that one or two bins/containers of waste can be moved from rooms to the garbage trolley parked outside the ward
2. Waste trolley - A large trolley made of iron/ stainless steel with 4 revolving castors and of

sturdy construction. It should be covered so that insects, flies, etc. do not have access inside to it

3. Wheel barrow - Can be used for small amount of general/non-hazardous waste

### External transportation

1. Cycle rickshaw - can be used if the site of final disposal is close to the hospital. It should be covered on all sides and can be divided into 2 compartments, for infectious and non-infectious waste
2. Van / lorry - It should be earmarked for waste transportation with the label 'Bio medical Waste' on both sides and at the back. It should be fully covered and lined internally with aluminum or metal to give it a smooth impervious finish. It should have rounded corners without edges or angles for effective cleaning and disinfection. The driver's cabin should be fully separated from the bulk head, and the load compartment should be securely locked during transit. If the journey to the site of final disposal is long, roof vents need to be provided for ventilation

### Final disposal

Disposal means burial, discharge, deposit, dumping, land-filling or placing on land, of any biomedical waste.

#### Disposal of general/non-hazardous solid waste

Depending upon the quantity of general non-hazardous wastes generated in the hospital the following are the options available for disposal.

#### For small quantities of wastes

1. **Landfill:** This is the most satisfactory method of garbage disposal where suitable land is available. However, the site of landfill has to be chosen with utmost care and the following factors regarding construction should be kept in mind:
  - It should be avoided near sources of water

- The site should be securely fenced and should have a gate away from public view with signboard stating "Landfill site"
- Covered with at least 0.5m of suitable cover material

Landfill is done by any of the following methods:

- **Trench Method** – A long trench 2-3m deep and 3-10 m wide depending upon local conditions is made. The treated waste is ideally compacted, filled up to 2m and covered with excavated earth
- **Ramp Method** - This is well suited where the terrain is moderately sloping, and excavation is done to secure the covering material
- **Area Method** - This method is used for terrain land depressions, disused quarries and clay pits. The treated waste is deposited, packed and consolidated in uniform layers up to 2-2.5 m deep. Each layer is sealed on its exposed surface with a mud cover at least 12" thick to prevent infestation of flies, rodents etc

After the waste has been buried, chemical, bacteriological and physical changes occur and the temperature goes up to 600 C within 7 days hastening the decomposition process. Within 4-6 months complete decomposition of matter occurs into an innocuous mass. The potential use of filled land includes improvement of eroded areas, marshes and other marginal land.

2. **Pit Burial:** This is suitable for small camps or institutions, where in a small pit of size 2m by 2m waste is put with 10cm soil between each layer of waste. When the level is full, it is closed with a thick layer of soil. It is also fenced with secure gate for entry and exit. Contents get decomposed within 4-6months
3. **Composting:** This is a method of combined disposal of refuse and night soil. It is a process whereby organic matter breaks down under bacterial action resulting in the formation of relatively stable humus like material called

compost which has considerable manorial value for soil as it contains nitrates and phosphates. The temperature achieved over a period of days destroys the eggs and larvae of flies and other insects.

**Vermiculture:** In this process, the biodegradable wastes from the kitchen, houses and the cafeteria are converted into manure with the help of earthworms. Organic waste is kept in wooden boxes or earthen ditches with small amount of waste at the bottom. A small bunch of earthworms are placed in each part and covered with organic matter. This is sprinkled with water, and in due course gets converted into manure

#### **For large quantities of waste**

1. **NADEP Composting:** General refuse/waste can be converted into rich, soft, good smelling compost by using this simple, economical and non-polluting technology
2. **Pelletisation Technology:** This process converts biodegradable wastes into “fuel pellets” by treatment with heat, humidity, and pressure by machine designed for this purpose. The fuel thus developed is cheaper, has less smoke emission but lasts longer
3. **Biopress Methods:** This turns garbage into incinerable matter and produces methane gas. Methane is produced naturally in any landfill through decomposition of organic matter, over a period of 20-30 years. It contains roughly 50% methane and 50% carbon dioxide. The recoverable gas is about 50-80% of the total gas which can be used for:
  - Generation of electricity in an internal combustion engine or gas turbine
  - Directly as a boiler fuel
  - Compressed for vehicle fuel or upgraded to pipeline gas

4. **Gasification technology (biogas from organic waste):** Energy derived from anaerobic digestion of organic waste involves the production of biogas from organic waste. The technology involves the separation of wastes at source or mechanically prior to digestion and comprises the following steps: (i) pre-treatment (ii) digestion (iii) post treatment of waste. This process is eco friendly and recovers 100% methane, reduces odour, produces electricity and displaces carbon dioxide. It is a traditional source of energy and forms a suitable by-product, viz. compost which is an excellent manure

#### **Disposal of human anatomical, blood and body fluids**

The preferred treatment for this is incineration. After incineration, the ash can be sent for specialized landfills, as it is sterile.

#### **Disposal of sharps**

Although sharps comprise of a relatively small proportion of the total hazardous waste generated in any hospital, they have the maximum propensity and potential for causing needle “stick” injuries and hence can cause infection. It has been proved beyond doubt that the category of waste that needs maximum precaution and care is sharps. Sharps are stored in areas or points of generation in puncture-proof containers. Before storing them, the needles, which comprise the majority of sharps, can be destroyed by needle destroyers or by using syringe melting and disposal systems.

#### **Disposal of microbiological and technological waste**

This is disposed using any of the technological options such as autoclaving, microwaving, hydroclaving, or incineration.

**Disposal of pharmaceutical and infectious solid waste**

This can be incinerated and the ash can be disposed of in landfills.

**Disposal of chemical waste**

Non-hazardous chemical waste can be disposed of using the same method as general wastes. The waste that can be recycled should be packed, labeled properly and stored for recycling. Hazardous chemical waste should be recycled if possible or treated and disposed of in sewers after dilution (liquids) or incineration (solids). The ash is disposed of in landfills.

**Disposal of radio active wastes**

This should be done as per the guidelines laid down by BARC, India. These wastes can be disposed of in the normal channels under strict supervision, after their radioactivity is neutralised.

Solids should be stored in appropriate containers like plastic bags or large cans under strict security and thereafter disposed of as ordinary waste after removal of all radioactive labels and warning signs. Liquid

and gases, which are generally low-level radioactive wastes, should be diluted properly and disposed of in the sewers or released in the open atmosphere.

**Disposal of pressurised container**

These should be disposed of with general waste, in specialised landfills.

*For a demonstration on waste management, please watch the video of the CD.*

**Student exercise****Answer the following**

1. *What is waste management?*
2. *Why is it important to have a good waste management system?*
3. *What are the different types of waste generated in an eye hospital?*
4. *What are the wastes generated in a multi speciality hospital?*
5. *What are the measures the Housekeeping Department can take to reduce the generation of waste?*

# CHAPTER 16 PEST CONTROL

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## CONTENTS

Cockroach  
Fly  
Silverfish  
Lizard  
Bees, wasps and spiders  
Bed bug  
Mosquitoes  
Rats  
Termites

## GOAL

To keep all areas of the hospital free from all types of pests

## OBJECTIVES

- To familiarize the trainees with
- Habits of common pests
  - Different techniques of pest control methods

## CHAPTER 16

# Pest Control

No matter how clean one keeps one's surroundings, you cannot avoid the "uninvited guests" - the pests. It is not only embarrassing but also speaks badly of a hospital where one sees rats, cockroaches, and lizards running around. Pest control is another major job of the housekeeping department (Fig. 16.1).



*Fig 16.1 Sprayer and pesticides*

We shall discuss below a few common pests and methods of controlling them.

### Cockroach

Cockroaches are eminently tropical but certain species have become widely disseminated through commerce and are now cosmopolitan. They are nocturnal in habit and attack food, paper, clothing, shoes, and dead insects. The German cockroach prefers a warm and moist environment. Consequently it has become a pest of kitchens, and restaurants, where food, warmth and moisture provide the necessary ecological requirements. The oriental cockroach on the other hand prefers cooler areas. These are therefore found

under coverings, in bathrooms, toilets, and sinks, where large numbers congregate around sources of water. The American cockroach infests all houses in store-rooms, kitchens, cupboards, and libraries, while the brown banded cockroach which can fly prefers locations high up in the rooms.

### Inspection

Inspection and treatment should go together whether a complaint has been received or not. All the possible hiding places of cockroaches must be thoroughly investigated. These places would probably be dark corners. Your inspection should begin where the patient or staff thinks he or she has seen one. You must be equipped with a flash light and a hypodermic syringe with a flushing agent to flush crevices and areas behind in-built furniture where the flash light cannot reach. Remove the drawers and shelves of the furniture wherever possible and inspect the inside of the furniture thoroughly. Check calendars and pictures on the walls, electrical appliances such as the refrigerators, wall clocks, ovens, food mixers, and coffee blenders.

Other places that need attention and which we tend to overlook are:

- Rubber and gasket lining in the refrigerator and other appliances
- Splash plate - in walls behind ovens and stoves
- Baseboard - forming a base around the room up to 8" above floor level
- Linoleum - corners and around the walls
- Carpets - underneath; to be rolled up
- Panels - on the walls - to be injected wherever there are cracks
- Fuse box, behind sinks, light fixtures etc

## Measures to be taken

Sprinkle Baygon bait in places where cockroaches congregate, rest or hide, such as dark corners of closets, base of walls in basements, under sinks, around drain pipes, upon shelves, etc. However, Baygon is toxic, and can harm children and pets if accidentally ingested. Bay leaves, cucumber slices and garlic are natural deterrents for roaches, and are far safer to use. Also, spraying cockroaches directly with soapy water kills them instantly. Hence keeping a spray of soapy water handy near cockroach infested areas is useful. Sealing of small cracks and crevices in walls, around window frames and in the floor are also proofing measures that would help to prevent nesting of cockroaches.

## Fly

As a rule flies are of small or moderate size; some species are even minute, measuring one millimeter long, while some Australian robber flies exceed three inches in wing-expanse with a body length of one and three-quarter inches. The majority of flies are diurnal and frequently fly around for nectar or haunt decaying organic matter of diverse kinds. Many flies do not visit flowers but are found on foliage, tree trunks, fallen logs, in grass, on the ground, or on the mud where they seek food. The primitive blood sucking species, such as the mosquito and the sand fly are mostly crepuscular (active at dawn or dusk) or nocturnal. Many species are predacious on smaller insects, mites, and small worms. A relatively small number have acquired the habit of blood sucking, confined mostly to the female of the species. A small number of the blood sucking species are of great importance to us on account of their ability to transmit various diseases to man and other animals. The pathogenic organism of malaria, yellow fever, elephantiasis, and other diseases are transmitted from animal to man and from man to man through the medium of biting flies, and cannot be contracted in any other way.

## The common housefly

This species is probably the most familiar and certainly the most widely distributed of all insects. It has accompanied man everywhere and has adapted itself to breeding in a variety of rejected food and excrement of man and his domestic animals.

It would be difficult to exaggerate the importance of the Common Housefly as a pest in homes. This is on account of its importance as a carrier of disease brought about by its habit of flying between human faeces and human food. The disease organisms of typhoid, dysentery, summer diarrhea, and probably infantile paralysis are transferred from faecal matter to food by vomit drops in fly excrement or by organisms adhering to the fly's feet. The eggs of parasitic worms are also transferred in this way. In tropical and sub-tropical areas, in addition to these diseases the housefly is also responsible for the spread of cholera, and ophthalmia.

## Fly control

Exclusion has been an effective method of fly control for many years. Putting up mesh screens made of any metal are helpful. Screens if properly maintained provide excellent control of flies.

Mint is a natural repellent for flies. Small sachets of crushed mint left around the ward will keep flies away. Bay leaves, cloves and eucalyptus oil hung on windows in small sachets will also keep the flies away.

## Chemical control

Fly sprays and household sprays are synonymous since a spray that controls flies will also control other insects. There are three kinds of sprays in the market - the space spray which includes aerosols, the surface or residual spray which may be pressurised and the combination space and residual spray. Space sprays are applied as a mist into the air and must be in contact with the insect at the time of spraying. They provide quick knockdown and fast results but temporary control. An aerosol spray sprays the insecticidal



ingredients which are dispersed by means of the vapour pressure of liquefied gas rather than the pressure of compressed air. Surface or residual sprays may have a petroleum or water base. They are applied on surfaces as a wet spray rather than a mist and they leave a toxic layer of either crystals or film on the evaporation of the carrier. Surface sprays provide relatively slow knockdowns but long lasting control against non-resistant flies and do not have to come in contact with the insect at the time of spraying in order to be effective. Residual sprays are applied to surfaces frequented by houseflies such as light fixtures, window screens and walls. When a residual spray is used as a space spray, the large amount of toxicant becomes hazardous to the user, and may contaminate food as well.

#### **Toxicants used for space sprays**

**Pyrethrum** : This is the most common ingredient in a fly spray. At recommended dosage it is the safest toxicants and has exceptionally fast knockdown effect. It has the disadvantage of not killing all the insects knocked down.

**Allenthrin** : This chemical is often referred to as synthetic pyrethrins. It has knockdown and mortality characteristics similar to natural pyrethrins when used against flying insects in space sprays.

**Residual sprays** : DDT was considered to be very effective until 1950, but by then the flies had become resistant to this toxicant. Today the most common toxicant used is Malathion and diazinon, but the housefly is becoming resistant to these toxicants too.

**Baygon bait**: there are many fly killing insecticides in the market, however many of them do not solve the real problem of doing their work – that of bringing into contact the fly and the insecticide. The ideal answer to this is the ready-to-use Baygon Bait. It first attracts, and then kills the fly.

The baygon bait has the following advantages:

1. The dry granular form makes application very convenient for even unskilled labour to sprinkle. No material for dilution or equipment is needed

2. The application can be limited to areas of heavy infestation which are easily located. This avoids waste of material and labour.
3. Baygon also controls flies which have developed resistance to the action of chlorinated hydrocarbon and organo-phosphorous insecticides.
4. The 2% formulation of Baygon bait has a relatively low order of toxicity to human beings, yet is powerful enough to achieve extremely good results in a few minutes of application. The undisturbed bait remains effective for a very long time.

#### **Application**

Sprinkle Baygon bait wherever flies congregate. Particular care should be taken to apply the bait around refuse dumps, garbage heaps, market and slaughter house refuse, around cess pools and other similar areas.

Baygon bait can also be used by dissolving the bait in water and sprinkling or brushing the solution along the walls and on the floor avoiding direct contact with food stuff.

#### **Other methods of fly control**

The presence of houseflies is an indication of our failure to properly dispose off manure, garbage, sewage, food wastes, human excrement dead animals or other organic waste. Therefore proper environmental sanitation is fundamental to successful fly control and fly breeding can be prevented by simple practice of burying such organic matter or by drying it so that its moisture content is below that of larvae development. More importantly, flies cannot breed in thinly scattered material because it dries out and there is no fermentation. Open outdoor toilets are the biggest menace from the stand-point of fly-borne diseases. Where privies cannot be avoided, they should be made as fly-proof as possible and the refuse kept covered by daily applications of waste crankcase oil or liberal amounts of lime.

Electric flycatcher units that have UV- light emitting fluorescent tubes can do flying insect monitoring.

## Silverfish

This primitive wingless insect is so called on account of its shining grey colouration, its sinuous movements, and its quick darts to cover when it is disturbed. The silverfish is nocturnal, shuns light and is most often seen when uncovered in dampish places like the kitchen and the scullery. It is able to walk up rough vertical surfaces such as wall paper and plaster, but unable to do the same on smooth surfaces like glass and porcelain. Hence it gets trapped in wash basins and bathrooms.

The silverfish is responsible for little actual damage. It feeds on carbohydrate substances such as starch used for wall paper paste and is recorded as biting small irregular shaped holes in linen, cotton and artificial silk. Its carbohydrate diet is supplemented by protein from dead insects and glues used in book binding. Silverfish is not of great economic importance, but is an unpleasant inhabitant in the hospital and in hospital library and needs to be attended to.

### Control of silverfish

Insecticides such as DDT, chlordane, dieldrin, and lindane formerly used for the control of silverfish are no longer registered for use. Although liquids, dust or baits can be used for the control of silverfish, liquids are preferred in visible or exposed areas of the home where dusts or baits may present an undue hazard to children or pets. Dusts can be used in attics, basements, and places where their use is not potentially hazardous.

In controlling silverfish, the insecticide will be most effective when applied where the insect is most commonly seen. The silverfish commonly occurs in damp areas such as behind or beneath kitchen sinks, beneath or behind cabinet shelves, and inside cupboards and linen closets. Particular attention should be paid to inject small amounts of liquid into or dusts into crevices and cracks formed by shelves, loose moulding or floor tiles, and loose drawer glides. Silverfish are commonly found around book shelves.

These shelves should therefore receive the crack and crevice injections. Caution must be exercised when applying liquids, as the liquid may stain the books especially when water based sprays are used. When it is not possible to use either sprays or dust, then it is advisable to sprinkle bait on the shelves. A small amount of bait, bait dispenser, or bait pellets can be put in the corner of the bookshelves.

Silverfish can be easily trapped in small glass containers. Wrap the outside with tape. Silverfish can easily climb on rough surfaces, so they can climb up and fall in. They will be trapped inside because they cannot climb smooth surfaces. Drown them in soapy water. However the best preventive control is to remedy the damp conditions.

## Lizards

Lizards are typically dry land animals loving the sun and its heat. They are four-legged animals and are capable of very active movements. Usually they are very small and slender creatures. The common garden lizards have a very long tail. The “flying dragon” of India, *Draco*, is able to hop from branch to branch of the trees that it inhabits. The ordinary wall lizard or gecko, is equipped with vacuum - cupped toes which help them to chase insects along the walls and ceilings of the rooms. A very interesting protective feature of these lizards is the power to break off their tails automatically. This power of automatically breaking off parts of the body is called autotomy.

### Control

Lizard control is usually carried out in the warmer periods of the year. Lizards are cold blooded animals and hence in the cold season they tend to hibernate in the warm corners of the house to restore their body temperature. During the warmer periods they come out and can be seen crawling up and down the walls. They usually come out after dusk as they feed on smaller insects that fly around the light sources. Lizards are also found in places infested with cockroaches, as they feed them. Usually, places where lizards abound one will rarely see cockroaches.

### **Mechanical control**

Lizards are found mostly behind picture frames, curtains, shelves and window frames. They enter the house through the ventilators and windows. Hence the windows and ventilators should be properly meshed. The house should be kept clean and the suspected hiding places should be regularly inspected. As the lizards thrive on insects, the most effective way of controlling lizards is to control the insects in the hospital.

### **Chemical control**

Lizards are carnivorous and prey on other insects. Hence they cannot be controlled using bait. Chemical control of lizards involves spraying of pesticides directly on the reptiles. Chemicals such as dichlorophos, malathion etc. sprayed on the body kills the lizard instantly. However this process is difficult and tiresome in godowns and libraries where there are several lizards and lots of goods or books behind which they can hide. In such places fumigation is recommended. Fumigation is carried out using Aluminum Phosphide or any other approved fumigant.

### **Bees, wasps and spiders**

As a rule bees and wasps are beneficial insects unmindful of the activities of man, as long as man makes it a point to disregard them. However, at times the nests of these insects are made in close proximity of the hospital. Although the sting of wasps and bees is painful, for some persons it may prove to be serious. It may result in severe reaction and even death.

The honey bee is man's oldest insect friend and to this insect that we owe honey, beeswax and the fertilization of many of our crop bearing plants. The honey bee is a social insect living in colonies of 20,000 to 80,000.

As with man, the honey bee too has its periods of depression. On cloudy days when they are unable to forage for nectar, they get "frustrated" and need to "take out their frustration" on others. On these days we need to be cautious.

Most individuals who fear bees do so because of their potent sting. When the bee stings the sting, poison sac, and several other parts of the bee's anatomy are torn from the bee's body and the bee soon dies. The action of the sting takes place instantly. The sting has barbs on it and if it is not immediately removed the reflex action of the muscle attached to the sting drives it deeper into the sting permitting more time for the poison to be discharged. The pain due to the sting gets more acute as the toxin is discharged.

### **Control**

While bees are almost always mild in the swarming stage, it is still advisable to wear a bee veil and to tie the cuffs of trousers tightly to the ankle when trying to trap them. Where the swarm has settled on a limb, the limb may be jerked and the swarm collected in a cardboard box. One should be sure that the queen bee does not remain on the limb. The box is then closed and sealed to prevent the bees from escaping. After taking the box to a distance away from the swarming place it may be opened and the bees set free. If the bees have to be returned to the hive the box is completely sealed and moved at night to where the hive is located. The bees are then transferred the next morning.

A variety of insecticides are effective including bendiocard, carbaryl, diazinon, malathion and porpoxur. The dust formulation of these products is preferable to spray formulations when bee and wasp nests are in enclosed places. Dust has the advantage of being widely distributed by the insects themselves as they move around in the nest. Sprays kill only those insects which come in contact with the sprayed area. Usually one application is sufficient with activity ceasing in one or two days. Nests should be treated at night to avoid getting stung.

### **Wasps**

The wasp flies above lawns which are infested with beetle grubs, as these grubs are food for the wasp. Wasps appear in the morning and fly all day, retiring early in the evening. These wasps generally do not

attack people. You can walk safely through them as they fly around. In order to control them the lawn can be sprayed with carbaryl or the grubs controlled with chloropyrifos or diazinon.

### **Yellow jackets and hornets**

These are the real problems of the wasp world as far as humans are concerned. These social wasps live in colonies which number in thousands. These beneficial insects would not anger man except they like to live in close proximity with us. they nest in attics and voids in the walls where they can go unnoticed for a long time. They usually go outdoors in search of food, but when they are not able to get food, they come into the living area and become a threat to the inhabitants of the place. They feed in trash cans, and enjoy our food they resent our efforts to keep them away from our food. When this happens they need to be controlled.

### **Prevention**

Seal entry points. Searching for and sealing off their point of entry is the best line of defense. Check your house for unsealed vents, torn screens, cracks around windows and door frames and open dampers. Observe the flight path of a wasp, especially in the morning, which may reveal the entry/exit point.

Any food left outdoors, such as pet food, picnic scraps, open garbage containers or uncovered compost piles should be removed or covered. Wasps imprint food sources, and will continue to search an area for some time after the food has been removed. Be sure to cover drinks and open food containers, keep a lid on the compost and avoid walking barefoot near fruit trees. Remove any fallen fruit rotting on the ground.

Avoid swatting. Swatting and squashing wasps is counterproductive. When a wasp is squashed, a chemical (pheromone) is released which attracts and incites other nearby wasps. It's best to walk away from a hovering wasp.

## **Traps**

### **Make a simple water trap**

Use a razor knife to cut the top from a 2-liter plastic pop bottle. Cut just above the shoulder of the bottle. Discard the screw top. Fill with water about halfway. Coat the neck with jam, invert it and set back on the bottle. Use two small pieces of tape to hold it in place.

Wasps will go down the funnel to get the jam, but will find it difficult to get out. Most will drop into the water and drown.

A few drops of dish soap in the water will make it hard for the wasps to tread water, and will hasten their demise. (You can also add a 1/4 cup of vinegar to the water to discourage honeybees from entering the trap in search of water.)

Note: In the spring and early summer, wasps are attracted to protein-based baits; use jam or other sweet baits in later summer and into fall.

Empty the trap daily! As more wasps are caught, they create a raft on which other wasps can survive for a considerable time. Some of these wasps then find purchase on the plastic of the bottle and eventually crawl out. The longer the trap is untended, the more wasps will manage to escape, which may result in swarming.

The trap will be most effective if set about 4' above ground.

### **Control**

If the nest can be found, control is simple. Simply spray bendiocarb, carbaryl, chloropyrifos, diazinon, or resmethrin into the nest opening of the aerial nesters. Then wet the nest envelope. The nest may be removed in a day or two. For ground nests dust formulation of any of the above insecticides is preferable. Workers entering the nest will track the dust into the nest and contaminate it. The problem is that it is most difficult if not impossible to track the nest.

## Spiders

There are 35,000 species of spiders in the world. Most spiders that are a cause of concern to the public and which pest control experts are called upon to control are either large or have striking marking. The large spider is often thought to be a tarantula, and the coloured one the black widow. Only a few species of spiders reside in dwellings and a larger number stray or are carried into the houses.

### The house spider

The house spider is so cosmopolitan and so widely distributed that it is difficult to trace its original homeland. The house spider selects its web sites at random. If the web does not yield prey, it is abandoned and another site is selected. Eventually the spider end up constructing webs where food is most available.

### Control

It should be recognised that spiders are predators and require prey to survive. However spiders stray into dwellings and other indoor habitats. In windows and outdoor dwellings, spiders frequently construct webs as insect prey may be attracted by the light or brought in by the air flow. The removal of debris, lumber piles, and materials may reduce the presence of some species. Care needs to be taken when using clothing, tents, sleeping bags, and other items left unused for long periods in areas where spiders are common. Improved storage, use of air tight boxes and bags, elevation of materials off the ground, discarding unwanted items, and periodically sweeping or vacuuming under furniture and behind mirrors and pictures are all helpful control measures. Thick leather gloves should be worn when cleaning areas infested with spiders.

Spiders are easily susceptible to most modern insecticides. One consideration which is important when web building spiders are being treated is their habit of recycling silk. They chew up the old web and consume the silk. They also have powerful digestive juices which dissolve the silk. This means that a dust formulation lightly applied to the web

can be quite effective. Dust formulations are best directed against web building spiders and to entry cracks and crevices for spiders entering from outside of the structure. Space sprays are useful for spider problems in confined areas when there is no hazard to people using the structures. Residual sprays are usually applied to infested windows, corners, doorframes, roofs, and storage areas.

Dust formulations for spiders include products containing bendiocarb, diazinon, malathion and pyrethrum. Space sprays are DDVP, pyrethrum, and resmethrin. Residual formulations include those based on bendiocarb, bromine, chlorpyrifos, DDVP diazinon, malathion, propetamphos, propoxur, pyrethrum, resmethrin, and runnel. Since all the materials are effective, control depends on using a formulation that is effective against a spider species, or group that gives the best result based on the habits of the spider group.

## Bed bug

This pest has plagued man since the dawn of civilization. It is believed that the bed bug originally was associated with bats living in caves in the Middle East. It was in the caves that these parasites became associated with man.

Although this creature draws no line between the rich and the poor, its presence is more evident in the quarters of the impoverished, owing to conditions more favourable for its growth. Escaping through windows, they pass along walls water pipes, or gutters and thus gain entrance into adjoining houses. The bed bug is distributed readily in a laundry and on clothes and baggage of individuals who have visited infested areas. This pest is disseminated primarily from one house to another by stowing away in furniture and bedding that is being moved.

These creatures are very wary and cautious, and their hiding place taxes the patience and ingenuity of man. Infestations can be detected by the bloodstains on the walls or linen, and by the characteristic spots of excrement. In addition to their disgusting

appearance, the bugs make a mess and they stink. The mess is due to their frequent excretion which causes brownish yellowish or black spots on the walls near the crevices where they hide. The dark marks are due to the presence of partly digested blood in their faeces to make way for a fresh meal.

The bed bug plays an insignificant role in carrying disease to man. However they do cause nervous and digestive disorders in sensitive persons. The house in which bugs are tolerated will be a home of malnutrition, dirt and other causes of physical inferiority.

### **Control**

DDT which was once considered the best control measure for bugs is today not effective. The bugs have become totally immune to this insecticide. No matter what insecticide is used, the pest control specialist must try and find their place of hiding. He must look for any place that offers darkness, isolation and protection.

Spray of 1% malathion, 1% fenclhophos, 0.5% DDVP, and 0.5% syneigised pyrethrins have given good results. Mattresses should be treated only at the seams and should not be soaked in spray. Mattresses should be allowed to dry and should be covered when used. Several residual sprays used as water emulsions and or oil-based solutions may be used away from beds: 0.5% diazinon 2%malathion, and 1% fenclhophos. Hand spray is usually adequate and spraying should be done early in the day so that the insecticide can dry before the room is used for sleeping. Lindane, malathion, pyrethrin or fenclhophos can be used to spray mattresses. Pyrethrum treatments need to be repeatedly given on account of its limited residual action. Care should be taken not to sleep on a freshly sprayed mattress. Treatment of infant crib and bedding should be avoided.

### **Mosquitoes**

Mosquitoes received very little attention until it was found that they were the cause for malaria and other disease. It was then that a study was conducted, and

it has been found that there are 1,700 species of these insects in the world. While the mosquito is found abundantly in the tropical region, there are traces of them even in the Arctic region. Not all mosquitoes are blood suckers, and most of them are attracted to light. Hence light traps are used in order to obtain information about them. Only the females suck blood. The male feeds on pollen and nectar.

The vast majority of them prefer water but some live in salt marshes and brackish water. Still others are happiest in water contaminated with sewage. Species that breed near houses and consistently enter houses are called domestic mosquitoes. There are two main types of mosquitoes - culicine and anopheline . The culicine type are painful biters and capable of transmitting certain diseases found in tropical areas such as yellow fever, filariasis and dengue fever. The anopheline group are capable of transmitting malaria.

By and large, the mosquito constitutes a hazardous pest in the house. Many species inflict painful bites and some species do so at night. Scratching the itching bite often sets up secondary complications.

### **Control**

Various methods for the control of mosquitoes have been developed. The ideal plan calls for a complete survey of the district, the mapping of all breeding places, and the identification of the species. This is necessary in order to determine the kind of mosquitoes and their breeding habits. Control consists essentially of destroying the larvae and their breeding places. Tin cans and all objects that hold water are eliminated and the rain barrels and cisterns are treated periodically. Draining provides permanent control and is used to eliminate small pools, swamps and marshy areas; ditches, and creeks are cleaned up so that water flows evenly and does not back up. Areas of water that cannot be eliminated by draining or leveling are sprayed or dusted.

Prevention of bites is an essential feature in the prevention of mosquito borne diseases. All buildings should be screened to prevent entry of these insects.

Where there are no screens sleeping nets should be used. A mixture of indalone, Rutgers 612 and dimethylphthalate is a good general repellent. Aerosol bombs containing pyrethrum, rotenone or DDT are



*Fig 16.2 - Spraying to control mosquitoes*

used to kill mosquitoes in small areas. DDT is used to spray wells and screens, and is effective for long periods, but kills slowly, and should be used carefully. The aedes and culex remain in dark portions of the building and bite during the day. Spraying will destroy them and prevent the spread of dengue and filariasis (Fig. 16.2). Several types of small fish like *Fundulus* and *Gambusia* are useful in controlling mosquitoes and are often introduced into ponds and other breeding places.

### **Mosquito bite prevention**

- Stay in the breeze. The mosquito can fly only eight m.p.h., so it doesn't take much to waft her away
- Wear long, loose-fitting garb to keep the mosquito from biting through to skin. Earth hues disguise us in the woods; green is best, brown rates second. White masks your silhouette in the open. Blue is worst; Mosquito mistakes it for a flowering plant from which she draws sustaining juices. Red flags her in also, as well as other insects

- Keep a section of yard open to sun and breeze
- Make a fire to create a dense, cool, low-hanging smoke. When smoke hangs around, the mosquitoes don't. This should not disturb the patients
- Brush them off. Our most common mosquitoes take several seconds after landing to bite

### **Rats**

Rats, mice and squirrels are from the same family -the Rodents. This group of animals is distinguished by their teeth – large and chisel-like front teeth. They use these teeth to gnaw through any kind of hard matter - wood and cement walls. There are many kinds of rats in the world, but only two kinds of rats the pest control man deals with-the Norway rat and the roof rat. The Norway rat is so called because it is believed that they originated in Norway. They are larger, and have larger droppings than the roof rat.

Roof rats also known as black or ship rat prefer warmer climate and upper floors of buildings. The Norway rat prefers basements and often burrows around water sewers, docks or wharfs. Rodents urinate and leave droppings on the food they eat. Their hair also drops in these foodstuffs. Hence humans should not consume food contaminated by these creatures.

In order to control rats the service man must be able to predict:

1. Where the rat will be
2. When the rat will be there
3. What the rats will eat
4. How the rats react to strange items of food.

Rats are designed for darkness, and hence are active only at night. If rats are visible during the day, it means that the place is infested with rats. The rats depend largely on their sense of smell and touch. They are suspicious by nature and do not touch or go near anything unfamiliar to them. During inspection if a rat trail is found, then it is very possible that the rat will come back again to the same area.

Rats eat the same kind of food that we do and prefer fresh clean food. They eat large amounts of the food that they like. Any new food is carefully examined by them and nibbled. If they do not like it they will not touch it again. If they do, they will come back only after a period of time. Thus rats are very clever to ignore poisoned food, however attractive the food may be. In the case of poisoned food, if a few rats die after eating the food, other rats in the colony will not come anywhere near to it.

### **The house mouse**

Like the rat the house mouse is most active during the night, but unlike rats the house mouse is not suspicious; rather, it is curious.

The control technique for the house mouse is very different from rats. Hence the service person must know which of the two he is treating.

One common technique is baiting – combination of food with toxic material. In order that this is effective, the serviceman must know what the rodents are eating and where they are getting their food and water.

Another is traps. These will be effective only if they are placed in the rodents' route or trail. Elimination of rodent nesting place or hide-outs is another method of control. The rodents may be nesting outside the building, but enter the building in search of food. We must find out the point of entry. Rodents leave clues or signs in their path. Correct reading of these signs will enable these servicemen to determine the kind of rodents, sources of food and water, where the trails are located where they are entering the building and where they are nesting. In order to keep their teeth in good condition, the rodents gnaw on hard surfaces. This is a big tell tale mark to know that rodents are around. Rodents also like to touch or be in contact with walls and other surfaces as they travel. This habit of theirs leaves rub marks on the walls.

Once a rat is killed it should be picked up with a pair of tongs gloved hands or a stick. If the fleas should bite the serviceman, it will transmit the disease to him. All dead rats should be buried.

### **Making buildings rodent-proof**

1. Place a curtain wall or barrier of metal, or concrete around and below the foundation of buildings
2. Wooden floors should be replaced with concrete
3. Close all vents around pipes with brick stone or cement
4. Protect ventilator grills and low windows with galvanised steel mesh
5. Ensure that the clearance between the door and sill is not more than 3/8 “
6. Flash cellar doors with 24 gauge galvanised sheet iron
7. A metal cover with small perforations should be cemented over the drain pipes in the floors and openings around the drain
8. Circular rat guards should be placed around vertical pipes and wires to prevent rats from climbing up

### **Control**

#### **Mechanical control**

Snap traps: trapping is done when the use of poisons is dangerous. Traps can be used again and again. The bait should be tied securely to the trigger. This prevents the rodent from nibbling the bait without setting off the trigger. The bait may be food or cotton. The rat uses the cotton for nesting.

Electromagnetic or ultra sound devices: electromagnetic devices work on the principle that a magnetic field produces a barrier which has a stunning effect on the rodents. The ultrasonic device works on the principle that certain high frequencies and amplitudes of sound are irritating. Ultrasonic sounds are directional and rodents seek shelter behind solid objects. In such cases there should be alternate use of baits and traps in these shadow zones.

#### **Chemical control**

**ANTU:** this kills rats by causing acute lung dropsy and an accumulation of fluid in the chest cavity. Death usually occurs within 12 – 48 hours. ANTU should be thoroughly mixed into the bait



**Arsenic:** this chemical is odourless and tasteless, and is therefore easily taken by the rat when mixed with food. However, on account of the very same properties, care should be taken that it is not accidentally consumed by humans.

**Barium carbonate:** This too is tasteless and odourless, and inexpensive. The toxicity of this poison is not very consistent. Some rats die after consuming very little of it, while others are not affected.

**Phosphorous paste:** This material is spread between two slices of bread in the form of a sandwich. Since phosphorous glows in the dark, one needs to be careful. It dissolves easily in fats, and should therefore be used with greasy baits.

**Fluoroacetamide:** This is used for the control of sewer rats, as it can be used in water baits.

**Strychnine:** This is extremely poisonous and characterized with very rapid action. However, it has a bitter taste and is not generally taken by rats.

**Zinc phosphide:** This too is a quick killing rodenticide. However, it has a strong garlic-like odour, which alerts rats when mixed in food.

## Termites

Termites are insects that cause serious damage to wood and paper. They actually eat wood as food, and like ants, live in colonies.

There are three types of termites – the subterranean, the damp wood and the dry wood termites. The subterranean termite lives in the ground which provides the dampness required for it to stay alive. The damp wood termite needs a lot of moisture to survive, but does not need to return to the ground. It can stay in the wood which is close to the ground or near a leaking roof. The dry wood termite is often found living in desert areas. They do not need water or moisture to survive and can nest in dry seasoned wood.

### Post construction termite treatment

White ants attack a building from their colonies under its floor or from outside or both. Any treatment given

should be such that it prevents future re-infestation through the foundation. This is achieved by four technical operations.

**Structural alterations:** This includes any structural operation which renders a structure less susceptible to termite attack or which renders the immediate surroundings of a structure less favourable to termites.

**Soil treatment:** chemicals are applied to the soil immediately adjacent to or under a structure for the purpose of eliminating existing infestations and creating an insecticidal barrier.

**Foundation treatment:** this involves application of chemicals to any type of foundation for preventing access to termites.

**Wood treatment:** chemicals are applied to wooden members of the structures to render them resistant to termites.

### Pre construction termite treatment

- Treatment to the bottom of trenches upto 30cm height
- Treatment to the sides of the foundation after the backfilling is done
- Treatment to the wall and floor joints, and under the floors
- Treatment to the external perimeter of the building upto a depth of 30cm.

*For a demonstration on pest control, please watch the video of the CD.*

### Student exercise

#### Answer the following

1. *What are the common pests in a hospital?*
2. *Why is it necessary to have regular pest control?*
3. *What measures will you take to rid the hospital of cockroaches?*
4. *What measures will you take to reduce flies and mosquitoes?*
5. *How will you deal with a problem of rats?*

# CHAPTER 17 INFECTION CONTROL

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## CONTENTS

Infections and precautions in a hospital  
Housekeeping and infection control  
Infection control in the linen department  
Housekeeping in the isolation ward  
Housekeeping in the operation theatre

## GOAL

To maintain an infection-free hospital

## OBJECTIVES

To familiarise the trainees with

- Infection control, sterilisation and disinfection
- The role of housekeeping in infection control

# CHAPTER 17

## Infection Control

In order to provide better and safer hospital facilities for its patients and personnel, the Health Care Institution has to adopt a programme of infection control involving all sections of the Health Care Centre.

A satisfactory infection control programme requires the co-operation of all personnel involved with patients. Any break in technique or lapse in discipline on the part of one person can render the efforts of a number of conscientious individuals ineffective. It is only through co-operative efforts of every member of the staff that nosocomial infections can be prevented.

Nosocomial infections are defined as infections acquired during or as a result of hospitalisation. The patients neither have these infections nor are incubating these infections on admission. Generally a patient who develops an infection after 48 hours of hospitalisation is considered to have nosocomial infection. However, nosocomial infection may not manifest as disease immediately and may manifest as disease only after discharge.

### Infections and precautions in a hospital

#### Objectives of an infection control programme

1. To develop written policies and procedures for standards of cleanliness, sanitation and asepsis in the hospital
2. To interpret, uphold and implement the hospital infection control policies and procedures in specific situations
3. To provide surveillance for nosocomial infections
4. To review and analyse data on infections that occur, in order to take corrective steps
5. To develop a mechanism to supervise infection control measures in all phases of hospital activities
6. To provide for continuing education of employees on infection control aspects

Several surveys of infections in developed countries have shown that occupationally acquired infections are greatest among some categories of health care workers (HCW) such as medical and technical staff, attenders and cleaners, while such risk is low among secretarial staff. This is essentially because of their coming into contact with pathogens or infected specimens.

The most effective method of preventing occupationally acquired infections is adopting safe working practices. Based on the risk assessment of the staff, specific protection may be recommended. The assessment takes into account the pathogens they may be exposed to, the local epidemiology of the disease, the nature of specimens/infective material handled the frequency of exposure/contact with potentially infected material or patient. Staff considered to be at risk should be offered specific protection, including immunisation.

Safety education must be given at the time of employment. A video on universal precautions should be screened and the employee should secure a certain score on a questionnaire that follows. All staff should be informed of the need to report exposure to blood or potentially infectious body fluids to the duty doctor without any delay. Other health and safety education should also be carried out as appropriate.

#### Rules of universal precautions

- Consider all patients potentially infectious
- Assume all blood and body fluids and tissue contaminated with blood borne pathogens
- Assume all unsterile needles and other sharps are similarly contaminated

#### What does one need to do?

1. Hand washing: Hands should be washed if contaminated with blood or body fluids and after removing the gloves
2. All HCWs should routinely use appropriate barrier precautions when exposure to blood or

potentially infected body fluids is anticipated. These include:

- Use of gloves for contact with blood, potentially infectious body fluids, mucous membranes or non-intact skin in ALL patients. Gloves should also be used for handling items or surfaces soiled with blood or body fluids and for performing venipuncture or other vascular access procedures. Gloves should be removed before leaving the patient's bedside
  - Masks and protective eyewear should be used for procedures likely to generate droplets of body fluids or blood that could lead to contamination of eyes, nose, or mouth
  - Appropriate protective clothing such as gowns, aprons, surgical caps, and impervious shoes should be worn if there is a risk of exposure. The type and characteristics of the attire worn will depend on the task and degree of exposure anticipated. All protective clothing and equipment must be properly discarded or decontaminated before leaving the work area
3. Proper disposal of needles and sharps: Needles and sharps are the commonest mode of transmission of blood borne pathogens to HCWs. Precautions should be taken to prevent injuries by sharp instruments, especially hollow bore needles that have been used for venipuncture or other vascular access procedures
- Needles should not be recapped, bent or broken by hand. Disposal needles and other sharps should be disposed of **immediately** after use into puncture resistant containers which should be located at the site of the procedure
  - If a needle has to be removed from a syringe, use forceps or do it with utmost care
  - **Do not overfill a sharps container**
4. Disinfection of instruments: Re-use instruments, tubings, etc. only after decontamination and sterilization. Do not touch the equipment with soiled gloves or gloves used for patient care.

Surfaces of large equipment should be disinfected with 1:100 dilution of sodium hypochlorite or an approved disinfectant. Heavily soiled equipment may require additional cleaning with detergent and water. Gloves must be worn while cleaning the equipment

5. Waste Disposal : Non plastic items soiled with blood, bloody drainage, or potentially infected material must be placed in the yellow biohazard plastic bags. Items that may tear the bag must not be put into the bag. Excreta, blood or body fluids must be emptied down the drain with adequate amount of water
6. Linen: Linen soiled with blood or potentially infectious body fluid must be soaked in Lysol for 60 minutes, placed in a leak proof bag and sent to the laundry
7. Spill clean up: Cover spills of blood or body fluids with Dakins solution or 1:10 to 1:100 dilution of freshly prepared sodium hypochlorite or household bleach for 10 minutes. Then mop dry. A second decontamination may be done if required. Wash the area with detergent and water. Gloves must be worn during cleanup and decontamination procedures

### Disinfection and sterilisation

Sterilisation is defined as a process where all microbes are removed from a defined object, inclusive of bacterial endospores. Disinfection is a process where most microbes are removed from a defined object or surface, except bacterial endospores. Certain chemicals are capable of sterilising an object if exposed for long periods of time, and serve as disinfectants at shorter exposure time. However, a common practice is to call all chemical agents as disinfectants - a misnomer.

Disinfectants can be classified according to their ability to destroy these categories of microorganisms. The agent which destroys only vegetative bacteria is termed a low level disinfectant. If the agent is capable of rendering myco-bacteria non-viable it is termed as intermediate level disinfectant. It is a safe assumption that all the other categories of microbes which are

classified more susceptible are also destroyed if efficacy against myco- bacteria can be demonstrated. High level disinfection is in other words sterilisation wherein all microbial life is destroyed inclusive of endospores.

## Housekeeping and infection control

The following procedures need to be followed by the housekeeping department in order to maintain a zero percent infection rate in the hospital:

1. The floor should be cleaned at least 4 times in 24 hours. Detergents and copious amount of water should be used during one cleaning. Lysol or any other equivalent disinfectant may be used to mop the floor for the remaining times
2. The walls are to be washed with a brush, using detergent and water once a week
3. High dusting should be done once a week with a wet mop
4. Fans and lights should be cleaned with soap and water once a month. This should be handled by the electrical department
5. All work surfaces are to be disinfected by wiping with 7% Lysol and then cleaned with detergent and water twice a day
6. Cupboards, shelves, beds, lockers, IV stands, stools and other fixtures are to be cleaned with detergent and water once a week
7. Curtains should be changed once a month or whenever soiled. These curtains are to be sent for regular laundering. In certain high risk areas such as the ICU and transplant units more frequent changes are required
8. Patient's cot is to be cleaned every week with detergent and water. 7% Lysol is to be used when soiled with blood or body fluids. In the isolation ward, cleaning is to be done daily
9. Store rooms should be mopped once a day and high dusted once a week
10. The floor of bathrooms is to be cleaned with a broom and detergents once a day. For disinfection 7% Lysol can be used

11. Toilets are cleaned with a brush using a detergent twice a day. Disinfection may be done using 7% Lysol. A stain removing liquid can be used once a month to remove stains
12. Wash basins are to be cleaned with vim powder every morning and with the stain removing liquid once a month
13. Regular AC maintenance is a must. The AC section should draw up a protocol for this

## Infection control in the linen department

- Bed linen is to be changed once in 2 days and whenever soiled with blood and body fluids
- Patient's gown is to be changed every day and whenever soiled with blood and body fluids
- Dry dirty linen is to be sent to the laundry for regular wash
- Linen soiled with blood or body fluids and all linen used by patients diagnosed to have HIV, HBV, and MRSA is to be decontaminated in the ward by soaking in 7% Lysol for at least 1 hour and then sent to the laundry

## Rubber goods

Rubber goods are to be cleaned with soap and water, disinfected with 7% Lysol, dried in the sun, sprinkled with powder, rolled and stored.

## Thermometer solution

Separate thermometers are recommended in intensive care units, nurseries and transplant units. In areas where a common thermometer is used, it is disinfected between patients by immersing it in thermometer solution (containing alcohol) for 5 minutes. After disinfection, the thermometer is washed and kept dry or immersed in alcohol. Empty the water from the container when not in use, and keep it dry. The thermometer solution should be changed once in three days. The date of change of the thermometer solution should be written on an adhesive tape which is stuck to the tray.

### Miscellaneous items

K basins, bed pans, urinals, etc. are to be cleaned with vim powder and water and disinfected with 7% Lysol.

Metal buckets are to be cleaned with vim powder every week. Dustbins are to be cleaned with detergent and water every morning and then with dettol solution.

### Housekeeping in the isolation ward

#### Before admission

The admitting physician should inform the sister in charge of Isolation Ward at least one hour prior to admission, mentioning the diagnosis, sex and the general state of the patient.

#### Pre-requisites for Isolation

- A source of running water should be available at the entrance of each room to facilitate hand washing
- The mattress and pillow should have an impervious cover such as mackintosh so that it can easily be damp dusted
- Clean gowns should always be available
- Separate urinals, bed pans and thermometers are to be used for each patient
- A bin lined with appropriate colour coded plastic cover should be available in each room for disposal of medical waste
- Rooms should be isolated according to disease conditions and should be well lit

#### Cleaning procedure for isolation ward

- a. Linen should be stripped from the bed taking care not to shake the linen during this action. The linen should then be soaked in 7% lysol solution before sending to the laundry
- b. All other articles like IV stands, and furniture should be cleaned with detergent and disinfected with 7% Lysol solution
- c. Walls should be cleaned with detergent and disinfected with 7% lysol

- d. The bathrooms should be cleaned with detergent and disinfected with 7% Lysol

#### At discharge (terminal disinfection)

- Keep an ultra-violet light in the room facing each direction for half an hour in a 2 bedded room and 1 hour in a 4 bedded room
- The pillows and mattress are to be cleaned with detergent, disinfected with 7% Lysol and dried in sunlight for 24 hours
- Bed sheets, curtains, gowns and dusters must be removed, soaked in 7% Lysol for one hour and then sent to the laundry
- After disinfection, wash the room, walls, windows, doors, bathrooms, sink and furniture with soap solution after doing thorough high dusting in that cubicle
- Soaked bed pan, urinal, kidney basin in Lysol solution for one hour, wash with detergent and dry it under sunlight
- Bath basins, multi-bin, bucket, jugs, mugs are washed with solution and dried in sunlight
- Rubber sheets are to be cleaned with Lysol, dried, powdered and replaced
- Soak the thermometer tray and its contents in 7% Lysol after cleaning. Utensils used by the patient are washed, boiled and replaced

### Housekeeping in the operation theatre

Theatre complex should be absolutely clean at all times. Dust should not accumulate at any region in the theatre.

Soap solution is recommended for cleaning floors and other surfaces. Operating rooms (ORs) are cleaned daily and the entire theatre complex is cleaned thoroughly once a week.

#### Before the start of the first case

Wipe all furniture, equipment, room lights, suction points, OR table, surgical light reflectors, other light fittings, slabs with soap solution. This should be completed at least one hour before the surgery.

## After each case

### Linen and gloves

Gather all soiled linen and towels in the receptacles provided. Take them to the service corridor (behind the theatre) and place them in trolleys to be taken for sorting. The dirty linen is then sent to the laundry. Use gloves while handling soiled linen.

### Instruments

Used instruments are cleaned immediately by the scrub nurse and the attender. Reusable sharps are decontaminated in Lysol / hypochlorite and then washed in the room adjacent to the respective OR by scrubbing with a brush, liquid soap and vim. They are then sent for sterilization in the TSSU. In the septic theatre alone the instruments are sent in the instrument tray for autoclaving. Once disinfected, they are taken back to the same instrument cleaning area for a manual wash described earlier. They are then packed and re-autoclaved before use.

### Environment

Wipe used equipment, furniture, OR table, etc. with detergent and water. If there is a blood spill, disinfect with sodium hypochlorite before wiping.

Empty and clean suction bottles and tubing with disinfectant.

### After the last case

The same procedure as mentioned above is followed and in addition, the following are carried out.

- Wipe overhead lights, cabinets, waste receptacles, equipment, furniture with a detergent
- Wash floor and wet mop with liquid soap and then remove water and wet mop with a disinfectant solution
- Clean the storage shelves, scrub and clean sluice room

### Weekly cleaning procedure

- Remove all portable equipment
- Damp wipe lights and other fixture with detergent

- Clean doors, hinges, facings, glass inserts, and rinse with a cloth moistened with detergent
- Wipe down walls with clean cloth mop with detergent
- Scrub floor using detergent and water
- Stainless steel surfaces - clean with detergent, rinse and clean with warm water
- Replace portable equipment: clean wheel castors by rolling across toweling saturated with detergent
- Wash (clean) and dry all furniture and equipment. (OR table, suction holders, foot and sitting stools, Mayo stands, IV poles, basin stands, X-ray view boxes, hamper stands, all tables in the room, hoses to oxygen tank, kick buckets and holder, and wall cupboards)
- After washing floors, allow disinfectant solution to remain on the floor for 5 minutes to ensure destruction of bacteria
- Do not remove or disturb delicate equipment
- While wiping cabinets, see to it that the solution does not get inside and contaminate sterile supplies
- Operating rooms and scrub rooms should never be dry dusted

### Maintenance and repairs

- Machinery and equipment should be checked, cleaned and repaired routinely on Sundays
- Urgent repairs should be carried out at the end of the days list
- Air conditioners and suction points should be checked, cleaned and repaired on a weekly basis.
- Preventive maintenance on all theatre equipment is to be carried out every Saturday, and major work to be done at least once a year.

### Student exercise

#### Answer the following

1. *What are the steps needed to be taken to keep the hospital infection free?*
2. *What measures does housekeeping take in the OT?*
3. *What is the role of housekeeping in keeping the hospital free of any infection?*

## CHAPTER 18 GENERAL MAINTENANCE DEPARTMENT

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### GOAL

Maintenance of electrical equipment  
Maintenance of taps, pipes and drains  
Maintenance of wooden fixtures / furniture

### GOAL

To ensure smooth running of the hospital by carrying out regular maintenance and repair

### OBJECTIVES

- To teach the trainees
- How the maintenance of electrical equipment is carried out
  - Maintenance of plumbing works
  - Maintenance of wooden furniture and fixtures



## CHAPTER 18

# General Maintenance Department

For the hospital to function smoothly it is necessary to prevent breakdown of infrastructure or try to keep breakdown at a minimum. This includes civil work, plumbing, carpentry and electrical. The housekeeping department therefore has to work closely with the General maintenance department

### Maintenance of electrical equipment

The maintenance of the electrical equipment is the most important job of the housekeeper. Electrical fittings and equipment such as the fans, lights, refrigerators, and others are used daily in all the areas of the hospital. It is therefore essential that they

should function well. Any problem with electrical fittings causes a lot of discomfort to the patients and the staff. Hence it is absolutely essential for the housekeeper to visit the patients' rooms and the office sections every day to check if the electrical fittings are functioning properly. If the light is flickering, or not functioning in any room, if the fan or AC is not working, or is making a sound when switched on, it should be noted down immediately in the handbook, mentioning the room no, area of the hospital and the defect. These details should be given to the Electrical maintenance department and the housekeeper should ensure that immediate action is taken.

### Format of the maintenance of electrical equipment/fittings

Sr.no.	Date	Room no	Defect	Date of registration	Date of completion	Signature of housekeeper	Signature of electrician

### Fittings and equipment the housekeeper should check and record in the maintenance register

#### In the patients' rooms

- Operate the switches on the switch board and ensure that they are working. Note down any fault in the register

If the tube light is not functioning properly, the housekeeper should try and adjust the starter. If it still does not function, then have the tube replaced. If the light still doesn't function, have the choke replaced

- Check the night lamp. Replace it if it is not functioning

- It is important to ensure that the fan is working. If there is an unusual sound while functioning, make a note and get it repaired. Also check the regulator and get it repaired if needed
- If the room is air conditioned, ensure that the AC is working soundlessly. Any disturbance should be noted down and rectified immediately

#### Other equipment

- If water filled and kept in the refrigerator does not chill in the stipulated time, the refrigerator should be checked and the fault should be corrected. This can be done with the help of the general maintenance department

- The water heater or geyser is a dangerous appliance. It is very important to handle this with care. It is essential to find out if this appliance gives a shock when it is functioning. Wearing footwear is a must when checking this out. Do not touch it with wet hands. Check if it heats the water in the stipulated time. If there is any defect, it should be noted down in the register and immediate action should be taken to rectify the fault
- Similarly, the vacuum cleaner and the stain removing/polishing machine should be checked out, and any faults should be noted down and rectified with the help of an electrician

### **Maintenance of taps, pipes and drains**

Water required for the bathroom and the toilets is supplied through the pipes. Taps may leak since they are opened and closed several times during the day, and this damages the washers. If this is not rectified immediately, not only is water wasted, but the salt deposits from water will leave stains on the floors and in the wash basins. Saving water is an important task of the housekeeper. The method of using water without wastage is explained in this lesson.

#### **Maintenance of taps**

- Close the taps tight to prevent water from leaking
- If the water continues to leak even after closing the tap tight, open the tap and check the washer. If required, change the washer
- If the tap still continues to leak, check the grooves in the tap, and if they are worn out, have the tap replaced

#### **Maintenance of pipelines**

The pipeline is most important for water supply. We use either iron pipes or PVC pipes.

- Pipelines are connected along the wall to the toilets and bathrooms. Elbow clamps, unions and threads are used to make these connections. Do

not hold the pipes when going up and down the stairs. Do not shake them or use them as supports when standing near them. This will make them loose and weak. If pipes have come off the wall due to the clamps being broken, have them fixed again with the help of a plumber. Pipelines connected at ground level should not be trampled upon

- Pipelines are usually straight. If they have to be taken around the curves of the buildings, they are connected with the help of elbow fittings. Sometimes these fittings become loose, and water starts to leak. This should be rectified immediately
- If the taps are connected very close to the wall on account of short pipes, water will be wasted. Due to leakage of water and the closeness of the tap to the wall, there will be stains on the walls. Hence taps should always be fitted leaving enough room between the tap and the wall

### **Problems that develop in a wash basin**

#### **Waste coupling**

- If the waste coupling is broken or the groove is worn out, the coupling should be changed
- If the sieve is worn out, the waste water will remain at the bottom and water cannot flow into the inner pipe. It therefore starts to flow out. To avoid this, a new coupling needs to be fitted

#### **Waste pipe**

The wash basin should be checked for any leak in the pipe through which the waste water goes down. If a leak is found, try and tighten the pipe fitting. If the leak still persists, check if there is a crack in the groove. If so, replace the pipe.

### **Problems that arise in a western closet**

- If there is a leak in the flush tank, it means the washer inside the tank is not functioning. The washer therefore needs to be replaced

- There is a nylon rope present on the flush tank between the handle and the valve. If this rope is worn thin it has to be replaced
- Since the handle of the flush is being used several times a day, and by so many different people, it may break and stop functioning due to rough use. It needs to be replaced
- A block in the plastic bend due to salt accumulation can be removed using hydrochloric acid
- In course of time, due to wear and tear, the cup in the bend may break and will have to be replaced
- The bend in the flush tank should be replaced when it has become old
- If the flush tank overflows the valve needs to be checked, and replaced if required

### **Maintenance of wooden fixtures/ furniture**

The proper maintenance of wooden fixtures/ furniture in a hospital is very important, and is second only to maintaining electrical equipment. Similar to noting down the defects in the functioning of the electrical equipments in all the areas of the hospital and in the patients' rooms, it is important to note down the defects, if any, in the doors, windows, tables and chairs. This should be done regularly.

#### **Maintaining wooden fixtures in a room**

- When opening and closing doors pay attention to the hinges. If the hinges are squeaking, get it rectified immediately. The squeaking noise irritates the patient and aggravates his pain
- Check the hooks, latches and door stoppers that prevent the doors and windows from banging.

If any of these is broken, have it replaced immediately to prevent any damage to the glass windows and the door hinges

- Check the furniture such as tables and chairs in a room. If any repair needs to be carried out, attend to it immediately. If they are irreparable remove them from the room and replace them. The condemned furniture should be put into the store room till the hospital decides what to do with it.
- Check the window frame, the glass pane, and the windows for damage. If the glass is broken, have it replaced
- The lower portion of the bathroom doors gets wet, and hence the wood decays. Check these regularly and have them repaired. It is advisable to nail an aluminum sheet to the lower half of the door and have it painted. This will prevent it from decaying
- Check the latches and the handles of the doors for any repair that may be needed
- It is not enough to check and note down the damage. It should be repaired immediately by calling the carpenter. This is the responsibility of the housekeeper

### **Student exercise**

#### **Answer the following**

1. *Why is maintenance important for a hospital?*
2. *What are the things we need to look into to ensure smooth functioning of electrical items?*
3. *What are the things needed to be done to ensure no problem in plumbing?*
4. *How will you ensure that the wooden furniture and fixtures are well maintained?*

# CHAPTER 19 CREATING A GOOD AMBIENCE IN THE HOSPITAL AREA

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## CONTENTS

Factors that decide the interiors  
Components that make up interiors  
Colours  
Making beautiful articles for interiors

## GOAL

To create a pleasant ambience

## OBJECTIVES

- To help the trainees
- To be creative by training them to make articles for interior decoration at affordable price
  - To cultivate an aesthetic sense in the trainees

## CHAPTER 19

# Creating a Good Ambience in the Hospital Area

Creating a pleasant and classy ambience is also one of the several jobs of the housekeeping department. This is not easy and requires a good eye for detail. A person who is artistically inclined can turn an ordinary room into a beautiful one at very little cost. Some people are naturally aesthetic; others have to cultivate the art. While it may be said that this work is an art, it is not difficult to learn what goes into creating a pleasant atmosphere. Following certain rules, and being imaginative, one can make a room aesthetically pleasing to the eye. Pictures, colours, show pieces and curtains can beautify a room. Carpets, lamps, tables and chairs should be collected in order to arrange a room. The skill of the housekeeper lies in positioning these things appropriately to lend grace and beauty to a room.

### Why do we need to decorate the interiors?

- Adds beauty and colour to the room : A room that is tastefully done is certainly pleasing to the eye
- Gives the room a personal touch: When care has been taken to decorate a room, it adds warmth to the room. A pleasantly decorated room helps the patient to recover faster
- Colours and lighting affect the mood and behaviour: Colours have a definite effect on the mood of the person in the room. Hence this aspect of interior decoration has to be very carefully looked into

### Factors that decide the interiors

#### Purpose of the building

The interiors differ from building to building. The interiors of a hotel will differ from that of an office building or a hospital.

#### Geographic and climatic factors

The colours, curtains, tapestry, etc. will depend on the place and the climate. eg. we will not use a wall carpet in a place that has a hot climate.

#### Tradition

This plays a vital role in planning the layout.

#### Availability of materials

It is easier and more economical to use materials locally available. Hence plans should be made accordingly

#### Socioeconomic conditions in the area

The building should fit in with the general economic conditions of the area. A very ornate building in an area that is economically backward will look out of place.

### Components that make up interiors

#### Furniture

Selection of furniture should be based on

- Size of the room  
A large room with very little furniture looks bare and unseemly. Similarly a small room with large pieces of furniture or too much furniture looks cluttered
- Comfort  
Furniture should be comfortable rather than ornate or fashionable. When buying furniture, thought should be given to the fact that people of different heights and girths, and different backgrounds will be using the room
- Affordability

## Draperies

Draperies, which become a part of the background contribute to the appearance in the following ways:

- Blend various colours used on the walls, floor and furniture
- Soften or accentuate the lines of a room
- Can be used to offset architectural problems

## Carpets

Carpets lend elegance and class to a room. A large carpet or a number of small rugs tend to break up the floor area and reduce the room space. However, in the end they can bring colour, pattern and texture to an otherwise plain floor. A patterned carpet is usually chosen for larger rooms with plain walls.

When selecting a carpet the following points need to be kept in mind:

- The colour of the carpet should match the walls and the table in the room
- A carpet with a lot of design is not suitable for a hospital room. The carpet should be simple with very little or no design

## Maintaining a carpet

- When the carpet is new, small bits of thread will fall from it when brushing or cleaning. Hence the cleaning should be done carefully and gently
- If any thread is protruding, it should be carefully cut with scissors, and not pulled out by hand
- The furniture on the carpet should be gently lifted when moved, and not dragged. Dragging will spoil the carpet

## Pictures/Photos

Pictures and photos can be used to add colour to a room. The colours in a picture can be used to complement another colour. The size of the picture depends on the wall space available and the general décor of the room.

Pictures and photos usually are used to

- Enhance the walls

- Can be used as fillers on shelves

In order that the photo/picture fulfills its purpose, care should be taken when framing it. The mount and frame should be carefully chosen, not only to make the picture attractive, but to go with the walls or shelves

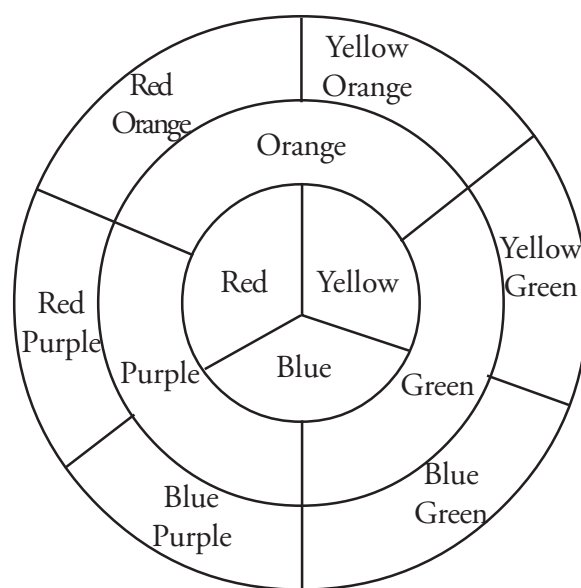
## Colours

Colours play a vital role in interiors, as colours have healing as well as disturbing effects. They can be introduced into a room by the use of pictures, cushions, lamp shades, flower arrangements, and other accessories like waste paper baskets, and ash trays.

- Red, peach and yellow give an illusion of warmth. They also make the room seem smaller
- Blue and green appear cool, and make the room seem larger
- Red and gold are associated with formal occasions
- Purple is associated with status
- Black is looked upon as a colour of death and depression

Hence colours have an effect on emotional health, and affect both mood and behaviour

## Colour wheel



## Colour combinations

### Monochromatic colour harmony

This makes use of values and intensities of a single colour eg. light blue, medium blue and dark blue. Sometimes an accent colour (contrast) is added in the form of pictures, pillows, or drapes. Eg. with blue (cool colour), the accent may be red or yellow (warm).

### Complementary colour schemes

This a combination of any two complementary colours (colours opp. to each other on the colour wheel). Complementary colours are best used in unequal amounts - one colour is dominant and the other is used as accent. eg. bright red and bright green cannot be used in equal amounts. They must complement each other.

### Analogous colour harmony

This is achieved by using colours adjacent to each other on the colour wheel. This is pleasing to the eye as they are related by a common colour.eg. blue, blue-green and green.

## Lighting

Artificial lighting is an important factor of designing.

- The type of lighting and the intensity of lighting in an area depends on the specific function of the area
- The type of fixtures used should be such that they are easy to clean

## Decorative pieces

- These are used to enhance the look of shelves, corners and table tops
- They must have a theme eg. one should not mix terracotta items with marble statues, or cut glass
- They should not clutter a shelf or the room. They should be well spaced out, and blend in with the rest of the room

## Flower arrangement

Of all the various skills that go into making a room look beautiful, flower arrangement is the most important. Flowers and indoor plants add colour and beauty to a room. Flower arrangement is an art, but can be learnt. The arrangements may be circular, semi-circular, or triangular.

- The vase should be positioned in a prominent place
- The table cloth should be selected to blend well with the colour of the vase and of the flowers
- The flowers should be 1.5” above the neck of the vase
- Adding a pinch of salt and sugar to the water keeps the flowers fresh
- A wooden stick helps climbers (money plant) to grow in the direction we want
- Before placing the flowers in the vase, cut the stem in a slant and immediately put it in water. This helps the plant take in water and remain fresh. Never break the stem or bend it
- Wash the flowers and check for worms and insects before arranging them
- Do not keep the flower vase directly under the fan or directly in the sunlight. The flowers will wither and die

## Making beautiful articles for interior decoration

Decorative articles play an important role in the interior decoration of a room. They may be wooden, clay or metal articles with minute artistic work done on them. Simple clay articles can be decorated and used to beautify a room by

- Pasting figures
- Egyptian artifacts
- Printing
- Glass and “chamki” work

## Pasting figures

Using our imagination we can make figures and paste them on the vases and pots. This enhances the beauty of these objects.

### Materials

Mud pot, white cement, fevicol(glue), enamel paint, varnish, kerosene, artist's paint brush (no. 0 or no.1)

### Method

- Rub the outside of the pot with sand paper to make it smooth
- Prepare dough with white cement, water and a little fevicol
- Prepare figures using this dough. This should be done before the dough becomes dry and hardens. You can prepare flowers, dolls, animals or birds with the dough
- Paste these figures on the pot using fevicol
- After these images dry, paint them using the artist's paint brush with vibrant colours
- Paint the pot with black enamel
- Varnish the pot after the paint has completely dried up. This helps to make the pot look more attractive
- The pot is now ready for use as a decorative piece or a flower pot in any room
- Ensure that the flowers put into the pot do not clash with the colour of the figures painted on the pot
- These would look very good in the reception area, classrooms or the dining hall

## Egyptian artifacts

This type of hand work helps to convert a simple and inexpensive mud pot into a beautiful and expensive looking pot.

### Materials

White cement, fevicol (glue), plastic cover, rubber band, big flower pot, enamel paint, metallic copper,

gold and bronze fabric paint, varnish, kerosene, paint brush (no.0 or no.1)

### Method

- Make the large mud pot smooth by using sand paper
- Mix white cement, water and fevicol to form a batter of the consistency of idli(pancake) batter
- Pour this batter into a plastic bag
- Twist and fold the plastic bag to form a cone and close it with the help of a rubber band.
- Cut a small hole at the apex of the cone
- Using the cone like in applying mehendi or icing on a cake, use your imagination and draw images on the pot
- After these images are dry, paint the pot using the black enamel paint
- Then brush the pot with metallic bronze or gold paint
- After the paint dries, varnish it
- The plain mud pot has been transformed into a beautiful and seemingly expensive bronze one

## Printing

### Materials

Mud pot, sand paper, lady's finger, enamel paint, varnish, blade, paint brush (no.1)

### Method

- Make the outer part smooth with the help of sand paper, and then paint it with black enamel paint
- Cut the lady's finger with a blade, into two parts.
- Take one part and push the seeds inside using a stick
- Now dip this in metallic gold paint and stamp it on the pot
- Do this several times till the pot is printed all over
- Now varnish the pot



**Glass and “chamki” work****Method**

- Smooth the pot with the help of sand paper
- Paint the pot neatly with black enamel paint
- Using our imagination and paste the mirrored glass or “chamki” to form patterns on the pot

**Key points to remember**

- *The pot should be evenly painted. Move the brush either length wise or breadth wise. If the direction is not maintained, it will show in broad lines and will look ugly*
- *It is important to wash the brush in kerosene after use. Otherwise the bristles will stick together and the brush will become useless*

*For a demonstration on painting and decorating flower vases, please watch the video of the CD.*

**Student exercise****Answer the following**

1. *Why is interior decoration important in a hospital?*
2. *What are the factors on which interior decorations depend?*
3. *What are the components that play an important role in decorating the interiors?*
4. *Explain the effect colours have on the mood and behaviour of people*
5. *What are the points to be kept in mind when arranging flowers?*
6. *Explain any one method of decorating a simple clay pot.*

## CHAPTER 20 HORTICULTURE AND GARDENING

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### CONTENTS

Cultivating a garden  
Maintenance of a garden  
Expanding the garden  
Plants in interior decoration

### GOAL

To create pleasant hospital grounds by gardening

### OBJECTIVES

- To teach the trainees how to
- Plan a garden
  - Mix manure
  - Expand an existing garden
  - Maintain a good garden
    - Watering
    - Pruning and shaping trees and plants
    - Weeding
    - Cleaning
  - Maintain indoor plants

## CHAPTER 20

# Horticulture and Gardening

### Horticulture and garden maintenance

Cultivating and maintaining a garden is an art. A garden is not only aesthetically pleasing to the eye, but plays an important role in providing a clean and fresh environment. With the rising pollution a peaceful garden can visually dissociate the hospital from the urban grime. The trees and plants create a green landscape, which is the most soothing colour to the eye and can help the patients relax. Maintaining a fertile and beautiful garden requires hard work, meticulous care and attention. However, gardens can also be beneficial to the gardeners since the act of gardening has been known to relieve stress.

### Equipment and materials

- Flower pots
- Red mud
- River sand
- Hose pipe
- Watering can
- Manure
- Sticks and poles required to support creepers
- Pesticides
- Stick broom
- Scissors

### Cultivating a garden

A garden is a place where there are flowers, trees, plants, creepers and grass. There are two types of gardens - a flower garden that lends beauty and a kitchen garden where vegetables are grown. A hospital can have both the gardens - one in the front to add

beauty and the second on the backside to supply the necessary vegetables to the kitchen. The plan and position of the garden should be settled before the building is constructed.

### Selection of trees, plants and creepers

Selection of plants needs to be given a lot of thought. The type of trees, plants and creepers should be appropriate and should suit the surroundings.

### Trees

Trees that will provide more shade and trees that bear flowers throughout the year should be planted outside the hospital and near the compound wall.

### Plants

Plants can be reared in two ways - in the soil, and in pots. Crotons and flowering plants can be planted on both sides of the pathway leading into the hospital, either in the ground or in flower pots.

### Creepers

Flower bearing creepers should be selected and planted near the compound wall to give them the required support. The newly planted creepers need to have their tender stems supported by a stilt so that they grow vertically. This is required until they get firmly fixed in the soil, after which they can be supported by the wall.

### Lawn

A beautiful green lawn can be planted at the entrance or on both sides of the pathway. The garden will be more captivating and attractive if colourful flowers are planted along the edges or in the centre of the lawn.

## Maintenance of a garden

### Fertility of the soil

After selecting the trees, plants, and creepers, for the garden, check if the soil is fertile. Spread the soil evenly. When doing so, remove any hard rock or plastic bags that may be embedded in the soil. If the soil is not fertile, replace it with a mixture of red soil and sand.

### Method of arranging the plants

Dig a pit one foot deep and one foot wide, and let it dry for a day. On the next day put a layer of sand at the bottom of the pit. Now mix red soil, sand and natural manure in the ratio 1:2:2 and put this mixture into the pit that has been dug. Plant the saplings firmly into it and pour some water. Do not pour excess water. After 40 days the sand at the bottom of the pit should be turned properly. Do not use manure for 2 months. After the plant has taken root, and started to grow, manure mixed with water should be poured once a month. Care should be taken not to pour manure on the roots. If the plant has to grow well, the weeds around the plant should be pulled out. Cow dung is not good manure. Worms grow out of it, and destroy the plant.

### Watering the garden

During the summer, plants need to be watered twice a day, in the morning and in the evening but not in the afternoon. When watering the plants, care should be taken not to pour water on the roots. Dig a shallow canal around the plant, a little distance away, and pour water into this canal. Care should be taken not to pour excess water. Do not forget to sprinkle water on the leaves. The leaves need to be regularly cleaned, as dust blocks the pores.

During winter, plants need far less water. Care should be taken to see that water does not stagnate near the plant. This will cause the stem and the roots to rot and the plant will wilt and die.

For pot plants, a hole needs to be made at the bottom of the pot to allow the excess water to drain out.

### Adding manure

While adding manure, the liquid manure should not come in direct contact with the stem and the root. It can be sprinkled or poured at a distance of one foot. Natural manure is preferred to chemical manure.

### Preparing natural manure

Dig a small pit. Put the dry leaves and stems which are swept from the garden into this pit and leave them there for a few days. This will form into natural manure.

### Weeding

Weeds are the parasite plants that grow on and around the plants. If they are not removed immediately, the manure and water meant for the plant is used by the weeds, and the plant gradually grows weak and dies.

### Pruning and shaping the trees, plants and creepers

When the trees plants and creepers have grown, they need to be pruned and shaped to look neat. In the process, the plants can be shaped to resemble peacocks, elephants, deer, or birds. This adds to the beauty of the garden.

### Cleaning a garden

The garden should be kept neat and clean, if the garden is to look beautiful, and remain healthy. The dried leaves and fallen twigs should be swept and put in an appropriate place to form natural manure which can be used later.

### Expanding the garden

New plants and creepers can be grown to expand the garden by means of seeding, grafting and cutting.

## Seeding

The seed bearing plants should be nurtured carefully and seeds should be collected. These can be sown to bring up new plants.

## Grafting

The mature stem of a rose, or jasmine plant should be bent and diverted towards another pot or a polythene bag filled with fertile soil. It should be inserted and covered with soil so that it is not seen. After some days the new plant will take root. When this happens, the stem should be cut off from the mother plant without disturbing the new plant.

## Cutting

A matured stem of a plant can be cut and planted in another pot or another place in the soil to raise a new plant of its type.

## Plants in interior decoration

Pot plants and creepers play an important role in interior decoration. Plants lend beauty and a natural atmosphere to a room. It requires skill and effort to maintain these plants and keep them looking fresh.

## Method to maintain indoor plants

- Place a square stone or a plate under each flower pot. This will prevent stains on the floor caused by excess water flowing out
- The plants should be kept in moderate sunlight at least once a week
- Remove the dry leaves that fall into the pot
- Sprinkle water on the leaves regularly to remove the dust collected there
- The plants should be provided with the required manure from time to time
- To keep the pots looking clean and new, paint them from time to time



Fig 20.1 - Potted plant inside a hall

## Key points to remember

- Do not put manure directly on the stem or the roots of the plant
- While watering a plant do not forget to sprinkle water on the leaves to keep them free of dust
- It is important to arrange the plants, creepers and the lawn so that they are not trampled upon or brushed against by the patients when walking into the hospital

*For a demonstration on gardening, please watch the video of the CD.*

## Student exercise

### Answer the following

1. How does the garden enhance the ambience in a hospital?
2. What are the things you need to keep in mind when starting a garden?
3. How is natural manure prepared?
4. How will you maintain indoor plants?

# CHAPTER 21 HOSPITALITY AND EVENT MANAGEMENT

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## CONTENTS

Administration  
Publicity and promotion  
Financial management  
Accommodation and meals  
Post-conference wrap-up

## GOAL

To ensure that all conferences and workshops are well-planned.

## OBJECTIVES

To teach the trainees  
- How to plan for any event in the organisation

## CHAPTER 21

# Hospitality and Event Management

As described in the earlier chapters, the housekeeping department has so many multiple functions to perform. Another major role the department plays is playing host to the various guests and volunteer workers who visit the Hospital and in making appropriate arrangements for conferences, meetings and workshops that are a regular feature in the Hospital. The word “appropriate” is to be noted. Each event is different, and we need to create a service tailored to the needs of the particular event.

Given below is the complete exercise that an organisation needs to go through in order to conduct an event successfully. The housekeeping department may be required to help the various departments in coordinating the work. Depending on the size and complexity of the event, the housekeeping department may need to work in all of the areas listed or in just a few. Hence it is important that a housekeeper is familiar with what goes into organizing an event.

### Administration

There are hundreds of details that must be worked out to properly plan, schedule, and administer an event. No job is too big, no detail too small, to merit attention. We need to:

- Develop a plan that will help to coordinate all programme details by assigning specific responsibilities to individuals.
- Schedule appropriate meeting and event space in the Conference Hall, the Auditorium or other rooms in campus, or at off-campus locations. Keep a welcome board in the entrance (Fig. 21.1).
- Manage the entire conference registration process, including:
  - Collecting and processing registration fees
  - Sending pre registration receipts and confirmation letters

- Staffing the conference registration desk
- Preparing conference registration packets that contain the conference programme, information about the organisation, appropriate maps, information about restaurants, and sightseeing ideas
- Preparing and distributing conference name badges
- Prepare appropriate signs for the event
- Prepare and distribute a roster of attendees



Fig. 21.1 - Welcome board for the participants

- Arrange for appropriate entertainment
- Provide comprehensive on-site management for the entire conference
- Provide up-to-the-minute enrollment tracking

## Publicity and promotion

An important factor in guaranteeing success for the event is to reach the proper target audience with appropriate publicity and promotional materials. As part of the total publicity and promotion plan for the conference, we need to:

- Produce effective brochure copy that will reflect the uniqueness of the programme and provide the necessary information to potential participants
- Design the appropriate graphics to complement the brochure copy
- Print conference brochures and fliers
- Create a mailing list to reach the potential registrants and maintain this list for future use
- Mail printed brochures
- Develop a Web page for the programme
- Arrange for news releases about the programme

## Financial management

It is important to draft a comprehensive programme budget. This budget will reflect the unique needs of the event and help make the programme self-supporting. To ensure sound financial management, we need to:

- Establish realistic registration fees
- Collect and administer programme tuition
- Carefully monitor all conference income and expenses so that conference finances are managed in accordance with legal and institutional requirements
- Maintain accurate accounting records of all conference income and expenses
- Pay all conference bills
- Prepare a final financial report for the Organisation

## Accommodation and meals

The Event Manager should coordinate in arranging for accommodation, meals and special refreshments for the participants.

Arrange for on-campus accommodation, when available, or off-campus accommodation in local hotels or motels which can meet the financial needs of all participants.

Help select menus, schedule banquet facilities, and coordinate with the catering department or food service providers. The housekeeping department assists with refreshment breaks, and service during meals.

## Instructional media assistance

We need to coordinate the services of a variety of instructional media professionals who can assist in creating audiovisual and other learning aids for the conference. In this regard, we need to:

- Arrange for audiovisual equipment such as projectors, screens, sound equipment, video projectors, and recording equipment
- Produce appropriate overhead transparencies, slides, posters, and charts to enhance the content of presentations
- Arrange for audio or video cassettes of major conference presentations for historical purposes or for distribution to participants

## Exhibit planning

Exhibitor kits need to be prepared, and a plan needs to be chalked out for exhibits and displays.

## Evaluation

The success or effectiveness of the programme needs to be evaluated. For this we need to:

- Design a programme-specific evaluation form
- Produce a summary report based on evaluation data
- Recommend what should be included in future programmes

## Post-conference wrap-up

After the programme is over, we need to wrap up all the dozens of details that occur in connection with



the event. The programme is not considered to be over until all the following are completed

- Account for all income and expenses
- Pay all conference bills
- Write appropriate thank-you letters to speakers and others who contributed to the success of the event
- Handle all administrative paperwork
- Process all appropriate documents related to travel, speakers' honoraria and other expenses

- Update the roster of attendees
- Create a computerised mailing list of attendees for use in announcing future programmes

### **Student exercise**

#### **Answer the following**

1. *What are the factors that play a major role in planning and execution of an event?*
2. *What is the role of the housekeeping department in event management?*

# CHAPTER 22 HOUSE KEEPING MANAGEMENT

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## CONTENTS

Organising a housekeeping department

Job descriptions

- Manager
- Housekeeping supervisor
- Housekeeper
- Sweeper
- Gardener

Responsibilities of the housekeeping department

Qualities required for housekeeper

Recruitment, selection and training of manpower

Supervision and evaluation of staff

Organisation of work

Inter departmental communication

Housekeeping and other departments

## GOAL

To have a well trained and well managed team

## OBJECTIVES

To teach the trainees

- How to set up a housekeeping department
- How to plan and organise work
- Evaluation of staff

## CHAPTER 22

# House Keeping Management

### Organising a housekeeping department

The housekeeping department serves all areas and departments of a hospital. Hence the housekeeping department needs to be centrally located and close to the vertical transport system to facilitate easy movement of housekeeping materials and equipment.

### Facilities and space requirement

- Office for the housekeeping manager
- Clerical work area
- Chief housekeeper's desk and bulletin board to put up daily duty charts and other housekeeping information
- Store room for the housekeeping equipment and materials
- housekeeping closets on all floors of the hospital with space and shelves for housekeeping equipment and materials, and trolleys. As a matter of routine, supplies for daily use should be delivered to their respective closets directly.

### Housekeeping control desk

The housekeeping control desk is the nerve centre of the entire department and its efficiency determines the smooth operation and effectiveness of housekeeping. It is the focal point for the dissemination of information and communication to various points in the housekeeping department as well as to other departments for co-ordination. The area of the control desk must have:

### Information board

- Duty chart for housekeepers and sweepers
- Cleaning schedules
- Hospital staff room accommodation details

- Other general information and important announcements

### Key board

- Patients' room keys
- Office room keys
- Entrance key
- Others

### Registers, files, forms

- Housekeeping equipment and supplies list
- Attendance register for sweepers
- Request form for supplies and equipment from stores
- Request form for repairs to be carried out in other departments
- Inventories of supplies and equipment
- Checklist for patients' rooms
- Year planning calendar
- Inventories of furniture and furnishings
- Inventory of linen

### Housekeeping stores

For the housekeeping department to function in a systematic manner, it is essential to maintain a housekeeping Stores. All items necessary for the day to day functioning of the department are stored here. It is from here that the housekeepers issue the necessary cleaning equipment, agents and supplies to the floor and out-patient areas. It is the duty of the housekeepers to request the equipment and supplies needed to clean the areas they are overseeing.

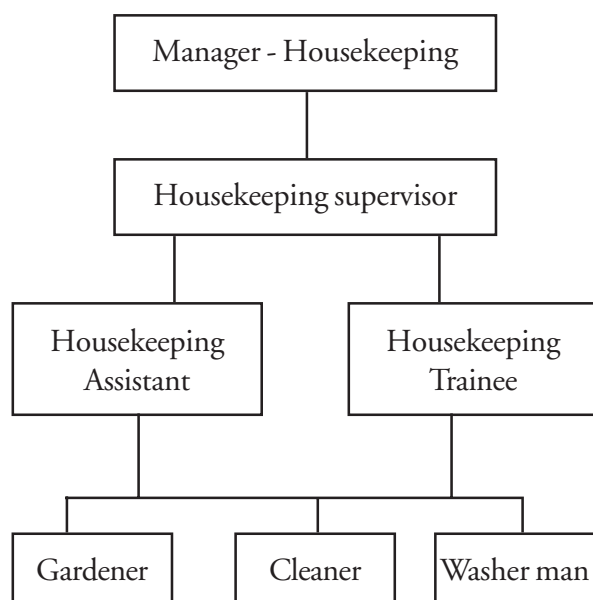
The housekeeping supervisor should inform the purchase department of the required items. These items are purchased and kept in the housekeeping stores. They are then distributed to the various areas

daily, weekly, fortnightly or monthly. Maintaining a regular disbursing system helps to keep track of the materials and supplies used, and minimizes waste and misuse. The rules to be followed when requesting supplies and materials:

- New for old
- Full for empty

The Out-patient area housekeepers should be given charge of the stores. They are responsible for all issues made from the stores and for the replacement of the items. Their duty is to take weekly inventory to ensure that the stocks are maintained and there is no shortage or pilferage. It is also their responsibility to keep the stores neat and clean at all times. Cleaning the stores should be a regular part of the housekeeping work. Access to the stores should be limited only to persons dealing with maintenance and issuing. Unauthorised entry should be forbidden and this rule should be strictly enforced. A part of the stores may be used for storing and stocking furniture such as extra chairs, tables and camp cots. These should be protected by covering them with dust sheets.

### Organisation chart



The housekeeping department has multiple functions to perform. Housekeeping services may be requested any time of the day or night, hence the staff structure must be so arranged as to provide the necessary services. Personalised services remain very much an important part of “quality” health care and this too is largely provided by the housekeeping department.

The housekeeping manager, as Head of the department, must coordinate the performance of these functions for the most efficient operation possible. Since the housekeeper cannot single-handedly discharge all the functions of supervision, requisition, scheduling, budgeting and so forth, the department must be organized in such a way that each of these jobs is capably done. Delegation of authority through a clear chain of command will accomplish this objective. It must however be remembered that although authority is delegated, the Manager retains full responsibility for the department.

### Job descriptions

#### Housekeeping manager

##### Reports to: Administrator

This is an important position in a hospital as it carries the responsibilities for the cleanliness, maintenance and aesthetic appeal of the hospital. An efficient housekeeping manager must possess a high degree of tact as well as good organizing ability, because of the need to work with other departments and with so many different people.

##### Work to be performed

- Collaborate with other departments to ensure delivery of quality services
- Interview, select, train, evaluate and counsel staff in the hospital housekeeping department
- Instruct and advise staff on changes in policies, procedures or working standards
- Listen to the problems if any, of the housekeepers and sweepers and try to resolve them

- Attend to the complaints and queries, if any, from other departments, or patients regarding the housekeeping functions and take necessary remedial action
- Conduct meetings with the housekeepers and sweepers separately to exchange ideas and solve problems
- Prepare a report as required by the management
- Work closely with the administrator on day to day housekeeping requirements
- Monitor departmental activities to ensure that maximum efficiency is maintained in the services being provided
- Assist in developing, delegating and monitoring departmental goals, objectives and programmes to ensure timely completion
- Build a good rapport with all departments and staff to enable smooth functioning of the housekeeping department
- Arrange rotation of cleaners and housekeepers in case of leave, absence or day off
- Assign shifts to the cleaners and housekeepers- day shift and night shift
- Calculate the salaries of all staff every month and maintain a record of the same
- Ensure that correct procedures are followed in Linen Management and that clean and hygienic conditions are maintained in the washing area
- Maintain a monthly stock of all items in the hospital
- Ensure that damaged furniture and fixtures are attended to immediately, and condemn those that cannot be repaired once in a month
- Ensure that damaged linen is repaired immediately, and condemned linen is recycled
- Ensure that regular repair and maintenance work is carried out
- Ensure a clean and safe environment to the staff and patients
- Report to the housekeeping Manager on housekeepers' and sweepers' performance

### **Housekeeping supervisor**

#### **Reports to: Manager - Housekeeping**

This is a senior position within the department. The Supervisor takes the responsibility to ensure that all procedures and policies brought into the department by the Manager are being followed.

#### **Work to be performed**

- Go on rounds every morning to inspect the floors of the hospital and to correct any mistakes on the part of the housekeepers
- Deployment, supervision and control of staff
- Train all staff to efficiently perform the standard procedures as applicable to their job positions
- Monitor the use of supplies and equipment and prepare a monthly request list including purchase of cleaning supplies
- Keep inventories and records of equipment and supplies
- Maintain a record of attendance of the housekeepers, cleaners, gardeners and laundry staff

### **Housekeeper**

#### **Reports to: Housekeeping Supervisor**

#### **Work performed**

- Keep all areas of the hospital dust free and stain free
- Follow the systems and procedures as laid down by the department
- Ensure clean and dry bathrooms at all times
- Co-operate with the staff of other departments
- Supervise and instruct the sweepers on the day to day activities
- Enhance the décor of different areas of the hospital with floral arrangements
- Train new recruits
- Check all the safety items on allotted floors
- Record all "lost and found" items on as per laid down norms
- Ensure total patient satisfaction

**Sweeper****Reports to: Housekeeper****Work to be performed**

- Receive the allocation of floor and area of cleaning
- Clean the rooms twice a day
- Clean the common toilets and bathrooms twice a day
- Follow instructions and cleaning procedures given by housekeepers
- Take care of cleaning materials and ensure economical use of supplies given from the department
- Remove and dispose off refuse and rubbish at the assigned area
- Report missing or broken hospital property to the housekeeper
- Maintain a polite, dignified and helpful attitude toward the patients
- Hand over the unclaimed articles found in the premises to the supervisor
- Attend over daily briefings and give attendance

**Gardener****Reports to: Housekeeper****Work to be performed**

- Clean and maintain the garden
- Take good care of newly cultivated plants
- Take an interest in adopting new technology in the development of the garden
- Water and prune the plants
- Be creative in arranging the plants in a garden
- Attend work regularly

**Responsibilities of the housekeeping department****Direct responsibilities**

- Daily cleaning
- Periodic cleaning

- Trash and garbage removal including proper hospital waste disposal
- Exterminating bugs and pests
- Preventing spread of infection
- Ensuring clean linen
- Safety and security of the hospital
- Creating an aesthetically pleasing environment
- Gardening
- Making the necessary arrangements for meetings, workshops and conferences

**Indirect responsibilities**

- Saving electricity by switching off lights and fans when not in use
- Ensuring an economical use of supplies
- Developing goodwill by a courteous, helpful and caring attitude towards patients and visitors
- Promoting safety rules and measures by observing them and reporting dangerous conditions
- Maintaining a harmonious working relationship with the staff of other departments
- Arranging accommodation facilities for visitors and providing food during their stay at the hospital

**Qualities required for a housekeeper**

- Basic knowledge of health care and sanitation, including principles of bacteriology, chemistry and related sciences, applicable to the prevention and control of infections and communicable diseases. The housekeeper should also have the ability to convey this knowledge in a non-technical way to subordinate supervisors and workers so that they can apply it in their daily work
- Ability to plan, administer and develop all phases of a comprehensive housekeeping programme that will provide a suitable environment for the hospital's medical and administrative activities
- General working knowledge of sanitation, laundry operations, linen service and interior decoration

- Ability to assign, supervise and evaluate the work of subordinate supervisors and their personnel
- An interest in people and tact in handling them
- A pleasant personality and the ability to converse with all types of people
- An ability to hide personal likes and dislikes and to be conscientious, fair and just
- Be strict with respect to punctuality and observance of rules and regulations of the hospital
- Loyalty to the hospital and to the staff
- A sense of humour
- A cool head to deal with emergencies
- Adaptability and willingness to experiment with new ideas
- Powers of critical observation

### **Recruitment, selection and training of manpower**

Having decided on the layout and facilities in the housekeeping department, the next task is to decide how many people are needed for the department. The number of people would depend on the structure of the hospital (block construction or cluster of rooms), number of floors and rooms per floor, number of public areas, size of landscape, the flow of patients and the time required for each task.

#### **Recruitment and selection**

The Administrator of the hospital and housekeeping Manager make the final decision regarding the selection of housekeepers. The process involved in recruitment and selection is:

#### **Planning the selection schedule**

- Print application form
- Inform public and staff through bulletin boards, advertisements and by word of mouth
- Issue application forms
- Collect application forms
- Shortlist and file applications
- Arrange interviews

- Conduct written exam and interview
- Shortlist the selected candidates
- Send employment letters
- Conduct an orientation programme for the selected candidates
- Conduct a basic training programme
- Give an on-the-job training

#### **Selection criteria for housekeeper**

Educational Qualifications	12th(Higher secondary class) passed with 500-700marks
Age	18-20 years
Experience	Fresh candidate with no prior experience in hospitals.
Skills	Ability to talk clearly and politely. Ability to listen well. Ability to influence others. Knowledge of knitting, drawing, stitching. Understand and speak the local language
Personality	Independent, responsible, open, bold, bright and pleasant disposition
Background	A low /middle income family
Health and appearance	Smart, clean, tidy, simple in dress. Good health - should pass the medical test criteria

#### **Basic training programme for housekeepers**

The basic training schedule for the recruited housekeepers should be planned for a specific period and should cover all aspects of housekeeping. The housekeeping Manager should appoint appropriate well-trained staff from the housekeeping department and other resource persons to conduct the training in the related field. The trainees can then be put on an on-the-job training.

The training schedule can cover the following areas:

- Introduction to housekeeping
- General rules and regulations
- Hospital work culture and values
- Housekeeping and patient relationship – interaction with patients to ensure patient satisfaction
- Housekeeping and other departments
- Microbiology
- Ward management
- Bed making
- General cleaning procedures
- Dusting
- Cleaning of picture-frames and windows
- Sweeping
- Mopping
- Cleaning the surroundings
- Cleaning the room
- Cleaning toilets and bathrooms
- Stain removal and polishing
- Cleaning walls
- Cleaning brass items
- Cleaning the lift
- Cleaning the water filter and cooler
- Maintenance and cleaning of drinking water tank. Chlorination
- Importance of checklists
- Indenting
- Maintenance and use of various equipment
- Other housekeeping activities like making articles for interior decoration
- Linen management and supply
- Waste Management
- Furniture care and maintenance
- Arrangement for meeting and conference in the concerned rooms or hall
- Flower arrangement
- Problem solving
- .Manpower planning and management

- Sweeper's job description
- Effective communication

### **Orientation schedule for cleaners**

Day	Particulars
1	General orientation about the hospital Visit to all departments and wards of the hospital Dress code General cleaning - demonstration and sweeping under the guidance of a housekeeper
2	Sweeper's role in the organisation Introduction to cleaning materials, equipment and supplies Demonstration on the use of these equipment and materials General cleaning - demonstration and mopping under the guidance of a housekeeper
3	Teaching the significance of cleanliness and personal hygiene Orientation on the different types of rooms Demonstration on gardening, and cleaning the surroundings General cleaning-sweeping and mopping under the supervision of a housekeeper
4	Carrying out sweeping, mopping, cleaning the surroundings and gardening Discussions with senior housekeeper regarding days off, leave, shifts, night duty, Sunday duty, welfare schemes, discipline and attitude expected of the cleaner Demonstration of cleaning wash basins, walls, doors, windows, and stain removal
5 -10	Cleaning wash basin, walls, doors, windows, and removing stains under the supervision of a housekeeper
11	Observation and cleaning of bathroom under the guidance of a housekeeper

### **Refresher training**

This should be conducted periodically to upgrade the standards of cleanliness, or whenever the standards are not being met adequately. This can also be



conducted whenever there is a change in policy, procedure or equipment.

### **Welfare of the staff**

To keep up the morale of the staff and to motivate them, it is important to provide a good working atmosphere at the hospital. This can be done by providing:

- Good working conditions
- Good working relationship and accessibility
- Incentive bonus
- Best employee award
- Statutory wages (provident fund, gratuity etc)
- Medical facilities
- Sick leave and maternity leave
- Meals when on duty
- Proper work methods

Good employees are hard to come by and once they are found, it is important to consider their welfare. Discipline should be maintained. Rules that are made should always be followed. Managerial policies should be consistent and every member of the staff should participate in the efficient and economic running of the department.

### **Supervision and evaluation of staff**

Supervising the workers and getting quality work done is an important role of the housekeeping supervisor.

The functions of the supervisors are:

- Organize the work assigned to them
- Plan the task to be performed
- Direct the work of those responsible to them
- Co-ordinate the resources under their direction
- Control workers and resources
- Evaluate the total job performance and the individual

### **Guidelines for effective supervision**

- Workers should understand clearly what is expected of them
- Workers should get guidance in performing work
- Good work should always be recognized
- Poor work should be corrected by adopting remedial methods
- Unwanted action and behaviour towards workers should be avoided

### **Routine inspection work is required to**

- Ensure that correct procedures and methods are being followed, and to make any improvements
- Ensure that standards are met and maintained
- Allow action to be taken to correct defective work
- Identify responsibility for defective work
- Enable complaints to be dealt with effectively

The supervisor should check each employee's work in each area at least twice during a work period. The first check should be at the beginning of the work to ensure that it has been started on time, and that it is being carried out satisfactorily. The second check should be made before the work in each area is completed to ensure that the work is satisfactory and to inform the worker to correct any faults, if necessary. It is also important to check that the work is being achieved in the stipulated time.

Checks should not be carried out at the same time each day, as the staff would be alert and responsive. Spot checks in the course of the work period are useful. More frequent checks are necessary for new recruits who are under training.

### **Handling the difficult worker**

- Find out the reasons for the problem - health, personal problem, or problem with the work procedures
- Arrange refresher training if required

- Frequently monitor and supervise the work
- Ask them to repeat the work if found unsatisfactory
- Motivate him to adopt new procedures and techniques adopted by the department (inculcate positive thinking)
- Encourage the worker through incentives, and bonus for festivals

### **Evaluation of workers**

In order to ensure continuing efficiency, it is important that the staff is evaluated from time to time. This exercise will be effective, if the following points are kept in mind

- Pay individual attention to each worker and supervise his work
- Observe if he completes his work in the stipulated time
- Help him if he has a problem related to his work
- Plan additional training for the worker, if you think he requires it
- Observe his attitude to other workers in the department

### **Organisation of work**

A well managed housekeeping department relies on the ability of its housekeepers to organize work efficiently and manage the use of equipment, space and human labour with minimum effort. It is also important that she concerns herself with the staff requirements and modern cleaning equipments, agents, and methods. She should study their advantages and disadvantages and bring into use those that make cleaning easier for her staff, spare time and ultimately cut down costs.

Work organisation involves the preparation of:

1. Work specification
2. Work schedule
3. Job procedure
4. Work study
5. Work simplification

### **Work specification**

This is a detailed description of the work to be carried out in a specific area. There should be work specifications for every area covered by the housekeeping department.

Eg. Work specification for cleaning corridors:

- a. Collect the required equipment and materials
- b. Store the equipment and materials neatly in the corridor to be cleaned
- c. Empty the waste bins and collect any other waste that may be on the ground
- d. Remove the dust from the walls, windows, curtains and picture frames
- e. Spot clean areas such as door handles, window sills and shaft
- f. Frequency of corridor cleaning - to be decided based on the patient flow

### **Work schedule**

This is a list of actual work to be carried out by an individual staff member during a particular period of the day. It would also include meal breaks and allow time for cleaning and tidying up of equipments. The number of schedules necessary indicates the number of staff required to clean an area once a day.

### **Job procedure**

This specifies the way a job is done and is to be prepared for each job individually.

Eg. Procedure for cleaning a telephone

### **Materials**

Damp cloth, dusters, disinfectant

### **Method**

Dust the telephone completely with the damp cloth. Wipe down with a disinfectant solution paying attention to the dial, mouthpiece, and phone. Wash, rinse and dry the dusters, and put them back in their place.

## Work study

A work study involves work measurements that are required to determine the work involved in a particular job, the time taken to carry out a job under normal circumstances by an average worker. This helps in determining the number of staff required and in standardising labour costs.

Example: A work study on bed making showed that the distance covered by the staff during bed-making can be reduced if she were to strip the bed more systematically and did not tuck in the sheets and the covers till the end of bed-making.

A work study must be carried out whenever there is a waste of time, labour or material. When there is a delay in carrying out the work, or when the complaints made by patients increase, it is a sure indication that one worker is overburdened with work, and another is not fully occupied. This is an indication that a work study needs to be carried out.

A work study involves the following procedure:

- a. Select the job procedure and identify the problem
- b. Observe and record the present work method
- c. Develop an improved method
- d. Conduct periodic checks to ensure that the improved method is working satisfactorily

A work study cannot be carried out unless it gets the full co-operation of the staff involved throughout the investigation. It is possible to get a clear picture of the old working method, and implement the new method only with the full support of the staff.

## Work simplification

While a worker is busy and on the job, the muscles of his body need moments of rest between motions. Tensed muscles produce neither high quality nor great quantity of work. The worker finds the work easy or difficult depending on the way he uses his body. New methods need to be developed to make the work easier and to reduce the stress factor for the worker.

A few methods of work are listed below:

- Movement of the worker should be limited to the minimum necessary
- The work should be in a pattern of curved line motion
- Both hands should begin and complete a motion at the same time
- Arms should move in opposite and symmetrical directions to give the worker proper balance
- Daily activity should be restricted to normal reach level. Objects out of reach can be cleaned periodically
- Use of different parts of the body should be restricted to a minimum
- Before starting work the equipment and materials should be arranged conveniently to avoid unnecessary movement
- Wherever possible, adjust work heights to make the work easier

## Planning the cleaning procedure in a hospital

Cleaning requires a systematic and planned approach, both, towards the individual tasks involved and towards the hospital's cleaning operations as a whole. This involves two areas:

- The cleaning process
- The work schedule

## The cleaning process

The objective of the process of cleaning is to remove as much dirt as possible without damaging the surface, and to prevent dirt from resettling. To do this effectively and safely, we need to identify the different types of dust and stains involved, along with ways in which they are introduced into the building. This information helps to decide which cleaning method, equipment and materials are most appropriate. The housekeeping department should establish methods of cleaning and work schedules.

### The work schedule

Before any cleaning programme can be carried out, a suitable work plan must be drawn up. The work schedule gives the actual work to be undertaken by a particular staff member during a particular period of the day. This should take into account several factors, which affect the way in which the work is carried out. These factors include:

- Standard of cleanliness: Cleaning standards vary in different parts of the hospital. In every hospital, the area of work can be classified as high risk and

low risk areas. The standard of housekeeping services depends on the level of risk

Housekeeping cleaning standard has been defined as:

Housekeeping cleaning standard = method x frequency

When cleaning methods are correctly selected, correct equipment and agents are used for each surface and cleaning tasks are carried out methodically, the housekeeping standards are said to be efficiently met. The following table shows the standard of cleanliness required in different areas of the hospital:

Area	Standard	Requirement
High risk areas (operation theatres, special units)	Prestige standard	Highest possible standard of cleaning, dust and infection control
Medium risk areas (Kitchen, toilets)	Special standard	High standard of cleaning, and infection control
Low risk areas (Corridors, offices, waiting areas, patient rooms)	Normal standard	Good standard of cleaning, absence of soil, dust and stains

- The activity in the area and the time of day: Consideration should be given to the level of activity and amount of traffic in the areas to be cleaned. Where possible, cleaning will be undertaken when these levels are at their lowest. Each part of the hospital has a primary function which should be disrupted as little as possible. Cleaning should fit in as modestly as possible with the main activity of that area. Administration areas and most departments have a standard working day. Hence cleaning in these areas can be programmed to take place either before or after working hours
- The planning schedule: The housekeeping department should plan and apply a systematic cleaning procedure. This includes:
  - Daily and weekly schedule: This includes all tasks that are to be carried out regularly in a specific functional area on a predetermined basis set by management according to area usage and the need for cleanliness. (Dusting, sweeping, mopping)

- Periodic schedule: This includes tasks, those additional to, but in combination with routine tasks, which have a frequency of once in every 15 days or once in every month. (Changing curtains, removing stains, polishing, cleaning water tanks, cleaning septic tanks) records should be maintained to show when and where a particular task is started and completed

Frequency of cleaning: Frequencies are to be based on sound quality cleaning, especially as they relate to "routine" cleaning. A set time schedule is not considered appropriate for routine cleaning. If an area requires cleaning, it should be cleaned, if it does not require cleaning, it should not be cleaned. Cleaning on the basis of "it has to be cleaned everyday even when it does not need it" is not applicable

Even though waiting area, patient examination area, refraction area and pathways are considered low risk areas in the hospital, frequency of routine

cleaning is to be followed to keep the area clean all the time. The area supervisor should check now and then and instruct the sweepers to go for special cleaning.

The following table may be used to plan the frequency of cleaning:

Area	Frequency of cleaning	Special attention	Special care
<b>OPD</b>			
Registration Waiting area Corridors	Continual	Patient flow is high; rainy season	Provide doormats at the entrances and clean them frequently
Common toilets	4-6 times a day	Patient flow is high	
<b>Wards</b>			
Patient room	Twice a day	Emergency, spillage, vomiting	Take immediate action to clean
Corridors	4 times a day	Emergency; spillage	Take action immediately
Room toilets	Twice a day	More usage	
Common toilets	Four times a day	More usage	
<b>Office area</b>			
Camp office Finance department Personnel department	Once a day		
<b>Laboratory</b>			
Biochemistry lab	Twice a day		
Lab. toilet	4 - 6 times a day	Patient flow is high	Use odonil, and a good disinfectant
<b>Outside area</b>	Twice a day		Sprinkle water to settle dust

Usage area	Cleaning agent	Dilution	Time for cleaning agent to act	Frequency of use
Floor, tiles, wash basin, outside of w/c closet, flush tank	LOC, Vim or any other good detergent	20ml: 5litre, 8gm/washbasin/ toilet	Direct	Twice a day
Floor, glass mirror	LOC, seespray/colin	20ml:5Llitre 8ml/litre	Direct	Weekly
Toilet closet and all stain removal	Harpic	No dilution	Direct	Once a day
Mopping the floor. Cleaning the toilet	Pursue	18ml/litre	Direct	Twice a day
Septic tank- 1kg/wash Water tank-500gms/ wash	Bleaching powder	No dilution	2 mins.	Septic tank-weekly Water tank-monthly
Brass items	Brasso	Direct		Special cleaning
Drawers, wardrobes, sinks	Naphthalene balls		Direct	Weekly
Toilet odour control	Odonil		Direct	Weekly
Disinfections	Dettol	100ml/5litres	Direct	Daily

### Inter departmental communication

Effective communication between housekeepers and workers is very important. Generally the cleaners are illiterate and recruited from the rural areas. Hence they understand only very simple language. Thus, it is necessary for the housekeeper to use very simple language when explaining the work procedures, so that the workers are not mislead into using incorrect procedures. This will lead to poor quality work.

#### Factors to be considered

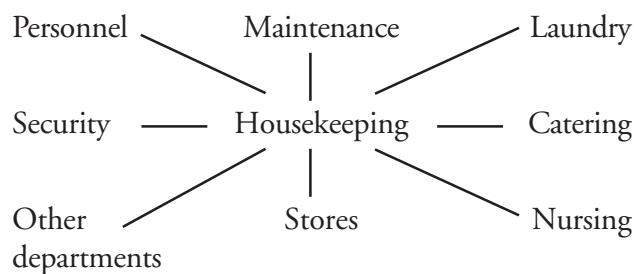
- Workers should understand clearly what is expected of them
- Unwanted actions should be avoided
- Use simple and clear language
- Adopt demonstration methods to explain the work procedures

- Proper job specification
- Two-way communication is essential to avoid misunderstanding the work procedure
- Guidelines given to the workers should neither be over commanding, nor easy. They should be moderate
- New policies and procedures should immediately be communicated to the workers and their queries clarified

#### Poor communication results in

- Following incorrect cleaning methods
- Improper use of cleaning materials and equipment, which results in increased costs
- Taking more time to finish the given task
- Arguments with the housekeeper
- Frequent absence from work
- Discontinue from service

## Inter departmental relationships



### Maintenance

One of the most important functions of housekeeping is the maintenance of keeping furniture, fixtures and facilities in working order. Housekeepers need to constantly check on various things throughout the hospital on a daily or a weekly basis and inform the maintenance department through a requisition form about any repairs that need to be done. The maintenance work could cover a number of aspects such as plumbing, carpentry, electricity and civil works. Hence a close coordination with the maintenance department is absolutely necessary.

### Stores

Hospitals stock all housekeeping equipment, materials and supplies, except linen, in the general stores. Coordination with the stores ensures availability of day-to-day requirements of housekeeping. Housekeepers can indent materials from the stores on a daily or a weekly basis. These indented materials can be issued directly to the staff or can be stored inside the department or under the staircase with proper safety measures. The stores consult with the housekeeping department regarding purchase of materials.

### Laundry

Most small hospitals prefer to outsource laundry on account of limited space and manpower. Larger hospitals usually handle the laundry in-house to issue

clean and quality linen to the operation theatres and other departments. Whether in-house or out-sourced, coordination between hospital and laundry is very important. The housekeepers should check the need and use of materials with the ward staff. The senior housekeeper should maintain registers for checking stock and transaction of materials, planning the laundry process, and salary of in-house dhobi.

### Nursing

The nursing department works closely with the housekeeping department. It is this department that is involved in bed-making in the patients' rooms, and informs the housekeeping department about any requirements by the patients. The nursing department also contacts the housekeeping department if there is any need for emergency cleaning in a specific area, in case of spillage, breakage, or if the patient has vomited. The nurses maintain the admission and discharge details of the patients. When the patient is discharged, it is the nurses who check the room, lock the door and handover the key to the housekeeper. The housekeeper then sends a sweeper to clean the room thoroughly and get it ready for the next patient.

### Catering

If a hospital has catering facilities, then the kitchen and dining room needs to be cleaned at least twice a day. This comes under the purview of the housekeeping department. The housekeeping department also needs to co-ordinate with the Catering department when making arrangements for guests and special occasions.

### Personnel

The housekeeping department deals with the Personnel department for the recruitment of the housekeeping staff, salary administration, indiscipline and grievance, identity cards for the staff, promotions and exit facilities.

## **Other departments**

Since every department in the hospital needs to be kept clean, the housekeeping department interacts with every department. When electrical equipment is not working or a door does not close properly, it is the housekeeping department that takes down the complaint and makes sure that the problem is rectified. Thus, the housekeeping department is an important and indispensable department in the smooth functioning of a hospital.

## **Student exercise**

### **Answer the following**

1. *Why is the housekeeping control desk important? What are the requirements at the control desk?*
2. *What is the importance of housekeeping stores?*
3. *What is a job description? Why is it necessary to have a clear job description for the employees?*
4. *What are the direct responsibilities of the housekeeping department?*
5. *What is refresher training? Why is it necessary?*
6. *Why is supervision and evaluation important?*
7. *What do you understand by work specification, work schedule and work study?*
8. *What areas in a hospital are considered high risk? Why?*



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