

UNIT: 1

OVERVIEW OF HOSPITAL ADMINISTRATION.

1. Management

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

The task of Management incorporates

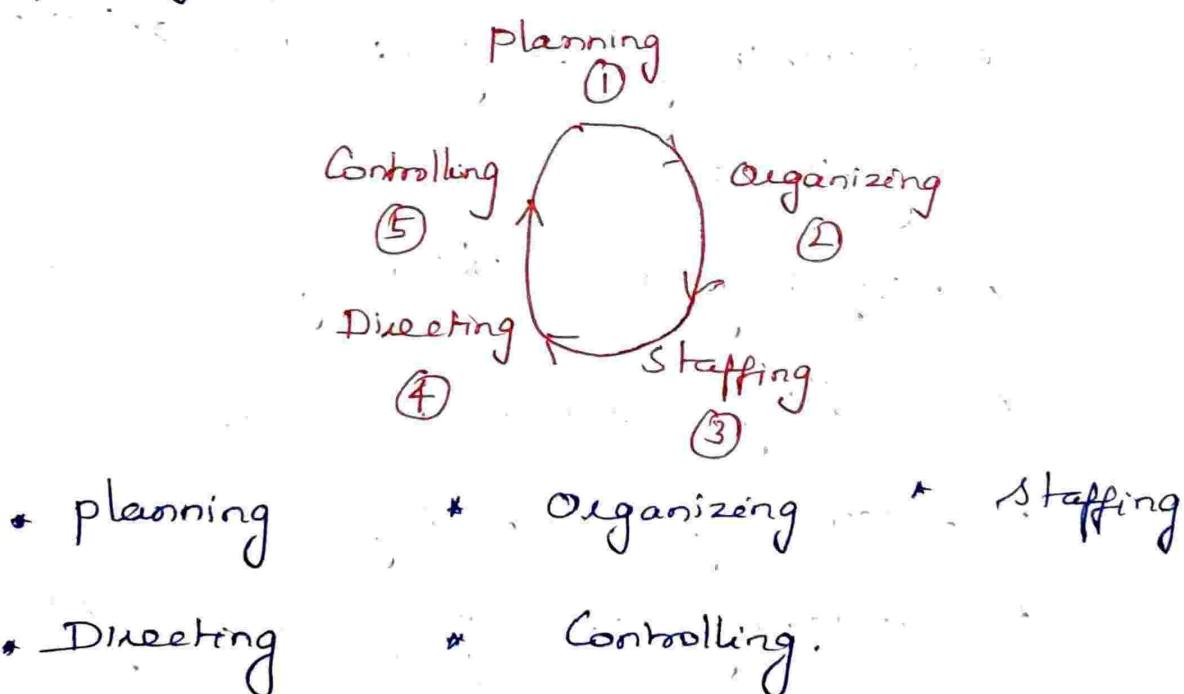
- * Determining the goals and objectives of the organization
- * Acquiring and Utilizing resources.
- * Installing Communication system.
- * Determining Controlling procedure.
- * Evaluating the performance of the organization.

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

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

Functions of Management

Management as a function performs the following five functions.



technology, increase in size of business,
Complexity of human behavior etc.

→ The Main purpose of staffing is to put
right man on right job.

is Square pegs in square hole.

Staffing involves:

Recruitment, Selection & placement

Training and development

Remuneration

Performance Appraisal

Promotions & Transfers.

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.

Planning

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

planning is determination of course of
action to achieve desired goals.

Organizing

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

Organizing as a process involves

* Identification of activities

* Classification or grouping of activities

* Assignment of duties

Staffing

staffing has assumed greater importance
in the recent years due to advancement of

→ It mainly relates to management of all aspects of a hospital, a co-ordination of all elements of a hospital

→ The functions of the management is all types of the organisation remains the same and revolves round,

Distinction between Hospital And Industry.

→ Hospitals has some difference from Industries

Hospital give service to people provided by Variety of skills.

→ Hospital exist because people need care and nursing homes exist because of 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

Direction has following elements

Supervision

Motivation

Leadership

Communication.

Controlling

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

* Establishment of standard performance

Measurement of actual performance

Corrective action.

Management in Hospital:

Hospital is the Institution for the care
care and treatment of sick and wounded,

for study of diseases and for the
training of doctors and nurses.

and require services which cannot be provided at home

- The patient leaves home, family, friends, his work-place, his way of life for a new environment, is the hospital
- In this new environment, he becomes one of the many. In his home, he has a definite role.
- A hospital deals daily with the life, suffering, recovery, and death of human beings.

Challenges in Hospital Administration:

- * Business and professional leaders who were initiated into the Hospital scene as trustees of voluntary Hospital.
- The large no. of physicians who are especially worry about the facilities.

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HOSPITAL PLANNING

The General public is now more alert to its health and is 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 the reasonable price.

Hospitals of yesterday:

Health care has come a long way since Florence Nightingale tended the wounded soldiers in the Crimean war. Back then, it was largely weak loving care. There was not enough of treatment and health care.

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

Technological Advances:

with a rapid development and advances in technological, medical and administrative Sciences and innovative technique and therapies. Today's hospitals will become disappearing within a short time.

→ one cannot even guess at the future milestones of medicine. That 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 specialities in hospitals and now we are planning and designing Super specialty hospitals operated and managed by Super specialists.

When our health is at stake, we want quality, whatever it takes, we demand

(B)

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 MRI, CT scans, ultrasound, Mammography, Simulator and linear accelerator are so common and so necessary in today's health care treatment require 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 ~~implanted~~ implant that would cost him a great deal of money.

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

Planning for a New Hospital

In the establishment of 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.

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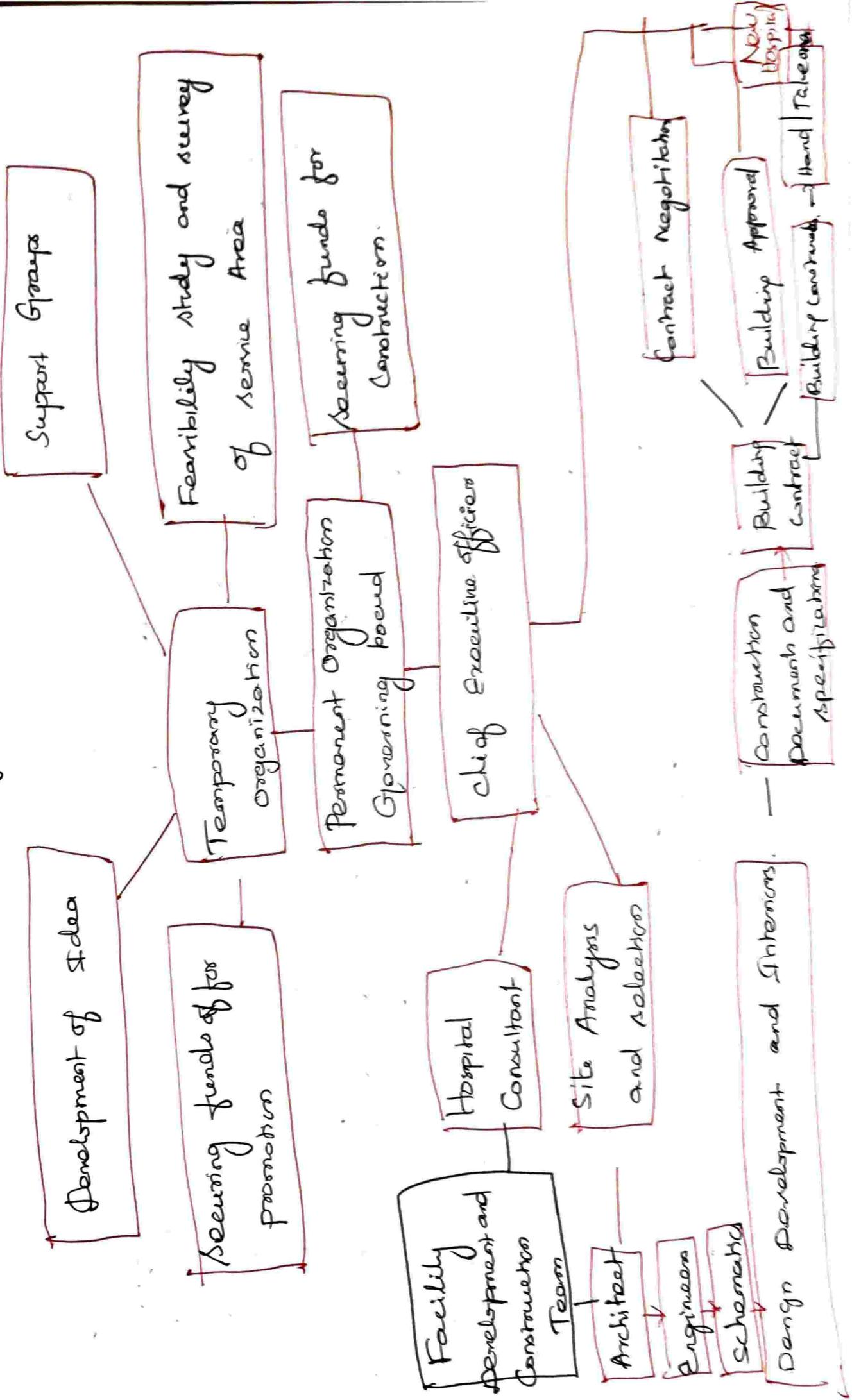
To be successful, a hospital requires a great deal of preliminary study and planning. It must be designed to meet the needs of the people it is going to serve. It must be staffed with adequate number of efficient doctors, nurses and other professionals.

→ 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.

Planning team:

- * Hospital Administrator
- * Specialists from various clinical branches
- * Nursing Advisor
- * HR Manager
- * civil and electrical Engg.
- * Representative of local body
- * Senior architect

Originator of the idea



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 building 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 co-ordination, 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 project build programme.
- Health care equipment planning is a specialised process and requires not only a clear understanding of the clinical need but also a knowledge of budgeting, architectural designs and building processes.
- Effective process of 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 health care 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 are arranged of the design and construction process.

- A series 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 mechanisms 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 purpose purchase.

Equipment for a new hospital may be classified into following three groups based on the usual methods.

① Built-in Equipment

This is usually included in the construction contracts.

Example 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 hospital facility is the architect's responsibility.

② Depreciable Equipment

→ Equipment that has a life of five years or more is not necessarily 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.

Example:

Surgical Apparatus, diagnostic and therapeutic equipment, laboratory and pharmacy equipment office equipment etc.

→ Equipment that is not included in the construction contract but which requires mechanical or electrical service connections, or construction modifications shall, as far as is practical, be identified on the design development drawings to ensure its co-ordinations with the architectural, mechanical and electrical phases of construction.

Non-depreciable Equipment

→ Equipment having less than five years life span is purchased through ways other than construction contracts.
→ There are generally small items of low unit cost under the control of the store room.

Examples:

kitchen utensils, chinaware, tableware,
surgical instruments catheters, linen, sheets,
blankets, lamps, waste baskets etc.

→ The first step is preparing the 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.

→ The selection of technical, scientific and medical equipment require careful analysis of each departments 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.

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 and health workers.

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 service.

Administration:

↳ Which concern the execution of policies and directions of the hospital governing discharge of support service is the area of finance personnel, materials and property, housekeeping laundry, security, transport, trolley and board and other maintenance.

Functional planning covers the following Activities:

- Determine Approximate section wise workload.
- Determine Services to be provided
- Determining area and space requirements to accommodate equipment, furniture, and personnel in technical, administrative and auxiliary functions.
- Dividing the area into functional units, bio-Chemistry, microbiology, histopathology, urinalysis etc.
- Determining the number of work stations in each functional units / division and deciding the linear bench space allotted for each work station

Determining the major equipment and appliances in each unit. This is generally classified as to:

- (i) technical equipment peculiar to certain work stations.
- (ii) other equipment and appliances eg (refri-gerator)

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

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.



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HUMAN RESOURCE MANAGEMENT IN HOSPITAL

Principle of HRM + Function of HEM-

Profile of H.R. Manager - Human Resource

Inventory - Manpower Planning.

Human Resource Management:

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

Principle of HRM:

~ ~ ~ ~

Human Resource

Management (HRM) integrates and emphasizes on Performance appraisal, career planning, training and development, organizational development, systems development, incentives, welfare measure etc.

1. The 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 achievements of an organization's objectives as well as provide

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Conducive atmosphere of working to the employees
so that their output is maximum.

→ Human resource are the most important assets
and their thoughtful Management is the key to
success of an organization.

5. The culture and values of an organization
effort broad influence on the organization. Therefore
organisational values and culture should be
accepted and acted upon by one and all in the
organization.

Functions of HRM

Human Resource
function. Human Resource

Managers throughout the

Personal requirements of the organization may

vary from time to time.

Management is a staff

Managers advise line

organization. Furthermore

the organization may

Policy Formulation:

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 internal environment of the organization.

Organizations which do not formulate policies for human resource management.

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.

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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.

Line functions:

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

Candidates are usually selected through newspapers, professional Journals, employment agencies, words of mouth & Campus visit to colleges and Universities.

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

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

New comers are introduced to their colleagues, Acquainted with their responsibilities and Informed about the organisation'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.

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and to prepare them for promotion.

Performance Appraisal is done to let an employee know about his performance. Low performance may prompt corrective actions 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 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.

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, procedure and practice in various personnel areas"

"

Stabilization involves seeking approval of the human resource department by the line manager before they take any action"

For example:

"Granting annual increment, solving Union grievances, taking disciplinary action against erring employees or rewarding the others etc"

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Management Functions:

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

Through 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 structure and thereby lead employees into the organization's future.

To achieve the organization's goal, it is necessary to make the organization structure effective, otherwise the process of

Preparing people who carry out the plans and work within the structure.

- The Managerial effort to keep people focused on the goals of organization involves the process of directing.
- Finally, Controlling helps the manager 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."

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.

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Hannover, on close observation of 109 hospitals
board meetings, 40% of the time at these

meetings is spent by the board members
discussing finances, 20% building and
equipment, 15% medical, paramedical and
Nursing problems, 10% services, 10%
relations and 5% Miscellaneous matter.
including Human resource Management.

→ The Human resource Management is
Hospitals has been too often the subject of
the tendency on the part of some hospital
Administrators to relegate representative some
responsibility to Human resource Managers
with one hand, to 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 'housepost' Management house keeping, public relations etc. besides the main responsibility of recruitment of personnel.

→ In short, If the hospital Administrator gives due importance to the Human resource manager in the hospital Administrations.

He (HRM) 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.

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→ Human resource Managers are particularly concerned 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 ~~order~~ advertisement in the newspapers.
- * Conduct Interviews and complete necessary formalities with regard to the appointment.

Human Resource Manager 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 in the future
- * Evaluate the present manpower and develop programme to improve skills by conducting surveys which indicate staffing patterns in similar organisations in the region, and compare them with his own organization.

HUMAN RESOURCE INVENTORY:

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

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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 ph.no.
8. Present permanent Address with ph.no if any
9. Date of Joining
10. Date of promotion
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 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 schedule
6. Seniority list of personnel
7. Hobbies of personnel

The Inventory will also help in the following areas:

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

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Human Resources Records and Forms:

It is necessary to maintain records of Outpatients 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 purpose 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.

Reasons for human resource records

- * 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.
- * Government Agencies frequently ask for various kind of information from time to time. This can easily be supplied on the basis of such records.
- * Payroll is prepared from these records.
- * Training needs are determined from these records.

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Personal details, family details, educational qualifications, experience, present salary, etc. can be discovered from human resource records for the purpose of deciding promotions, transfer, etc.

Categories of Forms:

Forms used in Hospitals may be divided into three categories.

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

Permanent Records:

1. Permanent Records Concerned with employees

2. Permanent Records Concerned with Positions.

Permanent records concerned with employees

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

* It has been found useful to record the following particulars:

1. Name
2. Father's Name
3. Present Address
4. Permanent Address
5. Telephone number
6. Birth place
7. Date of birth
8. Marital status
9. Dependents name, sex, age, etc.
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.

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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.

1. Job Analysis: The breakdown of a job into various component parts.

2. Job classification: Grouping of positions having a sufficient number of common characteristics to enable them to be grouped into a unit, eg: laboratory, aid, nursing aid, pharmacy, aid, etc.

3. 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.

4. 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.

- * Human resource planning: A thorough assessment of future staff needs is required for recruitment, training, and career-planning.

Forms which become Permanent Record:

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

1. Requisition for new employees and authorization for employment.
2. Job Application form.
3. Medical fitness report.
4. Employee probationary rating form.
5. Employee Annual rating form.

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Temporary Forms:

These are to be destroyed after use.

- * Introduction slips
- * Meal passes
- * Leave record
- * Attendance record.
- * Permission to visit health clinic.

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 is promotion planning.
- * Long - term planning is the really important planning.

In Manpower planning the basic questions of objectives, organizations 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.

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.

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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.

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

Systematic Manpower planning is a must for dynamic organizations.

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

Need for Manpower

Planning:

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/ and others.
5. labour laws affecting demand and supply of labour.
6. International scenario of employment.
Eg: employment of Nurse, doctors, Paramedical Personnel in USA, UK, ...
7. Introduction of competencies.

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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.

Major Benefit of Manpower planning

- * Enables an organization to have the right person at the right place.
- * provide scope for advancement and development of employees through training, development etc.
- * Helps in anticipating advertisement and salary budgets.
- * predict the need for redundancy and plan to eliminate it.

- * plan for working conditions, fringe benefits, training needs.
- * Give an idea of the type of test to be used and interview technique in selection based on the level of skills, qualifications, intelligence, values etc of future manpower.
- * Helps improve service to patients and contribution of working personnel.

Objectives of Manpower Planning:

- Ensuring Maximum Utilization of Personnel
- Assessing future requirements of the organization
- Determining recruitment sources.
- Anticipating from past records.
 - ① Resignations
 - ② Discharge Simplification
 - ③ Dismissals
 - ④ Retirement
- Determining training requirements for Management development

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Manpower Planning Steps:

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

Following steps:

Scouting of the present personnel strength

* The scouting 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 level.

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, promotions of employees to higher posts, losses that are likely to occur through resignations, discharge, simplification, ~~dismissals~~, ~~retirements~~.

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Investigation of turnover of personnel

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

A Study of Manpower

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.

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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 Important factors which result in employees quitting their jobs are:

1. Low salary
2. Better prospects to other Hospital.
3. Poor working conditions.
4. Transport problems.
5. Housing problems.
6. Marriage to care of female employee.
7. Health grounds.
8. Family circumstances.
9. Further studies.
10. Mal treatment 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.

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- 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 organisation weak spots are revealed, which can ultimately help reduce turnover and is building the morale of the remaining employees in the hospital.

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UNIT: III

RECRUITMENT AND TRAINING

Different Departments of Hospital, Recruitment, Selection, Training Guidelines, Methods of training - Evaluation of training - Leadership grooming and training, promotion and transfer.

Different Departments of Hospital:

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 task should be taken into consideration.

- Reception of patients
- Recording the history of patients, as concerned with X-ray
- Prepare necessary paper, the slip to be posted on the X-ray request counter in the register
- Taking film from stock, putting the same in the X-ray cassette.

- Explaining to the patients about x-ray procedure and taking the x-ray
- processing film
- Sorting films film
- Reporting to the radiologist
- Typing of report
- Clustering report

Physiotherapy Department:

The Main Objectives:

- To maintain Hospital objective.
- To minimize physical disability through exercise
- To assist each patient so that he may reach maximum functional level.
- To contribute to the comfort and well-being of the patient
- To retrain him in activities of daily living
- To accelerate the patient's recovery and decrease his length of stay in the Hospital
- The department is generally directed and supervised by the chief physiotherapist.

Main function of physiotherapy department

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

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

- Treatment area consisting of cubicles.
- Gymnasium
- Hydrotherapy area
- Space for office where clerical and administrative work can be carried out
- Sufficient changing room
- The department is generally directed and supervised by a chief physiotherapist.
- Before giving treatment to patients, he has to do some preparatory works
 - * Examination of the patients
 - * Entry into register.

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 in charge 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 aids and bottle washers, but secretarial staff can be common for all the sections.



Pharmacy:

To run the pharmacy of a hospital, the head of the hospital requires qualified pharmacists, organisation structure, co-operation of the medical and nursing staff of the hospital.

RECRUITMENT

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

Recruitment process is a process of identifying the job 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 actions.

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

Source of recruitment:

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

* List of sources:

1. Existing employee.
2. Door Applicants.
3. Government Employment Exchange.

Recruitment Policy:

The hospital authorities should frame a recruitment policy for the guidance of the human resource dept.
→ The Management should clearly spell out the objectives and major principles they intend to pursue while recruiting employees.

Considerations for framing recruitment policy:

1. Internal Vs external recruitment:

- Recruitment 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.

2. Appointment of relatives of employees:

- The relatives or friends recommended by employee 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

(6)

Considerations to be kept in mind while advertising;

- * The advertisement should be designed in such a way that it induces the interest of potential candidate.
- * The media of advertisement should be selected carefully.
- * As far as possible the advertisement should be a display advertisement. A classified advertisement usually fails to attract the right persons.
- * 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.
- * Give background information about your hospital in a couple of sentences such as a mission hospital, private hospital, public hospital, charitable hospital etc.

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 candidate for Interview.

Over and under-qualified staff:

- * The candidate to be selected should neither be under-qualified, he will not able to do his work efficiently.

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.

Advertising the post/vacancy:

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

Objects of advertising a post:

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

Job Application form:

The Job application form 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 qualifications, experience and participation in extra-curricular activities.

- The form should be large enough to provide enough space for writing the desired information.
- The application form should be printed on good paper.
- The wording used on the form should not be unclear.
- It can include some questions about the previous employers of the candidate to find out his stability at work.
- One blank page should be attached with every job applications information and the candidate should be asked to write why he is applying for the post.

Steps in selection:

- * Interview by Human Resource Department
- * pre-employment test - written / oral / practical
- * Interview by department Head
- * Decision of administrator to accept or reject
- * Medical Examination
- * Check of references
- * Issue of appointment letter.

① 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 employer interview can be divided into four parts

- * Warm-up stage → Drawing-out stage.
- * Information stage → forming an opinion stage

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

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 stating 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,

Main objective of an Interview:

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 job as well as of the organization
3. To demonstrate fairness to all candidates.

Preparations before the Interview:

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

- 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 category 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 4 types:

- a) Tests of general ability - intelligence tests.
- b) Tests of specific abilities - aptitude tests.
- c) Tests of achievement - trade tests.
- d) Personality tests - test of emotional ability, 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 job, 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 heads:

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 department (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 candidate, 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 thorough knowledge of his physical abilities 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 three fold:

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 reference 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 references letters should be brief and should require as little writing as possible by the person to whom it's sent.

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 employee 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.
6. 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 are 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.

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.

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.

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) A better future.

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.

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

Should have some say in promotions, but the industrial courts have hitherto held that promotion is a management function.

Promotion Policy may include the following:

1. Charts and diagrams showing job relationships and a ladder of promotion should be prepared. These lines and arrows are always based on a analysis of job duties.
2. There should be 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 complete.
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.
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.
7. In cases of promotion, the human resource department should carefully follow the progress of the promoted employee.

- #### 8.2.1 Advantage 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. A sound promotion policy keeps competent employees and provide them enough opportunities to further.
 - e. finally, it increases the effectiveness of an organization.

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.

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

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.

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.

8.2.2 Solution to promotion problems

Difficult human relations problems can arise in promotion cases.

1. In promoting an employee to a higher post, 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. 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.

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.

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.

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. Basic 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.

(1)

UNIT IV

Supporting Services:

Medical Records Department:

A medical records department maintains records and documents relating to patient care. Among a host of activities, its main functions are filling, 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 induced and filled in the department

→ Accurately written

→ properly filled

→ 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 purpose.

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

(2)

- each entry in the medical records must be signed by the person taking 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 lead itself to misinterpretation.
- Every hospital should formulate policies, rules and regulations for the production, completion and maintenance of medical records.

Functions:

- ① planning, developing and directing a medical record system:

That includes patient's original clinical records and also the primary and secondary records and indices. These may be in the central record room, the clinical service area, adjunct departments or the outpatient department of the hospital.

② Maintaining proper facilities and services:
For accurate and timely production / processing
Checking, indexing, filling and retrieval of
medical records.

③ 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.

④ 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.

⑤ Preparing vital records of births, deaths,
reports of Communicable diseases etc.

→ For mandatory and regulatory agencies,
and statistical reports. These relate to.

(3)

number of admissions, discharges by major clinical services, discharge diagnoses and length of stay by diagnoses, types and number of surgeries performed etc.

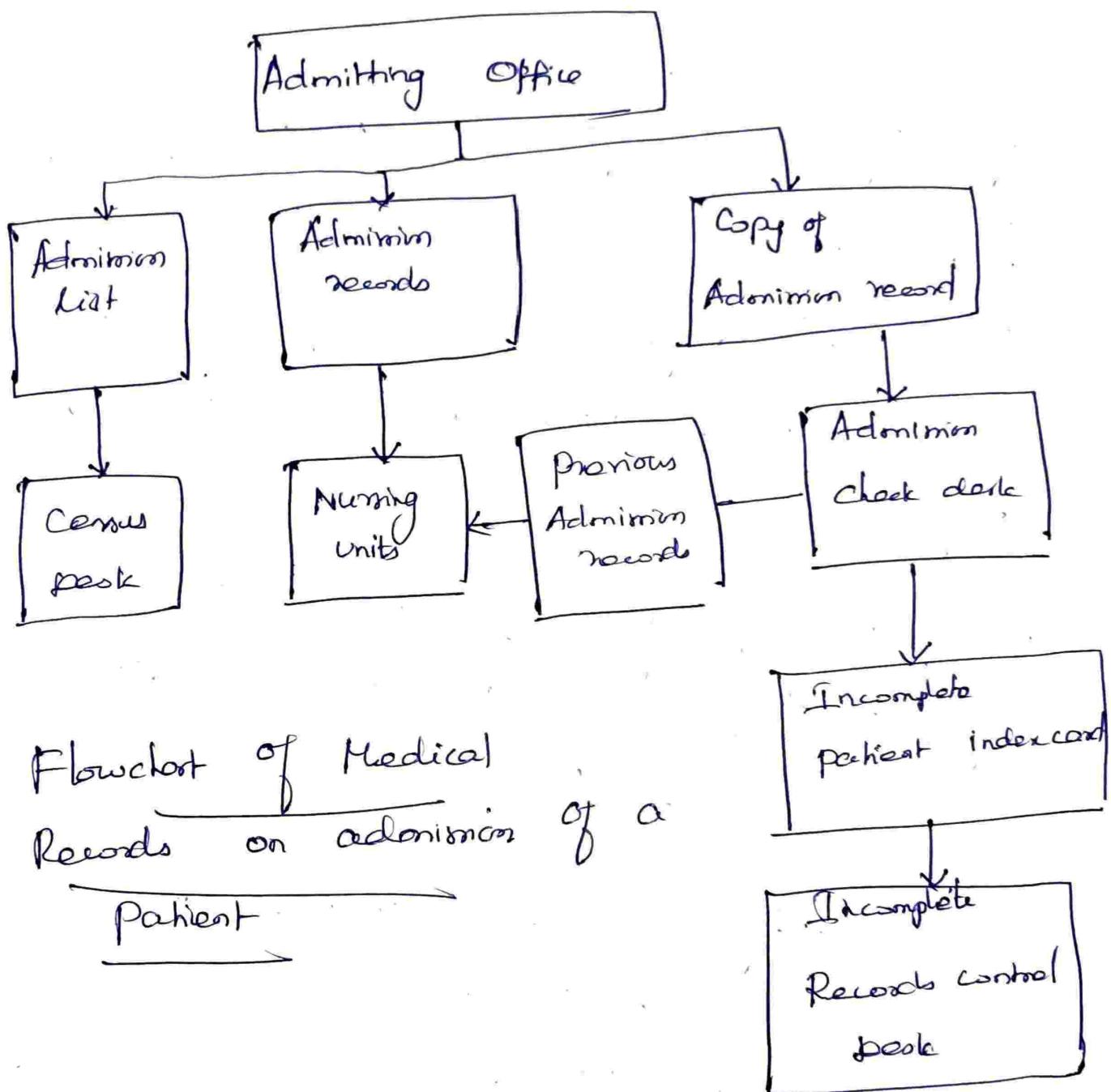
⑥ Coding all diagnoses and operation: According to international classifications of disease for statistical purposes

⑦ Safeguarding the information in the medical records against theft loss, defacement tampering or use by unauthorized persons.

⑧ Determining in co-ordination with medical staff and administration

The actions to be taken in medico-legal cases relating to the release of medical records is a variety of situations and determining the legality and ethical appropriateness of such actions to conformity with the laws of the land.

Location



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

Central Sterilization and Supply department

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 infections after being admitted.

- Give the poor standards in our hospital, 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 slos.
- Sterilization of instruments, operating packs, drapes 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 (EO) similar gases.

→ Gas sterilization require 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 sterilized items are used.

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

Objectives

→ Process and sterilize equipments and materials under controlled conditions by trained and experienced personnel thereby contributing to total environment control in the Hospital.

- effect greater economy by keeping and operating the expensive processing equipments in one central area.
- Achieve greater uniformity by standardizing tech of operations.
- Gain a higher level of efficiency in the operations by training personnel in correct processing procedures.

Functions

- Receiving and storing solided material used in Hospital
- determining whether the items should be reused or discarded
- carrying out the process of decontaminations (or) disinfections prior to sterilizing.
- Inspecting and testing instruments, equipments and linen
- sterilizing.
- Labelling and dating materials.
- Storing and controlling inventory.
- Issuing and distributing.

Location:

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

- It should be close to the depth which uses its services the most
- Hospitals are continuously searching for new ideas to maintain aseptic condition of the highest order, particularly in the surgical suites.
- 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 soiled 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.

Design:

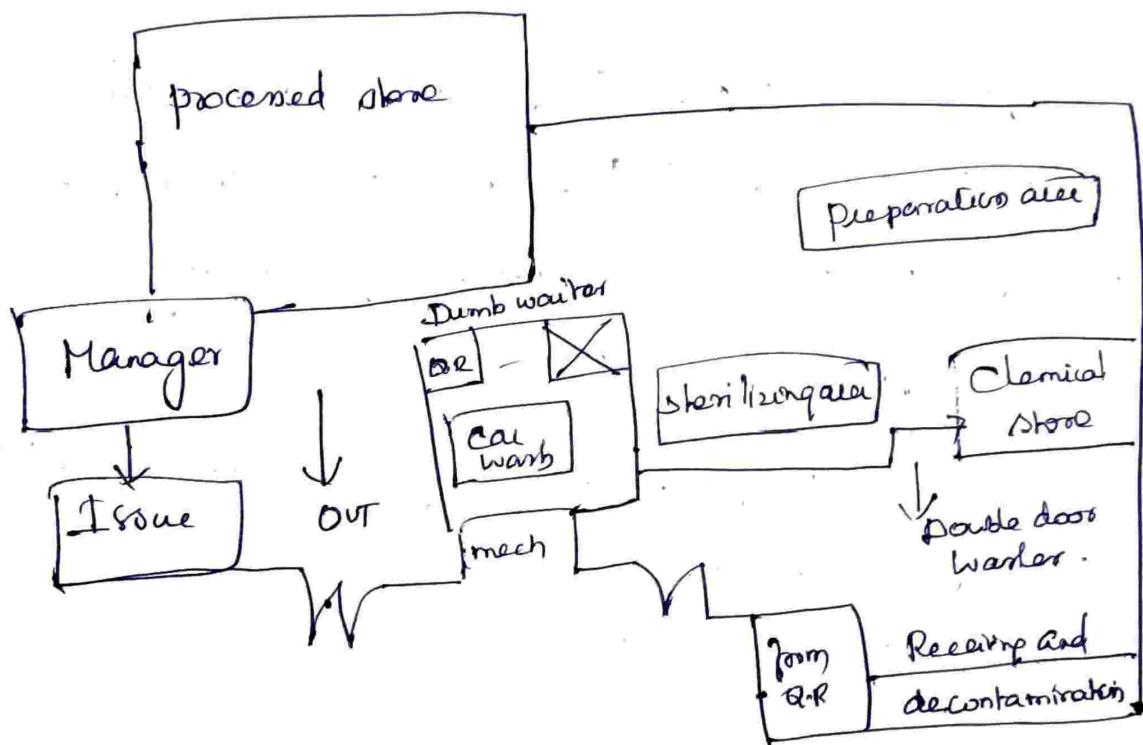
The workflow pattern should be planned in such a manner that the personnel traffic

and the movement of supplies and equipments is accomplished in an efficient manner. The flow of work is 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 instruments
- In a well designed, state of the art CSSD, there are three organised zones.
 1. Soiled area
 2. Clean area
 3. Sterile area.
- Materials are loaded on the clean side and unload on the sterile side
- Both automatic and manual loading and unloading autoclaves are available.
- Autoclave with formaldehyde and ethylene oxide for heat sensitive good and cycles for fluid production are also available.

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

PLAN OF CSSD



Some Procedure:

- Cleaning and washing of instruments trays, etc should be performed before reassembling and wrapping instruments.
- Cleaning and washing can be done either manually or by automatic washers.
- Ultrasonic cleaners are considered most effective in cleaning joints, hinges etc.

- Surgical linen is inspected before wrapping instruments
 - Linen packs to check for holes, tears, or rips by passing it over a light table.
- Linen packs of sheets, drapes, wraps, etc., are assembled for operating room, labour room and delivery suites.
- Processing of instruments, one of the activities of the CSSD includes assembling appropriate instruments and supplies into sterile kits and wrapping the kits with sterile liners.
- Instruments used regularly are sometimes assembled to make pre-wrapped kits and stocked, or they are prepared when needed as per order.
- Sterilization is done in batches, which means that several packages are sterilized in a single load.
- The CSSD may also be engaged in the manufacture of parenteral solutions, normal sterile saline solutions and sterile distilled water.

PHARMACY:

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

- qualified personnel
- Modern facilities
- efficient Organization and Operation
- Sound Budgeting
- the support and co-operation 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 systems, computer assisted pricing, billing, cash collection, out-of-stock and overstock over stock position, expiry dates and a host of other functions.

→ Pharmacy is a specialized area of operations calls for intimate knowledge of drugs and drug therapy.

functions

- purchase, receive, store, compound, package, label and dispense pharmaceutical items.
- 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 advise and consultation regarding drug therapy.

Drug Distribution:

- Drugs sent to the nursing units for stock inventory. These are items generally stored in the units for the use of patients but not charged to them.
- Drugs that are sent to nursing units specified for individual patients as prescribed by the doctor 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 given to the unit nurse to be stored in medication carts with individual drawers for each patient.
- Prescriptions drugs by the pharmacy on the strength of prescriptions given by the physician. These are largely paid for in cash and represent the vast majority of drugs both in terms of quantity and cost.

Location:

- Flow of outpatient traffic through the hospital
- Flow of drugs and other raw materials into the pharmacy.

- participate in Hospital educational Programmes
- plan and organize the pharmacy department, establish policies and procedures and implement them in accordance with the Hospital policies.
- serve as a member of the pharmacy and therapeutics Committee, be actively involved in its functions and activities and implement its decisions.
- carry out research and participate in the evaluation of new drugs.
- 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.
- 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.
- Comply with statutory regulations, initiating licenses to be obtained maintaining records as legally required.
- Whenever recognized, provide pharmacy students practical training which is in partial fulfillment of their course requirements.

Design

- ① Dispensing area
- ② Production / Preparation area
- ③ Administrative area
- ④ Storage area.

Organization:

The Head of the Pharmacy Services is usually a chief Pharmacist who may possess a B. Pharm or M. Pharm degree and only adequate experience.
→ He is normally responsible to the medical director or the medical superintendent.

Facilities and space Requirements

1. Dispensing Area:

1. patient working area. It should be designed so that the usually large waiting crowd does not obstruct the free flow of traffic on the corridor nor is it jotted by it.

2. Active Storage, Adequate space for temporary storage of carts.

- Flow of drugs and service from pharmacy to the inpatient areas and other departments.
- Need for future expansion.
- Many hospitals, however find that when the outpatient department is the overriding consideration in determining the location for the hospital.
- In many of our hospitals, inpatients are required to buy their requirements of medicines directly from the pharmacy on the 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 store room.

Manufacturing Area:

- Bulk Compounding area
- provision for package and labelling
- provision for packing assurance activities
- Clinical sinks and hand washing facilities.

Administrative Area:

- Reception and clerk - typist's area for clerical functions including filing, communication, reference etc.
- chief pharmacist's office and office space for assistant chief pharmacist and clinical sinks and handwashing facilities.

Storage Area

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

Food Services:

Overview:

- The food service department is today's modern hospital rank as one the major department
- It is headed by a Specialist who is either a professional Manager or a chief dietitian.
 - Hospital have long recognized the public relations value of the food service department

Functions:

- Provide the best possible food at a cost consistent with policy of the Hospital.
- Buy to specification, receive supplies, check their quantity and quality and store produce / poison assemble and distribute food.
- Establish standard for planning, menus, preparation and serving food, and controlling meals. Standards must be established before setting up food purchase specifications.
- Establish policies, plan layouts and equipment requirements

Functional Areas

① 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 case of dietary supplies, the director 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.

- Establish policies, plan layout and equipment requirements
- Train dietetics interns.
- Cooperate with medical staff in planning, preparing, and serving experimental metabolic research diets

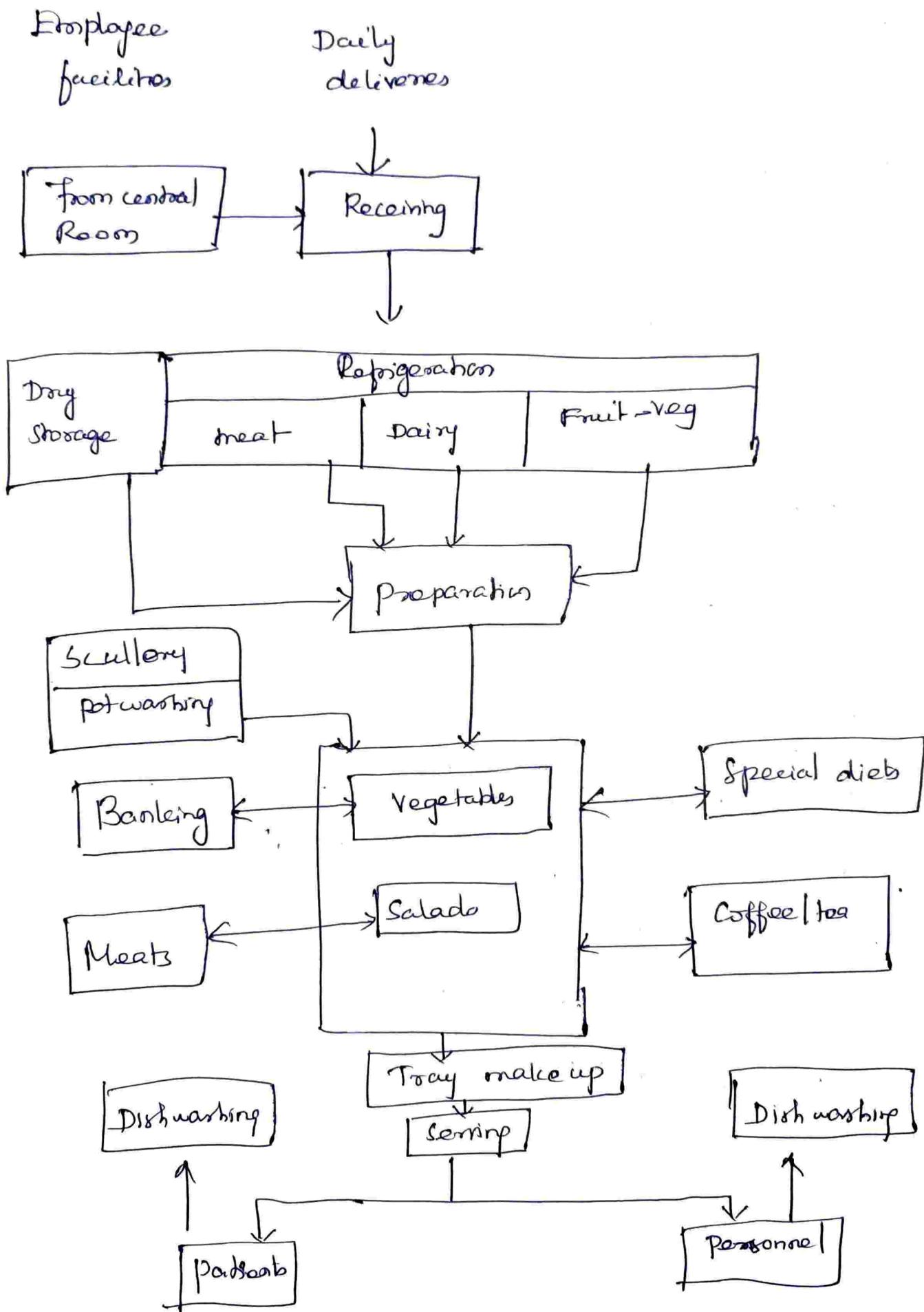
Location

- 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 ground floor location is preferable, and is also convenient to deliver supplies.

Design

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

Flow chart of food service



- Storage and Refrigeration room
- Preparation and production Area
- Seving room
- Food Delivery
- Special Diet kitchen
- Dishwashing Area
- Pot washing Area
- Cafeteria
- Coffee Shop and Snack Bar

Organization

- Traditionally, a dietitian has been the chief of the food service department, also called the dietary (or) nutrition department.
- In some hospital, the dietitian may have a dual role as both dietetic supervisor and department Manager.

Facilities and space requirements

- ① Food Manager office
- ② Clerical office.
- ③ Receiving area
- ④ Storage and refrigeration area.
- ⑤ Pre products and preparation area.
- ⑥ Special diet kitchen
- ⑦ Cooking and food Production area
- ⑧ Tray assembly area
- ⑨ Pot washing area
- ⑩ Storage of racks and cabinets for clean tray dishes, cutlery etc.
- ⑪ Employee facilities.

LAUNDRY SERVICES:

Overview:

- Laundry and linen service is one of the vital dept of the Hospital
- Attention to patient's personal needs and comfort is as important as the physician's medication, the care standards 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 becomes imperative.
- The other aspect of this is the personnel appearance of the staff who attend on patients.
- A reliable laundry service is of the utmost importance to the hospital.
- In some area, lines has to be changed even more frequently.

Functions:

- collection of or receiving soiled and infected linen
- processing soiled linen through laundry equipment
This includes sorting, sluicing and disinfecting, washing, extracting, conditioning, ironing, pressing, and folding.
- Inspection and repair of damaged articles, their condemnation and replacement
- Assembling and packing specially items and linen packs for sterilization
- Distributing processed linen to the respective user departments
- Maintenance and control of active and back up inventories and processed linen.

Location

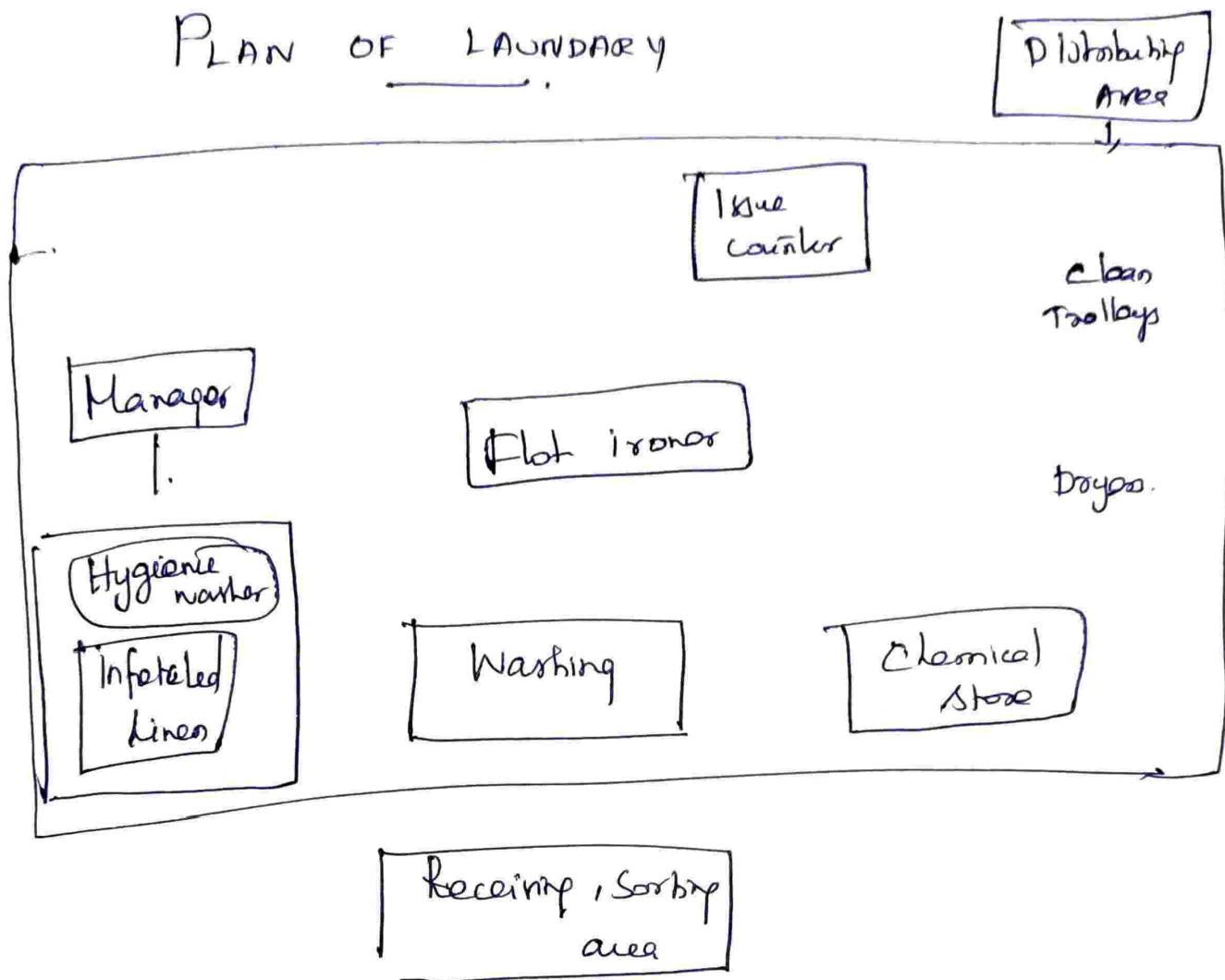
- The laundry should be located in one of the largest users of power, steam and water.
- Ideally, it should be located in ground floor.

- A location that allows movement of linen by the shortest route saves effort and time
- The department should be close to service elevators.
- Every time a load of linen is handled, the cost of laundry service goes up.
- The location and physical plan are important in keeping the cost down.

Design

- The laundry functions effectively only when it is planned strictly in accordance with the mode sequence, namely, receiving, processing and dispatching.
- 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.

PLAN OF LAUNDRY



Organization

- The operational chief of laundry is a laundry Manager who may have been trained as laundry process or has adequate experience in the field.
- He reports to the Assistant Director.
- No formal training is required personnel for the other personnel and most of them learn their responsibilities on the job.

Food Service:

- The food service department receives a substantial amount of supplies. Therefore it requires large enough area for handling supplies.
- The food service department in most of the hospital is divided into
 - * Supply receiving area
 - * refrigerated storage area
 - * for employees cooking
 - * patients serving room
 - * food service manager office
- It is difficult to generalize required to the food-service department of a hospital on the size of staff
- The staff strength depends upon the number of medicated diets required, the education programme, research work

(3).

→ 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.

→

Laundry:

The following space and equipment required in a hospital laundry.

- * Clean cloth prege processing area
- * Drying area
- * Folding area
- * Pressing area
- * Laundry Supervision area
- * Solution preparation and storage room
- * Boiler area.

List of equipment for laundry.

- * Washing machines
- * Hydro extractors
- * Iron for pressing cloths
- * Dryers
- * Sewing machines.
- * Boiler.

UNIT: V

Communication AND Safety Aspects in Hospital.

Communication Systems:

Communication systems in Hospitals encompass intra-department Intercom, television, paging, data communication. Computerized visual display terminals, television, cable television and closed circuit television (CCTV), alarm systems, central dictation, monitoring and more recent telemedicine, teleconsulting and so on.

- The demand to provide more and more information at higher speeds is greater today than ever before.
- The field of Communication is being improved constantly to meet the complex demand of communicating from person to person, person to medicine, machine to machine.
- Planning adequately for Communication Service is there changing times is as important as planning and designing the hospital 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.
- Poor communication can result in overall organizational inefficiency.

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 listen to the instructions of their supervisors and to perform their duties sincerely.

(2)

Proper communication is needed at every step and serves several purposes.

- Information and understanding necessary for group work
- The attitudes necessary for motivation, co-operation and job satisfaction
- Work satisfaction
- Assistance in decision-making because taking decisions needs information

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.

Steps of planning of Communication

- * Know your objective
- * Identify your audience
- * Determine your medium
- * Tailor the communication

- Establish mutual interest
- Watch your timing
- Measure results.

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 outline 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 averaged 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.

(3)

There are two types of house magazines - the news-bulletin type where 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 easier to prepare and its cost is very low.
- However, a full-blodged 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.
- If the magazine is to be a powerful shaper of opinion on relationship 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 magazines 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 sdm is therefore preferable.

(3) Suggestion Scheme:

Suggestion Scheme encourage employee participation and help them to identify themselves with the organization.

provided these schemes are properly administered.

* A joint committee should be formed to operate the sdm promptly and efficiently

* Employees should be encouraged to give their suggestion about the problem of the organization.

* Full information should be disseminated about the suggestions received.

* A fair monetary and non-monetary reward should be given for useful suggestions.

(4) 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.

(4)

⑤ Hospital and Department Letters:

Letters sent from CEO of hospitals or department head to employee 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 and more personnel 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.

→ E-mail

- E-mail is a wonderful way to communicate
- The Internet is a wonderful way to communicate
- Each and every organisation finds it a perfect way to talk to its staff.
- In particular, they need a way to build a corporate culture - that intangible something which binds employees together and teaches them to understand constantly 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.

⑧ Personnel Policy Manuals:

- Each and every employee of 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 employee maximum contribution towards the achievements of the objectives of the Institution.
- personnel policy manual should be designed to promote manual understanding and co-operation so as to maximize the delivery policies of the Hospital.

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 call to be transferred to another area as, for example, to the admitting office.
 - car telephone which hasn't made a big entry into Indian scene yet, is expected to have a major impact on communications for hospitals.

(5)

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.

- A telephone source outlet should be provided midway to the elevator shaft to connect the telephone to the elevator.
- Many hospitals provide telephones in patients rooms.
- The practice of installing jacks in all patient rooms for use of plug-in telephone 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 telephone should be provided at convenient locations for outpatients, visitors and staff, particularly in the outpatient area, inpatient area, emergency department, near the labour-delivery suites and in the father's waiting room, if there is one.
- Telephone instruments are sometimes selected for image rather than functional utility.
- Features such as multiple push button sets, electronic speaker phone, CRT display units, automatic dial feature and memory device can add much to cost but give little in return.

INTEGRATED SERVICE DIGITAL NETWORK (ISDN)

The Integrated Service digital Network (ISDN), which is poised to take the communication world by storm will revolutionize our communications 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 single telephone line to provide an integrated communications system.

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 locations.
- The system should be designed for zone paging so that information can be transmitted to selected places without distributing patients and hospital staff in other areas.
- Suitable background music can be piped throughout the hospitals during selected hours.

(6)

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.
- When piped music, the public address system and television system are bundled together, a cut-in feature for announcement should be included.

→ 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 TV 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 by the nurse 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.
- Modern Surgical lights adjustable for positioning and focusing the camera.
- CCTV is widely used in hospitals for surveillance operation.

SECURITY AND LOSS - PREVENTION PROGRAMME

Overview:

- One study put the yearly loss from theft in US Hospitals by employees and others at an estimated \$ 300 per bed.

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 management team cannot exercise direct and personal supervision over all 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 efficient running of the organization.
- Checks and balances are necessary. If there is 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.
- Most hospital Administrations 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 guard may be flamboyantly dressed, making obeisance to VIP patients as they do in five star hotels.

How the Hospital Suffers Loss.

1. Embezzlement
2. Pilferage
3. Kickbacks and collusions
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.
8. Fraud in registers, records, and billing
9. Computer fraud.

Some methods of Internal Control:

① physical security:

- * Guarding all means of ingress and egress, protect the hospital against intrusion from without and illegal movement of goods from within
- * 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.

- Control of human traffic like employees, visitors, drivers, contractors, vendors etc conduct body search if necessary.
- separate entry and exit points for
 - (a) staff
 - (b) patients and visitors
 - (c) Vendors, sales person, delivery people
- Contractions.
- Identify, scrutinize and guide the non-patient and non-visitor traffic such as vendors at controlled gates
- prohibit pedestrian traffic through unloading dock, receiving area, morgue exits and truck gates.
- Control Vehicles like delivery trucks etc, and check.

Outgoing vehicles.

- Electronic Surveillance of strategic and sensitive area through CCTV Controlled or guarded gates at all patient care areas.
- Install locking devices and alarm systems.
- Issue visitor passes.
- 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.

Lockers and lockable Cabinets for staff against personnel property theft.

Procedural Security:

- * 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.
- * Establish policies and procedure manual for each department
- * 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.
- * Institute inventory control procedure.
- * Institute well formulated procedure for requisitions
- * Establish purchase indent, supply and distribution
- * Institute perpetual inventory system
- * Conduct surprise checks of all department inventories.

FIRE SAFETY:

Fire safety and protection are matters of vital importance concerning every one 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 building as safe as possible, no place can be completely free from fire hazards.
- A careless employee, 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 the 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 vigil to detect fire hazards, prompt action to eliminate unsafe conditions and a high degree of preparedness to fight fire.

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.

- Fire is a chemical reaction, which occurs when a material 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 of fire extinguishing.

- Most fire can be classified into 3 general types.
Class A, Class B and Class 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 combustion.
- Water should never be used, it will only spread the type of fire.
- Class C fire occurs in electrical equipment such as motor, wiring, switches, panels etc.
- This is the 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 electrical fire may receive an electrical shock.
- The fire protection system in Hospital basically consists of a static water supply source within the building connected to this are first aid hose reels and landing or hydeant valves with hoses at every floor, levels preferably housed in an M.S. hose cabinet with glazed door and strategically placed.

- 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 device are wired in series and terminated to control panels located in a manner 24 hrs of the day.

- Basic Responsibility of Every Employee:
- * Be completely familiar with the hospital fire and the department fire plan.
 - * Be alert and observe the hospital with a critical eye, and report all dire Hazards to the authorities concerned.
 - * Not smoke in prohibited areas.
 - * Know the location of the fire alarm box and be familiar with operating with its operating instruction and use signals.
 - * Know the location of fire exits and aims the supervisor or head of the dept is keeping them clear at all times.

What do incase of fire:

- * Use code.
- * Evacuate
- * Sound alarm
- * Dial telephone operator
- * Shut off Ventilating fans etc..
- * prevent smoke or fire Gases from spreading to other floors.
- * Avoid using the Elevators.
- * Establish a Control centre.

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 now where else are such a large number of helpless people concentrated in one place and ~~safe~~ are so utterly dependent on other people for their

people for their safety and health.

① Fire alarm:

- Every hospital must have a fire alarm sys., which should be a part of the hospitals electrical sys. Whenever possible, it should be designed to transmit and 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.
- Fire alarm sys can be automatic and/or it can be operate manually.
- Smoke and fire detectors sensors are installed in the patient rooms and other high risk areas in the heating and ventilating ducts b/w the floors.
- These actuate the fire alarm system.
- On activation, the sys sound ~~should~~ alarms throughout the premises at zones, including distinctive visual and audible alarm signals at the respective nurse stations.

In the automatic slo., smoke detectors not only activate the fire alarm signals, but also close smoke doors and simultaneously shut off fans in the central air handling slo.

→ If the fire alarm slo. is not automatic, then anyone, then anyone noticing or hearing the fire signals should immediately inform the telephone operator, who in turn, will call the fire department and notify the hospital personnel.

Medical gas alarm

In the centralized medical gas slo., oxygen and nitrogen oxide which are stored in bulk ^{is} of the manifold room are distributed to other areas of the hospital such as the operating room, ICU, and patient rooms through pipelines.