

**OBM752 - HOSPITAL
MANAGEMENT**

UNIT I

OVERVIEW OF HOSPITAL ADMINISTRATION

Distinction between Hospital and Industry, Challenges in Hospital Administration – Hospital Planning- Equipment Planning – Functional Planning.

1. MANAGEMENT

Management is an activity which is necessary for a group of people working in an organization.

The task of management incorporates:

1. Determining the goals and objectives of the organization.
2. Acquiring and utilizing resources.
3. Installing communication system.
4. Determining controlling procedures.
5. Evaluating the performance of the organization.

Management is a purposive activity. It is something that directs group efforts towards the attainment of certain pre - determined goals.

According to *F.W. Taylor*, “Management is an art of knowing what to do, when to do and see that it is done in the best and cheapest way”.

1.1 Functions of management

Management as a function performs the following five functions:

1. Planning
2. Organizing
3. Staffing
4. Directing
5. Controlling



1.1.1 Planning

A plan is a future course of actions. It is an exercise in problem solving and decision-making.

Planning is determination of courses of action to achieve desired goals.

1.1.2 Organizing

It is the process of bringing together physical, financial and human resources and developing productive relationship amongst them for achievement of organizational goals.

To organize a business involves determining & providing human and non-human resources to the organizational structure.

Organizing as a process involves:

- Identification of activities.

- Classification of grouping of activities.
- Assignment of duties.

1.1.3 Staffing

Staffing has assumed greater importance in the recent years due to advancement of technology, increase in size of business, complexity of human behavior etc.

The main purpose of staffing is to put right man on right job i.e. square pegs in square holes and round pegs in round holes.

Staffing involves:

- Recruitment, Selection & Placement.
- Training & Development.
- Remuneration.
- Performance Appraisal.
- Promotions & Transfer.

1.1.4 Directing

Direction is that inert-personnel aspect of management which deals directly with influencing, guiding, supervising, motivating sub-ordinate for the achievement of organizational goals.

Direction has following elements:

- Supervision
- Motivation
- Leadership
- Communication

1.1.5 Controlling

The purpose of controlling is to ensure that everything occurs in conformities with the standards.

Controlling has following steps:

- Establishment of standard performance.
- Measurement of actual performance.
- Corrective action.

2. MANAGEMENT IN HOSPITAL

Hospital is an institution for the care, cure and treatment of the sick and wounded, for the study of diseases and for the training of doctors and nurses.

It mainly relates to management of all aspects of a hospital; a coordination of all elements of a hospital.

This may range from patient care to record keeping to inventory of medicines and cleanliness.

The functions of the management in all types of the organization remains the same and revolves round the following management functions.

3. DISTINCTION BETWEEN HOSPITAL AND INDUSTRY

Hospitals has some difference from industries.

- Hospital gives **service to people** provided by variety of skills.
- Hospitals exist because people need care, and nursing homes exist because of the need for long-term health care.

- The nature of the demand for hospital services is also different. The patient made decision that he is ill and requires **services which cannot be provided at home**.
- The patient leaves home, family, friends, his work-place, his way of life for a **new environment**, i.e. the hospital.
- In this new environment, he becomes one of the many. In his home, he has a definite role.
- In the hospital, his role is similar to 30 or 40 others in the ward or unit in which he is a patient. He is subjected to a new set of values and a new way of life.
- A hospital **deals daily with the life, suffering, recovery and death** of human beings.

Hospital is different in many aspects:

1. Complexity

- Hospitals tend to have very complex organizational structures compared to their overall size.
- A 400-bed hospital might have over 1,000 different job titles.

2. Highly trained professionals

- A large portion of the workforce- physicians, nurses, allied health and many technical positions, are highly trained and have a high level of autonomy.

3. A fragmented organization structure

- An auto manufacturer designs the entire workforce around production of the car.
- Hospitals have begun to take a service line or patient-centered approach to organizational structure, built around the patient experience.

4. Customer Service is no longer a 'nice to have'

- Every company wants to improve customer service.
- But with the new HCAHPS (Hospital Consumer Assessment of Health care Providers and Systems) requirements, patient satisfaction scores are a critical success metric for hospitals.

5. The nature of the Services

- Poor quality in a manufacturing plant means a poor product and a weakened competitive advantage.
- Poor quality in a hospital means harm to patients and the hospital's ability to fulfill its mission.

4. CHALLENGES IN HOSPITAL ADMINISTRATION

Challenges to administrative abilities have come from within the health field as well as from the public:

1. Business and professional leaders who were initiated into the hospital scene as trustees of voluntary hospitals;
2. The large number of physicians who are especially worry about the facilities and services available for the care of their patients;
3. Professional organizations which prescribe various standards of hospital operation while granting approval to the hospitals;

4. Academicians who are concerned about matching what they teach with the requirements of the patients and hospital administration;
5. Labour demanding standards of employment and working conditions.
6. Trustees of the Trust Hospitals, members of Registered Society Hospitals, shareholders of Corporate Hospitals, and other who have been their own masters and have been operating with no restraints so far will have to face increasing professionalism threatening their power and existence.

The hospital CEO has to collect sufficient funds from patients rather than from trustees, society members, shareholders, etc. to run his hospital.

A new challenge is that of being environment friendly. Hospitals do not focus on safe environment.

The CEO of a hospital must be able to provide latest technology and vision. He should push for change when it is required in the interest of the patients, employees and the community.

The Chief Executive Officer of a hospital; will have to serve as a catalyst for relationship building between patients and employees, government agencies and his hospital and between hospitals and his own hospital;

It is also important for the hospital CEO to be a business practitioner first and then a technologist. His responsibilities include executive communication, budgeting, building relationships, management, problem solving etc.

CEO is primarily responsible to facilitate and communicate the hospital's philosophy and vision.

The administrators of earlier hospitals usually were nurses were nurses who combined their nursing tasks with the performance of supervision of supply of cloth, feeding of patients and housekeeping. As the medical aspects of hospital service became more complex, physicians became administrators.

There's no doubt a hospital administrator's job is difficult and demanding, and it's only getting tougher. Here are four challenges they must overcome in order to successfully improve patient care.

1. Compete for healthcare professionals

There is a real shortage of healthcare professionals, and it's hurting the profitability of hospitals as they pay more for every employee they hire.

From 2008 and 2018, healthcare employment will grow by 23 percent, compared to only 9 percent in all other employment sectors, according to the Bureau of Labor Statistics. During that time, hospitals will be forced to compete for:

- Registered nurses (expected to grow 22.2 percent)
- Licensed practice and licensed vocational nurses (expected to grow by 20.7 percent)
- Home health aides (expected to grow by 50 percent)
- Nursing aids, orderlies and attendants (expected to grow by 18.8 percent)
- Physicians and surgeons (expected to grow by 21.8 percent)

With this in mind, hospital administrators must put a plan in place to address the shortage and compete for the best employees. As they compete, they must be skilled at recruiting, hiring and retaining qualified healthcare professionals.

Hospital administrators need to build strong relationships with schools that offer healthcare-related degrees in their local communities and across the nation.

Additionally, they must make working at their hospital attractive, which means thinking beyond competitive pay and benefits to ensuring each individual employee feels connected to the hospital and has a passion for working for the organization.

2. Specialize for growth

With the rapid growth of specialty hospitals, physician-run outpatient surgery centers and diagnostic centers, traditional hospitals are facing increased competition.

To compete for patients, hospital administrators must be prepared to set their hospitals apart through a specialized care strategy.

Benchmarking best practices is essential; hospital administrators must take time to investigate other specialty healthcare providers in their local communities, identify areas of opportunity and put a strategic plan in place for building renowned specialty practices. During this process, they typically take numerous factors into consideration, including local demographics and competitors' areas of specialization.

With a specialization strategy solidified, hospital administrators must focus their efforts on recruiting specialized personnel and building a local reputation for excellence for the practice area.

3. Prepare for the future

As America's 78 million baby boomers come of age, hospitals are feeling the pressure to expand to meet growing demand. At the same time, hospitals are facing changes in the way they are paid. Reimbursements are shifting from a fee-for-service model to a model that is based on outcomes and overall quality of care.

When patient satisfaction plays a role in the way hospitals are paid, you can bet hospital administrators are making it a priority.

Therefore, hospitals are conducting extensive market research to ensure their expansion efforts are aligned with what consumers expect.

For example, with the knowledge that women make most healthcare decisions in a family, one hospital decided to build an 18,000-square-foot imaging center for women with a spa-like atmosphere and robes. One children's rehabilitation hospital built a massive facility that comes complete with therapeutic gardens, play areas and even an all-grades school for inpatients. Other hospitals are converting semi-private rooms into private rooms, and there is a great deal of emphasis on making them safe, comfortable and cozy.

Having modern facilities with up-to-date medical equipment is crucial for hospitals that are competing for patients. With this in mind, hospital administrators must be prepared to balance current financial strain while positioning for the future.

4. Improve patient care through technology

There's not a corner or crevice of healthcare that is not being affected somehow by technology. Medical providers throughout the country, for instance, are spending millions of dollars on electronic medical record systems that allow physicians and hospitals to seamlessly share patient information.

Ensuring that EMRs are effectively implemented within the healthcare organization is a critical role of healthcare administrators.

Healthcare administrators need broad-based skills to integrate information and make evidence-based decisions. From electronic communication to order entry systems to the most advanced imaging technology, even the best technology is no good unless it's applied to improving organizational and patient outcomes.

Hospital administrators are responsible for making sure hospitals operate efficiently and provide quality medical care to patients.

As a result, they must keep up with advances in medicine, technology and government regulations and policy changes.

5. HOSPITAL PLANNING

The general public is now more alert to its health and in accepting the role of the hospital in its daily life.

Today's Patients are Better Informed

Today's patients are better informed and know more about health care services.

This is why they make their own decisions- they shop for and select the best hospital; they choose their doctor or change him.

Having become cost conscious, they demand quality care at a reasonable price.

Hospitals of Yesteryear

Health care has come a long way since Florence Nightingale tended the harmed soldiers in the Crimean War. Back then, it was largely weak loving care. There wasn't enough of treatment and health care.

The institution that we know today as the hospital is phenomenon of the last century.

Technological Advances

With the rapid development and advances in technological, medical and administrative sciences and innovative techniques and therapies, today's hospitals will become disappearing within a short time.

One cannot even guess at the future miracles of medicine.

That is why one planning design expert said, "We have got to design 'smart' hospitals that respond to present needs while anticipating future changes."

In the early days, we talked of only general hospitals. Then came specialties in hospitals and now we are planning and designing superspecialty hospitals operated and managed by superspecialists.

When our health is at stake, we want quality, whatever it takes. We demand the best and are willing to pay for it.

Why Health Care Costs are High?

Today, health care costs are rising dramatically. That is largely because of the tremendous advances that have come about in treatment, technology and equipment.

For example, equipment such as the MRI, CT Scan, ultrasound, mammography, simulator and linear accelerator are so common and so necessary in today's health care treatment requires huge investment.

On the treatment side, a cardiac patient who once would have been treated with drugs can now have a bypass operation or a pacemaker implant that would cost him a great deal of money. He recovers in the technologically advanced and sophisticated Coronary Care Unit (CCU) that would cost him Rs. 1,000 or more per day.

A person who at one time would have died of kidney failure now receives dialysis at considerable cost; alternatively he can have a new kidney – a transplant that would cost upward of a lakh of rupees.

Many hospitals fit the bill as “hospitals of people’s choice.” They are operated efficiently and furnish a high standard of patient care.

And yet, there are a vast number of hospitals in India in which standards of care are low. These standards must be improved if those hospitals have to meet people’s growing expectations.

Today’s patients recognize the distinction between good and commonplace hospitals.

5.1 Planning for a New Hospital

In the establishment of a hospital, the first step is always a dream or an idea born in the mind of an individual. If the idea is appealing, the originator is able to gather support of other people.

A committee is then formed and is given the authority to undertake preliminary work such as a feasibility study and to raise funds to meet the expenses involved in the survey and study.

All successful hospitals, are built on a triad of good planning, good design and construction, and good administration. The success of a hospital is generally measured by the quality of patient care it provides and the efficiency with which it operates. It must be noted that a strong management is essential for the daily functioning of a facility and this must be included in the plans for a new hospital.

To be successful, a hospital requires a great deal of preliminary study and planning. It must be designed to meet the needs of the people it is going to serve. It must be staffed with adequate number of efficient doctors, nurses and other professionals.

The promoters must be made aware of and assume responsibility for the creation of well planned and well designed hospitals that are efficient, functional and economical so that they will render quality and adequate care to the community they serve.

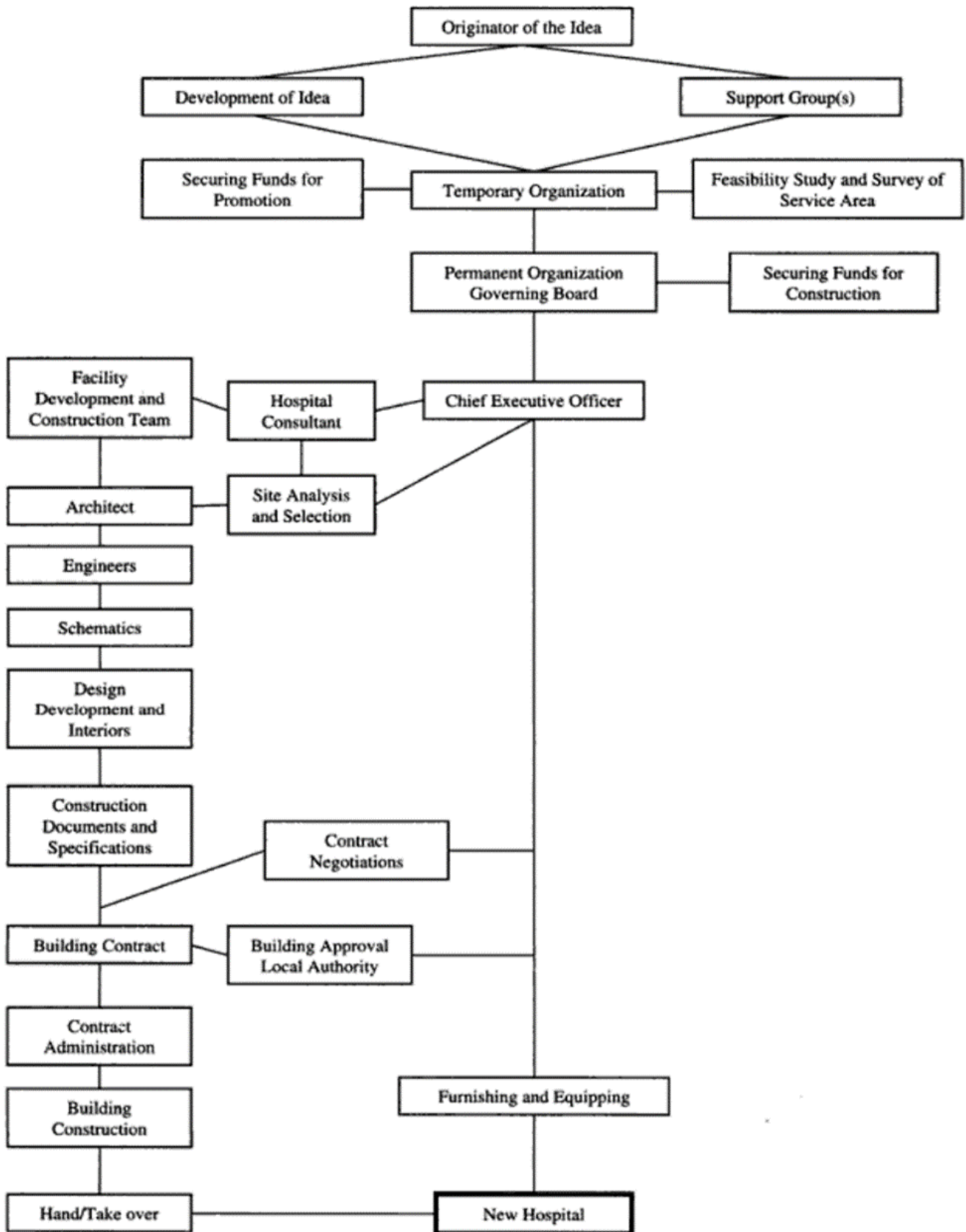
5.1.1 Planning involves six question

- What we expect to do?
- Why it will be done?
- Where will it be done?
- When we expect to do it?
- Who all are going to do it?
- How will it be done?

5.1.2 Planning Team

- Hospital administrator
- Specialists from various clinical branches
- Nursing advisor
- HR manager
- Civil and electrical engineers
- Representative of local body
- Senior architect

The graphic presentation of the different stages in promoting and building a new hospital is as follows:



6. EQUIPMENT PLANNING

Hospital planning is not complete if careful attention is not given to the fixed and movable equipment needed for the hospital. With the exception of items of current operating expense such as food, fuel, drugs, dressings, paper, printed forms, soap, etc.,

The term “equipment” means all items necessary for the functioning of all services of the hospital including accounting and records, maintenance of buildings and grounds, laundry, public waiting rooms, public health and related services.

Medical equipment is a vital component in healthcare delivery. Equipping health facilities need detail planning and coordination, clinical needs and the equipment requirements are met with the design and function.

The ultimate objective is to ensure all products selected are fit for purpose, within budget and, procured, delivered and commissioned in accordance with projects build programme.

Healthcare Equipment Planning is a specialised process and requires not only a clear understanding of the clinical need but also a knowledge of budgeting, architectural design and building process.

Effective project planning can only be achieved by a successful team process. This cohesive team generally consists of user groups, project managers, architects and other associated healthcare planners such as equipment planners, whose responsibility is to balance the requirements of the clinical users and the clients against available healthcare technology, budgetary targets and the realities of the design and construction process.

A series of meetings are arranged with the medical staff and other personnel to discuss the equipment needed. A room by room equipment list is then compiled and reviewed by the administrative, medical and departmental staff.

In an existing hospital, purchasing new equipment presents no particular problem except perhaps securing finances. Besides a purchasing department, there is usually a well-established procedure and mechanism to authenticate the need for new equipment or to replace an old one.

There are trained people who can write specifications. The hospital administrator, generally an experienced man, and his purchasing officer will easily accomplish these tasks. It is not so in a new hospital.

The timing of delivery, warehousing, unpacking, assembling and installing of equipment compound the problem. These are as important as selection and purchase.

If the equipment is to be imported, the procedure will be even more complex. There are approvals and licences to be obtained and economical hurdles to be crossed. The lead time will be longer. Lakhs of lakhs of rupees may be wasted, operating efficiency impaired and standards of patient care severely affected by not planning and executing any one of these tasks properly.

It devolves on the hospital consultant or the hospital administrator who will have been engaged early in the planning stage to determine all the items of equipment necessary for the hospital, to write or secure specifications, to call for and receive amounts and to purchase or recommend purchase with regard to depreciation.

Equipment for a new hospital may be classified into the following three groups based on the usual methods of acquisition and on suggested accounting practices with regard to depreciation.

1. Built-in Equipment:

- This is usually included in the construction contracts.
- Examples are cabinets and counters in the pharmacy, laboratory and other parts of the hospital, fixed kitchen equipment, laundry chutes, elevators, dumb waiters,

boilers, cold rooms/walk-in coolers, deep freezers, fixed sterilizing equipment and surgical lighting.

- The planning and design of fixed equipment built into the hospital facility is the architect's responsibility.

2. Depreciable Equipment:

- Equipment that has a life of five years or more is not normally purchased through construction contracts.
- These large items of furniture and equipment have reasonable fixed location in the hospital building but are capable of being moved.
- Examples are surgical apparatus, diagnostic and therapeutic equipment, laboratory and pharmacy equipment, office equipment, etc.
- Equipment that is not included in the construction contract but which require mechanical or electrical service connections or construction modifications shall, as far as is practical, be identified on the design development drawings to ensure its coordination with the architectural, mechanical and electrical phases of construction.

3. Non- depreciable Equipment:

- Equipment having less than five years' life span is purchased through ways other than construction contracts.
- These are generally small items of low unit cost under the control of the storeroom.
- Examples are kitchen utensils, chinaware, tableware, surgical instruments, catheters, linen, sheets, blankets, lamps, wastebaskets, etc.

The consultant must prepare a list of all the items under groups 2 and 3 given above.

The first step in preparing this list is to consider each room as a separate entity and prepare a comprehensive room-by-room equipment list, which should include additional items that may be required for the hospital. Detailed specifications must be given.

This task must be undertaken at the stage of design development itself. Working closely with the architect, the consultant should test the space needed for each item of equipment on the list.

The selection of technical, scientific and medical equipment requires careful analysis of each department's needs and conscientious study that will result in selecting equipment that will best meet the needs.

Department heads and staff members should be fully satisfied with the type and quality of the equipment. They should therefore be consulted before purchase.

It is necessary to consult with the architect designing the building early so that the facilities planned will be of sufficient size to accommodate the equipment and render the necessary service.

7. FUNCTIONAL PLANNING

Functional planning in hospitals is important, and the key to this is the understanding that travel and adjacencies affect the operational cost over the life of the building.

The main function of a hospital is to provide the population with complete health care; it also functions as the center for the training of health workers.

Following are some of the broad categories of Hospital functions:

Medical care - which involves the treatment and management of patients through the staff of physicians.

Patient Support - which relates directly to patient care and includes nursing, dietary diagnostic, therapy, pharmacy and laboratory services.

Administrative - which concerns the execution of policies and directions of the hospital governing discharge of support services in the area of finance, personnel, materials and property, housekeeping, laundry, security, transport, engineering and board and other maintenance.

7.1. Functional planning covers the following activities.

1. Determining approximate section wise workload.
2. Determining services to be provided (for inpatients/ outpatients, for other departments, smaller hospitals and private practitioners).
3. Determining area and space requirement to accommodate equipment, furniture and personnel in technical, administrative and auxiliary functions.
4. Dividing the area into functional units, biochemistry, microbiology, histopathology, urinalysis, etc.
5. Determining the number of workstations in each functional unit/division and deciding the linear bench space allotted for each work station.
6. Determining the major equipment and appliances in each unit. This is generally classified into:
 - i. Technical equipment peculiar to certain workstations
 - ii. Other equipment and appliances e.g. (refri-gerators, hot air ovens, centrifuges) that can be jointly used by different workstations or units.
7. Determining the functional location of each section in relation to one another, from the point of view of flow of work and technical work considerations.
8. Identifying the electrical and plumbing requirements for each area/work station. Independent electric circuits are required for electronic equipment items. Location of sinks and wash areas are vital for efficient performance of workstations.
9. Considering utilities, lighting, ventilation (forced or normal exhaust, air-conditioning and air hygiene) and isolation of equipment or workstations.
10. Working out the most suitable laboratory space unit, which is a standard module for work areas. A standard module facilitates rearrangement of work units with least disruption and minimal structural changes.

UNIT II

HUMAN RESOURCE MANAGEMENT IN HOSPITAL

Principles of HRM – Functions of HRM – Profile of HRD Manager – Human Resource Inventory – Manpower Planning.

1. HUMAN RESOURCE MANAGEMENT

Human resources (HR) is the department within a business that is responsible for all things worker-related. That includes recruiting, vetting, selecting, hiring, onboarding, training, promoting, paying, and firing employees and independent contractors.

HR professionals make sure that employees have everything they need to perform their day-to-day tasks and they are also responsible for creating a healthy work environment that attracts and retains qualified people.

2. PRINCIPLES OF HRM

Human resource management (HRM) integrates and emphasizes on performance appraisal, career planning, training and development, organizational development, systems development, incentives, welfare measures, etc.

The human resource management is an approach to the management of people based on the following principles:

1. Human resource management is concerned with integration by getting all the members of the organization involved so that they may work together with a sense of common purpose.
2. Human resource policies of the organization should be fair to all. They should make a major contribution to the achievement of an organization's objectives as well as provide conducive atmosphere of working to the employees so that their output is maximum.
3. Human resources are the most important assets and their thoughtful management is the key to success of an organization.
4. The culture and values of an organization effort broad influence on the organization. Therefore, organizational values and culture should be accepted and acted upon by one and all in the organization.

3. FUNCTIONS OF HRM

Human resource management is a staff function. Human resource managers advise line managers throughout the organization. Further-more, personnel requirements of the organization may vary from time to time.

The following functions of the human resource department try to keep the organization going smoothly and efficiently by supplying with the right type of personnel in the right position.

1. Policy Formulation
2. Staff Function
3. Line Function
 - a) Procurement
 - b) Development
 - c) Compensation

- d) Integration
 - e) Maintenance
 - f) Records and Research
 - g) Personnel Information System
4. Control
5. Managerial
- a) Planning
 - b) Organizing
 - c) Directing
 - d) Controlling

i. Policy Formulations

The important functions of the human resource management is to prepare new policies and revise the existing ones in the light of the experience gained in the area of human resource management.

Human resource policy formulation must consider both the strategic plan and the external environment of the organization.

Organizations which do not formulate policies for human resource management.

ii. Staff Function

Line managers come across various problems in their day-to-day management which can be solved satisfactorily with the advice of the personnel or human resource department.

These problems may relate to employee's grievances in connection with distribution of overtime work, promotion, transfer, disciplinary action, etc.

Advice given to them from time to time should be objective and legal, otherwise it will spoil human relations at work.

iii. Line functions

Line functions consist of development, compensation, integration, and maintenance of the human resource of the organization to achieve the organizational goals.

Candidates are usually selected through newspapers, professional journals, employment agencies, words of mouth and campus visit to colleges and universities.

Selection involves various techniques such as short-listing the application forms, interviews, tests, reference checks, etc.

Orientation is designed to help the selected candidates fit smoothly into the organization.

Newcomers are introduced to their colleagues, acquainted with their responsibilities and informed about the organization's culture, policies and their behavioural expectations.

Training aims to increase employee's ability to contribute to organizational effectiveness. It is designed to improve their skills in the present job and to prepare them for promotion.

Performance appraisal is done to let and employee know about his performance. Low performance may prompt corrective action such as additional training or demotion, and high performance may merit a reward such as raise in salary or promotion.

The appraisal is done by the employee's supervisor, but the human resource department is responsible to establish the policies that guide performance appraisals.

Promotion and separation are other major aspects of human resource management.

iv. Control functions

Two important control roles which find place in management literature are **auditing and stabilization**.

“Auditing refers to the monitoring by the human resource department of the performance of line and other staff departments to ensure that they conform to established personnel policy, procedures and practice in various personnel areas.”

“Stabilization involves seeking approval of the human resource department by the line managers before they take any action.”

For example, granting annual increment, solving union’s grievances, taking disciplinary action against erring employees or rewarding the others, etc.

v. Management functions

Human resource department performs managerial functions like planning, organizing, directing and controlling in respect of human resource department.

Though planning, managers constantly shape and reshape their organizations. They decide in what direction they want their organizations to go and accordingly, make the plans and decisions to get there.

By organizing, managers shape relationship with organizational structures and thereby lead employees into the organization’s future. To achieve the organization’s goal, it is necessary to make the organization’s structures effective, otherwise the process of preparing people to work efficiently may collapse.

A sensible strategic plan and sensible organizational structure result in the fulfilment of organizational goals. To translate these decisions into actions, managers encourage and support the people who carry out the plans and work within the structures.

The managerial effort to keep people focused on the goals of an organization involves the process of directing.

Finally, controlling helps the managers monitor the effectiveness of planning, organizing and directing and take corrective measures as needed. The process of ensuring that actual activities conform to planned activities is called controlling.

4. PROFILE OF HRD MANAGER

Human resource management is one of the most important and complex responsibilities of the hospital administration where more than 65% of the average hospital’s total budget is allocated for pay roll alone.

However, on close observation of any hospitals’ board meeting, 40% of the time at these meetings is spent by the board members discussing finances, 20% buildings and equipments, 15% medical, para-medical and nursing problems, 10% services, 10% public relations and 5% miscellaneous matters including human resource management.

The human resource management in hospitals has been too often the sufferer of the tendency on the part of some hospital administrators to representative some responsibility to human resource managers with one hand and take it back with the other.

There is no denying the fact that hospital administrators more often than not burden the human resource managers with additional responsibility of looking after miscellaneous matters such as hospital transport management, housekeeping, public relations, etc., besides the main responsibility of recruitment of personnel.

However, in practice, they have neither considered them an important and integral part of the administrative team nor they have given directions to the line managers to take seriously the counselling of the human resource managers.

In the absence of above, the line managers are likely to ignore the human resource managers and may continue to make decisions about the personnel of their own.

However, if the hospital administrator makes it clear to the line managers that the advice of the human resource managers is to be taken seriously, its influence on day-to-day decisions will grow.

In short, if the hospital administrator gives due importance to the human resource manager in the hospital administration, he (human resource manager) can recommend, counsel and cooperate with the line managers, and they in turn can actually accept his recommendations and act upon effectively to increase their efficiency.

The hospital administrator can expect from the human resource managers the production of programme which afford employees the opportunity for continued self-development and the possibility of realizing their potentialities.

Human resource managers have not been employed even in 1% of the health care institutions in India. However, wherever they have been employed, they are getting salary between fifteen to twenty thousand rupees per month on an average;

They are postgraduates or diploma holders either in personnel management or in human resource management.

Human resource managers are particularly remembered when the hospital administration is in trouble either due to strike/demonstration threat given by the employees/their unions, or a legal threat received from any other corner.

Generally, they represent the smallest department in the hospital.

- Whenever any replacement or extra person is required in any department,
- Requisition for recruitment of personnel properly approved by the hospital administrator if forwarded to the human resource department,
- Primarily responsible to notify the vacancy in the employment exchange or to place an advertisement in the newspapers.
- Conduct interviews and complete necessary formalities with regard to the appointment.

Human resource manager focusses the attention of the hospital administrator and the medical superintendent upon the social and psychological needs of the hospital. He does this by giving advice to them.

Therefore, he is to serve them as one of the organization leaders.

- He must be an active member of the top administrative team,
- Should participate in organizational planning by projecting the organization into the future,
- Evaluate the present manpower and develop programme to improve skills by conducting surveys which indicate staffing patterns in similar organizations in the region, and compare them with his own organization.

5. HUMAN RESOURCE INVENTORY

Before the human resource manager can plan his programme, he should orient himself about the personnel and their jobs by conducting a human resource inventory.

Detailed information should be collected about each employee:

1. Name
2. Designation
3. Department
4. Immediate supervisor
5. Location of job
6. Dependents
7. Present address with telephone number, if any
8. Permanent address with telephone number, if any
9. Date of joining
10. Date of promotion, if any
11. Total salary and pay-scale at the time of joining
12. Total salary and pay-scale at present
13. Date of last salary increase
14. Background of family members
15. Any other information.

The data necessary to know about the personnel may be gathered from payrolls and existing employment records. The human resource inventory will provide the following important information:

1. An overall picture of the personnel situation
2. Data for making a rough analysis of the turnover of personnel
3. Information as to the number and types of jobs in existence
4. The number of employees reporting to each supervisor
5. Data for making a rough study of salary schedules
6. Seniority list of personnel
7. Hobbies of personnel

Once the personnel inventory is established, it should be revised annually. It serves as a check against existing records. It may be supplemented by such information as the employee's new address, addition in family or any other details.

The inventory will also help in the following areas:

1. Determining the areas where short-term employment is needed
2. Studying the effects of transport facilities on employment
3. Assessing the ratio of supervisors to employees.

5.1 Human Resource Records and Forms

Just as it is necessary to maintain records of outdoor and indoor patients, medico-legal cases, Finance or accounts, similarly, the proper maintenance of human resource records is essential.

Some records are to be kept because of legal requirements; other records are for reference purposes only.

As the number of employees grows, it becomes more and more difficult to remember all details.

Human resource records must include not only negative records of employees, like records of absenteeism, warning, etc., but also positive records of their achievements, promotions, training, etc.

The human resource department should keep this record up-to-date, accurate and also handy so that it can be referred to when required.

5.1.1 Reasons for human resource records

There are several reasons for keeping human resource records:

1. Individual functional departments usually do not keep human resource records of their employees with them. Their records are kept in the human resource department and shared/supplied when required.
2. Government agencies frequently ask for various kinds of information from time to time. This can easily be supplied on the basis of such records.
3. Payroll is prepared from these records.
4. Training needs are determined from these records.
5. Personnel details, family details, educational qualifications, experience, present salary, etc., can be discovered from human resource records for the purpose of deciding promotions, transfers, etc.

The efficient operation of the human resource department demands that forms to promote efficiency, be designed and put into use.

5.2 Categories of Forms

Forms used in hospitals may be divided into three categories:

1. Permanent records concerned with employees' positions.
2. Forms which may become a part of the permanent records once their immediate use is over.
3. Temporary forms which are destroyed once their immediate purpose has been served.

5.3 Permanent Records

Permanent records can be divided into two categories:

- i. Permanent records concerned with employees
- ii. Permanent records concerned with position

5.3.1 Permanent records concerned with employees

All records concerning an individual employee throughout his employment at the hospital should be kept in a file.

This file can also be used for reference purposes after the employee has left the organization.

It has been found useful to record the following particulars:

1. Name
2. Father's name
3. Present address(sufficient space should be provided to record changes in address)
4. Permanent address
5. Telephone number, if any
6. Birth place
7. Date of birth
8. Marital status

9. Dependent(s)' name, sex, age, relationship
10. Person to notify in case of emergency, with address and telephone number, if any
11. Hobbies
12. Education
13. Experience
14. Test record if pre-employment and promotional tests are used
15. References
16. Employment record in the hospital
 - i. Date of joining
 - ii. Designation
 - iii. Department
 - iv. Pay-scale
 - v. Break-up of allotments
 - vi. Date of each change along with designation, department, pay-scale and allotments
 - vii. Date and reason for leaving
17. Unauthorized absence record
18. Misconduct record, date-wise
19. Punishment record, date-wise
20. Appreciation record
21. Special notes, if any, e.g. special health report, repeated loans taken.

5.3.2 Permanent Records concerned with the Position

Permanent records concerned with the positions give the history of what has happened in the various positions throughout the hospital.

The following constitutes the permanent record concerned with the position of an employee:

- i. Job analysis. The breakdown of a job into various component parts.
- ii. Job classification. Grouping of positions having a sufficient number of common characteristics to enable them to be grouped into a unit, e.g. laboratory aid, nursing aid, pharmacy aid, etc.
- iii. Job evaluation. A system by which each position is rated on specified factors and positioned in its relationship to every other job in the hospital.
- iv. Job specification. A summary of the requirements of the job both from the point of view of tasks to be performed and the qualifications necessary to perform the tasks.
- v. Human resource planning. A thorough assessment of future staff needs is required for recruitment, training and career-planning.

5.4 Forms which Become Permanent Record

These include forms which will become a part of the permanent record once their immediate use is over.

The most common ones are:

1. Requisition for new employee(s) and authorization for employment
2. Job application form
3. Medical fitness report

4. Employee probationary rating form
5. Employee annual rating form.

5.5 Temporary Forms

These are to be destroyed after use. They consist of the following:

1. Introduction slips
2. Meal passes
3. Leave record(should be maintained for 3 years)
4. Attendance record(should be maintained for 3 years)
5. Permission to visit health clinic.

6. MANPOWER PLANNING

Manpower planning is the prime function of the hospital human resource manager.

Manpower planning starts with the analysis of the future needs of the hospital and its objectives. It determines organization structure, decides what jobs have to be filled and what their requirements are.

Short-term manpower planning (two years or so ahead) is promotion planning.

Long-term planning (five or ten years ahead) is the really important planning.

In manpower planning, the basic questions of objectives, organization structure and age-structure of personnel have to be considered.

Therefore, manpower planning is essential to know the present and future needs of the health workers.

6.1 Nature and Scope of Manpower Planning

Manpower planning may be defined as a technique for the acquisition, development, allocation and utilization of human resources in an organization.

Manpower planning, which is at times described as manpower management, is basically concerned with having the right type of personnel for the right job at the right time.

This is done by studying three types of forecasts:

1. Economic forecast
2. Hospital's expansion forecast
3. Employee's market forecast.

Systematic manpower planning is a must for dynamic organization.

The management has to meet the challenge of various pressures, such as political, economical and technological, to ensure that the future of the hospital remains bright under all circumstances.

6.2 Need for Manpower Planning

Every hospital has to do manpower planning for the following reasons:

1. Shortage of certain categories of employees.
2. Advancement of medical science and technology resulting in need for new skills and new categories of employees.
3. Changes in organization design and structure affecting manpower demand.
4. Government policies in respect to reservation of seats for SC/ST/OBC/handicapped persons/women, and others.
5. Labour laws affecting demand and supply of labour.

6. International scenario of employment, e.g. employment of nurses, doctors, para-medical personnel in USA, UK, Ireland, the gulf countries, etc.
7. Introduction of computers.

6.3 Benefits of Manpower Planning

Manpower planning anticipates not only the required kind and number of employees but also the action plan for all the functions of human resource management.

The major benefits of manpower planning are that it

1. enables an organization to have the right person at the right place;
2. provides scope for advancement and development of employees through training, development, etc.
3. helps in anticipating advertisement and salary budgets;
4. predicts the need for redundancy and plan to eliminate it;
5. plans for better working conditions, fringe benefits, training needs;
6. gives an idea of the type of tests to be used and interview techniques in selection based on the level of skills, qualifications, intelligence, values, etc. of future manpower; and
7. helps improve service to patients and contributions of working personnel.

6.4 Objectives of Manpower Planning

The objectives of manpower planning are very wide and varied. The most important ones are:

1. Ensuring maximum utilization of personnel
2. Assessing future requirements of the organization
3. Determining recruitment sources
4. Anticipating from past records:
 - i. Resignations;
 - ii. Discharge simpliciter (simple discharge);
 - iii. Dismissals;
 - iv. Retirement.
5. Determining training requirements for management development and organization development.

6.5 Manpower Planning Steps

Manpower planning covers the total activity of the personnel functions such as recruitment, selection, training, career development, staff appraisal, etc.

Manpower planning involves the following steps:

- i. Scrutiny of the present personnel strength
- ii. Anticipation of manpower needs
- iii. Investigation of turnover of personnel
- iv. Planning job requirements and job descriptions.

i) Scrutiny of the present personnel strength

- The scrutiny of the present personnel strength is the corner-stone in manpower planning.
- This helps in management development, in determining training needs, and in the optimum utilization of personnel wherever they are needed most.
- An examination of present staffing can further determine the exact number of personnel required and their skill-levels.

ii) Anticipation of manpower needs

- The anticipation of the needs for manpower generally involves taking an inventory of the existing personnel who are 'in stock' today, and what can be expected to be in stock tomorrow.
- This forecast is prepared every year for the next five years.
- Its objective is to determine the number of personnel likely to be needed on account of any reason whatsoever; promotion of employees to higher posts, losses that are likely to occur through resignations, discharge simpliciter, dismissals, retirements, etc.

iii) Investigation of Turnover of Personnel

Labour turnover, means the rate of change in the number of employees, i.e. the number of employees leaving and joining an organization during a certain period.

A study of labour turnover is helpful in manpower planning.

A high turnover is a warning to the hospital authorities that something is wrong with the personnel policies and practices of the hospital. It may be due to wrong selection, placement, low salary, poor working conditions, lack of promotional avenues, etc.

A high rate of turnover not only costs in terms of money but also harms the reputation of a hospital, lowers the team-spirit of the remaining employees and reduces the quality of patient-care.

Some of the important factors which result in employees quitting their jobs are:

1. Low salary
2. Better prospects in other hospitals
3. Poor working conditions
4. Transport problem
5. Housing problem
6. Marriage in case of female employees
7. Health grounds
8. Family circumstances
9. Further studies
10. Maltreatment by superiors
11. Unfriendly relations with colleagues
12. The attraction of going back to one's native place
13. The attraction of going to a foreign country.

The exit-interview is a useful tool to study labour turnover. When an employee is leaving, he is generally willing to be candid and may share his bitter experiences. The organization's weak spots are revealed, which can ultimately help reduce turnover and in building the morale of the remaining employees in the hospital.

The exit interview form should be filled up by the human resource department. Any responsible person of the human resource department should conduct the exit-interview of an outgoing employee on the last day of his leaving. He should report his findings to the human resource manager and chief executive of the hospital for taking corrective measures so that other employees may not leave the hospital for the same reasons.

The exit-form should also be filled by the concerned department head. While filling up this form, the department head need not interview the employee who is leaving.

The Head of the human resource department should objectively analyze the information received through the exit-interview conducted by the human resource department and the information given by the concerned department head through the exit-form. He should then forward his observations and recommendations to the head of the hospital so that corrective measures may be taken to reduce the turnover.

Exit-interview form filled by HRD

Name and Address of the Hospital
EXIT-INTERVIEW FORM
(To be filled up by the head of the human resource department)

Name: Designation: Department:

Employment: Permanent/Temporary/Leave vacancy/Casual/Apprentice

Pay-scale at the time of joining:

Total Salary: Rs. /p.m.

Pay-scale at the time of leaving:

Total Salary: Rs /p.m.

Date of joining: Date of leaving:

Age: Sex:

Marital status: Single/Married/Separated/Divorced/Widow(er)

Why did you join this hospital?

Why are you leaving this hospital? If it is for any of the reasons listed below, please tick as many alternatives as appropriate. If it is for some other reasons, please state.

<i>Personal Reasons</i>	<i>Economic Reasons</i>	<i>Involuntary</i>	<i>Others</i>
Health grounds	Better pay in another hospital: Name	Advised to resign	Poor working conditions
Getting married	Better prospects in another hospital: Name	Terminated	Distance and transport problem
Family circumstances		Retrenched	

Further studies Starting own practice Any other reason Housing problem

Maltreatment by superiors: Any other reason

Name

Unfriendly relations with colleagues:

Name

Going to native place/abroad

Voluntary retirement

If not, can you give reasons for this decision?

.....
.....
.....

Please give your suggestions for further improvement of this hospital

.....
.....
.....

Date:

Signature of the employee

How far does the head of the department agree with the comments of the employee?

.....
.....
.....

Signature of the Head of the human resource department

Direction of the Head of the hospital, if any

.....
.....
.....

Signature of the Head of the institution

Exit-Form filled by Department Head

Name and Address of the Hospital
EXIT-FORM

(To be filled up by the concerned Department Head)

Name of employee:
Designation:
Department:
Date of joining:
Date of leaving:
Reason for leaving:
Knowledge and skill of profession/occupation:
Quality of work:
Quantity of work:
Ability to work with others:
Dependability:
Health:
Emotional stability:
Appearance and grooming:
Re-employability:
Other comments, if any:
.....

Date:

(Signature of the Department Head)

iv) Planning Job Requirements and Job Descriptions

Manpower planning consists of studying job requirements and preparing job descriptions. The requirements of each and every job must be thoroughly studied through job analysis.

Job analysis – job analysis is the process of examining a job to identify its component parts and the circumstances in which it is performed. It is necessary to be familiar with this technique because its application is quite wide and extends across the whole range of staff management functions.

- a. *Recruitment* – it aims at filling jobs by recruitment, transfer or promotion.
- b. *Training* – it is intended to decide the contents of the programme.
- c. *Salary* – it is designed for finding the correct grading of individual posts.
- d. *Safety* – it is meant for identifying job hazards.
- e. *Annual performance appraisal* – it evaluates the performance of employees annually.

The mechanics of carrying out this work of job analysis are demanding on the resources of both the functional management who prepare the job analysis and the line management who analyzes it.

The steps in conducting job analysis are as follows:

1. The analysis should commence with a fairly brief statement of initial requirements such as aptitude, educational qualification, training and experience.
2. The next main item should be a description of the responsibilities under broad headings such as physical effort (amount of physical effort required for moving,

lifting, duration, etc.), mental effort (the degree of intelligence needed); and responsibilities (for controlling staff, material, equipment, cash, etc.).

3. Environment and conditions of service are to be considered and analyzed, such as physical surrounding (indoor, outdoor, temperature, humidity, noise, etc.), accident hazards, shift duties, prospects of advancement, occupational illness, etc.
4. The constraints, difficulties and pressure of the job should also be brought out.

Job description - Job description is a broad statement of the purpose, scope, duties and responsibilities of a particular job. This is a resultant of the job analysis. It provides the detailed factual information required by candidates and selectors alike in order to obtain a through knowledge of the requirements of a job.

To avoid confusion and misunderstanding, a job description should be prepared jointly by the human resource department and the concerned department head.

A broad format for job description is follows:

Name and Address of the Hospital
JOB DESCRIPTION

Job title: Department:

Accountable to*: Pay scale:

(*Here mention the job title of the individual responsible for the supervision of the job holder, e.g. matron in case of staff nurse, electrical engineer in case of an electrician, etc.)

Job summary:

.....

Job duties: 1.
2.
3.
4.
5. Any other duty assigned by the Department Head.

Qualification:

Experience:

Efforts:

Working conditions:

The job description should be reviewed from time to time, particularly at the time of annual appraisal, because the job itself changes due to advancement in technology, laws, requirements, etc.

Job specification – a job specification can be defined as a list of various qualities which the person doing the job should possess. It is prepared by analyzing the job description. The job description is translated in terms of qualifications required and personality requirements.

These requirements can be grouped under the heads:

1. *Mental requirements* which include intelligence needed, and educational and professional qualifications.
2. *Physical requirements* which include age, height, health and eyesight, etc.
3. *Skills requirements* such as dexterity required for doing a job, communication, human relations and leadership skills.
4. *Responsibility requirements* in relation to machines, equipment, fellow workers, work schedules, etc.

5. *Experience requirements* to do the job efficiently.
6. *Working conditions requirements* such as physical surroundings.

The requirements vary from job to job. Due importance should be given to each requirement depending upon the circumstances of each job. However, undue importance should not be given to any one requirement at the cost of the other.

A well-laid-out job specification will enable the management to identify the right man needed to do the required job efficiently.

It should be noted that if a man is not found fit for a particular job, he need not be necessarily unfit for all other jobs. At the time of selection, due care and caution should be taken to avoid selection of the wrong person.

Human resource requirements in hospitals – Before the requirement and selection of personnel can be undertaken, the requirements for human resources must be analyzed in terms of number of personnel needed for each type of job.

According to a report of the commission on University Education in Hospital Administration, a ratio of 2 employees per bed has been prescribed. This ratio is applicable to general hospitals where patients with all types of diseases are treated.

The term ‘employee’ means any person who works in any capacity in a hospital, e.g. doctors, nurses, pharmacists, medical laboratory technicians, X-ray technicians, physiotherapists, dieticians, medical social workers, supervisors, skilled/semi-skilled/unskilled employees, etc.

According to a recommendation by the World Health Organization, a population of one thousand people needs at least one qualified doctor and every qualified doctor in turn requires eight skilled paramedical and nursing professionals.

Thus, according to this recommendation, India which has crossed the one million population mark, requires approximately 12 lakh doctors and 96 lakh paramedical and nursing personnel to build the right kind of medical infrastructure.

Unfortunately, the country today has approximately 4 lakh doctors and equal number of paramedical and nursing personnel. Thus, India still requires more than 75 lakh such personnel to bring stability to its medical and paramedical infrastructure, especially if we keep in mind the upcoming concept of medical tourism.

6.5.1 Stay in Interview

Stay in interview for Human Resource managers has become an indispensable tool to retain their workforce by making them feel appreciated and motivated. Contrary to exit interview, stay in interview is conducted to understand the reasons why employees wish to continue working for the organization.

It is all about their work, the environment, the practices and the behavior of the supervisors managers that appeal to them and motivate them to stay on.

Stay in interview is held to understand the issues an employee may be facing. So, the Human Resource manager should get feedback from time to time by conducting stay in interviews.

The concept of stay in interview is a positive approach. It focuses on what is going right rather than what is going wrong.

Stay in interviews can be conducted periodically by the immediate supervisor with the help of an assistant of human resource department. They should bring the information

collected from the employees in the knowledge of the concerned department head of the employee as well as the human resource manager and try to utilize the information in the best interest of the hospital.

6.5.2 Doctor-to-Beds Ratio

According to the Medical Council of India, the doctor-to-beds ratio should be 1:5, but this ratio is applicable only to those hospitals which are attached to medical colleges and where the doctors are required to participate in teaching programmes of the medical colleges.

This ratio depends upon the type of hospital, such as maternity, paediatric, infectious diseases, referral, general, etc.

However, it can be recommend that the doctors-to-beds ration should be 1:10 in general hospitals.

6.5.3 Nurse-to-Beds Ratio

The nurse-to-beds ratio should be 1:3, according to the Indian Nursing Council.

The Council has further prescribed that for every 100 beds and to cover a 24-hour period, there should be 4 ward sisters and 30 staff nurses and for fractions of 100, the staff should increase in the proportion of ward sister to 25 beds and 1 staff nurse to 3 beds.

When the bed strength is between 150 and 400, in addition to the nursing superintendent, there should be an assistant nursing superintendent, and when the bed strength is 401 to 700 and for every 300 beds in excess of 700, there should be an additional nursing superintendent.

The nurse-to-beds ratio also depends upon the kind of ward. The recommended nurse-to-beds ratios for the various kinds of wards in a hospital are given in Table.

<i>Ward</i>	<i>Nurse</i>	<i>Beds</i>	<i>Remarks</i>
Medicine	1	3	
Surgery	1	3	
Casualty	1	2	
ICU	1	1	
CCU	1	1	
Pediatrics	1	4	If mothers are allowed to stay with the patients.
	1	2	If mothers are not allowed to stay with the patients
Gastroenterology	1	3	
OB & Gynae	1	3	
Labour Room	1	3	(Per OT table)
Operation Theatre	2	1	
Orthopaedics	1	3	
Well baby nursery	1	3	
Special nursery	1	1	
Dialysis	1	1	
Neurology	1	3	
Psychiatry	1	3	
Dermatology	1	3	
Cardiothoracis Surgery	1	1	
ENT	1	3	
Eye	1	3	
Neuro Surgery	1	3	
Oncology	1	3	
Plastic Surgery	1	3	
Urology	1	3	
Post Operative Room	1	1	

A nurse is to perform different procedures and functions at different time, such as on admission of a patient, discharge of a patient and care during the stay of a patient in the morning, afternoon, evening and at night.

Patient's care at the time of admission

- Nurse welcome a patients with smile
- Remove bed cover
- Make him feel comfortable,
- arranges for fresh drinking water,
- checks his weight, temperature and blood pressure,
- enquires about the history of illness, orientates the patients to his surrounding (Such as use of the call bell, bed pan, light, fan etc.)

Morning care of the patients

This care is given to the patients in the morning by the day shift nurses.

- She visit the patients in his room, greets him,
- gives a sponge bath,
- change his clothes,
- rubs talcum powder,
- change bed sheets and pillow covers,
- check temperature, Blood Pressure,
- administers morning medicines.

Afternoon care of the patients

Care given day shift staff after he has had his lunch, comb the patient hair, check temperature, BP, administers afternoon medicines, prepares him for evening tea.

Evening care of the patients

This is the care given to the patient by the P.M. shift nurse.

- She takes report about the patients from the morning shift staff,
- check temperature, BP,
- administers evening medicines,
- places the patients in a comfortable position for sleep,
- wishes the patients a peaceful and comfortable night sleep,
- switches off the rom lights and switches on the night lamp if required.

Pre –morning care of the patients

(Between 5am-7am by the night nurse)

- provide bed pan, collect urine and stool specimens if required,
- assists the patients in brushing his teeth,
- washes his face,
- Straightens the bed sheet and makes the patients comfortable,
- If patients has any problem at night she contacts the doctor on call,
- makes entries in the nurse note-sheets about the general condition of the patient finally reports to the day shift nurse before going off duty.

Care at the time of discharge

Prepare for the patients to return home.

The whole aim of hospitalization is to try to help an individual recover speedily so that he may again take his place in society. If this is not possible, he should be prepared to continue his treatment at home.

When the doctor decides to discharge a patients nurse informs the patients his family member so that they make the necessary arrangement.

Send the chart of billing, explain discharge policy to patients and relatives, hands over the bills to the patients relatives, collect home medicines from the pharmacy from the patients request the doctor to prepare the discharge summary.

Receiving pay bill-give discharge summary sign it the inform admission office, dietary department, explain follow up policy, enter the patients name and accurate time in discharge census.

UNIT III

RECRUITMENT AND TRAINING

Different Departments of Hospital, Recruitment, Selection, Training Guidelines – Methods of Training – Evaluation of Training – Leadership grooming and Training, Promotion – Transfer.

1. DIFFERENT DEPARTMENTS OF HOSPITAL

1.1 X-ray Department

The main function of this department is to assist clinicians in the diagnosis of diseases through radiography, ultra sonography, computerized axial tomography, magnetic resonance imaging, etc.

While deciding the number of employees in an x-ray department, the following tasks should be taken into consideration:

1. Reception of patients
2. Recording the history of a patients, as concerned with x-ray
3. Prepare necessary paper, the slip to be pasted on the x-ray request entry in the register
4. Taking film from stock, putting the same in the x-ray cassette
5. Explaining to the patients about x-ray procedure and taking the x-ray
6. Processing film
7. Sorting film
8. Reporting to the radiologist
9. Typing of report
10. Charting report or dispatching report

One senior X-ray supervisor is required for 7 X-ray technicians, to supervise and execute radiographic work, to maintain efficiency and high quality of work.

Also required are one receptionist-cum-typist to take care of reception, clerical and typing work and also one X-ray aide to fetch up to 25 patients from the wards during the day.

1.2 Physiotherapy Department

The main objectives of physical therapy is as follows:

1. To minimize physical disability through exercises
2. To assist each patient so that he may reach maximum functional level
3. To contribute to the comfort and well-being of the patient
4. To re-train him in activities of daily living
5. To accelerate the patient's recovery and decrease his length of stay in the hospital.

The main function of this department are to rehabilitate or activate various limbs/parts of human body which might have become inactive due to accident/disease/ageing process etc.

The department is generally directed and supervised by a chief physiotherapist. He is assisted by a number of physiotherapists depending upon the work load. One or more receptionists for receiving patients, their scheduling and clerical duties.

Therefore, the following are the main functions of the physiotherapy department:

1. To speed up recovery of patients
2. To prevent and minimize residual physical disabilities
3. To restore physical functions of the body
4. To make an individual return to his optimum way of living

In designing the physical therapy department, hospital planners should pay attention to six major functional areas. They are:

1. Treatment area consisting of cubicles
2. Gymnasium
3. Hydrotherapy area
4. Space for office where clerical and administrative work can be carried out
5. Sufficient changing rooms
6. Sufficient number of toilets

The department is generally directed and supervised by a Chief Physiotherapist.

One physiotherapist can treat about 25 patients in a day during his 8 hours duty. Before giving treatment to patients, he has to do some preparatory work:

1. Examination of the patients
2. Entry into register:
 - Name, age, sex
 - Present history of illness
 - Past history of illness
 - Family history if any
 - Diagnosis

3. Aim of treatment

4. Planning of treatment

5. Progress report

One Chief Physiotherapist is required for 7 physiotherapists to supervise their working and to maintain a high standard.

1.3 Medical Laboratory

The primary function of medical laboratory is to perform laboratory tests in the eight main fields of hematology, parasitology, urinalysis, histopathology, serology, biochemistry, bacteriology, cytology, etc. to assist medical staff in making or confirming diagnosis.

In all hospitals, a pathologist is incharge of the laboratory. At the middle level there is a chief laboratory technician who looks after the section heads of various sections of the laboratory.

Each section head has a number of laboratory technicians, laboratory aides and bottle washers, but secretarial staff can be common for all the section.

One medical laboratory technician can do approximately 35 tests per day. If he does less than 35 tests, it means that his performance is below average. If he does more than 35 tests, the accuracy of his results should be questioned.

In one day, one technician can do: 45 hematology tests; or 50 urine analysis tests; or 50 parasitology tests; or 20 blood-bank tests; or 40 serology tests; or 30 biochemistry tests; or 20 histopathology tests.

Also required are one section head over 7 laboratory technicians, clerical staff and bottle-washers, keeping in view the workload and technology used in the department.

1.4 Pharmacy

To run the pharmacy of a hospital, the head of the hospital requires qualified pharmacists, organization structure, cooperation of the medical and nursing staff of the hospital.

The number of pharmacists to be employed in a hospital depends upon the policy of the hospital.

It has been observed that one pharmacist can dispense medicines to 150 patients per day. One pharmacist can dispose of one prescription of a patient, whether an out or an in-patient in approximately 2 minutes.

Thus, one pharmacist who works 8 hours a day can take care of 100 out-patients as well as 50 in-patients.

If the number of pharmacists in a hospital exceeds 7, the Chief Pharmacist should employ one senior pharmacist to assist him in supervision so that the efficiency of the department may be maintained.

1.5 Laundry

The following lists show the space and equipment required in a hospital laundry:

1. Clean cloth processing area
2. Drying area
3. Folding area
4. Pressing area
5. Material storage area
6. Laundry supervisor area
7. Laundry personnel's rest room
8. Solution preparation and storage room
9. Boiler area

List of equipment for laundry:

1. Washing machines
2. Hydro extractors
3. Iron for pressing clothes
4. Dryers
5. Sewing machines
6. Boiler

The number of personnel required in the laundry department depends upon the frequency of changing cloths in the wards, the quality of cloths, as well as upon its laundry equipment.

However, one laundry operator can wash the cloths of 25 to 30 beds and one laundry orderly can assist in washing the cloths of 50 to 60 beds.

One shift supervisor, one laundry mechanic and one laundry clerk are required in each shift. Some staffing norms based on the workload being followed at various hospitals are:

- | | |
|-------------------------------------|---------------------------------|
| One washerman can take care of | : 150 to 200 kg cloths per day. |
| Each operation in Operation theatre | : 7 to 8 kg of soiled cloths |
| Each delivery in Labour Room | : 7 to 8 kg of soiled cloths |
| Each ward patient | : 5 to 6 kg of bed cloths |

1.6 Food Service

The food service department receives a substantial amount of supplies. Therefore, it requires large enough area for handling supplies.

The storekeeper of the food service department should also be present so that he can check the quantity and quality of the supplies.

The food service department in most of the hospitals is divided into:

- i. Supply receiving area
- ii. dry storage area
- iii. refrigerated storage area
- iv. cooking area:
 - a) for vegetarian cooking
 - b) for non-vegetarian cooking
 - c) for western cooking
 - d) for special diet cooking
- v. for employees cooking
- vi. patients serving rooms
- vii. food service manager office
- viii. dietician office
- ix. dishwashing area
- x. peeling of vegetables area
- xi. visitor's canteen
- xii. pot washing area

It is difficult to generalize on the size of staff required in the food-service department of a hospital.

The staff strength depends upon the number of medicated diets required, the education programme, research work, and the type of equipment used in the department.

However, one dietary staff member is required for approximately 15 to 20 patients.

Generally, in the food-service department of a hospital, the dietician, food storekeeper, cook, cook helpers, bearer and dish washer work in close co-ordination.

One dietician can look after upto 200 beds. If the bed strength exceeds 200 beds, another dietician should be appointed.

One cook, one cook helper, one bearer and one dishwasher are sufficient to prepare and serve meals for 20 patients/staff members.

1.7 Sanitation and Housekeeping

The housekeeping department deals with hospital hygiene. The sanitation in-charge should know the simple facts about bacteriology. He should also be able to train his employees in cleaning techniques.

The following functions are carried out by personnel of the housekeeping department:

1. They sweep and mop floors, dust furniture, clean walls, windows and bathrooms.
2. They scrub and wax floors.
3. They collect garbage and dump it near the burning site.
4. They prevent spread of infection.

A sweeper should be allocated a work-area of 1,200 to 1,500 square feet keeping in view the work policies of the institution, the degree of cleanliness required, and the electrical cleaning equipment used.

One supervisor to supervise 10 sweepers is recommended. For a 300-bed hospital, there should be one sanitation incharge, four supervisors and 40 sweepers (30 sweepers for the daily requirement and 10 sweepers as leave reserve).

1.8 Security

The security of any hospital is becoming more and more problematic. The visitors may violate the rules and regulations of the hospital.

Similarly, employees of the hospital try to break hospital discipline.

The security personnel of a hospital have a dual role to play that of watching and controlling both visitors and the staff.

Keeping in view the rising trend of thefts and the tendency of visitors to violate the rules and regulations, it is necessary to engage sufficient security force.

The staff strength required depends upon several factors;

- The area of the hospital,
- The location of the hospital (city, town, village),
- The construction of the hospital building

However, the norm is that one security guard is required for every 10 beds of a hospital and one security supervisor is required in every shift to take decisions on the spot in case of any untoward incident such as theft, fight between the hospital staff and the public or amongst the hospital employees.

1.9 Central Sterilization and Supply Department

The primary activities of the department are sterilizing, storing and distributing the dressings, instrument packs, gloves, catheters, sterile cloths packs, treatment trays, etc.

The main objectives of the central sterilization and supply department are:

1. To prevent infection by sterilizing equipment and materials
2. To sterilize equipments and materials
3. To achieve higher efficiency in the areas where sterilized equipment and materials are used
4. To reduce the length of stay of patients by providing proper sterilized equipment
5. To reduce the cost of maintenance of the hospital.

Mostly the functions of the central sterilization and supply department are:

1. Receiving the used equipment and materials
2. Deciding whether any of the equipment and materials are required to be discarded
3. To disinfect prior to sterilization
4. Assembling equipment sets, cloths packs and treatment trays
5. Packing equipment sets, cloths packs and treatment trays
6. Sterilizing
7. Labelling and dating
8. Storing equipment packs, cloths packs and treatment trays
9. Issuing

Generally, in the central sterilization and supply department, there is a supervisor who may be a nurse and the remaining staff consists of technicians and aides who are trained on the job.

One person in the central sterile supply department can take care of 25 to 30 beds. This excludes the supervisory staff but includes a 30 percent leave reserve.

1.10 ECG Department

The staffing norms for ECG technicians depend upon the type of hospital, size of the hospital and number of patients visiting the Outpatient department.

The staffing norms for ECG technicians can be formulated on the basis of number of ECGs taken in one shift (lasting 8 hours).

One ECG technician can take about 20 ECGs in one shift.

1.11 Admitting Department

The functions of the admitting department generally consist of giving information, admitting, transfer and discharge of patients.

At the time of admission, the admission desk collects data during the admission process. Once the admission formalities are over, one person from the admitting department accompanies the patient to the ward and hands over the admitting papers of the patient to the ward incharge concerned.

The main functions of the admitting department are:

1. Admission of patients, transfer from one place to another because of the condition of patients and discharge of patients from the hospital.
2. Collecting information from patients at the time of admission.
3. Generating appropriate patient's records to pass on to the department concerned
4. Collecting advance from patients at the time of admission as per the policy of the hospital, if any.
5. Booking patients for planned surgeries and deliveries on the basis of written instructions by the doctors concerned.
6. Maintaining a bed index showing current occupy of beds ward wise in order to assign beds for other patients.
7. Arranging some one to take the patient and his family members to the patient's room where he has been allotted a bed.
8. Providing information about the hospital and its doctors to patients.

1.12 Medical Records Department

The medical records department maintains records and document relating to patient care. Its main functions are filing, indexing and retrieving medical records by

- i. Developing a procedure for the proper flow or records,
- ii. Developing a statistical reporting systems
- iii. Preparing births, deaths and communicable diseases reports
- iv. Preparing statistical reports in relation to admission, discharge, coding all diagnosis.

1.13 Public Relations Department

The major responsibilities of the Public Relations Officer are:

1. To keep good relations with all kinds of media personnel.
2. To develop communication material such as website of the hospital.
3. To bring the virus of the public to the knowledge of the management.
4. To tell beforehand the impact of any change in the hospital policy.
5. To improve communication between the public and the management.
6. To organize camps for blood donation, fund raising, etc.

2. RECRUITMENT

Recruitment is a process of finding and attracting the potential resources for filling up the vacant positions in an organization.

Recruitment process is a process of identifying the jobs vacancy, analyzing the job requirements, reviewing applications, screening, shortlisting and selecting the right candidate.

Job requisition

Once a department head knows that there is a vacancy, he fills up a job-requisition slip and submits it to the human resource department for necessary action.

Job requisitions are intended to give the human resource manager enough information about the job.

Name and Address of the Hospital

JOB-REQUISITION FORM

To

The Human Resource Manager

Please arrange to fill post/posts of for my department within days. Job specifications are given below:

1. Post Permanent/Temporary/Leave vacancy
2. If temporary/leave vacancy, its duration
3. Age
4. Sex
5. Qualification
6. Experience
7. Working schedule
8. Special skills required
9. Budget provision
10. Any special requirement

Date

Signature of the Department Head

Instructions

1. Be sure about the nature of the post mentioned at S. No. 1.
2. While filling particulars from S. No. 2 to 8, please go through the job description of the concerned job.
3. Before submitting this form to the human resource department, please take the approval of the head of the institution.

Sources of recruitment

The moment the human resource department gets a job requisition slip from any department, it starts looking for prospective candidates using various sources of recruitment.

The following sources are well established but their effectiveness varies in different situations and different parts of the country.

1. Existing employees
2. Door applicants
3. Government employment exchange
4. Private employment exchange
5. Newspapers
6. Professional journals
7. From other hospitals
8. Unsolicited applicants
9. Campus interviews in teaching institutions
10. Internal circulars for vacancies
11. Referral from:
 - a. Employees;
 - b. Ex-employees;

- c. Political leaders;
- d. Government officials;
- e. Religious bodies.

- 12.Re-employment
- 13.Through contacts
- 14.Walking interviews
- 15.Job websites
- 16.Placement agencies
- 17.Social networking

Though the human resource department of a hospital generally tries to utilize one or more sources of recruitment as mentioned above, a few human resource managers give some weightage to the referred candidates of their own hospital's employees.

The latest source of recruitment which is catching up the market these days is social networking. The very concept of social networking for the purpose of recruitment is that every one knows some one.

The specifications of the vacancy should be circulated in writing to all the recruitment sources and particularly to the government Employment Exchange.

Name and Address of the Hospital

VACANCY NOTIFICATION FORM

To

The Employment Exchange Officer
 ABC Road
 XYZ Place

1. Type of worker required (designation)
2. Description of duties
3. Qualifications required
 - (i) Essential
 - (ii) Desirable
4. Experience required
 - (i) Essential
 - (ii) Desirable
5. Age limit, if any
6. Whether women eligible
7. Number of worker/workers required
8. Probable duration of post
9. Pay scale
10. Allowances
11. Particulars regarding interview
 - (i) Date of interview
 - (ii) Time of interview
 - (iii) Place of interview
12. Probable date by which the vacancy will be filled
13. Reservation for any community
14. Willingness to consider applicants from other exchanges in case local candidates are not available
15. Admissibility of travelling allowance to candidates reporting for interview
16. Provision for food and accommodation
17. Other items of information

Date

Signature of the Employer
 Stamp of the Hospital

2.1 Recruitment Policy

The hospital authorities should frame a recruitment policy for the guidance of the human resource department.

The management should clearly spell out the objectives and major principles they intend to pursue while recruiting employees.

They should also lay down a promotion policy.

2.1.1 Considerations for framing recruitment policy

The following points should be kept in mind for the recruitment and selection of employees:

- i. Internal vs. external recruitment
 - Recruitments can be classified into two main types: internal and external.
 - Internal recruitment implies the promotion and transfer of employees within an organization to fill a vacancy.
 - External recruitment implies recruitment of an employee from outside the organization.
- ii. Appointment of relatives of employees
 - The relatives or friends recommended by employees are accepted as a reliable source of recruitment.
 - Where there is confidence and respect between an employer and his staff, it is unlikely that employees will put forward the names of such persons who would let them down.
- iii. Over- and under-qualified staff
 - The candidate to be selected should neither be under-qualified nor over-qualified.
 - If he is under-qualified, he will not be able to do his work efficiently.
 - On the other hand, if he is over-qualified, he would soon become frustrated and ultimately leave the hospital.
 - Hence the candidate to be selected should be suitably and adequately qualified.
- iv. Exit interview
 - Exit interviews are considered essential to get a feedback regarding the hospital's policies.
 - In fact, the exit-interview is a very useful tool to study labour turnover
 - Weak spots in the organization's policy are revealed which help in reducing turnover and building the morale of the remaining employees in the hospital.

2.1.2 Advertising the post/vacancy

Where it is not possible to fill the vacancy through other sources of recruitment, vacancies have to be advertised in newspapers and professional journals.

2.1.3 Objects of advertising a post

A post is advertised to

- a. Attract suitable persons;
- b. Get adequate number of applicants;
- c. Discourage unsuitable persons from applying;
- d. Project a good image of the hospital.

2.1.4 Considerations to be kept in mind while advertising

While advertising, the following points should be kept in mind:

1. The advertisement should be designed in such a way that it induces the interest of potential candidates.

2. The media of advertisement should be selected carefully.
3. As far as possible the advertisement should be a display advertisement. A classified advertisement usually fails to attract the right persons.
4. Repeated advertisement for the same post should be avoided because it gives the impression that the hospital is one where employees do not wish to stay long.
5. Give background information about your hospital in a couple of sentences such as a mission hospital, private hospital, public hospital, charitable hospital, etc.

3. SELECTION

The selection process starts when applications are received and screened in the human resource department. The human resource manager goes through the applications to identify potential candidates for interview.

The job application form is one of the most important tools in the selection process. When drafted properly, it can supply enough information about a candidate. In this way, the number of persons who have applied can be reduced to a manageable size for interview.

3.1 Job application form

The job application forms of different organizations are quite similar. They need to know the applicant's name, father's name, present and permanent address, sex, age, religion, weight, height, physical deformity, if any, educational qualification, experience and participation in extra-curricular activities.

While preparing the job-application form, the following points should be kept in mind:

1. The form should be large enough to provide enough space for writing the desired information.
2. The application form should be printed on good paper.
3. The wording used on the form should not be unclear.
4. Items included in the form should be designed to extract only the required information.
5. It is desirable to include some questions about the previous employers of the candidate to find out his stability at work.
6. One blank page should be attached with every job-application information and the candidate should be asked to write why he is applying for the post.
7. At the end of the form, there should be a place for his signature. The signature should follow two statements:
 - i. I have no objection if any enquiry is made from my past or present employer.
 - ii. I hereby certify that all the information given by me in the form is correct and complete to the best of my knowledge and belief.

A job-application form serves three main purposes:

- a. It enables hospital authorities to weed out unsuitable candidates.
- b. It acts as a frame of reference for the interview
- c. It forms the basis for the personnel record file of the successful candidates.

One model job-application form has been given as follows:

Name and Address of the Hospital
HUMAN RESOURCE DEPARTMENT—PERSONAL INFORMATION FORM

Post applied for
 Name
 Address
 Present
 Permanent

Please paste
 your latest
 passport size
 photograph here

Father's/Husband's Name His Occupation
 Citizenship Religion Sex
 Age Date of Birth Physical Deformity, if any
 Marital Status: Single Married Divorced Separated Widow(er)
 Hobbies
 Name and address of relation to be notified in case of emergency
 Education: (Including technical/professional qualification, if any)

Degree/Certificate Diploma awarded	Institution Board/University	Year	Division	Subjects

Do you know typing? Yes/No. If yes, what is your typing speed

Do you possess working knowledge of computer? Yes/No.

References (Not relations and employers)

- | | |
|-------------------|-------------------|
| 1. Name | 2. Name |
| Designation | Designation |
| Address | Address |

Are any of your relatives employed in this hospital? Yes/No. If yes,

Name Relationship

Have you had any major illness, operation or accident in the past. If yes, give details

Service Experience (Start with the last employment)

1. Name and address of the employer
 From To Your position
 Description of duties
 Salary and grade Fringe benefits, if any
 Reason for leaving Refer to whom?
2. Name and address of the employer
 From To Your position
 Description of duties
 Salary and grade Fringe benefits, if any
 Reason for leaving Refer to whom?
3. Name and address of the employer
 From To Your position
 Description of duties
 Salary and grade Fringe benefits, if any
 Reason for leaving Refer to whom?

What type of Nursing do you prefer most? OT/Public Health/OPD/Medical/Surgical/
 Paediatrics/OrthopaedicOb. & Gyn.
 (For nurses only)

Are you currently a member of any professional organization? Yes/No.

If yes, name:

Have you any objection to our making enquiries from your

- (a) Past employers: Yes/No
 (b) Present employer: Yes/No

Minimum salary expected

Minimum time required for joining

Have you ever applied earlier? If so, with what result

Have you ever been convicted by a Court of Law

I hereby certify that the statement made by me in answer to the foregoing questions is true, complete and correct to the best of my knowledge and belief. I understand that any misrepresentation or material omission made in the personal information form or any other document requested by the hospital authorities renders a staff member/workman of (*name of the hospital*) liable to termination or dismissal.

Date

Signature of the Applicant

The human resource manager does not select anyone. His job is to screen and recommend the potential applicants to the department head.

The final decision must rest with the department head.

3.2 Steps in selection

The steps which constitute the employee selection process are the following:

- i. Interview by human resource department
- ii. Pre-employment tests – written/oral/practical
- iii. Interview by department head
- iv. Decision of administrator to accept or reject
- v. Medical examination
- vi. Check of references
- vii. Issue of appointment letter.

i) Interviewing

Interviewing is the main method of appraising an applicant's suitability for a post.

Interviews are often conducted to assess the suitability of candidates.

The employment interview can be divided into four parts;

- a. Warm-up stage,
- b. Drawing-out stage,
- c. Information stage,
- d. Forming-an-opinion stage

The employment interview is aimed at obtaining certain basic information. It is normally conducted by the human resource manager and the concerned department head.

The candidate is asked about his education, job experience, minimum salary acceptable, etc. sometimes, he is asked why he is applying for job in that hospital or why he is leaving his present job.

Phone interview

These days, human resource manager interview outstation and out of country applicants on phone. The interviewer and the interviewee do not meet face to face.

Instead, they talk on telephone and the interviewer interviews the interviewee, the result of which determines whether the candidate can be invited to meet the human resource manager or not.

Main objectives of an interview

The main objectives of an interview are:

1. For the employer to obtain all the information about the candidate to decide about his suitability for the post;
2. To give the candidate a complete picture of the job as well as of the organization;
3. To demonstrate fairness to all candidates.

The interview letter

When calling a candidate for an interview, the time, date and place must be specifically mentioned. Other conditions such as requirements of passport size photograph, certificates, and testimonials, etc. should also be mentioned. The model interview letter is as follows:

Name and Address of the Hospital

INTERVIEW LETTER

Address

.....
.....
.....

Date

Dear,

With reference to your application dated for the post of, I am pleased to call you for an interview at on in the human resource department.

You are required to fill up the enclosed job-application form and bring it with you at the time of the interview.

You will be/will not be paid travelling allowance to report here for the interview.

Please bring your original certificates and testimonials with you. We look forward to seeing you.

Your sincerely,

Encl: 1

(Human Resource Manager)

Preparation before the interview

There are several points to be taken care of before the interview.

1. Plan carefully before interview.
2. Inform the receptionist so that candidates called for the interview are correctly directed to the place of interview.
3. Make sure that the waiting arrangements are satisfactory.
4. Explain the process of selection to the candidates about the hospital.
5. Ensure that all candidates feel at ease before and during interview.
6. Have a plan of questions so that assessment is comprehensive.

During interview

Encourage the candidates to talk frankly. Privacy during the interview is essential.

A written appraisal of the candidates should be made by the interviewer after the interview.

Interviewing functions of the Human Resource Manager

There is always some confusion about the responsibilities of the department head and of the human resource manager.

It can be clarified by starting that the human resource manager helps the department head in the selection of the candidates who meet the job requirements.

The department head, on the contrary, is able to visualize the applicant as a part of his own department and will question him more specifically as to his adaptability to the position to be filled. The responsibilities of the human resource manager are:

1. To screen the application of the candidate;
2. To give information about:
 - (i) General nature of work,
 - (ii) Hours of work,
 - (iii) Pay-scale, allowances and starting total salary,
 - (iv) Fringe benefits,
 - (v) Leave policy, and
 - (vi) Brief information about the background of the hospital;
3. To discover any differences in the expectations of the hospital and the candidate.

Concluding the interview

Once the interviewer has secured a clear idea of the applicant's basic strengths and limitations, he should bring the interview to a close with a brief summary of what has been discussed and give indications to the applicant of the next step. At the end of the interview, the interviewer should fill up his evaluation form/recommendation sheet.

ii) Pre-employment tests

For certain categories of posts, there is need for testing the professional capability of the candidates because there are several characteristics which cannot be properly assessed either during the interview or investigating the background of the candidates.

These tests can broadly be divided into four types:

- a) Tests of general ability – intelligence tests
- b) Tests of specific abilities – aptitude tests
- c) Tests of achievement – trade tests
- d) Personality tests – tests of emotional stability, interest, values, traits, etc.

a) Tests of general ability

These tests can give a useful indication of a candidate's mental ability. It has been observed that for various professions, there is an optimum level of I.Q.

While selecting individuals for a particular job, the human resource manager should ensure that he selects individuals who have I.Q.s within the required optimum range.

b) Tests of aptitude

Aptitude tests measure whether an individual has the capacity or hidden ability to learn a new job, if given adequate training.

These tests measure skills and abilities that have the potential for later development in the person tested.

c) Tests of achievement

Tests of achievement measure the present level of experience that a person has achieved. In hospitals, these tests can be used for typists, stenographers, laboratory technicians, radiographers, etc. These tests can also be used at the end of training programmes to evaluate the level of experience.

d) Personality tests

Personality tests are used to evaluate certain personality characteristics.

These tests are used in selecting candidates for sales jobs, supervisory jobs, management trainees, etc., because certain personality characteristics are essential to succeed in such jobs

iii) Interview by department head

The responsibilities of the department head are:

1. To review the job-application form to check relevant data on experience;
2. To evaluate the professional ability of the candidate;
3. To give a detailed picture of the job requirement to the applicant;
4. To advise the human resource manager if he thinks that the previous training or experience or both of the applicant justifies a higher starting salary.

iv) Decision of administrator to accept or reject

In some hospitals, the selection committee consists of one person each from the human resource department head/supervisor of the concerned department and representative of the head of the hospital.

After interviewing all the candidates, the selection committee submits its recommendations for approval to the head of the hospital, who is generally the hiring and firing authority.

Different hospitals adopt different policies according to their own convenience for the selection of their employees. However, final approval of selection or rejection of the candidates rests with the head of the institution.

v) Medical examination

The medical examination of a potential employee is a help both to the employee and to the management. The selection of the right type of employee who can give his best and be most happy requires a through knowledge of his physical capacities and handicaps.

This necessitates a complete medical examination by a doctor who understands the job requirements. Therefore, no employee should be placed on the job unless he has been declared medically fit by a qualified medical officer.

The purpose of the medical examination is threefold:

1. It is for the protection of the applicant himself to know whether that job will suit him or not from the medical point of view.
2. It is for the protection of the other employees so that they are not at risk of any communicable or other disease which the prospective employee may have.
3. It is for the protection of the employer as well, so that he may avoid selecting a medically unfit person.

vi) Check of references

The references provided by the applicant should be cross checked to find out his past performance and to obtain relevant information from his past employer and others who have knowledge of his professional ability.

Reference forms are generally checked by the employees of the human resource department who have comparatively little knowledge about the applicant.

The reference letters should be brief and should require as little writing as possible by the person to whom it is sent.

Model letter for sending to persons whose names have been given by applicants

Name and Address of the Hospital

REFERENCE LETTER

(To check antecedents from a person whose name has been given by the candidate)

Address

.....
.....
.....

Dear Sir/Madam,

Mr./Mrs./Miss has applied for a position of in our hospital. In his/her application, he/she has mentioned your reference. We would appreciate it very much if you please comment on Mr./Mrs./Miss’s character, dependability, integrity and provide any other information that you may wish to pass on to us.

Please be assured that any communication received from you will be treated as strictly confidential.

Yours sincerely,

Human Resource Manager

vii) Issue of appointment letter

The next step is to send an offer of appointment to the selected candidate. The model offer letter is as follows:

Name and Address of the Hospital
OFFER LETTER

Address
.....
.....

Date:

Dear,

With reference to your application datedand the subsequent interview held on, I have been directed by the Administrator/Medical Superintendent of our hospital to offer you the post of in the pay scale of Rs..... at Rs..... P.M. as basic pay, Rs. P.M. as dearness allowance, Rs..... P.M. as house rent allowance and Rs..... P.M. as city compensatory allowance. (Mention any other allowance, if any).
Total Rs..... P.M.

You will be on probation for months/year. This offer is subject to your medical fitness declared by the medical officer of our hospital.

If this offer is acceptable to you, please report for the medical examination at a.m. on in our hospital.

Yours sincerely,
(Personnel Manager)

4. TRAINING GUIDELINES

Training may be defined as systematized tailor-made exercise to suit the needs of a particular organization for developing certain attitudes, skills and abilities in employees irrespective of their functional levels.

While designing any training programme, the following guidelines should be kept in mind:

1. Training opportunities should be given to all employees irrespective of their age, sex, rank, etc.
2. Training programmes should be based on job analysis.
3. Training opportunities should be provided throughout the employees' stay in the organization in order to meet technological changes.
4. Apart from meeting immediate demands, all employees should be encouraged to take courses which are likely to improve their respects for more highly skilled employment.
5. A systematic means of assessment should be used while selecting employees for training.

5. METHODS OF TRAINING

The type of employee training depends upon a number of factors such as skills called for in jobs to be filled, qualifications of candidates applying for jobs and the kinds of operating problems confronted by the organization.

The most important type of training has always been and will always be training on the job. The experience of actually doing something on the job makes a lasting impression that other types of training cannot provide.

Training on the job to train new employees can be successful when it is done in an effective manner.

It is, therefore, necessary to ensure that supervisors are themselves trained and motivated to be good trainers.

The following outline can help in giving on-the-job training effectively:

1. Prepare the employee for training on the job. State the job and find out what he already knows about it.
2. Illustrate and show one important step at a time. Instruct clearly and patiently.
3. Let him do the job. Correct his errors. Make sure he understands. Continue correcting his errors until he can do the job confidently.
4. Choose a 'buddy' to whom he can go for help.
5. Check frequently. Let him feel free to ask questions.

For training on the job to be effective, the trainer must take time to see that learning really occurs and is in the best interest of the trainees, patients and hospital.

There are four main types of training. These are provided by the management according to their requirements.

Entry training

It refers to the initial training provided to employees at the time of joining the hospital.

Job training

It is provided to the employees with the object of increasing their knowledge about their jobs, and also to enhance their efficiency. It enables employees to know the correct method of handling the machines and materials at their jobs.

Skills are taught through a mixture of demonstration, explanation and practice. The teaching must be geared to the job.

There must be continual process of correction of errors made, and checking that the trainee understands what is taking place.

Training for promotion

It is provided in some organizations to fill higher posts from among the existing employees. This gives encouragement to employees to work harder.

Refresher training

It is arranged through short-term courses for the old employees of the latest development in their fields.

6. EVALUATION OF TRAINING

When large sums of money are spent on training programmes, it is necessary to evaluate their effectiveness.

A constant check needs to be kept on whether the objectives and contents of training programmes are consistent with the aims and current needs of the hospital, and whether the objectives are being achieved economically.

The following points should be kept in mind:

1. A comprehensive evaluation and assessment of training plans as related to the defined needs should be undertaken.
2. Measures must be evolved to evaluate the effectiveness with the methods, procedures, training-aids and materials are used by the training instructors.
3. There should be some effective means by which the progress of the trainees during the training programme may be assessed and evaluated.
4. Finally, the achievements of those who have received training must be followed-up over a period of time to assess whether performance has improved.

7. LEADERSHIP GROOMING AND TRAINING

No organization can do without a superleader who can recognize the 'skill-set' of everyone, sharpen these skills, and mould him into the next leader.

A superleader's brief is to spot and liberate the leader in every employee. And, this liberation cannot happen overnight.

It is often the result of a continuous effort at developing individual capacity of every employee till they realise their optimum potential to act in a responsible manner.

Effective leaders invest in developing people's skills and competencies. Surveys have shown that organization's which spend more than average amount of money on employee training, achieve higher levels of commitment, better customer service and employee alignment with company vision and values.

Another responsibility of a superleader is to create an effective learning environment. This is characterized by a climate of trust and openness which leads to greater willingness to communicate about feelings and problems and a positive tendency for change.

Learning is also about making mistakes. In any work environment, there is **learning curve**. Performance generally goes down before it goes up.

Superleaders are thus great learners who regard all mistakes as **learning opportunities**. They foster this attitude among their associates also by encouraging them to break old patterns of thinking, come out of their boxes, question routines and challenge assumptions.

One leading company introduced a suggestion system that rewarded thinkers of original ideas. The response from the employees was prompt and instantaneous.

The system began to change established mindsets. Employees began to think more in terms of how to improve their productivity rather than remain disturbed by others mistakes.

The President of a well-known company pursues a very open-ended communication strategy with his subordinates.

Instead of interacting only with a small set of key executives, he routinely summons big employee groups to his office and openly shares his vision for the company with them.

Sometimes, the employees come up with their own suggestions on better alternatives. The employees are more committed to the company plan than even the boss himself.

8. PROMOTION

The promotion policy is one of the most controversial issues in every organization. The management usually favours promotion on the basis of merits, and the unions oppose it by saying that managements resort to favouritism.

The unions generally favour promotions on the basis of seniority. It is hence essential to examine this issue and arrive at a friendly solution.

8.1 Nature and Scope of Promotion

A change for better prospects from one job to another job is considered by the employee as a 'promotion'.

The factors which are considered by employees as implying promotions are:

- a) An increase in salary;
- b) An increase in job prestige;
- c) An upward movement in the hierarchy of jobs;
- d) Additional supervisory responsibility; and

e) A better future.

The presence of any or all of these factors is considered as promotion by the employees.

8.1.1 Seniority versus Merits

There has been a great deal of controversy over the relative values of seniority and merit in any system of promotion. Seniority is a fact, merit is only a guess.

Seniority will always remain a factor to be considered, but there would be much greater opportunity for efficient personnel, irrespective of their seniority, to move up speedily if merit is used as the basis for promotions.

It is often says that at least for the lower ranks, seniority alone should be the criterion for promotion.

One cannot agree with this. The quality of work is as important in the lower ranks as in the higher.

8.2 Promotion Policy

Trade unions think in terms of their members as a whole and are constantly suspicious of favouritism on the part of the management. They frequently argue that they should have some say in promotions, but the industrial courts have hitherto held that promotion is a management function.

However, in practice, both seniority and ability criteria should be taken into consideration; but in order to allay the suspicious of the trade unions, there should be a written promotion policy which should be clearly understood by all.

Promotion policy may include the following:

1. **Charts and diagrams** showing job relationships and a ladder of promotion should be prepared. These charts and diagrams clearly distinguish each job and connect various jobs by lines and arrows showing the channels to promotion. These lines and arrows are always based on an analysis of job duties.
2. There should be some **define system for making a waiting list** after identification and selection of those candidates who are to be promoted as and when vacancies occur.
3. All vacancies within the organization should be **notified** so that all potential candidates may compete.
4. The following **eight factors** must be the basis for promotion:
 - i. Outstanding service in terms of quality as well as quantity
 - ii. Above-average achievement in patient care and/or public relations
 - iii. Experience
 - iv. Seniority
 - v. Initiative
 - vi. Recognition by employees as a leader
 - vii. Particular knowledge and experience necessary for a vacancy
 - viii. Record of loyalty and co-operation.
5. Though the department heads may initiate promotion of an employee, the final approval should lie with top management because a department head can think only of the repercussions of the promotion in his department.
6. All promotions should be for a **trial period**. In case the promoted person is not found capable of handling the job, he may be reverted to his original job.

7. In cases of promotion, the human resource department should carefully **follow the progress** of the promoted employee.

8.2.1 Advantages of a sound promotion policy

- a. It provides an incentive to work more and show interest in their work.
- b. It develops loyalty amongst the employees, because a sound promotion policy assures them of their promotion, if they are found fit.
- c. It increases job satisfaction among the employees.
- d. It generates greater motivation in competent employees, as they do not have to depend on seniority for their advancement.
- e. A sound promotion policy keeps competent employees and provides them enough opportunities to rise further.
- f. It generally results in increased productivity as promotions will be based on an evaluation of the employee's performance.
- g. Finally, it increases the effectiveness of an organization.

8.2.2 Solution to promotion problems

Difficult human relations problems can arise in promotion cases. These problems may be reduced to the minimum if extra care and the following principles are observed:

1. In promoting an employee to a higher port, his salary should be at least one step above his present salary.
2. Specific job specifications will enable an employee to realize whether or not his qualifications are equal to those called for.
3. There should be a well-defined plan for informing prospective employees of impending vacancies.
4. The organization chart and promotion charts should be made so that employees may know the various avenues for their promotion.
5. The promotion policy should be made known to each and every employee in the organization.
6. Management should prepare and practice promotion policy sincerely.

9. TRANSFER

Transfer is used to place employees in positions where they may get greater job satisfaction and contribute their best efforts to the organization.

Transfer involves some rather delicate issues which should be tackled gently. No department head wants to lose a good employee.

9.1 Types of Transfer

A transfer implies a lateral movement of an employee in the hierarchy of positions of the same or similar status, from one department to another.

Transfer may be initiated by the management or by the employees.

The management may initiate a transfer to place an employee at such a place where he can be better utilized from its point of view.

Similarly, an employee may request a transfer to a place where he can find more avenues of promotion, or for some personnel reasons.

There are several types of transfers:

i. Production transfers

These are made from one department where the personnel requirements are declining to another department where more personnel are required.

This type of transfer is made to avoid dismissal in one department and also to avoid employment of persons from outside in another department.

ii. Replacement transfers

In replacement transfers, a long-service employee is transferred to a similar job in another department where he replaces an employee with shorter service.

The object of these transfers is to retain, as far as possible, an efficient and trained employee and to discharge the junior-most employee.

iii. Versatility transfers

These are made for the purpose of providing the management with a flexible group of employees.

This type of transfer may be used as preparation for production or replacement transfers.

Such transfers help the management in preparing an army of all-rounders who can be conveniently transferred from one department to another at the time of need.

iv. Shift transfers

These are made in those organizations where there are more than one shifts.

Under this type of transfer, employees are transferred from one shift to the other on similar jobs involving the same type of work.

v. Remedial transfers

These are made for various reasons primarily concerning the person on the job, e.g. faulty placement of an employee on a job at the time of his joining, incompatibility with his supervisor, illness, accident record, etc.

Remedial transfers can particularly result in better placement of employees and improved confidence.

9.2 Transfer Policy

A systematic transfer policy is needed to maintain harmonious relations between management and employees.

A transfer policy is needed to maintain reasonable consistency of treatment throughout the organization. In formulating this policy, the following points should be incorporated:

1. The circumstances under which transfers can be made
2. Responsibility for initiating and approving transfers
3. Transfers within sections or between departments anywhere in the hospital
4. Basis for transfer
5. The rate of pay.

9.2.1 Advantages of transfer policy

Transfers are helpful in utilizing human resources. They help in relating long-service employees and utilizing them effectively.

The following are some of the advantages of a good transfer policy:

1. It increases the productivity and effectiveness of an organization
2. It improves employer-employee relations
3. It motivates employees.

UNIT IV

SUPPORTIVE SERVICES

Medical Records Department - Central Sterilization and Supply Department - Pharmacy
- Food Services - Laundry Services.

1. MEDICAL RECORDS DEPARTMENT

1.1 Overview

The medical records department maintain records and documents relating to patient care.

Among a host of activities, its main functions are filing, indexing and retrieving medical records.

The primary purpose of establishing a medical records department is to render services to patients, medical staff and hospital administration.

The quality of care rendered depends on the accuracy of information contained in medical records, its timely availability to and the extent of utilization by the professional staff.

To achieve economy, accuracy of information and good communication which are of vital importance to the medical records system, all information should be concentrated in the original medical records of patients.

This should be indexed and filed in the department.

The three basic principles of medical records are:

- Accurately written,
- Properly filed, and
- Easily accessible.

Medical records are used as primary tools to evaluate the quality of patient care rendered by the medical staff.

To implement this effectively, the medical staff must adopt and self-enforce rules and regulation for the production of timely, accurate and complete medical records.

Medical records are widely used for teaching and research purposes.

In the context of increasing malpractice liability suits against hospitals and physicians, well-documented medical records are a good legal protection.

The physician is primarily responsible for the quality of his patient's medical records.

It is his duty to review correct and countersign records that are written by residents and junior doctors working under him.

Each entry in the medical record must be signed by the person making the entry, and the signature should be identifiable so that responsibility for accuracy and authenticity can be fixed.

The language used in writing medical records should be clear and concise and should not lend itself to misinterpretation.

Abbreviation, symbols, etc. should be of acceptable standard.

The medical records department should maintain a list of acceptable abbreviations and symbols for everyone to follow.

Every hospital should formulate policies, rules and regulations for the production, completion and maintenance of medical records.

In many hospitals, registration is an integral part of medical records.

The front office, which registers all patients, assigns each new patient a unique number, collects patient demographics and other necessary data, assigns/directs patients to physicians, and creates records.

In the case of returning patients it retrieves their records and updates them.

It maintain a master patient index for all patients.

Registration is the starting point for outpatient visits and all patient-related activities.

1.2 Functions

i) Planning, developing and directing a medical record system that includes patient's original clinical records and also the primary and secondary records and indexes. These may be in the central record room, the clinical service area, adjunct departments or the outpatient department of the hospital.

ii) Maintaining proper facilities and services for accurate and timely production, processing, checking, indexing, filing and retrieval of medical records.

iii) Developing a procedure for the proper flow of records and reports among the various services and departments including clinical services and the outpatient clinics where they are needed.

iv) Developing a statistical reporting system that includes ward census, consolidated daily census, outpatient department activities, and statistics in relation to services such as radiology, clinical laboratories and pharmacy.

v) Preparing vital records of births, deaths, reports of communicable diseases, etc. for mandatory and regulatory agencies, and statistical reports. These relate to number of admissions, discharges by major clinical services, discharge diagnoses and length of stay by diagnoses, types and number of surgeries performed, etc. for use by administration, medical staff communities and the education and research departments.

vi) Coding all diagnoses and operators according to international classification of disease for statistical purposes.

vii) Safeguarding the information in the medical records against theft, loss, defacement, tampering or use by unauthorized persons.

viii) Determining in coordination with medical staff and administration the action to be taken in medico-legal cases relating to the release of medical records in a variety of situations and determining the legality and ethical appropriateness of such actions in conformity with the laws of the land.

To appreciate the several activities that take place during the medical record's journey after admission and after discharge of patient, see flowcharts in Fig.1.1 and Fig.1.2.

1.3 Location

In order to provide prompt medical record service for the care of all patients at all hours and to foster a close working relationship and good communication among the related departments, the medical records department should be located close to the admitting area, outpatient department, emergency room and the business office.

It should also be close to or on the corridor leading to the doctor's lounge so that the medical staff can conveniently stop by and complete their records and study cases.

Proximity to admitting, outpatient and emergency departments eliminates delay in procuring medical records.

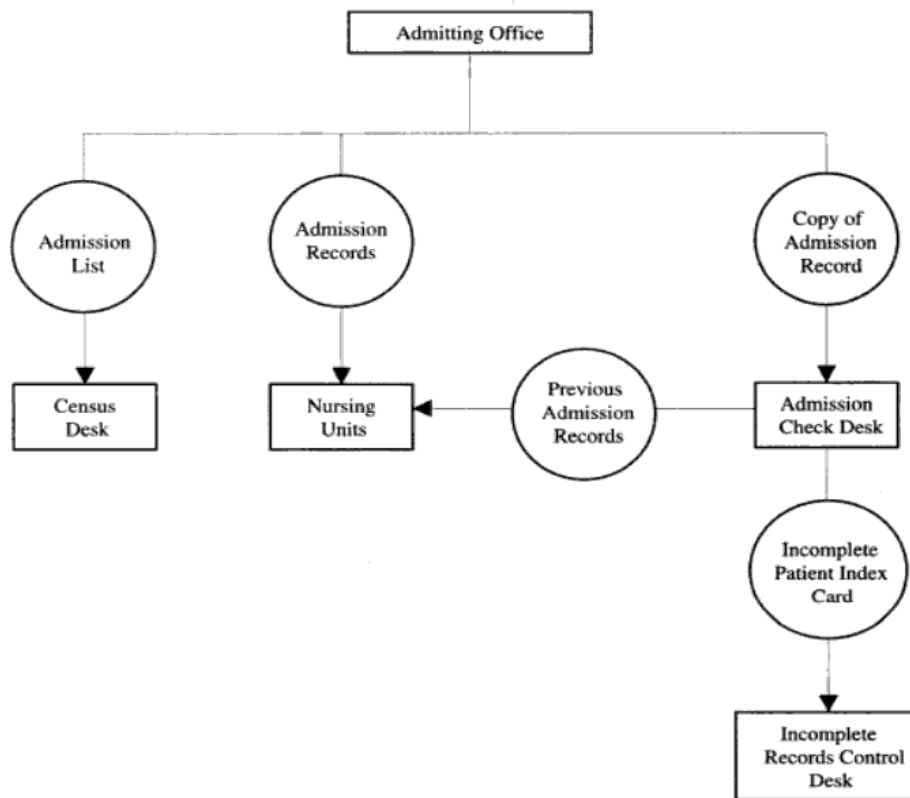


Fig. 1.1 Flowchart of Medical Records on admission of a patient

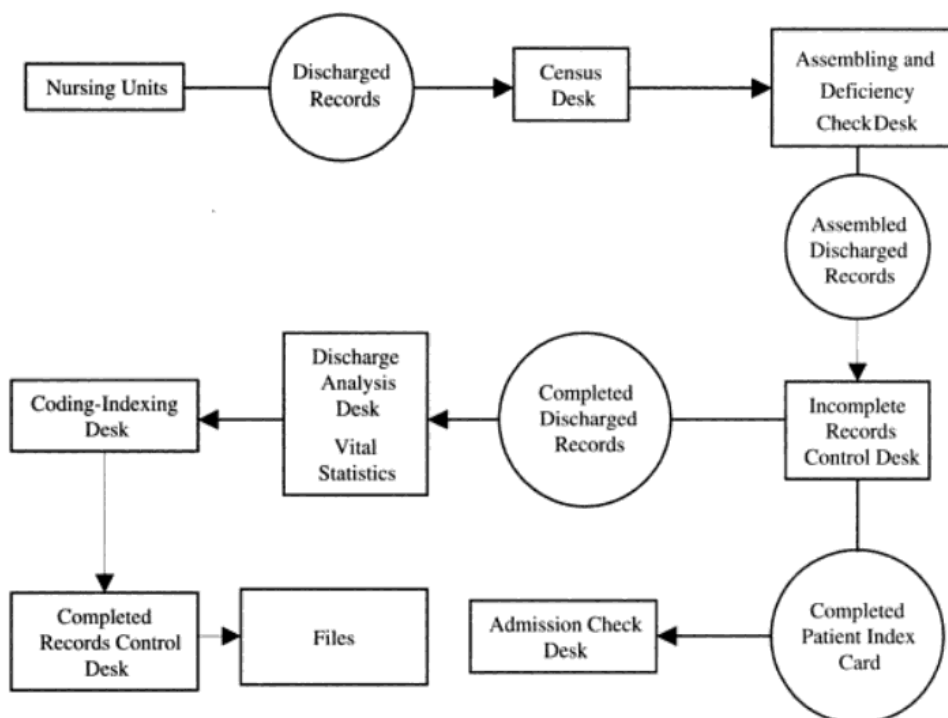


Fig. 1.2 Flowchart of Medical Records on discharge of a patient

It also permits a skeleton staff to manage the work of the medical records department during the evening and night shifts.

While carrying on their normal duties like filing, etc. the night crew can also furnish records to the emergency department.

Location is important particularly in small hospitals where the records department usually remain closed during the night. In that case, it should be within easy walking distance

for the authorized admitting or emergency department staff to enter the department and retrieve records for emergency patients.

The need for security surveillance to safeguard medical record information also has a bearing on the location.

1.4 Design

The front office of medical records – the registration together with the enquiry – is often the patient's first point of contact with the hospital.

It is here that public relations plays a vital role.

In addition to courteous and helpful staff, the physical design should be one that projects a warm and welcome feeling.

Good functional design, logical placement of work areas and a good system of communication among the various sections of the department and between other departments are vital.

The department should also be designed with the best possible means of transportation of medical records through all stages of their use and processing.

1.5 Organization

The medical records department may be headed by a medical record administrator or officer who reports to the director for medical or administrative services.

He should be a graduate with a degree or diploma in medical records administration.

The remaining staff in the department consists of medical records technicians and medical records clerks.

The Christian Medical Association of India and various medical colleges offer degree and diploma courses in medical administration.

In large hospitals, there may be an assistant medical record officer and supervisor for major functional areas such as filing and indexing, coding and abstracting, transcription, discharge analysis, medical audit, utilization review and registration.

1.5.1 Unit Record

The unit record is a single record that documents the entire medical care provided to an individual in all the services of the hospital, namely, in the inpatient and outpatient sections and the emergency room.

The single unit consolidates and retain all the records in a chronological order, that is, in the order of occurrence of events and findings.

This way, the record provides the doctors with the necessary references to a patient's current and past conditions all tests and procedures on him and his response to therapy.

Some hospitals maintain separate records for inpatient and outpatient visits.

The disadvantage of this system is that the patient's complete history cannot be reviewed quickly and easily.

Other methods of assembling medical records are:

- 1. Chronological by source** of information or section (physician's notes, nurse's notes, lab reports, etc.)
- 2. Problem- oriented medical record**

1.5.2 Numbering System

The most widely used method for numbering is the unit numbering, used in conjunction with the unit record system.

In this system, a single, permanent number is assigned for each patient (as against different number each time a patient is admitted).

The unit number ensures accurate identification of the patient and complete information about his investigation, tests and the accounting records.

1.5.3 Filing System

The most popular method of filing is the straight numerical filing, starting with the lowest number and ending with the highest.

Activities relating to filing and retrieving are most concentrated in the area where records with the highest numbers are stored because they are the most recent and active files.

This is the easiest method of filing as the staff is familiar and comfortable with it.

However, the chances of misfiling and not finding the misfiled charts are high in this system.

The other method of filing is the **terminal digital filing**.

This provides equal distribution of medical records in the storage area and therefore allows the staff to be evenly spread within the area.

The filing is based on the last two digits of the medical record number.

The entire file is divided into hundred sections from 00 to 99 and the records are stored in these sections according to their last two digits.

For example, all records ending with 14 are filed together.

In an advanced system, the terminal digits are also colour-coded.

The great advantages of this system is that the filing clerks can visualize the actual location of the records.

It also speeds up filing and retrieval of files and virtually eliminates any chance of misfiling.

1.5.4 Dictating and Transcription System

Various dictating and transcription systems are available.

In an advanced system, doctors dictate their notes or discharge summaries from various location in the hospital – from the wards, operating room, ICC & CCU complex, emergency room, etc. – using either a remote dictating equipment or the telephone which is linked to the central transcription room in the medical records department where the dictation is tape recorded.

The medical secretaries then transcribe the recorded dictation.

With the advances in telephones, doctors can now dictate their notes from anywhere from their homes or even from moving cars using car phones.

1.6 Space requirements

The medical records department requires space and facilities for the following:

1. Reception and registration area.
2. Offices for the medical records officer and assistant medical records officer.
3. Space for sectional supervisors.
4. Work area for record processing, assembling, numbering, indexing, utilization review, discharge analysis, correspondence, work processing, quality assurance, etc.
5. Record storage for active and inactive files.
 - Active files are the files where the data of discharge or last visit is within three to five years of the current date. These files should be readily accessible.

- Inactive record storage should also be located near the active files area as far as possible. These may be stored in a computer assisted system.
- 6. Space for copies that is used to a considerable degree.
- 7. A room for medical staff to complete records, study cases review and abstract records with tables, chairs, dictating equipment, etc.
- 8. An area with bookcases or shelves to temporarily house medical records pending completion or temporarily used by the medical staff.
- 9. Transcription area with space for the central recording equipment, tables, computers, etc. for medical secretaries to transcribe dictation.
- 10. Space for master patient index depending on the kind of system used, for immediate identification of current and past patients. Computer-assisted system are now widely used.
- 11. Storage area for medical record carts.
- 12. Supplies storage area for unused medical record file folders, forms, etc.
- 13. Staff facilities.

1.7 Other Consideration

i) Ownership of Medical Records

Medical records are created and maintained for the benefit of patients, medical staff and the hospital.

The hospital has the right to restrict removal of the records from the records room or from the hospital premises, determine who may have access to them, and lay down as a policy the kind of information that may be taken from them.

Except for authorized patient care purposes within the hospital, medical records may be removed from the department only on the order of a court of law and with the prior permission of the chief executive officer.

Even when the records are given out, it is a wise policy not to part with the original records.

Only photo copies should be given except on the orders of the court.

ii) Confidentiality of Information

While the information contained in the identification section of the medical record is not confidential, the clinical data obtained professionally is confidential and it should be safeguarded.

Employees are obligated to safeguard the confidential information of patients.

Many hospitals require employees having access to patient records sign an undertaking not to divulge any patient information that may have come to their knowledge in the course of their work.

A great deal of harm can be done to patients by employees divulging confidential patient information.

Confidential information may be released with appropriate authorization.

However, the information acquired by a physician in doctor-patient relationship in privileged information that the physician may not disclose even in a court of law.

iii) Record Retention

Apart from patient care, records are retained for various reasons such as for legal and research purposes.

It is not necessary to retain records permanently for any purpose, and certainly not for the purpose of proving birth, age, residence, etc.

It is generally accepted that hospitals are seldom required to produce medical records older than 10 years for clinical, research, legal or audit purposes.

iv) Computerization

Computers are widely used in the access of registration and medical records.

In registration, they are used to maintain information and patient's personal data (demographics), for assigning patient numbers, making appointments and assigning to physicians, creating records, etc.

In medical records, computers can be used for patient records and medical records administration.

For the most part, however, computers have not made much inroads into the patient records area, but in the records administration area they are used for chart abstracting, medical record indexing, diagnosis coding, chart locating, master patient index, statistics, etc.

Authorized personnel can have access to all current and historical data.

On-line abstracting can be done using screens and conditional editing.

All editing is done in real time.

An on-line master patient index gives immediate access to essential, episodic patient information.

Medical records reporting gives optional access to essential, episodic patient information.

Reports can be sorted and sequenced in a variety of ways.

They can be generated on a daily, monthly, quarterly, semi-annual and annual basis.

2. CENTRAL STERILIZATION AND SUPPLY DEPARTMENT

2.1 Overview

Despite the unprecedented advances made in the medical field, hospital-acquired infection remains the hospital's single most serious concern that negates some of its otherwise good work.

It is acknowledged that even in advanced countries, approximately five percent of all hospital patients develop infection after being admitted.

Given the poor standards in our hospitals, this figure is likely to be much higher in India.

The intangible and tangible cost of this by way of unnecessary suffering, extra hospitalization and loss of working days can be high.

To combat this ubiquitous menace of infections caused by pathogenic micro-organisms, hospitals have over the years developed a scientific method commonly referred to as the central sterile and supply system.

The method basically involves cleaning, disinfecting and sterilizing before use all instruments, materials and equipment utilized in patient care.

From various parts of the hospital like operating room, wards, outpatient clinics and other departments, all soiled items are collected in the CSSD for processing, and then transported back to the end users.

In the CSSD, the process of cleaning, disinfecting, packing, sterilizing and distributing is carried out by specially trained personnel.

This ensures better control and reliable result and reduced risk of infection.

Sterilization of instruments, operating packs, trays, etc. is performed by heating them with pressurized steam or by gas sterilization.

Steam sterilization is called **autoclaving**.

However, certain items such as rubber, plastic and delicate instruments cannot be autoclaved and so have to be sterilized by using ethylene oxide or similar gases.

Gas sterilization requires certain safety precautions such as aeration prior to use and special exhaust ventilation.

Under both systems, sterilization is performed on cleaned instruments wrapped in special linen.

In the decentralized system, the sterilization facility is located near the area where the sterilized items are used.

This is called **Theatre Sterile Supply Unit (TSSU)**.

The advantage of this system is that it allow for direct communication, the number of instruments in small and transportation is more or less eliminated.

The CSSD services the nursing units, the operating rooms, ICUs, labour-delivery suites, the nursery, outpatient department, radiology, pharmacy and the clinical laboratories.

The primary activities of the department are sterilizing, storing and distributing the dressings, needles and syringes, rubber goods (gloves, catheters, and tubing), instruments, treatment trays and sets, sterile linen packs, etc.

Disposable sterile supplies are being increasingly used in hospitals

They need only to be stored and not processed for reuse.

Since these disposable items are expensive, their use in Indian hospitals has not significantly affected the workload of the CSSD.

2.2 Objectives

1. Process and sterilize equipments and materials under controlled conditions by trained and experienced personnel thereby contributing to total environment control in the hospital.
2. Effect greater economy by keeping and operating the expensive processing equipments in one central area.
3. Achieve greater uniformity by standardizing techniques of operations.
4. Gain a higher level of efficiency in the operations by training personnel in correct processing procedures.

2.3 Functions

1. Receiving and storing soiled material used in the hospital.
2. Determining whether the item should be reused or discarded.
3. Carrying out the process of decontamination or disinfection prior to sterilizing.
4. Carrying out specialized cleaning of equipment and supplies.
5. Inspecting and testing instruments, equipment and linen.
6. Assembling treatment trays, instruments sets, liner packs, etc.
7. Packing all materials for sterilizing.
8. Sterilizing.
9. Labelling and dating materials.
10. Storing and controlling inventory.

11. Issuing and distributing.

2.4 Location

Accessibility to elevators, dumb waiters and stairs is of utmost importance in determining the location of CSSD.

It should be close to the depth which use its services the most.

Generally, the largest users are the surgical department, including the recovery room, and the nursing units.

Hospitals are continuously searching for new ideas to maintain aseptic condition of the highest order, particularly in the surgical suites.

In advanced countries CSSD is located in a lower floor directly under the surgical suite.

The surgical suite and the CSSD are connected by means of two dedicated dumb waiters – small elevators that deliver trays, medicines, etc. – one sterile and the other soiled.

The sterile dumb waiter, located in the sterile area of the CSSD, opens into the sterile area of the surgical suite and transports all sterile items without being contaminated in transit.

The solid dumb waiter is located in the less sterile area of the surgical suite and brings down the soiled items to the soiled area of the CSSD for reprocessing.

2.5 Design

The workflow pattern should be planned in such a manner that the personnel traffic and the movement of supplies and equipment is accomplished in an efficient manner, the flow of work in continuous from receiving to issuing without retracing steps, and the receiving and clean up areas are physically separated from the rest of the department.

Workflow must be so planned as to allow a separate entrance to receive soiled and contaminated materials from departments, and another for issuing clean and sterile supplies and instrument.

There could be a third entrance, if necessary to receive materials from general stories and laundry.

In a well-designed, state of the art CSSD, there are three organized zones:

1. Soiled area
2. Clean area
3. Sterile area

Soiled items from various departments of the hospital are received at the solid reception area in the same trolleys, instrument trays, baskets or containers as they were delivered in.

Most of them are loaded straight onto the pass-through washer-disinfector.

Trolleys and some instruments are cleaned and disinfected manually.

Steam and hot water are the most common of disinfection agents used in hospitals.

In the clean area, clean disinfected materials are sorted, inspected and packed.

After packing, the instrument trays are put into baskets for sterilization in the double-door, pan-through autoclaves.

Fabrics are sorted out and packed in a separate area before sterilization.

The double-door pan-through autoclaves of the required size are built into the wall between the clean and sterile areas.

Materials are loaded on the clean side and unload on the sterile side.

Both automatic and manual loading and unloading autoclaves are available.

Autoclaves with formaldehyde and ethylene oxide for heat-sensitive goods and cycles for fluid production are also available.

After sterilization, the autoclaves are unloaded in the sterile area and the materials stored there. The storage area should be dry and free of dust.

It is advisable to have one high-speed autoclave, preferably in the operating room, to re-sterilize the instruments needed immediately or those that have been dropped accidentally.

Flash sterilization is autoclaving an instrument when it is unwrapped.

Plan of CSSD is given in Fig. 2.1.

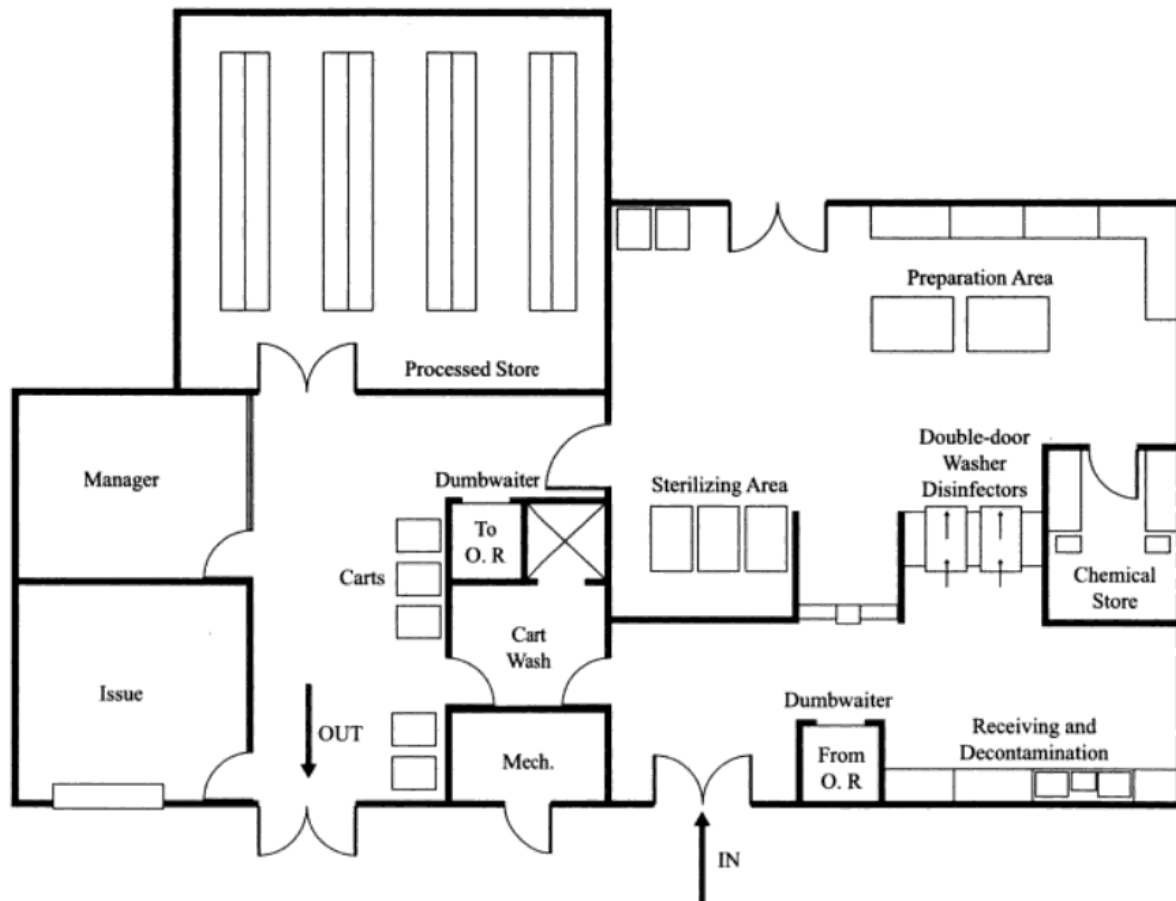


Fig. 2.1 Plan of CSSD

2.6 Some procedures

1. Cleaning and working of instruments, trays, etc., should be performed before reassembling and wrapping instrument kits.
 - Cleaning and waiting can be done wither manually or by automatic washers.
 - Ultrasonic cleaners are considered most effective in cleaning joints, hinges, etc.
 - They, however, erode the surface of instruments and shorter their life.
2. Surgical linen is inspected before wrapping instruments or linen packs to check for holes, tears or rips by passing it over a light table.
3. Linen packs of sheets, drapes, wraps, etc. are assembled for operating room, labour rooms and delivery suites.
 - Special linen packs are prepared to suit special procedures such as laparoscopy, mastectomy and orthopaedic hip surgery.
4. Processing of instruments, one of the activities of the CSSD, includes assembling appropriate instruments and supplies into kits and wrapping the kits with sterile linen.

- Kits and trays may be of various types, such as surgical instrument kits for operating room, suture kits for nursing units and emergency departments, cut down trays for nursing with and special trays for radiology.
5. Instruments used regularly are sometimes assembled to make pre-wrapped kits and stocked, or they are prepared when needed as per order.
 6. Sterilization is done in batches, which means that several packages are sterilized in a single load.
 - For infection control, these packages are labelled, and dated, and later reviewed periodically against test indicators.
 - If a batch is found to be below standard, the packages are removed from the shelves.
 - A wrapped and sterilized kit is considered sterile for a certain length of time after which it has to be re-sterilized.
 - The length of time a kit remains sterile depends on the type of wrap used, that is whether the kit is wrapped with single or double thickness surgical quality linen.
 - Labelling and dating of package is one of the important steps in the sterilization process.
 7. The CSSD may also be engaged in the manufacture of parenteral solutions, normal sterile saline solution and sterile distilled water.
 - However, because of risks involved, only a few hospitals prepare parenteral solution.
 - Even in the case of saline solutions and sterile water, the trend is to purchase them from outside in plastic pouch containers.
 - These reduce breakage and are also convenient to handle.

2.7 Organization

Traditionally, CSSD has been a part of the nursing service department supervised by a nurse or a person with para medical training and reporting to the director of nursing or the nursing superintendent.

This pattern prevails in many hospitals.

It is also not uncommon for operating rooms to perform their own sterilization and not have much interaction with the CSSD.

The sterilization room is located next to the operating rooms so that sterile packs are transported easily.

In developed countries, the department goes by the name of “Central Service Department” and encompasses many other functions in addition to sterilization, such as purchasing, stocking and distribution of supplies under a materials manager or an assistant administrator.

Personnel in the CSSD comprise a supervisor who may be a nurse and one or two nurses.

The remaining staff typically consists of assistants, technicians, aides, orderlies and messengers who are trained on the job.

Usually in a new set-up with sophisticated equipment the firm that supplies the equipment trains personnel in handling it as part of a package deal.

There is now a growing trend towards putting the CSSD in the charge of an experienced manager.

The chief of CSSD is generally a member of the hospital infection control committee.

2.8 Facilities and Space Requirements

1. Reception control and disinfection area workspace and equipment are needed to clean and disinfected medical and surgical instruments that are sorted, racked and passed through washer-sterilizers to the clean area.
2. Facilities for washing and sanitizing carts.
3. Staff change rooms, lockers, toilets, etc.
4. Supervisor's office. It should be out of the flow of activities but provide unobstructed view of the processing area. For this a glass-walled office is recommended.
5. Clean work area. Space for preparing special instruments, inspecting and testing instruments, equipment and linen for assembling treatment trays and linen packs for preparing gloves and for packing materials for sterilizing.
6. Assembling area. Requires workstations for assembling medical-surgical treatment packs, sets and trays, work benches with multiple drawers for instruments and supplies should be provided. The linen pack area requires large work tables, and for inspection, a special inspection (light) table for examining linen wrappers for minute instrument holes.
7. Supply storage area.
8. Double-door, pass-through autoclaves. These are high-vacuum steam and gas sterilizers.
9. Adequate space for loaded sterilizer carts or trolleys prior to sterilization for carts during the cooling period following sterilization and wherever applicable for carts for sterilized supplies for the surgical suites and labour-delivery suits prior to delivery of these supplies.
10. Sterile store.
11. Issue counter.
12. Clean cart storage area.
13. Provision for supply of steam, hot and cold water and other utilities and services.

3. PHARMACY

3.1 Overview

The pharmacy is one of the most extensively used therapeutic facilities of the hospital and one of the few areas where large amounts of money are spent on purchases on a recurring basis.

It is also one of the highest revenue-generating centres.

A fairly high percentage of the total expenditure of the hospital goes for pharmacy services.

This emphasizes the need to plan and design the pharmacy in a manner that results in efficient clinical and administrative services.

A good pharmacy is a blend of several things:

- qualified personnel,
- modern facilities,

- efficient organization and operation,
- sound budgeting,
- the support and cooperation of the medical, nursing and administrative staff of the hospital.

Automation, pre-packaging, unit dose drug distribution, decentralization are some of the methods that are being increasingly used in addition to computer-based ordering system, computer-assisted pricing, billing, cash collection checking of reorder level, out-of-stock and overstock over-stock position, expiry dates and a host of other function.

Pharmacy is a specialized area and its operation calls for intimate knowledge of drugs and drug therapy.

Because of this and the amount of drugs and supplies involved, pharmacists usually handle their own purchases and stocking of drugs rather than leaving it to the purchasing department.

In large hospitals, there is a pharmacy and therapeutic committee of which the chief pharmacist is a member, to oversee the activities of the pharmacy.

3.2 Functions

The following are the primary functions of the pharmacy, some of which are performed directly by its chief:

1. Purchase, receive, store, compound, package, label and dispense pharmaceutical item.
2. Serve as a source of drug information to physicians, pharmacists and other health care professionals, and the patients. This involves compiling storing, retrieving and disseminating drug information and providing pharmaceutical advice and consultation regarding drug therapy.
3. Participate in hospital's educational programmes.
4. Plan and organize the pharmacy department, establish policies and procedures, and implement them in accordance with the hospital's policies.
5. Serve as a member of the pharmacy and therapeutics committee, be actively involved in its functions and activities, and implement its decision.
6. Carry out research and participate in the evaluation of new drugs.
7. Participate in performing therapeutic assessment of drugs and in the preparation of a hospital formulary so that equally effective but less expensive drugs may be put on the formulary.
(A formulary is a list of drugs approved by the medical staff and the pharmacy committee for hospital use and kept in the inventory).
8. Keep track of drugs and formulations or combinations banned in the country and elsewhere, and keep abreast of WHO's revision of "essential list of drugs" and other notification.
9. Carry out quality assurance programme to ensure quality when in doubt of the efficiency or potency of a drug by sampling and analysing it either in the hospital or through the drug inspectorate.
10. Comply with statutory regulations, initiating licenses to be obtained maintaining records as legally required.
11. Wherever recognized, provide pharmacy students practical training which is in partial fulfilment of their course requirements.

3.3 Drug Distribution

The pharmacy distributes drugs primarily to nursing units, where they are administered to inpatients. Generally, the drugs distributed or dispensed by the pharmacy fall into three categories.

1. Drugs sent to the nursing units for floor stock inventory. These are items generally stored in the units for the use of patients but not charged to them.
2. Drugs that are sent to nursing units specified for individual patients as prescribed by the doctors and are charged to them. In most of our hospitals this is not done. Patients are asked to buy their medicines from the pharmacy which are then give to the unit nurse to be stored in medication carts with individual drawers for each patients.
3. Prescription drugs by the pharmacy on the strength of a prescription given by a physician. These are largely paid for in cash and represent the vast majority of drugs both in terms of quantity and cost.

3.4 Location

In determining the most suitable location for the pharmacy, the following factors should be considered:

- Flow of outpatient traffic through the hospital.
- Flow of drugs and other raw materials into the pharmacy.
- Flow of drugs and services from pharmacy to the inpatient areas and other departments.
- Need for future expansion.

These factors make it evident that pharmacy should be conveniently accessible from the outpatient department, central receiving store and the inpatient areas.

A ground floor location close to the outpatient department and to elevators servicing the inpatient areas is ideal.

It is assumed that the outpatient and inpatient dispensing activities are combined.

Many hospitals, however, find that when the outpatient department is the overriding consideration in determining the location of the pharmacy, the result is a less than optimal location for the inpatient dispensing activities.

They may soon find that one or more separate inpatient or satellite pharmacy facilities need to be established.

In many of our hospitals, inpatients are required to buy their requirements of medicines directly from the pharmacy on a cash down basis.

Medicines are not supplied and billed.

Every hospital, sooner than later, and much to its consternation discovers that its pharmacy facility is woefully inadequate.

Keeping in mind, the pharmacy should have at least one outside wall to allow the expansion, and must be adjacent to an area that can be relocated easily, for example, a storeroom.

3.5 Design

Each hospital must its own pharmacy and solve its individual pharmacy-programming problems, while adhering to the accepted norms of good pharmacy practice and legal requirements.

The pharmacy has 4 main functional areas:

1. Dispensing area
2. Production/ preparation area
3. Administrative area
4. Storage area

These areas must be designed and located for convenient access, staff control and security.

3.6 Organization

The head of the pharmacy services is usually a chief pharmacist who may possess a B.Pharm. or M.Pharm. degree and adequate experience.

He is normally responsible to the medical director or the medical superintendent.

In large hospitals, he may be required to work in conjunction with the pharmacy and therapeutics committee.

Every pharmacist has to register with the pharmacy council without which he cannot practise.

Other personnel in the pharmacy department are the registered staff pharmacists, pharmacy aides or helpers, pharmacy storekeeper and pharmacy clerks.

The normal working hours of the pharmacy in most hospitals are from 7.00.a.m to 11.00.p.m, seven days a week although some pharmacies provide round-the-clock service.

Where 24-hour service is not available, coverage during the late night (between 11.00.p.m and 7.00.a.m) is provided by on-call staff.

3.7 Facilities and Space Requirements

3.7.1 Dispensing Area

1. Patient working area. It should be recessed so that the usually large waiting crowd does not obstruct the free flow of traffic on the corridor nor is it jostled by it.
2. Patient dispensing counter, preferably glass panelled with pan-through windows, with space for computer-assisted pricing, billing, and receiving cash on one side and for dispensing on the other.
3. Active storage. Adequate space for a large number of active drugs stored in routine shelves laid out efficiently.
4. Pick up and receiving counter and space for temporary storage of carts.
5. Area for review and recording of drug orders.
6. Extemporaneous compounding area.
7. Work counters and cabinets for pharmacy activities.
8. Refrigerated storage.
9. Storage for alcohol and for volatile and flammable substances.
10. Second storage for narcotics and other controlled drugs.
11. Space for maintain patient medication profiles and cross-checking of medication, for providing drug information, and a room for pharmacist to meet patients who require extensive consultation, instructions or counselling, if these functions are performed.

3.7.2 Manufacturing Area

1. Bulk compounding area.
2. Provision for packing and labelling.
3. Provision for packing assurance activities.
4. Clinical sinks and hand washing facilities.

Preparation of parenteral fluids comes under the mandatory regulations of the Drug Control Act that has now been made stricter and more comprehensive.

Hospitals which want to manufacture these fluids are advised to thoroughly study the regulations and procedures.

3.7.3 Administrative Area

1. Reception and clerk-typist's area for clerical functions including filing, communication, references, etc.
2. Chief pharmacist's office and office space for assistant chief pharmacist and clinical pharmacist.
3. Waiting area for visitors, medical representations and salesman.
4. Conference room-cum-library.
5. Staff facilities like lockers, toilets, lounge, duty room for on-call duty pharmacists, etc.

3.7.4 Storage Area

1. Bulk storage.
2. Active storage.
3. Refrigerated storage.
4. Volatile and alcohol storage.
5. Secured storage for narcotics and controlled drugs.
6. Storage for general supplies, equipment, filter, stationary, etc.

3.8 Other Considerations

Traditional pharmacy services are rapidly undergoing a change all over the world, especially in the dispensing and distribution system.

Many innovative approaches and methods have been introduced in recent years.

Though not all hospitals can implement these changes, it is hoped that some of the larger and progressive hospitals in our country will introduce and test these newer systems and set the pace for other hospitals, some of these changes are described below:

i) Clinical Pharmacy

In most of our hospitals, the pharmacy is engaged in traditional activities such as drug ordering, preparation, distribution and dispensing.

Of these, dispensing prescription as ordered by physicians is the most important.

Except for monitoring drug incompatibilities occasionally, pharmacists have no role in determining what to order.

But hospital pharmacists are now increasingly becoming involved in what is called "Clinical Pharmacy".

This includes activities like taking medication history, monitoring drug use, drug selection, patient counselling and surveillance of adverse reaction of drugs.

In other words, they are becoming involved in determining what to order, thus becoming a part of the team effort in determining treatment.

ii) Unit Dose Dispensing System

Another important change that has taken place in the field of pharmacy is in the medication dispensing system – from the traditional pharmacy system to a considerably refined unit dose system.

In the traditional system, the pharmacy sends to each patient in the nursing unit, several day's supply of medication.

The nursing unit then prepares the individual dose from the supply.

In the unit dose system, the doses are premeasured by the pharmacy so that the nurse has only to administer the medication.

The system uses a cassette mechanism that designates one drawer for each patient in the medication cart or cabinet.

The nurse rolls the unit dose cart to each individual patient room, removes the dose of medication to be given from the respective patient drawer in the cart, and administers it to the patient.

In the emergency cart maintained in the nursing units, certain drugs are kept in single-dose packages that are ready and convenient to administer.

While the unit dose system is expensive-initial one-time cost largely involves the purchase of unit dose carts and packaging equipment and increased pharmacy personnel these are several advantages.

It reduces nursing time for pouring, counting and dispensing, reduces medication errors, and increases control and recording of medication by the pharmacy.

iii) I.V Additive System

The concept of a unit dose system can be extended to intravenous (IV) solutions, for which there are two methods:

- The traditional method
- IV additive method.

The activity relates to mixing medications with IV solutions.

In the traditional system, IV solutions are stocked in the nursing unit.

Medications are sent to the unit by the pharmacy, and the nurse mixes or adds medications to the IV solution.

In the additive system, the medications and the IV solutions are mixed in the pharmacy itself.

The pre-mixed bottles are then sent to the nursing unit and the nurse merely administers the solution.

As in the case of the unit dose system, this saves the nurses time and prevents wastage and medication errors.

iv) Pharmacy and Therapeutics Committee

Every hospital should have a pharmacy and therapeutics committee consisting of physicians representing the various divisions of medical staff, pharmacists, and representatives of administration, to oversee the work of the pharmacy.

The following are some of the duties and responsibilities of the committee:

1. Develops a formulary of accepted drugs for use in the hospital.
2. Serve the medical staff, pharmacists and hospital administration in an advisory capacity in all matters pertaining to the use of drugs and in the selection of drugs to be stocked.
3. Evaluate clinical data concerning new drugs requested to be included in the formulary and for use in hospital.
4. Add or delete specific drugs from the formulary.
5. Prevent unnecessary duplication of the same basic drugs to be stocked.
6. Recommend drugs to be stocked in the nursing units and other areas.

7. Study problems or reported adverse reactions to the administration of drugs.
8. Issue communication(s) to physicians, pharmacists, nurses and administrative staff regarding proposed change in the formulary such as addition to and deletions from the list, changes in the working of the system and in the contents of the formulary.
9. Adoption of a policy that the inclusion of drugs in the formulary should be by their non-proprietary names.
10. Ensure that the labelling of medication containers be by the non-proprietary names of the contents.
11. Issue written communication to the nursing and pharmacy staff regarding the existence of a formulary in the hospital and the policies and procedures governing its operation.
12. Issue guidelines for the control, appraisal and use of drugs not included in the formulary, investigational drugs and non-formulary drugs.

v) Hospital Formulary

One of the major responsibilities of the pharmacy and therapeutics committee is to develop or adopt a suitable formulary of selected medication.

A formulary is the official compilation of drug products that have been selected and approved for use within the hospital.

The two main objectives of the formulary are:

1. It promotes rational therapeutics
2. It prevents unnecessary duplicates, waste and confusion and thus promotes economy for both the hospital and the patient.

When many brands of the same drug are stocked and prescribed, it results in a loss to the patient as well as to the hospital.

It should be remembered that a mere list of medications placed on the shelves does not constitute a formulary.

The drug list should be expanded to include specifications about how a medication should be used.

Formularies should also include recommended daily dosage and a cautions, warnings, restrictions, pharmacology and other similar information to facilitate correct use of drugs.

The following steps are some of the steps involved in the process:

1. Appointment of a pharmacy and therapeutics committee by the medical staff composed of physicians, pharmacist(s), and representatives of the administration.
2. Outlining the purpose, organization, function and scope of the committee and an organized method for this committee to evaluate the therapeutic claims of competing or suggested drug products.
3. Periodic publication of authorized drugs.
4. Procedures for revising the list.

3.9 Problem Situations: - Theft in Pharmacy

The pharmacy is one of the most theft-prone places in the hospital and what is worse, pharmacy theft can be costly, difficult to check and may go unnoticed.

Theft is usually by the employees themselves or in collusion with them.

The most common points where thefts take place are the dispensing area, stores, purchasing process, receiving and invoice payment and the nursing units.

Substantial losses may take place in the dispensing and purchasing areas and continue for a long time without being discovered.

The chief pharmacist or the person responsible for purchasing may in collusion with the vendors, manipulate supply or bills and divert part of the supply to privately owned drug stores.

With an incredibly large number of items kept in open shelves of the dispensing pharmacy, the task of exercising any meaningful control over the drugs is a formidable one even with all checks and balances and control measures.

The problem becomes serious during evening and night shifts when there may be only one pharmacist on duty and even more serious when, in smaller hospitals, the pharmacist doubles up as the cashier as well.

Every hospital must recognize that it has a moral obligation to make theft and fraud as difficult as possible; if not altogether impossible by instituting proper control systems.

Too often, the general climate in the hospital provides ample scope for employees to indulge in such activities without anybody taking cognizance of such offences or punishing the offenders.

A sound system of controls acts as a deterrent and creates fear in the employees that frauds and thefts will be detected and punished.

4. FOOD SERVICES

4.1 Overview

Good food is important in the treatment of the patient and in a part of his total care.

The food service department in today's modern hospitals ranks as one of the major department.

It is headed by a specialist who is either a professional manager or a chief dietitian.

Most people tend to pass judgements on the cleanliness of the hospital, the personnel care and attention given to them as patients and visitors and on the quality of food.

The coffee shop is one of the places where a visitor often stops by on entering the hospital and it sets the overall impression of the hospital for the first-time visitor.

An irritated customer may give vent to his feelings at the patient's bedside and look for faults in patient care.

Hospitals have long recognized the public relations value of the food service department.

Unfortunately, criticism of food is one of the most frequently heard complaints in any hospital.

The major share of this criticism can be avoided by a properly planned and administered food service department.

4.2 Functions

1. Provide the best possible food at a cost consistent with the policy of the hospital.
2. Buy to specifications, receive supplies, check their quantity and quality, and store, produce, portion assemble and distribute food.
3. Establish standards for planning, menus, preparing and serving food, and controlling meals. Standards must be established before setting up food purchase specifications.

4. Establish policies, plan layouts and equipment requirements.
5. Plan and implement patient therapy, education and counselling; advise patients and their families on special dietetic problems prior to their discharge from the hospital or when referred from the outpatient clinics.
6. Train dietetics interns.
7. Impart instructions to nurses, medical and dental students, interns and residents about principles of nutrition and diet therapy.
8. Cooperate with medical staff in planning, preparing and serving experimental metabolic research diets.

4.3 Location

Earlier, hospital kitchens were generally allocated space unusable for any other purpose. A food service department located below the ground level is certain to have a deleterious effect on the quality of food and efficiency of the department.

A kitchen in the basement, for example, is likely to be dingy, dark and poorly ventilated. A ground floor location is preferable, and is more convenient to deliver supplies.

Current cooperation/municipal by laws in most places prohibit locating kitchens in basement floors.

Older hospitals that had their kitchens below the ground level found themselves in a quandary when municipalities in cities started enforcing this rule.

The department should be close to the materials management department and the storage area should be close to the unloading dock.

Easy access to vertical transportation system serving patient care units is important to facilitate delivery of patient meals and return of used trays and utensils.

The cafeteria and dining room should be close to the food preparation and production area and within convenient access to the hospital staff.

4.4 Design

The design and physical facilities of the food service department have an important bearing on the standard of food service, labour costs and the morale of employees.

For example, storage rooms far removed from the work area, poor arrangement of the preparation and production areas for work flow and a long travelling distance for prepared food lower the employees efficiency levels and increase unnecessary steps resulting in increased costs.

In general layout, the most important factor to be borne in mind is the logical work flow-receiving supplies, storing and refrigerating them, preparing and serving food, returning trays and washing dishes.

There should be adequate space and facilities to perform the work in each of these functional areas.

Fig. 4.1 shows a typical food service department flowchart.

Fig. 4.2 shows a plan of food service department.

4.5 Functional Areas

i) Receiving Area and Control Station

The food service department requires a substantial amount of supplies and materials.

The receiving area that may be common to other hospital supplies and should be large enough for handling bulk supplies.

The receiving clerk inspects and checks all the supplies both for quantity and quality. In the case of dietary supplies, the direction or a staff member of the food service department personally checks the supplies.

The receiving area should be equipped with scales to weigh materials and supplies. All internal control measures described under materials, management apply to this area too.

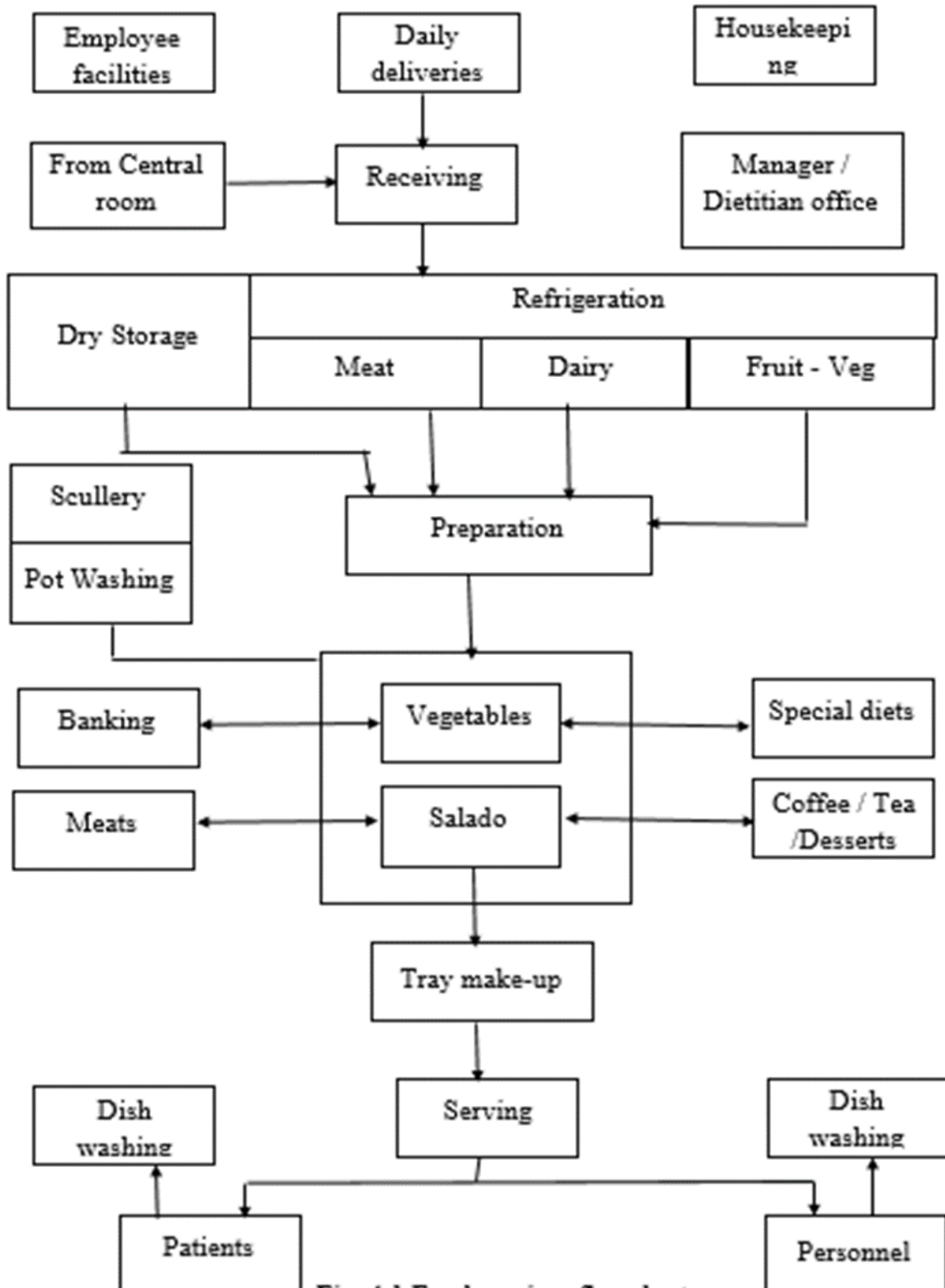


Fig. 4.1 Food services flowchart

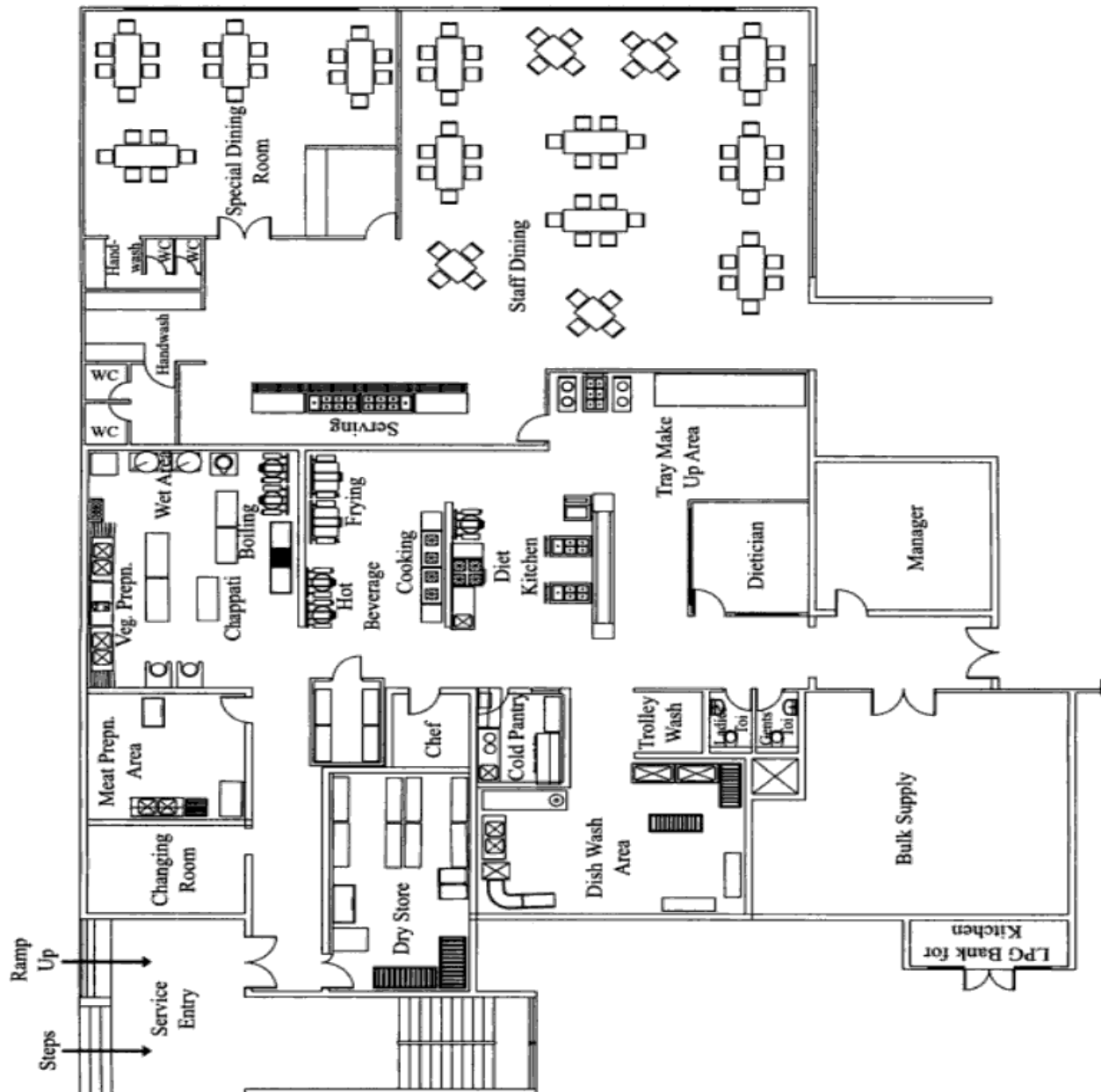


Fig. 4.2 A typical food service department

ii) Storage and Refrigeration Room(s)

The storage area, which comprises dry and refrigerated storage, should be adjacent or close to the receiving area.

Dry storage is for staples and refrigerated storage for perishables.

Hospitals generally store several days' supplies to meet any eventuality.

Some dry foods are bought and stored in bulk.

Wooden, or steel racks and platforms are used for storage.

Large hospitals have walk-in coolers and refrigerators with varying degrees of temperature for meat and meat products and poultry, dairy products and eggs and fruits and vegetables.

As in restaurants, it is a common practice in such hospitals to freeze all leftover foods for later use.

The refrigerators should have a thermometer in each unit to check temperature daily.

The walk-in refrigerator should also have an alarm connected to a place with a 24-hour personnel coverage in case someone gets locked inside accidentally.

iii) Preparation and Production Areas

Some hospitals prefer to have a separate pre-production preparation area where sorting, peeling, slicing, chopping and washing may be done prior to cooking.

A double sink with draining boards, worktops, peelers and grinders are the necessary facilities and equipments.

There should be efficient arrangements in the production area so as to permit the best workflow and minimum cross traffic.

Special attention should be paid to the size of the production area.

Early in the planning stage, it should be decided whether the hospital will serve only vegetarian food or non-vegetarian food as well.

There should be a separate kitchen for non-veg foods.

Some raw foods, when cooked may produce disagreeable odours and also taint other food. This may be necessary to handle separately.

Food in hospitals is prepared using the progressive approach.

In progressive cooking, food is prepared in small batches at regular intervals during the serving-time.

This provides freshness and palatability and the food remains hot.

The essentials of good production are:

- Good physical layout that ensures easy flow of work.
- Use of standardized recipes.
- Correct techniques of preparing each kind of food that preserve natural flavour and nutritional value.
- Progressive cooking and preparation in the shortest possible time.
- Good management and supervision.

iv) Serving Room

The serving room is a place where patient food trays are assembled or made up.

It receives prepared food in bulk from the kitchen and the refrigerators.

After the trays are assembled, they are loaded on to tray carts or food trolleys and sent to the patient floors.

It is imperative that the serving area be close to the elevators.

The equipment and facilities in the serving room includes refrigerators, table-tops and cupboards for storing trays, dishes, cutlery and other articles necessary for assembling trays.

The dietitian has the overall responsibility for inpatient food.

She has the last immediate duty of checking the trays for proper identification, accuracy and temperature of foods and ensuring that the food is palatable and served attractively.

v) Food Delivery

Food trolleys that can be plugged into an electrical outlet to keep the food hot are now available.

An airline track is a tray truck with separate heated and refrigerated sections for hot and cold foods, and bulk thermal containers for liquids.

The hot bulk cart contains hot food in bulk that is dished on to the patient trays on the patient floors.

Many hospitals distribute foods in individual hot food containers carried in open food carts.

Smaller hospitals may serve them in ordinary tiffin carriers.

Beverages like coffee and tea are poured in the patient rooms.

Whatever the method of distribution is used, the patient serving should not take more than 45 minutes; if it does, the system should be evaluated.

vi) Special Diet Kitchen

This is an integral part of the hospital kitchen.

The special diets should be prepared under the supervision of a qualified dietitian the actual preparation being carried out by student dietitians or interns as part of their training.

Since special diets are usually modification of the basic menu and since the special diet kitchen derives its supplies from the main kitchen and transports the trays through the same tray carts, it should be located in the main kitchen or close to it.

It also requires pots, pans vessels, etc. like the main kitchen but on a much smaller scale.

In addition, it requires scales for weighted diets.

vii) Dishwashing Area

Dishwashing, an otherwise noisy job, is made easy with large modern dishwashing machines.

In these, a continuous stream of soiled dishes are loaded at one end and clean dishes unloaded at other side.

Wire baskets may be used to place glasses and cups in individual compartments.

In smaller hospitals, washing of dishes, etc., is generally done manually in the scullery.

An abundant supply of hot and cold water should be piped to the dishwashers and sinks.

Drainage and plumbing should be well engineered.

Soiled dishes are brought to the dishwashing area and scraped.

The waste is collected in a garbage receptacle.

Dishes are then checked and placed in dishwashing trays, and loaded for washing.

After this, they are stacked in appropriate places for reuse.

viii) Pot Washing Area

Washing of pots, pans and utensils is usually done by hand.

It is best done in a separate room.

The place must have deep sinks, abundant supply of hot and cold water and drying racks.

Pots and utensils should be identifiable so that they can be returned to their respective user units.

ix) Cafeteria

While accepting the proper nutritional care of patients as the primary responsibility of the food service department, most hospitals also provide food to non-patients and non-patient areas, such as the hospital staff, visitors and patient bystanders.

They also cater to functions and meetings through the cafeteria, coffee shop and the snack bar.

In planning the cafeteria, the following factors should be considered:

1. The number and kinds of groups to be served-day staff, resident medical and nursing staff, visitors, patient attendants and bystander.

2. Whether these should be separate dining rooms for medical staff, officers, VIPs and other staff.
3. Types and extent of food selection-vegetarian or non-vegetarian, number of food items, a complete meal for a fixed price or items by selection
4. Kind of service – self-service at the counter or table service; whether there should be a separate counter for doctors.
5. Size of the dining room and number of shifts – whether all persons can be accommodated in two or three sittings during a one or one-and-a-half-hour meal period.
6. Method of clearing table. If self-service, whether personnel will be required to return their trays to a designated area, e.g. a trolley or a cart, and whether they will be required to dump garbage in the garbage bin before depositing the trays.

The hospital cafeteria works like a fast food business operation – cash down.

The customers buy coupons at the counter, pick up food items in exchange for them, carry their trays to the tables and eat.

Alternatively, they pick up their food items in a tray and pay the cashier who will be seated at the far end of the food counter.

The hospital cafeteria should be designed for this kind of operation.

A customer-oriented menu is the key to the successful management of a hospital cafeteria.

The chief of food service must recognize certain fundamental principles that ensure an efficient and profitable running of the cafeteria. They are:

- Satisfaction of the customers who enjoy good food. In the case of hospitals, they are more of semi-captive customers.
- Variety in food. Patients may or may not be accustomed to luxury but most of them are used to variety in their diets at home. If it is not provided, they may quickly develop a distaste for the food.
- Purchase of high quality food at economical prices.
- Receiving and storing food supplies properly.
- Exercising effective control on supplies at the point of receiving, storing and issuing.
- Preparing foods according to standard recipes and standard quality and serving them attractively in standard portion.
- Accounting for sale of food.

x) Coffee Shop and Snack Bar

The coffee shop and snack bar should preferably be away from the main kitchen and dining rooms to cater largely to in-between-the-meals coffee, tea and snacks to outpatients, visitors and personnel.

This way, the main cafeteria can remain closed except for breakfast, lunch and dinner as keeping the whole cafeteria open over two shifts is costly.

The coffee shop should be easily accessible to outpatients, particularly emergency patients.

This is important in the night when the cafeteria is closed and the patients need refreshments.

It should be designed like a fast food restaurant for a quick turnover of patrons and not as a lounge where people settle down for an informal chat over a cup of coffee or tea.

4.6 Organization

Traditionally, a dietitian has been the chief of the food service department, also called the dietary or nutrition department.

But in larger hospitals, professional managers with degrees in management and food service or hotel management are now becoming more common with dietitian as the dietetic supervisor.

In smaller hospitals, the dietitian may serve a dual role as both dietetic supervisor and department manager.

The manager usually reports to one of the associate administrators.

The department has two main functional divisions: one relating to the administration of the department and food production, and the other relating to therapeutic food service and instructions to patients, and their counselling.

Administrative duties ranging from purchases to planning of menus occupy most of the manager's time.

The therapeutic duties include diet therapy, planning patient menus and special diets, supplying a special diet list to patients and counselling.

Educational activities include teaching students and training dietitian trainees.

The bulk of workers in the department are unskilled.

The trend in hospitals is to employ workers at the lowest salary level

The results in instability, lack of responsibility, and poor quality of work.

The department is often a hotbed of unions and union activities.

Many hospitals make it mandatory that those working in the food service department undergo physical examinations regularly to ensure that they are free of communicable diseases.

Dietary aides, if properly trained, can perform a variety of functions such as checking supplies, writing requisition, checking and reporting census, making out time schedules, checking routine tray line, and making out charge slips.

Early in the planning and design development stage, hospitals should decide as a matter of policy whether hospital food is to be compulsory for all patients or whether they can bring food from home, perhaps with the exception of special diets.

The size of the department and the primary functions of this department.

- It is the determination of meals that are to be served to the patients and the non-patients.
- Cycle menus that are commonly used consists of a series of skeleton menus to be served over the length of the cycle-weekly, biweekly, or monthly.
- Variations are sometimes made to take advantage of seasonal foods.

Some progressive hospitals allow the patients to select their own meals using menu cards as in restaurant.

Dietitians help patients in giving their orders.

Therapeutic nutrition requires a qualified dietitian to assist in patient therapy.

In most cases, nutrition therapy, as ordered by a physician, requires modification of the normal diet in its content, consistency and preparation.

Therapeutic and special diets and meals should be clearly marked, preferably by colour coded labels.

4.7 Facilities and Space Requirements

1. Food service manager's office. It should offer an unobstructed view of all the parts of the department, and be ventilated and preferably soundproofed.
2. Secretarial, clerical office with space for file cabinets and other equipment, seating for visitors, vendors, etc.
3. Office space for chief dietitian and staff dietitians. Some hospitals locate the office of therapeutic dietitians on the patient floors so that they can be available quickly to the medical staff and patients.
4. Receiving area.
5. Storage and refrigeration area with walk-in refrigerators, coolers and drug storage.
6. Pre-production preparation area.
7. Cooking or food production area, separate for vegetarian and non-vegetarian foods.
8. Special diet kitchen.
9. Tray assembly or make up area.
10. Dishwashing area.
11. Pot washing area.
12. Trolley, cart washing area and clean act storage area.
13. Deep sinks and hand washing facilities in various places.
14. Garbage disposal facilities.
15. Storage with racks and cabinets for clean trays dishes, cutlery etc.
16. Storage with racks for clean pots, pans, vessels, etc.
17. Employee facilities like lockers, staff toilet, etc.
18. Janitor's closet.
19. Dining hall with self-service counter, cashier's booth, clean tray storage area, seating for adequate number of people, used tray depositing area, hand washing facilities, drinking water fountain, etc.
20. Special (private) dining rooms for officers, medical staff, special guests, meetings, etc.
21. Coffee shop/snack bar, preferably off site.

4.8 Problem Situation

4.8.1 Conflicts

Conflicts often arise between the food service staff and the nurse service staff and the nursing and admitting staff when patient admission, discharge and transfer result in last minute requests, cancellation, or changes in preparation and delivery of scheduled meals.

Sometimes, food gets wasted.

A degree of tolerance, understanding and effective communication will help reduce such conflicts.

Another point of conflict between the food service and nursing department is who should pass and pick up patient trays. This is an administrative decision.

It is hard to provide a menu that pleases everyone.

Complaints against the food service department are common and frequent.

The work of the department is rendered more difficult because of the need to contain costs.

Dietitians can play an effective role in this regard both in the preparation of the menu and in talking to patients, especially in the matter of special diets which may not always be palatable or pleasing to the eye.

Many hospitals provide subsidized food to personnel and charge a much lower rate to them to visitors and patients.

Some hospitals provide free food to employees of the food service department while on duty.

Most hospitals like to continue this tradition, but it because of the rising cost, they have to reduce or abolish the subsidy, and it may breed resentment among employees.

4.8.2 Theft

Petty theft and pilferage are common in the food service department.

These mostly involve food dishonestly consumed on the premises, stealing patient food, eating food left in patient trays, and pilfering food from the store room and pantries on the patient floors.

The biggest offenders are the employees of the department, housekeeping, maintenance personnel and guards.

An effective method to curtail this is to lock the place where food is stored. Good supervision is necessary.

Bigger frauds can take place in materials management level, particularly in the purchasing process.

5. LAUNDRY SERVICES

5.1 Overview

Laundry and linen service is one of the vital departments of the hospital.

Criticism of linen service is one of the most frequently heard complaints in the hospital.

Attention to patient's personal needs and comfort is as important as the physician's medication, the care tendered by the nurse and appetizing food served promptly and attractively.

An adequate supply of clean linen sufficient for the comfort and safety of the patient thus becomes imperative.

Besides helping in maintaining a clean environment which is aesthetically significant to patients, clean linen is a vital element in providing high quality medical care.

The other aspect of this is the personnel appearance of the staff who attend on patients.

Pleasant, neatly-dressed employees in fresh, neat, uniforms go a long way in creating a positive image of the hospital.

A reliable laundry service is of the utmost importance to the hospital.

In today's medical care facilities, patients expect daily linen changes.

In some areas, linen has to be changed even more frequently.

This rigorous schedule can be very exacting on both the laundry and the capacity of linen to withstand repeated cycles of use and wash.

To enable the laundry to meet such a demand, the hospital should have a sufficient quantity of linen for circulation and to provide a rest period in storage.

5.2 Functions

1. Collection of or receiving soiled and infected linen.
2. Processing soiled linen through laundry equipment. This includes sorting, sluicing and disinfecting, washing, extracting, conditioning, ironing, pressing and folding.
3. Inspection and repair of damaged articles, their condemnation and replacement.
4. Assembling and packing specially items and linen packs for sterilization.
5. Distributing processed linen to the respective user departments.
6. Maintenance and control of active and back-up inventories and processed linen.

5.3 Location

The laundry should be located as to have ample daylight and natural ventilation.

Ideally, it should be on the ground floor of an isolated building connected or adjacent to the power plant.

This is because laundry is one of the largest users of power, steam and water.

A location that allows movement of linen by the shortest route saves effort and time.

The department should also be close to service elevators.

Some hospitals have chutes through which linen bags are dropped to a designated place from where they are picked up by laundry personnel.

Every time a load of linen is handled, the cost of laundry services goes up.

The location and physical plan are important in keeping the cost down.

One way of doing this is to keep the traffic flowline as short as possible on vertical and horizontal transportation between the laundry and the user departments.

This can be more easily accomplished in a vertical multi-storeyed building where the services are in the basement.

5.4 Some Planning Elements

5.4.1 Size of Active Inventory.

In planning and maintaining linen stock, a stratified inventory system is generally used.

This means that for every piece of linen in use, there are four others either being processed or held in store.

Therefore, the active inventory consists of items used daily multiplied by five.

For example, for each hospital bed in use, one sheet or pillowcase will be found in the following places:

- A soiled one is use on the patient's bed.
- A clean one in the linen closet in the nursing unit.
- A soiled one in the hamper or dirty linen collection area.
- One piece being processed in the laundry.
- A clean one in the linen store or back-up store for replacing active store.

5.4.2 Laundry capacity and Load

A final assessment of the plant and machinery required for a laundry can be made only by compiling a list of types and quantity of articles to be laundered weekly.

At the planning stage, the information required can be projected by using the following guidelines:

1. **American Standard:** An average of 15 pounds (6.80 kilograms) per bed per day plus 25 pounds (11.33 kilograms) for each operation or delivery.
2. **British Standard:** 60 articles per bed per week at 0.39 kilogram per article.

3. Indian Standard: the rule of thumb is three to five kilograms per bed per day.

All soiled linen in hospitals can be classified into two categories:

- a) Ordinary or normally soiled linen
- b) Fouled or infected linen

All babies' soiled napkins should be treated as infected.

For arriving at the actual daily workload, the total load of seven days soiled linen should be washed on six working days of the week.

The laundry should have the capacity to process at least seven days collection within the regular six-day workweek.

Soiled and infected linen comprises large flats (sheets, etc.), small flats (pillowcases, etc.), tumble work (both towel, bedspread. Blankets, etc.), presswork (garments, etc.), operating room and obstetrical linen, nursing and paediatric linen, and isolated linen.

5.5 Design

The laundry functions effectively only when it is planned strictly in accordance with the work sequence, namely, receiving, processing and dispatching.

Fig. shows the flowchart of the laundry showing trends of traffic.

The activities of the hospital laundry are in many ways similar to those in hotels and other institutions.

However, the hospital laundry also handles speciality items and tasks.

The most important of these being disinfection and infection control because hospital laundry processes not only ordinarily soiled linen but also infected or fouled linen.

It should be designed for asepsis and for removal of bacterial contamination from linen.

Hospital planners and administrations by and large fail to see that the layout and system of processing linen in a hospital laundry should follow the principles involved in the central sterilization and supply department.

There should be a strict barrier separation between the normally soiled linen and fouled or infected linen on the one hand, and between the soiled area and the clean processing area on the other.

The latter can be accomplished by installing double-door, pass through washing machines in the wall separating the soiled area and the clean processing area.

Linen is loaded on the soiled side and unloaded on the clean side.

This physical separation of soiled and clean areas has an important bearing on the design of laundry and infection control.

Traditionally, the various steps involved in the processing of linen are carried out, in the same room as, say, in a hotel laundry.

An enormous quantity of bacteria is released into the air of the processing area while sorting linen before wash.

This airborne contamination pervades the whole area and eventually settles down on clean processed linen that is delivered to the patient care areas.

This should be avoided by separating clean and soiled areas.

The plan of a hospital laundry is given in following Fig. 5.1.

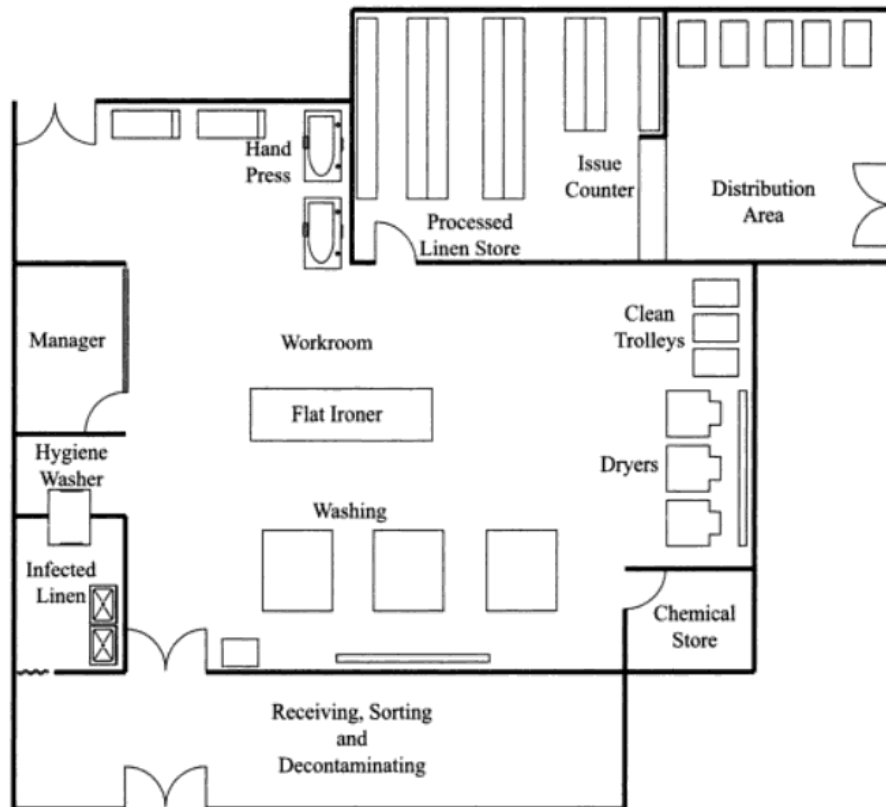


Fig. 5.1 Plan of a Laundry

5.5.1 Disinfection Area

Fouled or infected and normally soiled linen should be handled and washed separately.

Fouled and infected linen goes to one section of the reception-control area where it may be temporarily stored and later sorted and loaded into washing machines.

This area should be separated from the rest of the reception area and from the post-wash clean area of the laundry.

This latter separation is best done by double-door, pass-through washer-extractor machines installed in the barrier wall.

Some laundries provide a separate slicing machine for sluicing and disinfecting before they are loaded into the washing machine on the clean side of the reception-control area.

The normally soiled linen is stored, classified and loaded into the washing machine on the clean side of the reception control area.

Some hospitals use a double door pass through a hygiene washer for infected or fouled linen at the initial decontaminating stage of washing.

5.5.2 Utilities

Early in the planning and design stage, a careful study and projection of the utility and services needed for the laundry should be made.

The important requirements are water, power, steam and compressed air.

Laundry consumes a great deal of water.

There should be a source sufficient to meet the entire need.

Discharge of effluents should also be dealt with at the earliest stage.

Adequate power must be available. Hundred percent of the normal power should be provided as standby.

Adequate quantity of steam and correct temperature are also important.

Steam should be delivered by the shortest route to minimize line losses and at the same time provide ample heat to flat work ironers and presses.

The laundry also needs compressed air to operate these flat work ironers and presses.

5.6 Organization

The operational chief of the laundry is a laundry manager who may have been trained in laundry operation or has adequate experience in the field.

He reports to one of the associate or assistant administrators.

Many laundry managers come up through the ranks.

However, with increased automation and better opportunities to train people in technical schools, more and more hospitals are recruiting ITI-trained personnel to head their in-house laundries.

No formal training is required for the other personnel and most of them learn their responsibilities on the job.

Hospitals will do well to recruit personnel who are able to read and understand simple instructions.

5.7 Facilities and Space Requirements

1. Reception control area with facilities for receiving, storing, sorting and washer loading of soiled linen.
2. Sluicing and disinfecting/decontaminating area.
3. Clean linen processing room.
4. Laundry manager's office with provision for an unobstructed view of the laundry operation.
5. Sewing, inspection and mending area. A light table is necessary for inspection.
6. Staff facilities.
7. Supply storage room.
8. A lockable store to accommodate materials for re-clothing calendars and presses.
9. Solution preparation and storage room.
10. Hand washing facilities in each room where clean and soiled linen is handled or processed.
11. Provision for supply of water, power, steam and compressed air.
12. Cart washing and cart storage area.
13. Clean linen storage room.
14. Clean linen issuing counter.
15. Electrical distribution switchgear room.
16. Water recovery and recycling plant, if necessary.
17. Water softening plant, if necessary.

The following facilities are required off-site:

1. A central clean linen storage and issuing room.
2. Clean linen (lockable) storage in every nursing unit and user department.
3. Separate room(s) to receive and hold soiled linen from the wards and departments until ready for pick up by the laundry personnel.

5.8 Selection of Equipment

Automatic machine and labour saving devices have resulted in economics in the number of personnel and operational time, increased productivity, better utilization of water, heat power, steam and washing materials, and maximum utilization of men and machines.

Some of the features commonly focused are automatic formula dispensers, automatic operation controls, sorting and counting devices, machines combining washing, rinsing and extraction, and flat work folding machines for automatic folding.

The solution of equipment of a proper size is of utmost importance for balanced and economical production.

Laundry equipments should be carefully selected.

The following factors should be kept in mind:

1. Reasonable capital cost.
2. Reliability of design and compliance with the Bureau of Indian Standards.
3. Availability of spare parts and ease of maintenance.
4. Efficiency in working under normal conditions.
5. Economy in consumption of utilities like water, power, steam, etc. and in washing materials and other consumables.
6. Continuity of workflow and reduction of manual effort.

5.8.1 List of Equipment

1. Washer-extractor sluicing machine.
2. Double-door washing machine.
3. Hydro-extractor.
4. Machines combining washing, rinsing and extraction.
5. Flat work ironer, also called rotary iron or calendar.
6. Tumble dryer.
7. Utility press.
8. Mushroom press.
9. Table trolley.
10. Hand iron.
11. Dry linen trolley.
12. Wet linen trolley.
13. Linen hamper.
14. Hanger trolley.
15. Distribution trolley.
16. Motorized sewing machine.
17. Platform scale.
18. Air compressor.

5.9 Problem Situations

Theft of linen

Linen in good condition is a very marketable commodity.

Besides, people use sheets and pillowcases in their homes and pilfered linen items becomes handy.

Theft of linen takes place usually at night on the patient floors and departments.

Interestingly, soiled linen is not a significant target of theft.

All linen should be kept under lock and key, and linen in stock should be made accessible only to those who need it as part of their duty.

The linen closet in the nursing unit should be located directly facing the nurses' station to deter pilferage.

The supply of linen in the wards should be kept low to correspond with the bed occupancy.

Theft is proportionally higher when a large quantity of linen is accessible to the employees, visitors and patients.

UNIT V

COMMUNICATION AND SAFETY ASPECTS IN HOSPITAL

Purposes - Planning of Communication, Modes of Communication - Telephone, ISDN, Public Address and Piped Music – CCTV. Security - Loss Prevention - Fire Safety – Alarm System - Safety Rules.

COMMUNICATION SYSTEMS

Communication systems in hospitals encompass intra-departmental intercom, telephone, paging (overhead & wireless), nurses' call, data communications, computerized visual display terminals, television, cable television and closed circuit television (CCTV), alarm system, central dictation, monitoring and the more recent telemedicine, teleconsulting, and so on.

The demand to provide more and more information at higher speeds is greater today than even before.

The field of communication is being improved constantly to meet the complex demand of communicating from person to person, person to machine, and machine to machine.

With the advancement and sophistication of communication technology and the development of new and complex systems of communication, hospitals increasingly need persons who are knowledgeable in the management of communication systems and skilled in handling them.

Planning adequately for communication services in these changing times is as important as planning and designing the hospitals itself and its services.

The ability to transmit messages – voice, video, print and data – in a quick and accurate manner depends on the ready availability of the hospital's communications network and facilities.

A system that anticipates frequent changes and growth allows for the control of rising costs and produces greater efficiency.

Instantaneous and reliable communication is crucial to hospitals.

A slow response or missed communication is crucial to hospitals.

For example, a delay in issuing a cardiac emergency call or failure to reach a specialist on time may endanger life.

Poor communication can result in overall organizational inefficiency.

A tardy response or unfriendly attitude of the telephone operator may establish a negative image in the minds of the public.

Since the telephone operator is frequently the first contact of the caller with the hospital, how she responds to his calls sets the overall first impression of the hospital for him.

Nature and Scope for Communication

Communication is the process of passing messages from one mind to another.

The use of the word 'mind' is intended to imply the importance of conveying facts, ideas, emotions, opinions and all other types of instructions in such a way that they can be understood by the person receiving them.

A significant point about communication is that it always involves two people – a sender and a receiver.

In addition, whether the sender is an employee or a manager, he usually wants his receiver to accept his ideas and then to act upon it.

1. PURPOSE OF COMMUNICATION

Results are achieved in an organization through the process of communication.

If there is a proper system of communication in an organization, there will not be any misunderstanding and confusion.

Communication is needed not only by the managerial staff for discharging their duties efficiently, but also by the lowest employees to listen to the instructions of their supervisors and to perform their duties sincerely.

Proper communication is needed at every step and serves several purposes. It provides:

1. Information and understanding necessary for group work.
2. The attitudes necessary for motivation, co-operation, and job satisfaction.
3. Work satisfaction.
4. Assistance in decision-making because taking decision needs information.

A good communication system results in better patient-care and higher job satisfaction through better team-work.

2. PLANNING OF COMMUNICATION

Planning is an all pervasive and fundamental function of management.

It involves choosing the proper course of action from different alternatives.

Similarly, communication is also a vital aspect of the managerial process.

In fact, the superior-subordinate relation cannot thrive without effective and meaningful communication.

Therefore, the planning of communication is essential to produce the desired result.

The following are the essential steps in planning of communication:

1. **Know your objective.** What is it that you intend to accomplish by this communication? The sharper the focus, the better the result.
2. **Identify your audience.** It is necessary to know whom you are communicating with in order to select the proper language and the proper media.
3. **Determine your medium.** The method of communication will often determine the success of the communication. A decision must be made on how best to communicate the message.
4. **Tailor the communication** to fit the relationship between sender and receiver. The key to this element of effective communication is the relationship climate.
5. **Establish mutual interest.** Empathy, the ability to see the other person's point of view, is a priceless ingredient of the effective communication.
6. **Watch your timing.** This is critical to the effectiveness of the communication. It is important to decide who should receive the communication first.
7. **Measure results.** Has the desired response occurred?

3. MODES OF COMMUNICATION

There are various modes of communication.

i) Notice Boards

These can be an effective method of communication provided they are well located and attractive to look at.

The most important thing is that notices should be allowed to outlive their usefulness.

To this end, one person should be made responsible for putting up notices and for regularly removing those which have served their purpose.

ii) House Magazine

At first thought, the introduction of a house magazine may seem ambitious for an average-sized hospital in this country, but it can provide a platform for top management to communicate with its employees in informal and direct teams.

If intelligently used, it can be a method of creating team spirit and building mutual understanding among employees.

It can explain the policies of the management in simple words, it can remind the employees from time to time of the advantage of the various welfare schemes that operate for their benefit, it can show them how they fit into the organization; and it can make the employees feel pride in their hospital.

There are two types of house magazines – the news – bulletin type where in news and notes of topical interest are published and the proper magazine type where articles, poems and news all find a place.

The news bulletin is easier to prepare and its cost is very low.

However, a full-fledged magazine is often preferable because it is an informal means by which management policy can be explained to the employees and at the same time it provides the employees the opportunity to contribute articles and poems so that they consider the magazine their own.

The editorial functions can be performed by the HRD (Human Resource Department) because even no medium sized hospital can employ an editor for this job.

If the magazine is to be a powerful moulder of opinion on relationships between the management and employees, the editor has to be a person enjoying the full confidence of the management.

He should be assisted by an advisory committee to collect news.

The magazine should be distributed free to all employees.

The distribution of the magazine through the members of the editorial board can bring the readers and the members of the editorial board close to each other, and this system is therefore preferable.

The magazine should be in the language known by the majority of the employees.

iii) Suggestion Scheme

Suggestion schemes encourage employees' participation and help them to identify themselves with the organization, provided these schemes are properly administered.

The following factors should be taken into account for the success of this scheme:

1. A joint committee should be formed to operate the system promptly and efficiently.
2. Employees should be encouraged to give their suggestions about the problems of the organization.
3. Full information should be disseminated about the suggestions received.
4. A fair monetary or non-monetary reward should be given for useful suggestions.

When such suggestions can result in real savings by reducing operating costs and efficient service to the patients, there should be no hesitation on spending the money required for this implementation.

In addition to this, well-organized suggestion systems provide an excellent opportunity for upward communications and for developing a feeling of 'belonging' on the part of the employees.

iv) Meetings and Conferences

Meetings and conferences are widely-used methods of communication.

The truly-effective conferences and meetings encourage two-way communication and involve a group of people putting forth their ideas and experiences.

Those meetings and conferences which do not allow free participation should be discouraged.

v) Hospital and Departmental Letters

Letters sent from CEO of hospital or department head to employees are generally used in special circumstances, such as any change in hospital policy, salary scales, fringe benefits, etc.

Such letters should be addressed by name, instead of 'Sir', to an employee because letters addressed by name are more personal and therefore effective.

However, one must remember that CEO of a hospital should write such letters only when he has something of the utmost importance to communicate.

Another point to remember is that these letters should be brief and simple.

vi) E-mail

The internet is a wonderful way to communicate.

Each and every organization finds it a perfect way to talk to its staff.

It is useful but also dangerous when staff wants to talk to each other during working hours.

As hospital employees work around the clock, those employees who work in PM and night shifts have no way to know what is going on in their hospital.

So, department heads need a way to rally those employees.

In particular, they need a way to build a corporate culture – that intangible something which binds employees together and teaches them to understand instinctively the defining qualities of the hospital and appropriate way to respond to any issue that confronts them.

The e-mail provides the means to do this.

Surprisingly, the idea of going through a secretary to an appointment has changed.

New employees can send e-mails to anyone and expect a response.

It is very democratizing. New hospitals find all sorts of mundane tasks that can be done online with greater efficiency and less expense.

vii) Personnel Policy Manuals

Each and every employee in the hospital has a right to know the conditions under which he is working and the rules and regulations which govern his employment.

Sound HRM encourages the employees' maximum contribution towards the achievement of the objectives of the institution.

Personnel policy manuals should be designed to promote mutual understanding and co-operation so as to maximize the delivery of services in the hospital.

The institution must develop policies of employment, placement, promotion, fringe benefits, training and developments, grievance procedure, performance appraisal, etc. because these certainly have a great impact on employees.

The manual embodying these policies acts as an effective vehicle of formal communication.

4. TELEPHONE SYSTEM

Advanced telecommunication technology today offers vastly improved and sophisticated telephone equipment with never-before features and capabilities.

Advanced systems are now available in which a single instrument acts as a multi-button phone.

Most telephone systems have flexible circuits that allow telephone calls to be transferred to another area as, for example, to the admitting office.

In smaller hospitals, this eliminates the need for a telephone operator during the night.

Some other new features are: Touchtone dialling, call pick up, call forwarding, conference capability, transferability of incoming and outgoing call, video conferencing, social media calling and direct dialling.

Car telephone which hasn't made a big foray into the Indian scene yet, is expected to have a major impact on communications for hospitals.

Made accessible by use of cellular technology, can telephone will play a big role in contacting doctors who are on the move particularly because the use of a mobile phone is prohibited while driving.

Within the hospital, interconnecting telephone should be provided for all departments and section including operating room, ICUs, nurses' stations, offices, maintenance, housekeeping, and elevators.

A telephone service outlet should be provided midway in the elevator shaft to connect the telephone in the elevator.

All intercom telephones should be dial type that permits intercommunication without calling the hospital switchboard.

Many hospitals provide telephones in patient room.

Patients can make long-distance calls directly with the facility of remote metering or transmission to a computer so that automatic changing of the concerned patient is accomplished.

The practice of installing jacks in all patient rooms for use of plug-in telephones is now considered obsolete.

However, jacks may be provided in multi-bed general wards for the use of sick patients who cannot come to the nursing station to receive or make a call.

Public telephones should be provided at convenient location for outpatients, visitors and staff, particularly in the outpatient area, inpatient areas, emergency department, near the labour-delivery suites and in the father's waiting room, if there is one.

Pay phones leave hospital switchboard free for patient care and official use.

In addition to public telephones, there should be a convenient room where visitors, outpatients and hospital personnel can make assisted STD and ISD calls.

At the construction stage, conduits should be provided to facilitate installation of telephones wherever necessary, keeping future needs in mind.

Telephone instruments are sometimes selected for image rather than functional utility.

For example, an egocentric administrator of a medium-sized or small charitable hospital may like to add many unnecessary but costly features to his telephone without regard to the

questionable return on investment and the overall effect it will have on the economy of the hospital.

Features such as multiple push button sets, electronic speaker phones, CRT display units, automatic dial features and memory devices can add much to cost but give little in return.

Today's decisions may appear less than optimum, and equipment and instruments may become obsolete in a short time.

It is therefore important to institute a planning process that define functional requirements, technical capabilities, and organizational considerations over intermediate and long range periods.

4.1 Choosing the Right System and Vendor

Now that the Indian telecom department that was once a government monopoly is privatized, hospitals will do well to consider the following recommendations in selecting the telephone vendor:

1. Study and understand the communication needs of the hospital.
2. Determine the financial status of the company, its reputation and track record, and find out how long it has been in the field.
3. Talk to other hospitals / institutions that have installed the company's product and similar system.
4. Similarly, check with the operators in those hospitals who use, and maintain the equipment.
5. Get assurances that the system can be upgraded.
6. Find out the technical knowledge and competence of the company's technicians who will be installing the system.
7. Make sure that the company will train the hospital's personnel both to operate and maintain the system and provide post-installation services.

5. INTEGRATED SERVICE DIGITAL NETWORK (ISDN)

The Integrated Service Digital Network (ISDN), which is poised to take the communication world by storm, will revolutionize our communication systems and with them our lives.

Digital switching system, which is an advanced computer by itself, will be able to handle voice, data, text and image transmission – all on the same telephone line.

In other words, telephone, computer, printer, fax and almost anything else that is electronic can be plugged into a single telephone line to provide an integrated communications system.

6. PUBLIC ADDRESS SYSTEM AND PIPED MUSIC

A public address system or wired or overhead paging is invaluable for making announcements to a large number of people in assembly halls and other strategic location.

The system should be designed for zone paging so that information can be transmitted to selected places without disturbing patients and hospital staff in other areas.

Suitable background music can be piped throughout the hospital during selected hours.

Many Christian institutions broadcast devotional songs and worship programmes over the public address system.

Individual speakers in patient rooms give patients the option to switch the transmission off.

Where piped music, the public address system and television system are bundled together, a cut-in feature for announcement should be included.

Announcements may be made from several places depending on the nature of announcements.

7. TELEVISION AND CLOSED CIRCUIT TELEVISION

Television once considered a luxury, has now become common place as a source for news and entertainment.

Many hospitals also provide for patients entertainment, information and educational and health programmes by way of television, video and closed circuit television.

Cable TVs provide a variety of entertainment, sports and educational programmes.

Many hospitals provide these avenues of entertainment of their patients.

A television system becomes a closed circuit television (CCTV) when the hospital generates its own video programme and feeds it into the distribution system.

In some hospitals, CCTV is used in the operating room to transmit information to consulting doctors for advice and to residents and students for teaching purposes.

It is also used in cardiac catheterization procedures for displaying an X-ray image of the catheter position.

In advanced countries, CCTV is used by the nurses to view children in isolation, and for visitor-patient two-way viewing.

Inclusion of audio facility provides an opportunity for children to communicate with their parents when the latter are in isolation and children are not permitted to visit them.

When CCTV is used in the operating rooms on a permanent basis, a good quality camera is required, and it should be adopted for use with the surgical lights.

Most modern surgical lights are adjustable for positioning and focusing the camera.

CCTV is widely used in hospitals for surveillance operation.

8. SECURITY AND LOSS-PREVENTION PROGRAMME

8.1 Overview

One study put the yearly loss from theft in US hospitals by employees and others at an estimated \$3000 per bed.

Another study suggests that 25% of all employees will steal to some extent if they feel that only a small percentage of the offenders are likely to be caught and punished.

The study further reveals that within that 25%, the management level culprit is responsible for over 60% of thefts.

Sometimes an employee who would not steal a rupee of hospital funds appropriates valuable articles of supplies for personal use.

Fraud and theft are a booming business in any society.

Like corruption, they have become a global phenomenon.

They can strike from anywhere and often rear their ugly heads where they are least expected.

Figures relating to loss due to fraud and theft are incredibly high. Such figures are not easily available in India.

However, KPMG's India Fraud Survey identifies the sources of fraud as follows:

Employees 38%

Customers 19%

Service providers 15%

Suppliers 14%

Management 7%

Others 7%

Contrary to popular brief, it is not true that much of the losses due to fraud and theft is the handiwork of the lower categories of employees.

In fact, top management personnel engaged in embezzling can be more expressive and probably most difficult to detect.

Worse, it is not easy to punish them. Frequently, subordinates collude with their bosses.

Embezzlers are successful primarily because in most cases they are long-time, respected and trusted employees who handle cash, financial transactions and financial records or they are people placed in charge of purchase, store or similar functions.

Embezzlement is the most costly white-collar crime.

Regular burglars and robbers do not do half as well.

In any organization, some employees are placed in certain strategic positions, which makes it easy for them to embezzle money.

The accounts clerks may maintain two sets of books, write cheques to fictitious names in the salary register, give refunds to materials not returned, collude with suppliers in manipulating quotations and supplies.

Collusion, the cooperative meeting of two thieves, can be present anywhere in the facility.

It could involve a document falsification scheme between the employees of shipping and accounting departments; it could involve a major kickback operation between the purchase officer and the supplier.

Cheque forgery is said to be the largest single item of loss in the finance area.

Individuals with many opportunities to steal or commit fraud are officers and supervisors vested with authority, people with keys to sensitive areas, storekeepers, receiving clerks and purchase department staff, personnel handling cash, payments, payroll, financial and equipment records, employees on duty during evening and late night shifts, weekends and holidays, guards, long-time trusted employees and service departmental personnel.

Keys, time, lack of supervision and accountability, and authorized access to materials, money and records represent opportunities.

There is one other class of employees on which the top management should keep a close watch on.

These are the employees who linger at the workplace after regular working hours to complete "some unfinished business" or come back for work on Sundays and holidays for the same purpose even though they are not on duty.

One sensitive area of the hospital that warrants special attention is the purchase department, which is very vulnerable to fraud and kickbacks.

The management should be particularly wary of the purchase officer who is not interested in receiving competitive bids but prefers to deal with an established supplier.

The purchase officer's argument is that supplier is well known and the quality of his service and the prices are favourable.

This in fact is only a ploy to extend the kickback that the officer is receiving from the supplier.

Even if the prices are fair and the quality of goods satisfactory, this kind of an unchallenged long-term relationship always leads to many kind of abuses.

Assured of business, the supplier becomes lax.

Orders may be neglected, top quality materials may be diverted to other organizations and poor quality goods will land in this hospital.

The purchasing officer with a vested interest will not complain of course.

Three elements – motive, opportunity, and means – are necessary to prompt someone to commit a criminal act.

The hospital management can effectively curtail only the elements of opportunity.

The other two can only be constrained, not countered.

For example, the element of motive can be countered to some extent by preaching and practising a code of values, positive morale building, stressing loyalty to the institution and reminding employees of the consequences of theft and fraud.

The means may be curtailed by instituting internal control measures like unannounced audits, formulating well-defined policies for the control of materials, cash and other assets, checking and questioning all expense accounts, and so on.

Even then, employees are ingenious enough to devise new ways of committing fraud.

The element of opportunity can and should be controlled.

The management has a moral obligation to safeguard the assets of the institution by making theft and fraud as difficult as possible, if not impossible.

Often, the general climate in the organization is such as to provide ample opportunity and temptation to the employees to indulge in fraudulent activities without anybody taking cognizance of those offences or punishing the offenders.

8.2 Internal Control

One of the primary responsibilities of CEO of any organization is to safeguard the assets of the institution against fraud, theft and other kinds of losses including waste.

However, the CEO and his to management team cannot exercise direct and personnel supervision overall employees and their activities – it is not desirable either.

They must depend on policies, regulations and a built-in system of internal control for the prevention of loss and for the efficient running of the organization.

Checks and balances are necessary in any kind of organization.

Internal control provides a built-in mechanism by which the work of one employee acts as a check on the work of another.

For example, the storekeeper does not have control on inventory records; persons handling cash do not have access to accounting records; the purchasing functions are segregated from the accounting and stores functions, and receiving functions from issuing functions.

Most hospital administrators believe in the folly of stationing a security guard at the main entrance of the hospital to monitor the members of the public who enter and leave the facility.

In prestigious corporate hospitals, the guards may be flashily dressed, making obeisance to VIP patients as they do in five star hotels.

Having done that the administrators sit back secure in the knowledge that all is well and that they have plugged the biggest potential leak in pilferage.

However, they fail to see the fertility of this exercise as long as they leave the employees' entrance and the shipping and receiving area open without any security check.

It is through those unsupervised passages that large-scale pilferage take place every day.

The amount of money lost through the front door over a 10-year period will in no way match the loss of the hospital suffers in one year through the back and service doors.

8.2.1 How the Hospital Suffers Loss

1. Embezzlement
2. Pilferage
3. Kickbacks and collusion
4. Equipment theft
5. Personal property theft
6. Payroll fraud and theft including fraud in purchasing the time clock.
7. Cash theft involving main cashier, subsidiary cashier(s), cafeteria cashier, etc.
8. Fraudulent practices in purchasing, receiving and storing
9. Fraud in registers, records, and billing
10. Computer fraud

8.3 Some Methods of Internal Control:

i) Physical Security

1. Guarding all means of ingress and egress. Protect the hospital against intrusion from without and illegal movement of goods from within.
2. Control of the hospital's perimeter. This is easy if the hospital is housed in a single building, but extremely difficult in sprawling campus-type layout with several buildings spread across a wide area.
3. Control of human traffic like employees, visitors, drivers, contractors, vendors, etc. conduct body search, if necessary.
4. Separate entry and exit points for
 - (a) Staff
 - (b) Patients and visitors
 - (c) Vendors, sales persons, delivery people and contractors.
5. Identify, scrutinize and guide the non-patient and non-visitors traffic such as vendors at the controlled gates.
6. Prohibit pedestrian traffic through unloading dock, receiving area, morgue exits and truck gates.
7. Control vehicles like delivery trucks, etc. and check outgoing vehicles.
8. Electronic surveillance of strategic and sensitive area through CCTV controlled or guarded gates at all patient care areas.
9. Install locking devices and alarm system.
10. Issue visitor passes.
11. Procedure for and control over the issue of keys – master keys and sub-master keys. Authorization necessary to issue keys and an effective, enforceable procedure to retrieve them.
12. Lockers and lockable cabinets for staff against personal property theft.

13. Provision of a safe for patient's valuables.

14. Secured cabins for cashiers with a panic button or a silent foot or knee-operated hold-up alarm in their cabins.

15. Provide roll-up shutters or grills at strategic places for night time protection.

ii) Procedural Security

1. Establish service rules and communicate them to all employees. Each employee should be given a printed copy of service rules, the receipt of which he has to acknowledge.
2. Establish policies and procedure manual for each department.
3. Establish committees such as the general purchase committee, pharmacy and therapeutics committee, etc.
4. Establish accountability and control over the flow of hospital supplies and materials, particularly the receiving functions, and regulate the operation of receiving and unloading dock.
5. Institute inventory control procedures.
6. Establish well-formulated procedures for requisition, purchase indent, supply and distribution.
7. Do not allow the cashier to have both the keys to operate the cash register. The first key unlocks the mechanism for register operation and gives the total readings for money and number of transactions. The second key gives total either cashier-wise or by some other classification, and resets all totals back to zero. If the cashier has both keys, the prospects of fraud increase.
8. Institute a perpetual inventory system.
9. Conduct surprise checks of all departmental inventories.

9. FIRE SAFETY

9.1 Overview

Fire safety and protection are matters of vital importance concerning everyone in the hospital.

The best form of protection from fire is its prevention.

Although every possible measure may have been taken to make the hospital buildings as safe as possible, no place can be completely free from fire hazards.

A careless employee, a thoughtless visitor, a confused or disoriented patient can inadvertently set off a fire.

Initially, it may appear to be insignificant but it is important to remember that every big fire starts from a small one.

An effective fire safety programme calls for an understanding of the hospital fire plan and the active participation of every employee at all times.

There is no better protection against fire than constant visit to detect fire hazards, prompt action to eliminate unsafe conditions and a high degree of preparedness to fight fire.

Panic and confusion are the greatest hazards of fire. They can be countered only by sufficient preparedness.

9.1.1 General Fire Information

Every employee should know how a fire is caused how it can be prevented, and where the alarm boxes and extinguishers are located.

He or she should also learn the fire-fighting procedure before a fire actually occurs.

For a fire to sustain itself, three elements – heat, fuel and oxygen – should be present.

Fire is a chemical reaction, which occurs when a material (fuel) rapidly combines itself with oxygen in the presence of heat to produce a flame.

If any of these elements is taken away, the fire will fizzle out. This principle is the basis for fire extinguishing.

Most fires can be classified into 3 general types. Let us call them Class A, B and C.

Class A fire occurs in ordinary combustible materials such as wood, paper, cloth, etc.

The best way to put out such a fire is by dousing it with water and thereby reducing the temperature of the burning material below its ignition point.

Class B fire occurs in flammable liquids and greases like oil, petrol, alcohol, etc.

It is best handled by the blanketing technique, which tends to keep oxygen from the fire and thereby suppress contribution.

Water should never be used. It will only spread this type of fire.

Class C fire occurs in electrical equipment such as motor, wiring, switches, panels, etc.

This is a combination of the previous two types.

Because of the hazards of electrical short circuit, a non-conducting extinguishing agent should be used to put out this type of fire.

Again, water should never be used on an electrical fire.

The person using water on an electric fire may receive an electric shock.

The fire protection system in hospitals basically consists of a static water supply source within the building.

Connected to this are first aid hose reels and landing or hydrant valves with hoses at every floor levels, preferably housed in an M.S. hose cabinet with glazed door and strategically placed.

If the building is a high-rise one, there should be a wet riser serving 1000 sq. meters of the floor area to which the hose reels and hydrant valves are connected.

The required pressure in the line should be provided with suitable capacity pump.

It is necessary to have one working pump and another as standby in case of power failure while fire-fighting.

In addition to wet riser system, some unmanned areas require sprinklers.

Portable fire-fighting extinguishers of the type and capacity suitable for specific areas of application should also be provided in strategic location.

The fire-detection system consists mainly of smoke and heat detectors that sense fire at an early stage and give off an alarm so that the fire can be controlled at an initial stage itself.

Smoke and heat-detection devices are wired in series and terminated in control panels located in areas manned 24 hours of the day.

Apart from these detectors, break-glass units and hooters are also provided at strategic points.

When there is a fire, the nearest break-glass unit should be activated by breaking the glass.

This automatically sets off the alarm so that precautionary methods such as evacuation of the area can be undertaken.

9.1.2 Basic Responsibilities of Every Employee

1. Be completely familiar with the hospital fire safety programme and the departmental fire plan.
2. Be alert and observe the hospital with a critical eye, and report all dire hazards to the authorities concerned.
3. Not smoke in prohibited areas or anywhere if the entire hospital is declared a non-smoking area.
4. Know the location of fire alarm boxes and be familiar with the operating with its operating instructions, use and signals.
5. Know the location of fire-fighting equipment and be acquainted with its operating instructions and use.
6. Know the location of fire exits and assist the supervisor or head of the department in keeping them clear at all times.
7. Report to the supervisor if he (she) notices any defect in stairway doors, which should remain closed and in operational condition at all times.
8. Participate in all fire drills and other training or practice sessions as well as know his (her) assigned duties in the hospital's fire plan and evacuation.

9.2 What to do in case of Fire

If you discover a fire in your area, observe the following points:

i) Use code: do not panic, run, yell or use the word "Fire". Use the code: Doctor Red or Code Red.

ii) Evacuate: Remove persons from immediate danger of smoke and fire. Only persons in immediate danger need be relocated in areas on the same floor but away from the fire. If the fire is in the patient room(s), remove the patient(s) and close the door behind you.

iii) Sound Alarm: Sound the fire alarm from the nearest fire alarm box. This will notify the telephone operator and fellow hospital employees of the situation. The alarm box will set off a series of sounds or hoots.

iv) Dial Telephone Operator: Give the location – the floor, wing, area, etc. – and the extent of fire.

This is important because the telephone operator should be very sure of these details before calling up the fire department.

The telephone operator will immediately write the location down.

The telephone operator will announce Doctor Red on the public address system followed by the location of the fire three times.

This announcement will be repeated every 30 seconds for a period of two minutes.

To avoid panic among patients and visitors, emergencies in the hospital are announced using codes, for example, "Doctor Red" for fire.

The operator will also notify important officials like the CEO, or the person in charge at that time, the telephone operator will notify the fire department and summon help.

v) Shut off Ventilating Fans, etc.: On notification, the engineering department will shut off all ventilating fans, oxygen, gas, electric power to the affected area and if necessary, to any adjoining area threatened by fire.

vi) Prevent Smoke or Fire Gases from Spreading to Other Floors: There is a great danger of people dying of suffocation even on the floors far removed from where the fire has broken out.

Smoke and fire gases spread to other floors through air-conditioning ducts, pipe tunnels, etc.

This can be avoided by closing all the dampers in the air-conditioning ducts.

vii) Avoid Using the Elevators: walk down the stairs.

viii) Establish a Control Centre: The CEO or a senior officer will take charge.

9.2.1 At the Scene of Fire

1. Seal off the area of fire. Close windows and all patient room doors. Place wet blankets or towels along the door edges to prevent leakage of smoke. This is an effective fire-fighting technique.
2. Fight the fire with appropriate fire extinguishers. Use carbon dioxide liquid fires. Use fire extinguishers if the fire is small and fire hose if it is large.
3. Supervisor of the area will take charge.
4. He Doctor Red Alert Team will go to the scene of fire. The team leader will direct operations as they pertain to the actual fire situation.
5. When the fire department personnel arrive, they will be in complete charge.
6. Personnel on the general floor and other patient care areas will remain with their patients at all times until properly relieved.
7. There should be written procedures for evacuation of patients and on who can make that decision.
8. In case you are trapped and are unable to leave your room do the following:
 - Feel the door. If warm, do not open.
 - Place wet towels, bedding or blankets under the door(s).
 - Stay low on the floor where smoke and heat are the least and the air clearer.
 - Go to the window and open it.
 - Attract the attention of fire fighters by hanging a sheet or blanket outside the window.
 - Stay at the window for rescue.
9. All clear signal should be given by a responsible person, and Code Green announced after the fire is controlled.

9.2.2 The Time to know what to do is Before a Fire Occurs, Not After

Regardless of whether it comes under the purview of fire regulations or not, every hospital should be provided with a fire protection system considering the damage fire can cause to life and property.

In addition, provision must be made for the following:

1. There should be an effective fire safety programme for the hospital.
2. There should be written policies as well as a procedure manual covering all contingencies arising from fire.
3. Every department should have a departmental fire plan and a fire procedure manual outlining every employee's role in the plan.
4. There should be a pre-appointed standing Doctor Red Alert Team to direct all fire-fighting operations.
5. There should be written procedures to evacuate patients in case the fire becomes widespread. The procedure should specify who should decide on evacuation as well as procedures, methods and the order of precedence to be followed for evacuation.

6. Simulated fire drills, which are an essential part of an effective fire prevention programme, should be conducted periodically. These drills help ensure that all personnel understand their roles in the fire safety programme and perform their assigned tasks well. Fire drills should be conducted in a realistic manner.

9.2.3 Summary

If the fire is in your area:

1. Remove persons from immediate danger.
2. Activate fire alarm.
3. Alert personnel calmly. Never use the word Fire. Use the code Doctor Red or Code Red.
4. Dial the telephone operator. Give exact location and extent of fire.
5. Seal off the affected area. Close all windows and room doors in the area. Use wet blankets to confine smoke.
6. Unless lives are at stake, do not attempt to re-enter if the fire has gone out of control. Wait for help to arrive.
7. Shut off all equipment, gas, etc. which may compound the risk.
8. Fight the fire. Use a proper extinguisher.
9. Follow your department's specific fire plan and procedures.
10. Set up a fire control area.
11. Take a head count of patients and staff.
12. Post staff at the elevator.
13. Prepare for evacuation of patients or other duties as prescribed in the department fire rules.
14. Establish contact with the engineering, security, etc.
15. Establish and maintain communication with the control centre, and inform it about staffing needs.
16. Relinquish control when the fire department personnel arrive at the scene.
17. When the fire is completely put off, send an All Clear message to the control centre. This should be agreed to by the fire department personnel if they are present.

If the fire is not in your area:

1. Stop what you are doing.
2. Report to your department head or supervisor.
3. Continue your duties within your department if instructed by your supervisor.
4. Take a head count of patients and staff.
5. Shut off equipment, gas, etc. which might aggravate the risk. Check with the supervisor before shutting off oxygen.
6. If you are in the patient care area, communicate with the patients and reassure them.
7. Send staff to the control centre or the assignment area, if required.
8. Be prepared to assist in evacuating patient, if necessary.
9. Post staff at the elevator.
10. Maintain a stand by alert for any eventuality.

Do not:

1. Panic.
2. Run or shout in the corridors.
3. Use the word Fire: refer to it as Doctor Red.

4. Use elevators unless you are already on your way down.
5. Leave your department unless permitted or directed by your supervisor.

Within a reasonable time after the fire is extinguished, head(s) of department(s) where the fire had broken out should write a fire incident report and send it to the administration.

The engineer should assess the damage caused by the fire, make an estimate of the loss suffered by the hospital and send a report to the CEO.

10. ALARM SYSTEM

A hospital, more than any other institution, is exposed to emergencies and life-threatening situations – from medical emergencies like cardiac arrest, accidents, casualties and disasters to dangers arising from fire and bomb threat.

It has to be all the more alert to these situations because nowhere else are such a large number of helpless people concentrated in one place and are so utterly dependent on other people for their safety and health.

Build-in safeguards and preparedness are the essence of all safety programmes. The alarm system is one such programme.

1) Fire alarm

Every hospital must have a fire alarm system, which should be a part of the hospital's electrical system.

Wherever possible, it should be designed to transmit an alarm signal directly to the telephone operator so that she can contact the fire department and notify the hospital personnel without any loss of time.

The fire alarm system can be automatic or it can be operated manually.

Smoke and fire detection devices are installed in the patient rooms and other high-risk areas in the heating and ventilating ducts between the floors.

These actuate the fire alarm system.

On activation, the system sounds alarms throughout the premises or zones, including distinctive visual and audible alarm signals at the respective nurses' station.

To indicate the location of fire, there is an indicator light outside every room.

This is activated when there is a fire in the room.

In the automatic system, smoke detectors not only activate the fire alarm signals, but also close smoke doors and simultaneously shut off fans in the central air handling system.

If the fire alarm system is not automatic, then anyone noticing or hearing the fire signal should immediately inform the telephone operator who, in turn, will call the fire department, and notify the hospital personnel.

2) Medical Gas Alarm

In the centralized medical gas system, oxygen and nitrogen oxide which are stored in bulk in the manifold room are distributed to other areas of the hospital such as the operating rooms, ICUs and patient rooms through pipelines.

Compressed air and vacuum (suction) are supplied through pipes to certain areas.

Two kinds of alarm are incorporated into the medical gas system.

One monitors the pressure of various gases at different areas of the distribution system.

If abnormal pressure is sensed, the system sets off an alarm – the green signal goes off and the red warning signal glows with audible alarm until the line pressure returns to normal.

The second alarm is called the remote signal lamp which is generally only visible.

The lamp lights up when either of the banks of cylinders becomes empty.

The remote signal lamp is only a warning signal.

No immediate action is necessary because when one bank is empty, the other takes over and supplies the gas without interruption.

The alarm should be located in the medical gas user areas such as the operating rooms and patient floors as well as the main working area where the medical gas system is maintained.

However, these areas especially the maintenance area, may not be manned all the time.

Secondary signals should therefore be installed in places like the telephone operator's room, security office and the like where a 24-hour attendance is assured.

3) Blood Bank Alarm

Most hospitals use specially crafted refrigerators – a cold room or walk-in cooler is ideal- to store whole blood in the blood bank.

These refrigerator are set to a particular temperature to maintain blood in good condition and are provided with an alarm.

The alarm, which is both audible and visual goes off whenever it senses high temperature or a drop in voltage.

If the blood bank or the laboratory of which it is a part is not manned round the clock, the alarm signals should be located both in the blood bank and in a place that has 24-hour attendance.

4) Narcotics Alarm

Narcotics are stored in locked and be in the cabinets in nurses' stations as well as in the pharmacy.

There are restricted drugs, which are constantly stolen by persons addicted to them.

Some hospitals install a signal system that illuminates a light bulb that is visible from the nurses' station and the corridors whenever the narcotics cabinet door is opened.

5) Cold Room and Walk-in Cooler Alarm

Many hospitals have walk-in coolers or cold rooms in their food service department and laboratory.

They have been instances of the staff of the food service department getting accidentally locked up overnight inside the walk-in coders.

There should be an alarm button that can be used in such an emergency with a distinguishable audible and visual alarm indicator in a prominent area where there is a 24-hour personnel coverage.

6) Voltage Fluctuation Alarm

In any hospital where sensitive and expressive equipment worth crores of rupees is used, stabilized voltage is essential.

Motors are usually designed to withstand only a 10% fluctuation in voltage supply.

Beyond this limit, the motor will get damaged unless it is disconnected.

Low voltage poses the biggest threat to electrical system and equipment.

Diagnostic equipment often gives erroneous readings in low voltage conditions.

There are certain areas and sensitive equipment that do not tolerate excessive low or high voltage.

Such areas or equipment may be fitted with a simple voltage-sensitive alarm along with a voltmeter.

The alarm can be set at any desired point.

7) Elevator Alarm

Many hospitals have more than one passenger and bed-cum-passenger elevators, which are in continuous operation.

Whenever there is an electric power failure, elevators with their passengers get stranded, often in between floors.

In order to rescue the stranded passengers, a panic or emergency push button is provided in each elevator.

When it is pressed, a battery-operated alarm installed in the electric room or the security room, which is manned round the clock, is actuated to alert people about the rescue operation.

Elevator operators or maintenance crew then manually which down the elevator car from the machine room to the next floor to rescue the stranded passengers.

Modern elevators have a levelling feature that automatically taxes the elevator car to the next floor level in case of power failure.

8) Security Alarm

Certain sensitive areas of the hospital like the cashier's office, the psychiatric ward, bank extension counter and pharmacy which are prone to theft and burglary or where patients suddenly become violent need to summon immediate help from security personnel.

Some hospitals provide alarm systems in these areas.

The alarm may be of two kinds.

One is an automatic alarm like the one used in strong rooms of banks or jewellery shops which goes off when someone tries to break in.

The other is similar to the one used by bank tellers.

The device is activated by the employee to summon security or police help.

9) Patient Emergency Alarm

Various new features are now available that can be incorporated into the conventional nurse call system to meet emergency situations in the patient rooms.

If the nurse does not respond to the patient's call immediately, the system makes the light outside the patient's room and on the nurse call panel in the nurse station blink.

If there is still no response, the blinking of lights and the beep signals from the bleeper on the panel gradually keep increasing in frequency.

An additional feature that can also be fitted into the nurse call system is the panic button in the patient toilet that the patient can activate by using a pull cord in case of emergency.

10) Code Blue Alarm

Code blue is a term used in hospitals to announce or signal an emergency of a serious nature such as a cardiac arrest.

In some hospitals, in all patient rooms and other strategic location, there are independent buttons – not a part of the nurse call system – named Code Blue which when activated emit distinguishable emergency alarm signals both at nurse's station and at the telephone operator's room.

While the nurse attends to the patient instantly, the telephone operator goes on the public address instantly, the telephone operator goes on the public address system announcing Code Blue three times giving the location of the emergency.

In such hospitals, there is a written procedure to deal with such situations and pre-appointed Code Blue team which respond to the call instantly.

The members of the team are trained to deal with medical emergencies including cardiac arrest.

11. SAFETY IN HOSPITAL

11.1 Overview

The word safety in its purest sense means freedom from injury, risk or harm.

The management of any hospital has a twofold responsibilities regarding safety.

1. To make the workplace and the environment safe by creating safe conditions.
2. To establish, communicate to all concerned and enforce safety rules.

Everyone has to work as a team and share the responsibilities of safeguarding the patients, visitors and the hospital personnel.

Safety awareness is of paramount importance for the success of hospital's safety programme.

Every task that we perform, whether at workplace or at home, entails some risk of personnel injury.

Our ability to work safety is directly related to our knowledge of the hazards associated with the work.

Therefore, knowledge of work-related risks is essential.

Some departments of the hospital are more risk-prone and hazardous than others.

The laboratories, nursing floors, laundry and kitchen call for special instructions and elaborate safety rules.

Ignorance about the risks associated with the workspace and negligence may endanger the lives of employees and turn them into a liability to the hospital and their families.

Accidents do not happen by themselves; they are caused.

These causative factors are more human than environmental.

Merely controlling environmental factors does not prevent accidents.

The hidden causes of accidents should also be taken into account.

11.2 Hospital Safety Rules

General Safety Rules

1. The only correct way to do a job in the hospital is the safe way. Urgency is not a justifiable excuse for neglecting safety.
2. Know your job thoroughly. When in doubt, do not indulge in guess work; ask your supervisor.
3. Do not handle or observe machinery, tools and equipment without authorization.
4. Be alert and observe keenly. Report immediately any fault equipment, unsafe conditions or acts, and defective or broken equipment. Do not try amateur repairs.
5. Stay physically and emotionally fit for your work by maintaining good health and a proper diet. Abstain from alcoholic drinks. Take sufficient rest and practise cleanliness.
6. Personnel hygiene is important. Wash your hands often. In many areas of the hospital, this is necessary.

7. Prevent the spread of infection and contagious disease. Cooperate with the hospital infection control committee by observing established procedures. When you are ill with an infectious disease, report to the doctor immediately and stay at home.
8. Wear proper uniforms or clothing for your job. Neither too tight nor too loose. Jewellery and high-heeled footwear may be hazardous.
9. Walk, not run, particularly when you are carrying delicate, breakable articles or instruments. Be extra cautions at the corridor intersections, in front of swinging doors, at blind corners and in congested areas.
10. If you are some foreign material, loose wire, oil spill, etc. on the floor that may cause an accident, make sure it is removed at once.
11. Never indulge in horseplay or practical jokes involving fire, acid, water, compressed air and other potentially dangerous things.
12. Pay attention to all warning boards. For example, smoking in an area where oxygen is being administered or oxygen cylinders are stored.
13. Be familiar with your work procedure. All departments have written work procedures that include safety practices at work and handling equipments.
14. Always remember to use handrails on stairways or ramps.
15. When you want to reach overhead objects, always use a good ladder. Do not climb on chairs or boxes.