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Semester - VII (CSE, IT, ECE) Open Elective - II

HOSPITAL MANAGEMENT

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PREFACE

The importance of **Hospital Managment** is well known in various engineering fields. Overwhelming response to our books on various subjects inspired us to write this book. The book is structured to cover the key aspects of the subject **Hospital Managment**.

The book uses plain, lucid language to explain fundamentals of this subject. The book provides logical method of explaining various complicated concepts and stepwise methods to explain the important topics. Each chapter is well supported with necessary illustrations, practical examples and solved problems. All the chapters in the book are arranged in a proper sequence that permits each topic to build upon earlier studies. All care has been taken to make students comfortable in understanding the basic concepts of the subject.

Representative questions have been added at the end of each chapter to help the students in picking important points from that chapter.

The book not only covers the entire scope of the subject but explains the philosophy of the subject. This makes the understanding of this subject more clear and makes it more interesting. The book will be very useful not only to the students but also to the subject teachers. The students have to omit nothing and possibly have to cover nothing more.

We wish to express our profound thanks to all those who helped in making this book a reality. Much needed moral support and encouragement is provided on numerous occasions by our whole family. We wish to thank the **Publisher** and the entire team of **Technical Publications** who have taken immense pain to get this book in time with quality printing.

Any suggestion for the improvement of the book will be acknowledged and well appreciated.

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Dedicated to God

SYLLABUS

Hospital Management - OBM752

UNIT I - Overview of Hospital Administration

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

UNIT II - Human Resource Management in Hospital

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

UNIT III - Recruitment and Training

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

UNIT IV - Supportive Services

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

UNIT V - Communication and Safety Aspects in Hospital

Purposes - Planning of Communication, Modes of Communication - Telephone, ISDN, Public Address and Piped Music - CCTV.Security - Loss Prevention - Fire Safety - Alarm System - Safety Rules.

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Unit I

Overview of Hospital Administration

Syllabus

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

Contents

1.1 Overview of Hospital Administration

The hospital is an organization that mobilizes the skills and efforts of widely divergent group of professionals. Semi-professional and non-professional personnel to provide highly personalized services to individual patients. Like other large organizations, hospital is established and designed to pursue certain objectives through collaborative activity.

The main objective of the hospital administration, of course, is to provide adequate care and treatment to its patients. Its principal product is medical, surgical and nursing service to the patient and its central concern is the life and health of the patient. A hospital may, of course, have additional objectives, including its own maintenance and survival, organizational stability and growth, financial solvency, medical and nursing education and research and various employee-related objectives.

1.1.1 Importance of Hospital Administration

Hospital administration is a science and the art of application of the principles of public administration. It deals with matters like promotion of health, preventive services and medical care, development of medical education and training.

Research studies of administrative practices in India, has felt that health administration is a crucial area for research since health administration is lacking research based literature. Very few studies were conducted on health administration. Still adequate research work has to be under taken in this regard, mainly on the administrative and human resources practices of hospitals.

The success of a hospital is generally measured in terms of patient care, efficiency, experience of personnel and community service. Absence of any one of these requirements leads to failure. The administration is mainly responsible for success and smooth operation of the hospital. The administration should be available, approachable and be ever willing to meet and listen to the staff and the patients, and should be ready to do anything that is for the good of the hospital.

1.1.2 Hospital as a Profession

Hospital is the major social institution for delivery of health care in the modern world which offers considerable advantages to both patient and society. The word “hospital” is originated from Latin “Hospes”. The term has been used to refer to an institution for the aged, sick, and a place of rest.

The Hospital is an integral part of social organization. Its function is to provide complete health care for the population both curative/ preventive and its out patient services reach out to the families and home environment.

The hospital is also a center for training of health workers and bio-social research. The hospital is a media through which scientific technological innovations of medical sciences are put into operation and practiced for healthy living of the community. So, today hospital is a place for the treatment of human illness restoration of health and well being of the people. Older concept of hospital for the provision of curative care is not valid any more.

A hospital's role is not only in the provision of curative care, but an equally important role is, the provision of preventive & promotive health care.

" Hospital without beds" is the latest concept about hospitals. Preventive and promotive efforts should be so effective that, the people should have optimum health with a minimum need for curative consultation, and even less for hospital admission.

Various definition for the Hospital management provided by the professionals are listed below

a) W.H.O. expert committee on organization of health care defined Hospitals as follows;

   "*The hospital is an integral part of a social and medical organization, the function of which is to provide for the population, complete health care, both curative and preventive, and, whose out patient services reach out to the family and its home environment; the hospital is also centre for the training of health workers and for social research".*

b) Other than this WHO definition, the definition given in the "Directory of Hospitals in India, 1988" is to some extent simple and short.

   According to this definition, "*A hospital is an institution which is operated for the medical, surgical and obstetrical care of in-patients and which is treated as a hospital by the Central/State Government/Local Bodies or licensed by the appropriate authority*".

c) As per the medical dictionary, "Hospital is an institution that provides medical, surgical and psychiatric care and treatment for the sick or injured" (Oxford Advanced Learners dictionary, 7th Edition: 2005).

d) According to Britannica Encyclopedia, "Hospital is an institution for diagnosing and treating the sick or injured, housing them during treatment, examining patients, and managing child birth. Patients can leave after treatment, come in for

emergency care or are referred for services not available in a private doctor's office". (www.britanica.com).

1.1.3 Historical Perspective of Hospitals in India

The most primitive form of the hospital might have been the cave in which early man gave refuge to his companion in despair. In ancient culture, religion and medicine were inter linked. The evolution of hospitals in India can be divided in to 3 phases. They are

a) In Ancient India :

In the early period institutions were created specially to care for the sick. King Ashoka founded 18 hospitals all over the Mauryan empire in 230 B.C which were maintained by the state. There were physicians, nursing staff, and the expenses were borne by the royal treasury. Hala, a scholar in Sathavahana Kingdom in 2nd century B.C wrote about the medical practices of those days in his book "Saptarathi". The Pallavas, Cholas of the south, the Chanakyas and the Rastrakuta's of Deccan gave grants to physicians and dispensaries.

During the western Chalukyan period (8th-12th century A.D), there were evidences for hospitals and medical care. The inscriptions on the walls of "Tirumukundal" temple in Changalpet mentions about Sri Veera Choleshwara hospital with 15 beds, in 12th -13th centuryA.D. Under the patronage of Kakatiya's of Warangal. Vishveswara Shiva had founded a hospital (Arogyashala) and a maternity center in Orugallu in 14th century.

b) In Medieval India :

The Muslim conquerors of India brought with them Hakeems and Arabic system of medicine which is called Unani, which had developed a high standard of care during the 8^{th} -12^{th} century A.D. The Delhi and Deccan Sultans established Unani hospitals (Dar-u-Shafa) all over India during medieval age.

c) In the Modern era :

The Western Medical System came to India with the european merchant companies. In the 16th Century, hospitals were established by the Portuguese in Goa during the time of Alfanso de Albuquerque, (1509-1515 AD) but it was in the 18th century that the modern hospitals were staffed with physicians and surgeons to attend to the medical needs of sick people.

The first modern hospital in India was established at Madras (presently Chennai) in the year 1664, subsequently at Bombay (presently Mumbai) in 1676 and at Calcutta (presently Kolkata) in 1707.

Christian missionaries who came to India did an excellent work for the establishment of modern hospitals throughout the country. In 1883, Dr. Anna Sarah Kugler founded a hospital in Guntur (Andhra Pradesh) and in Tamilnadu the well-known Christian medical college hospital, at Vellore was established by Dr.Ida Scudder. She opened a one-bed clinic in Vellore in 1900. In 1902, she built a 40-bedded hospital. In 1909, she started the School of Nursing and in 1918, a medical school for women was opened under the name "Missionary Medical School for Women". In the late 20th century a number of for-profit hospitals arose enormously.

1.1.4 Factors Responsible for Development of Hospitals

The following factors played important role in the development of hospitals.

- Advances in Medical Sciences
- Development of Technological Sophistication and Specialization
- Development of Professional Nursing
- Advances in Medical Education
- Contribution by Industrialist
- Support by Health Insurance
- Role of Government

The first influence on the growth of the modern hospital was the ability to perform surgical procedures successfully. This was the result of two important scientific advances.

i) The first was the discovery, in 1850s, of anesthesia. Before anesthesia, the very best surgeon was the speediest one and complicated procedures could not be performed because of the pain associated with them. The advent of anesthesia ushered in the golden age of surgery in the late 1800s.

ii) The second major advance was the discovery of asepsis. Patients undergoing surgery frequently developed postoperative infections. With the advent of asepsis the danger of postoperative infection was reduced substantially. These advances allowed surgery to become a major force in the care of patients. Over 40% of total hospital beds are surgical beds to understand the impact of these discoveries.

The more recent advances in outpatient surgical procedures probably represent another turning point in the influence of surgery on the system.

Various literatures while describing the origin of hospitals stated that religious forces and institutions was the main force behind the development of hospitals rather than the development in the medical services. It is at times difficult and complex task to dissociate development of hospitals from religion as in some cases like early Roman or Greek

civilisation, temples of Gods were utilised as hospitals. But in 400 BC Hippocrates made it possible to separate medicine from religion on rational grounds.

Modern hospitals are very complex socio-economic, scientific and highly labour-oriented organisations. Still they owe their origin to the sufferings and ailments of people and to the compassion and zeal amongst some philanthropist, to relieve these sufferers from agony of suffering and discomfort.

Today hospital runs an institution in which sick or injured persons are treated. A hospital is different from a dispensary because hospital being primarily an institution where in-patients are received and treated while the purpose of a dispensary is distribution of medicine and administration of out-door relief.

1.1.5 Special Features of the Hospital

The special features of the hospital are listed as follows

1. The motto of the hospital is 'service' which cannot be quantified in any economic terms, and no objective criteria can be laid down to evaluate the standard of service.
2. The service in the hospital is always personalized.
3. Medical services are rendered by the doctors, nurses and other specialized personnel according to the needs and requirements of each individual.
4. Hospital service is normally emergent in nature and no two situations are similar, which needs the same treatment.
5. The wide spectrum of people involved in the hospital activity ranges from highly skilled professional to a person who may not have visited school at all.
6. The dual control through means of professional authority in the hospital variably leads to management conflict, which is a peculiar situation every hospital administrator has to face in the day to day operation.
7. A hospital has to be highly responsive to the health needs and service expectation of the community.
8. The work in a hospital tends to be both variable and uneven.
9. There is great concern for clarity and responsibility. The cost of committing a mistake in patient's care is treated with serious life and legal consequences

1.2 Distinction between Hospital and Industry

When we work with our healthcare partners, how do we tailor our approach ?

In some respects it is very similar to what we do in any industry – identify key traits and competencies and configure selection tools that will predict which candidates will succeed.

In fact, as hospitals look to other industries for solutions to their challenges, like adopting 'lean' management approaches, we have the advantage of applying what we've learned in the manufacturing, distribution, retail, and customer service sectors. Certainly our approach to legal defensibility remains the same. Beyond these, however, healthcare IS different in many respects:

1. **Complexity** – Hospitals tend to have very complex organizational structures compared to their overall size. A 400-bed hospital might have over 1,000 different job titles.
2. **Highly trained professionals** – A large portion of the workforce- physicians, nurses, allied health and many technical positions, are highly trained and have a high level of autonomy. Many have performance criteria defined by the profession and by state and national testing and licensing bodies.
3. **A fragmented organization structure** – An auto manufacturer designs the entire workforce around production of the car. Hospitals, only recently, have begun to take a service line or patient-centered approach to organizational structure, built around the patient experience. Historically, a hospital is built around relatively independent departments, each with a great deal of autonomy.
4. **De-centralized and disparate hiring processes** – This autonomy often fosters a decentralized and inconsistent approach to recruiting and hiring. Nursing has its approach, other departments do something else, and physician hiring is informally controlled by the C-suite and the VPMA. Inconsistency between hospitals in a system, or even hiring managers within the same hospital, make standardization difficult and create unnecessary legal risk.
5. **Customer Service is no longer a 'nice to have'** – Every company wants to improve customer service but with the new HCAHPS requirements, patient satisfaction scores are a critical success metric for hospitals.
6. **The nature of the Services** – Poor quality in a manufacturing plant means a poor product and a weakened competitive advantage. Poor quality in a hospital means harm to patients and the hospital's ability to fulfill its mission.

Accordingly, we advocate a unique approach to selection :

1. **Healthcare-specific solutions** – Basic, off the shelf personality tests that might be fine for other industries don't work in healthcare. Nurses, physicians, and other care providers are unique and assessments must incorporate an understanding of the work and the competencies that lead to success.
2. **A multi-level approach** – Creating a patient and family focused environment means you can't just improve the level of customer service provided by the nursing staff. Even housekeeping impacts the patient experience, and if you don't hire better managers, hiring better front line workers is futile.
3. **Consider the 'future-state'** – Healthcare is changing – rapidly. Our traditional better performers may not be what we need moving forward. It takes a thorough understanding of the new challenges and of the vision of the organization, in order to build the workforce for the future.

The science of selection can be applied to any industry and many industries are similar in many respects so selection solutions can be applied in a similar manner. For a number of reasons, healthcare is unique and your approach to selection should reflect these differences.

1.3 Hospital Management System Functions

The main functions of the hospital management system includes the following vital points.

- The hospital management system organizes the stable functioning of daily tasks and interactions.
- Hospital Management System is a special tool to support the smooth operating of the software components that are vital for the clinic administration.
- The hospital records management software keeps a track of all the operations, stores the users' data, performs its analysis and generates the reports.

The medical institution is given the opportunity to collect its information in one place. It includes the patient and doctors' records as well as the data concerning financial affairs, supply management, etc. Furthermore, it is only processed, classified and accessible for authorized users. The hospital database management system provides users with data security due to all regulations. Implementation of different functions empowers smooth and clear functionality.

The hospital records management software tracks the number of available doctors and their working hours. This allows to have the accurate schedule of each employee, manage your facility abilities and the supply chain in order to meet all the needs of the patients. It helps to arrange the appointments for both the staff and patients' convenience. Figure 1.1 shows the functional areas of Hospital Administration.

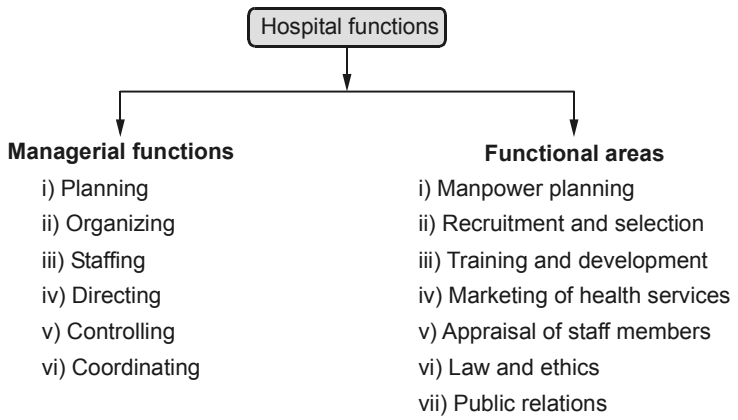


Fig. 1.1 Functional areas of hospital administration

The following explanations of the functions cover the aspects of hospital administration department seen along with the view of managerial functions from Planning to Control.

a) Managerial functions

(i) Planning :

Hospital management, in advance should finalize goals or objectives. To achieve goals and objective, hospital administration should design a course of action that is called as planning. Hospital sector is full of uncertainty. Because of big accident, 15-20 patients will come in few minutes time for hospitalization. This is the reason why hospital should have short term, long term and back-up plans ready for execution as per the demand of the situation. Planning for material, manpower and financial resources are very vital.

(ii) Organizing :

In this function, hospital administration should identity the activities, and preparing the group of activities. Next step in the process of organizing is delegation of authority to various positions in the hospital organization. It is noticed that in hospital organization, staff members are working under multiple commands. There are no clear cut guidelines for line of authority and unity of command.

(iii) Staffing :

Staffing is the function responsible for filling up the vacant position in hospital organization. This will be done with recruitment and selection, training and development, retention and utilization of work force. Still hospitals are using traditional system of senior and junior for staffing process. The range of work force in terms of skill level is very vast in hospital organization. It varies from highly skilled Surgeons to illiterate Attendants. Hospital hierarchy is a key element in staffing function.

(iv) Directing :

The function is a combination of four sub-processes. These are supervising, leading, communicating and motivating staff members. Performing these four functions needs that a hospital administrator to be a good leader The directing function in hospital organization is carried out by head nurses and in charge of various departments. The concentration on motivation and training of employees is very less. On the job training is widely used method for employee training in hospital organization. Off the job methods are used very rarely.

(v) Controlling :

Controlling means measuring and correcting of performance of employees. This will help activities to move as per plan. Performance without much deviation will be witnessed at the end of the activity. Control are generally budgetary or non budgetary. Controlling is a very vital process because it will have impact on quality of services. If it is more of situational in nature, role of hospital administration is to establish check post at various stages of a process becomes more important.

(vi) Coordinating :

In hospital as a system, many subsystems like clinical services, diagnostic services, therapeutic services, support and utility service and administration services are in place. These sub systems are sometimes working as independent units, while majority times these subsystems are dependent on each other. These subsystems have their own objectives. Job of hospital administration is to link the objectives of these subsystems to hospital goals. Most of the controlling is exercised with the coordinating approach in the hospital.

b) Operational Functions

(i) Manpower planning :

Manpower planning is also called as Human Resource Planning (HRP). It is an assessment about future human resource recruitment by considering goals of the hospital. Decisions of recruitment, retrenchment and lay-offs depend upon results of human resource planning. It is the function of hospital administration to carry out the function and sub functions under Manpower Planning.

(ii)Recruitment and selection :

Recruitment is a process of creating a pool of eligible candidates for selection purpose while selection is a process of differentiating candidate to find out best candidate as per need of an organization. The job of hospital administration and HR department is to prepare a pool of eligible candidates and select best from the same pool. Skilled employee in adulate number will enable the hospital for delivering best healthcare services for patients.

(iii) Training and Development :

The world is changing very fast. This statement is also true for hospital sector. Rapid developments are taking place in hospital sector. To cope with the changing environment, training for hospital staff is very important. Training related to technical skills, managerial skills and self development will help hospital to build human capital.

(iv) Performance Appraisal :

In the process of performance appraisal, employee performance and behavior is evaluated. Employee whose performance is best should get reward and employee whose performance is not up to the expected mark should be helped by analyzing reasons for under performance. Hospital Administration should design and conduct performance appraisal process for all employees with full transparency. Reward should be finalized for employees.

(v) Marketing of health services :

Product, Price, place and promotion are the four important factors of marketing. These factors should be related to health care delivery system of hospital organization. Product in case of hospital is variety of services patients are getting and place means where the services are offered to patients. Price is related to cost of services with profit. Promotion is a process of not only creating awareness about hospital services but also motivating individuals to come to hospital for availing services. Hospital administration should take decisions about delivery of services, location, cost, profit and media to be used for creating awareness about hospital services.

(vi) Law & Ethics :

Hospital administration has to keep all details about latest happening in the field of laws related to medical practice. It is the duty of hospital administration to maintain ethical environment in hospital. Hospital administration should draft rules and methods, Standard Operative Procedures (SOP) for each member of organization.

(vii) Quality management :

Hospital administration has to perform the key role in maintaining quality in health care delivery system. The principle of quality in the health care service has to be do it right the first time, do it right every time, do it right on time and above that superiority of performance and customer's delight. Function of hospital administration covers vast area. There is no boundary limit for hospital administration in case of hospital sector. From every small activity like attending patients at reception counter to critical activity like after surgery care, hospital administration has a role to play.

1.3.1 Classification of Hospitals

The hospitals are increasing in numbers and its width and length. There are different bases on which the hospitals are classified as:

(a) Ownership	(b) Therapy System
(c) Hospital Directory	(d) Size
(e) Clinical Criteria	(f) Level of Care
(g) Teaching Facilities	(h) Accreditation
(i) Gender	(j) Length of Stay.

a) According to Ownership

The ownership based classification includes the sub types as shown in figure 1.2 includes

i) Public Hospital (Government hospital)

These hospitals are owned and managed by government and/or autonomous bodies e.g. Civil Hospital, Sargodha, Pakistan Institute of Medical Sciences, National Institute of Child Health etc.

ii) Private Hospital (Non- Government hospital)

Owned by private people or entrepreneur, can be further classified into.

a) Commercial

b) Non-profit

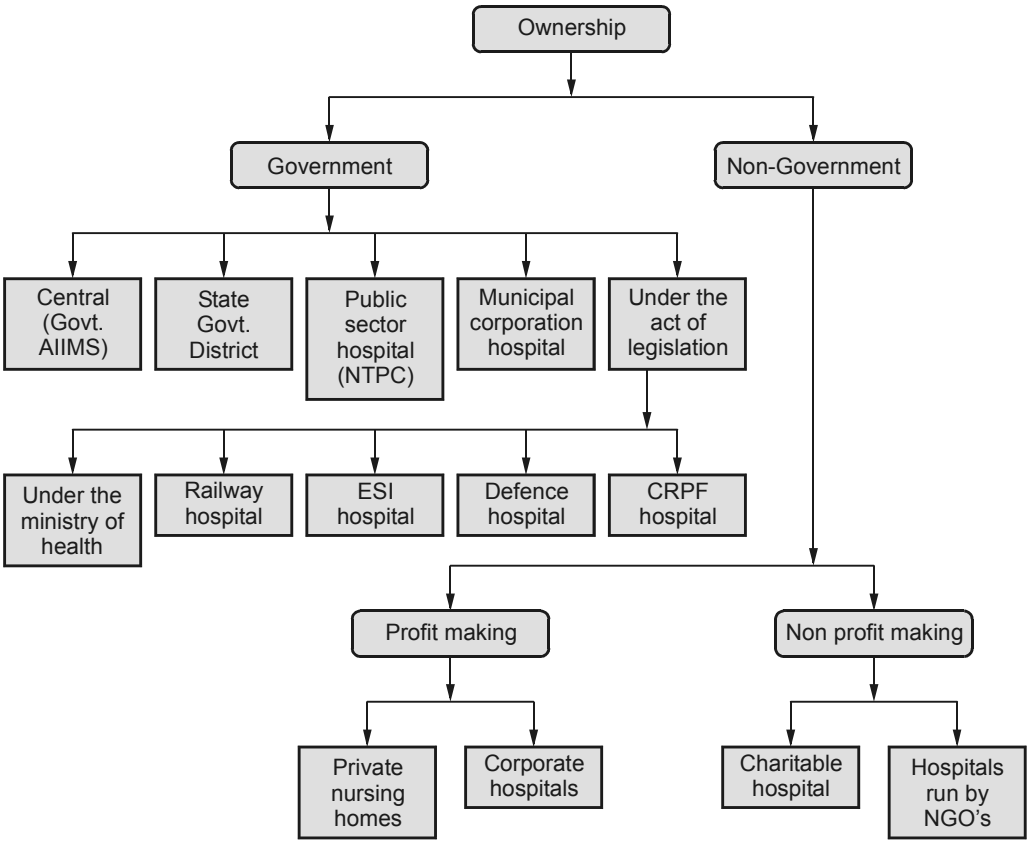


Fig. 1.2 Ownership based classification

b) According to therapy system

The sub-classification of Therapy system is summarized under the Fig. 1.3.

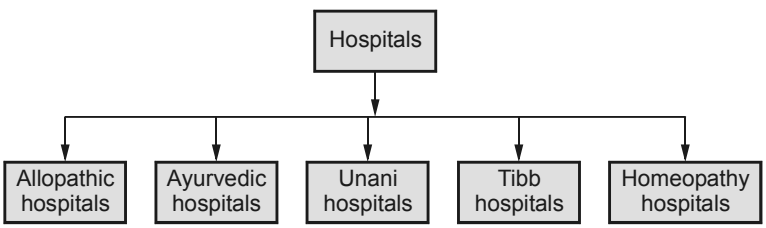


Fig. 1.3 Therapy based classification

c) Hospital directory based classification

Fig. 1.4 depicts the classification of the Hospital Directory.

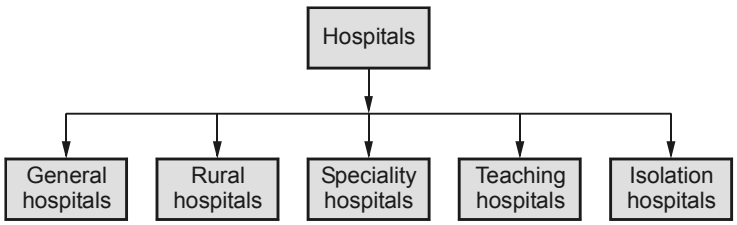


Fig. 1.4 Hospital Directory based classification

d) According to size based classification

These hospitals have more than 500 beds. They are attached to medical colleges and have all types of specialties and subspecialties e.g. radiotherapy, neurosurgery. Example of this type of hospital is Jinnah Postgraduate Medical Centre, Karachi & Mayo Hospital Lahore. Fig. 1.5 shows the details of size based classification.

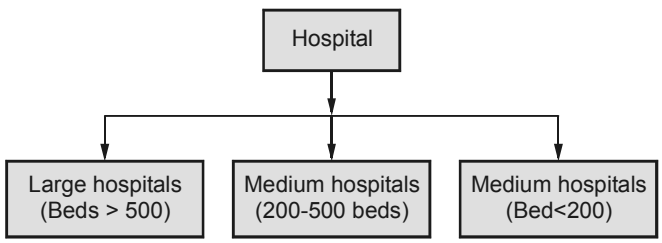


Fig. 1.5 Size based classification

District Hospitals

Provide about fifteen specialties including Medical, Surgery, Gynae & Obs. , ENT, Eye, anesthesia and dermatology and have a range of beds from 100-600, example include Civil Hospital, Thatta, Jacobabad, Attock etc.

Rural Hospital

It has capacity of 20 – 100 beds. It provides medical, surgical & obstetrical care only, e.g. Rural Health Centre Gharoo, Rural Health Centre, Murad Memon Goth, Malir.

e) According to clinical based classification

The Types of Services are provided under Clinical based Classification and is depicted in Fig. 1.6.

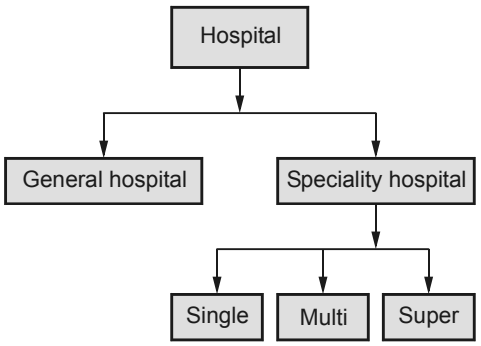


Fig. 1.6 Clinical based classification

f) According to level of care based classification

Fig. 1.7 shows the details of Care based classification.

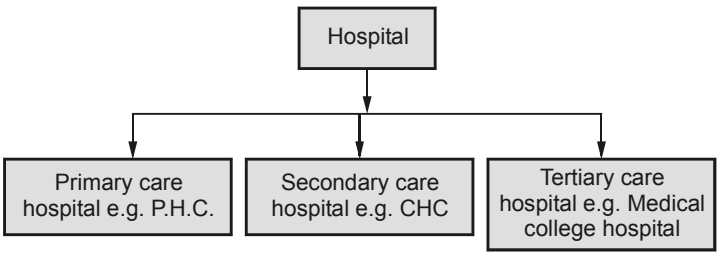


Fig. 1.7 Level of care based classification

g) According to teaching faculties based classification

Fig. 1.8 shows the details of teaching faculties based classification.

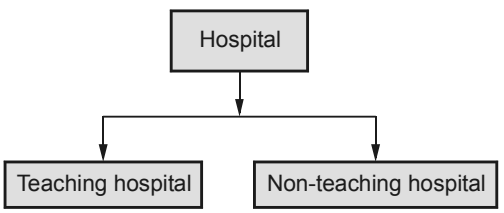


Fig. 1.8 Level of teaching faculties based classification

h) According to accreditation based classification

Fig. 1.9 shows the details of accreditation based classification.

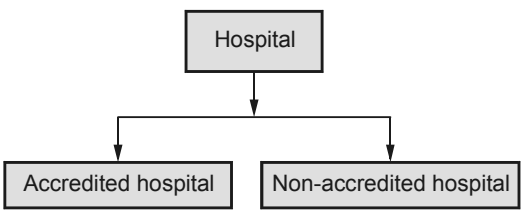


Fig. 1.9 Accreditation based classification

i) According to gender based classification

Fig. 1.10 shows the details of gender based classification.

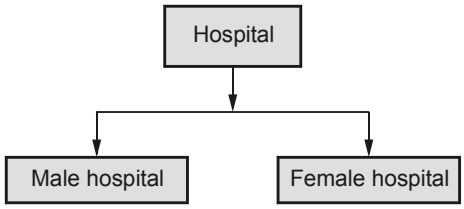


Fig. 1.10 Gender based classification

j) According to length of stay based classification

Fig. 1.11 shows the details of length of stay based classification.

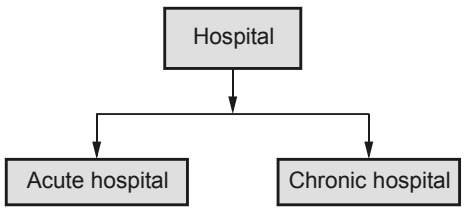


Fig. 1.11 Length of stay based classification

Acute Hospitals are those where the stay ranges between one to seven days. Chronic where the stay is for a longer period e.g. Hospital treating patients of TB, HIV infected and Mental Illness.

1.4 Significance of Hospital Administration

- Hospital administration is a process of planning, policy formulation, planning of activities and decision making to provide best health care for patients.
- Administration covers more part of planning activities as per need of patients and healthcare delivery system of the hospital
- The term "Administration" has been derived from the Latin words `ad` and "ministiare" which means to serve, to care for. In simple language, administration means "the management of affairs".
- Administration may be defined as a co-operative group effort to accomplish common goals.
- It plays an important role in mobilization and proper utilization of material and human resources to achieve the desired ends.
- Administration is thus a goal-oriented, purposive and co-operative activity which is necessary for smooth running of every institution.

Hospital Management is an art of managing an institution i.e. hospital, its infrastructure facilities, manpower and overall services. Hospital Management professionals are dealing with directly with doctors and patients.

Hospital Administration, also often called health administration and medical administration, involves making both daily and long-term decisions that reflect the healthcare system's business strategies.

Healthcare administration may involve the oversight and management of:

- An entire healthcare system
- Specific facilities, such as physician's practices, hospitals, and home health agencies
- Specific departments or units, such as critical care units, emergency departments, and cardiac care units
- Specific clinical areas, such as nursing, physical therapy, and cardiology
- Specific areas, such as staffing, facility administration, admissions, and finances

A hospital is no exception to this fundamental rule. Administration plays a vital role in the functioning of a hospital, more than it does in any other institution. In order to perform its functions efficiently, hospitals today must be organized and administered in a scientific manner. There is now a greater need for efficient administration in Indian hospitals because the number of people who utilize hospital services has increased manifold, whereas the financial and other resources available to hospitals in India have not kept pace with the growth in number of users. The optimum use of resources is possible only with an efficient and professionally competent administration. This demands that every member involve in hospital administration need to be adequately trained. Moreover, with the increase in the hospital's size and complexity, as also with the changing socio-economic conditions, the organizational relationship within the hospital has undergone a change. In short, having become a large scale organization, the hospital requires a more explicit organizational division of labour and more efficient and responsible management (Goyal R.C, 2000).

1.5 The Components of The Functions of Hospital Administration

The functions only as an administrative level and taking them as managerial function are distinct from each other and such a change is the demand of the time. It is relevant to see the distinction between these two concepts. Fig. 1.12 gives the information on components of functions of Hospital administration.

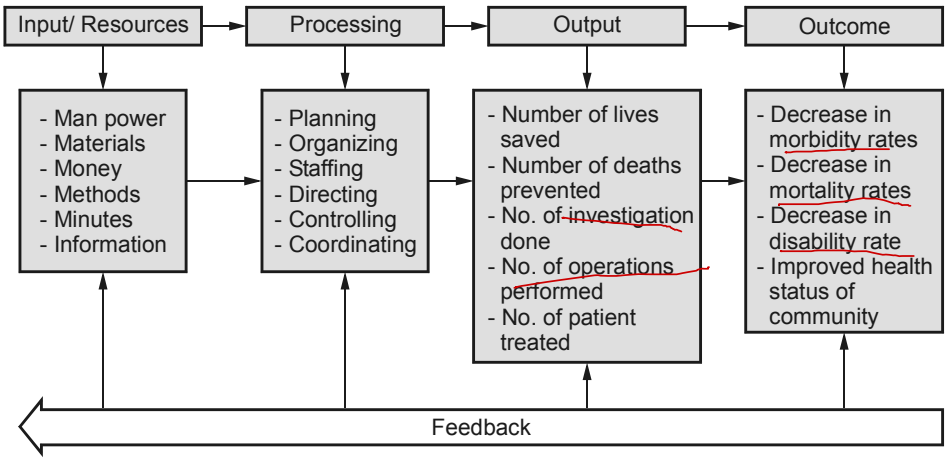


Fig. 1.12 Components of functions of hospital administration

This a common work flow diagram for every hospital irrespective of its types. The above figure has to be seen from the view point of a system and following lines explain the input, process and output part of Hospital Administration as Health Care Delivery System.

(i) Resource inputs :

- The process begins with inputs provided as different resources. These inputs are in form of man power, materials, money, methods, time and information collected.
- It is the job of hospital administration to provide skilled manpower in a required number as well as best quality material like beds, laboratory material for various departments of the hospital.
- It is the job of administration to make necessary arrangements of funds for purchasing purpose as well as for salary purpose.
- Hospital administration should finalize systems for each process in the hospital e.g. attendance of employees. The attendance will be taken by using biometric machine.
- It is the duty of hospital administration to finalize time for each activity in the various processes, carried out by departments. How much time should be given to prepare one x-ray report? Administration should finalize the time. Administration should collect and provide all necessary information required for different activities.

(ii) Process

- Inputs shall go to next step that is processing.

- With the help of planning, requirement of all resources will get finalized and resources as per need of the activities will get organized.
- Requirement of human resources will get fulfilled as per the need of the activity or process.
- As the process will start, close supervision will be needed to observe how employees are performing and completing the activity. If it is not as per standards, the performance will be controlled with proper checks. Diversions shall get controlled and output will be delivered.

(iii) Output

- Output of hospital input-output process will be checked by getting data about how many patients saved? Number of surgical operations performed, Number of patients treated and Number of accurate investigations done will help to calculate output of the hospital process.
- In case of effective administration, the output figures will be very satisfactory for hospitals as well as for society.

(iv) Outcome

- These outcomes are results of policies adopted by hospital administration.
- If hospital administration implements policies effectively then outcome will be decrease in deaths, decrease in disability rate and improved health status of community.
- For each step from input to outcome hospital administration has a very important role to play.
- Outcome will depend upon how hospital administration implements effectively this input-output process.

1.6 Challenges in Hospital Administration

Over the last century, hospital administration has witnessed dramatic changes:

- Hospitals have become large, complex organizations
- Technology has advanced exponentially
- Healthcare financing has moved from private pay to a complex, third-party reimbursement system
- Government has taken on a larger role in healthcare delivery

Despite these significant changes, the field continues to focus on the business and financial aspects of hospitals, clinics, and other health services, with particular focus placed on efficiency and financial stability.

The primary roles of today's professionals in healthcare administration include:

- Human resources management
- Financial management
- Cost accounting
- Data collection and analysis
- Strategic planning
- Marketing
- Maintenance functions of the organization
- Providing the most basic social services: the care of dependent people at the most vulnerable points in their lives.
- Maintaining the moral and social order of healthcare organizations
- Serving as patient advocates
- Serving as arbitrators in situations where there are competing values
- Serving as intermediaries for the various professional groups practicing within the organization

Some of the challenges professionals in healthcare administration face today include :

- Ensuring effective, efficient healthcare services for communities
- Shortages of nurses and other healthcare workers
- Concern for the safety and quality of healthcare services
- Rising healthcare costs
- An aging population
- Rapidly changing medical terminology and practice

Some areas in which hospital effectiveness is being questioned and the role of administrator is under stress, include :

a) Organisation structure
b) Technology management
c) Manpower utilisation
d) Sharing of power in decision-making
e) Patient care-quality management
f) Cost and financing of operations

g) Leadership and motivation

h) Information technology

i) Marketing of hospital services

a) Hospital organisation :

No two hospitals are alike-this will be reflected in the organisational structure. The ideas and outlook of management, the type of services, and the relative skill of personnel, will all have a bearing on the structure of the organisation. Due to various factors in a government department the organisation structure tends to become unrelated to the goals of the organisation and the administrators freedom to organise is seriously curtailed. Organisation structure is expected to provide a sound framework for management, however, the present structure is identified as a stumbling block and it has become necessary to reorganise to achieve clarity of responsibility, and accountability. There is centralisation of authority, generally remote from the point where tasks are performed. Authority is vested to a position without clear accountability. For example, the administrators have little control over staffing, and in the selection of people who constitute their work group.

Due to increased specialisation, changing technology, and increased expectations of consumers and employees the hospitals require better co-ordination and organizational adaptability. The administrator's expertise is that of an integrator structuring the perceptions among producers, and between producers and consumers, so that change can be effected without destroying organisational integration.

Therefore, there is a need for an organisational structure and a system for performance of various activities, which can be regulated through process control methods.

b) Technology management :

Technology management is posing a great challenge to hospital management. The continuous process of technological advancement, particularly in the field of diagnostic and therapeutic services, often leads to conflicting situations between the health care providers and the expectations of the community. The cost benefit analysis of technology by the hospital management in terms of hospital size, location, morbidity status of population, budget, mission and management of the technology in terms of quality improvement is critical to the hospital's success. Hospitals desire to update technology to be competitive among the health care organisations should always be weighed with the benefit to the organisation and the improvement of quality of care for the community.

c) Manpower utilization :

Hospital is a labour-intensive organisation. Human resources with adequate level of education and skill when properly motivated to work with zeal and confidence can only achieve good results. The reasons for poor capacity utilisation are

- Outdated recruitment rules,
- Education and experience standards not commensurate with present day requirement
- Lack of organised on the job training and inservice training for growth and development.
- Departmental policy.
- Duties and responsibilities for each grade are not specified resulting in overlapping of functions.
- Poor motivation due to poor managerial leadership.
- Unsuitable organisation climate conflicts
- No grievance procedure and lack of facilities.

Therefore, there is a need for a good executive leadership to attend to personnel management for optimum capacity utilisation and to prevent frequent turnover of trained manpower.

d) Sharing of power :

There are multiple line of authorities in the complex, modem hospital. A delicate balance of power exists which is frequently shifting. Authority lines can be considered as checks and balances within the organisation. Power is synonymous with exercising influence and control over a situation and it is that force when used causes a change.

Hospital governing body is responsible for monitoring the quality of care rendered in the hospital by the medical staff. The medical staff has the overall responsibility for the quality of medical care provided to patients. The hospital administrator has to ensure availability of resources required for medical care and efficient operation of different departments directly or indirectly providing medical care services. Hospital is, therefore a functional organization with three lines of authority. The administrator should empower his subordinates through the following methods:

a) Delegation of authority to take decisions

b) Involvement of employees at all levels of decision making process

c) Provide resources men , materials, finance, system design, rules and procedures

d) Provide developmental opportunities

e) Trust employees

f) Sharing information

g) Recognition and rewards

h) Empowerment of teams.

The need for empowerment for willing co-operation and performance of tasks cannot be over emphasized. This will help in process control and in determining causes of success or failure.

e) Patient care :

The quality of care refers to the degree of excellence of the medical care delivered-whether it meets or exceeds the accepted standards. However, the criteria necessarily changes with improved efficiency related to technological advancement. It is a moral as well as legal responsibility of the owner of the hospital to ensure that the interest of the patient is safeguarded and appropriate measures are taken to monitor and improve quality and patient safety at reasonable cost to the satisfaction of the patient.

The measurement of quality of service poses many problems, as it is not possible to establish accurate standards of judgment. Yet we need to have some means of evaluating the service for only then the efficiency of performance and in turn the community benefit, can be assessed.

The medical care service quality evaluation programme should be so designed that the adequacy of the structure, the process of medical care delivery and the impact on the beneficiaries can be assessed in quantitative and qualitative terms and correlated with cost.

f) Cost and financing operations :

In your hospitals there is a perpetual problem of scarcity of resources. The cost of manpower and material resources, and the cost of operation of facilities have increased manifold. Therefore, it is essential that all those who are engaged in hospital activities and not only in hospital management must be made responsible for reducing/controlling cost of operation of activities. Responsibility of such nature cannot be imposed, but it has to be introduced in a manner acceptable to the people. Therefore, working out an acceptable cost containment strategy for hospitals is a problem requiring urgent attention.

g) Leadership and motivation :

The administration of modem hospital has become a demanding profession because of increasing complexity. There is an urgent need for high quality management of our hospitals as in any other industry. A fully trained hospital administrator can only ensure optimum and economic utilization of resources, prevent underuse/overuse of facilities, standardize hospital rules and procedures, collect data for evaluation of performance. The hospital administrator should pursue the twin aims of efficiency and effectiveness. The deficiency of trained administrators particularly for larger hospital is posing a problem in management of hospital.

h) Information technology :

Scientific management is recognized as the key to the success of an enterprise. By now you know that the management is the effective use of human, financial and material resources to achieve the organizational objective through the managerial functions of planning, organizing, staffing, leading and controlling. Information system is the most vital for performing all managerial functions as it provides required information to each level of management, at the right time, in the right form and the right place, so that decisions are made efficiently and effectively. The framework of hospital information system should be so organized that there is a rapid and regular feedback of information. A vast amount of information is available in the hospital to enable an objective assessment of the hospital service and to compare the performance of one hospital with that of another. The main problem is the collection, compilation and presentation of the basic statistical facts in a more acceptable and digestible form. Therefore, the system of collection and presentation of "Hospital Operational Statistics" and "Hospital Morbidity Statistics" should be standardized.

i) Marketing of hospital services :

Marketing has since been recognized as one of the core activities in the hospital management, particularly in private hospitals. Hospitals which concentrate on treatment of diseases are gradually under going a change to health management. Marketing should not only stop at bringing in patients but also be extended to develop a permanent image within the minds of people by building lasting relationship. With the health insurance gaining importance and the recent proposal by the government to privatizes health insurance a new challenge is faced in marketing hospital service. The hospital administrator should now be familiar with health insurance policies, diseases covered, cost of adopting the scheme, reimbursement policies and attracting potential customers, and also to take care of a patient within the stipulated period and cost.

1.7 Hospital Planning

Planning is the process of determining in advance what should be accomplished at when, by whom, how and at what cost. Planning is an important skill for Health Extension Practitioners because it is a key management function for all health workers and health managers. In other words , the Planning is forecasting and thinking about things that may happen in the future. In hospital management you need to plan in order to have a clear understanding of what needs to be done and why you need to do it. Furthermore, it helps you to priorities health problems so that limited resources are used for actions that will bring most benefit.

The success of Hospital Planning includes following key points :

- Planning is the forecasting and organizing the activities required to achieve the desired goals.
- All successful hospitals, without exception are built on a triad of good planning, good design & construction and good administration.
- To be successful, a hospital requires a great deal of preliminary study and planning.
- It must be designed to serve people.
- It must be staffed with competent and adequate number of efficient doctors, nurses, and other professionals.
- A strong management essential for the daily functioning of a facility; must be included in the plans of a new hospital.
- Hospital building differs from other building types in the complex functional relationship that exist between the various parts of the hospital.
- Apart from providing right environment for patients and care providers, it should also be sensitive to the needs of visitors.
- It is thus imperative to examine the emerging issues, analyze the challenges, appreciate the emerging trends and study the various strategic options available for planning, designing and construction of a hospital.
- Moreover the successful hospital planning will leads to arising the six questions :
    - What we expect to do ?
    - Why it will be done ?
    - Where will it be done ?
    - When we expect to do it ?
    - Who all are going to do it ?
    - How will it be done ?

A hospital is made up of many different departments, having different functions, but all these must be in due proportion, relation to each other and to the environment. The design of appropriate health and health facilities for large populations requires overall understanding of the culture, specific health issues and available health professionals before appropriate facilities can be successfully planned, programmed, designed, built, operated and maintained.

The by products of administrative data can be used and are used for a multitude of purposes as follows :

a) planning of services including workforce and staffing
b) needs assessment
c) disease registers
d) medical and nursing education planning
e) clinical audits and confidential enquiries into deaths
f) epidemiological studies
g) child health immunisations, screening

1.7.1 Important Guiding Principles for Hospital Planning

These principles were developed in the context of the hospital system but have relevance and usefulness to hospital planning in India and other countries.

(i) Patient care of a high quality :

Patient care of a high quality should be achieved by the hospital through adopting following measures.

1. Provision of appropriate technical equipment and facilities necessary to support the hospital's objectives.
2. An organisational structure that assigns responsibility appropriately and requires accountability for the various functions within the institution.
3. A continuous review of the adequacy of care provided by physicians, nursing staff and paramedical personnel and of the adequacy with which it is supported by other hospital activities.

(ii) Effective community orientation :

Effective community orientation should be achieved by the hospital through adopting following measures :

1. A governing board made up of persons who have demonstrated concern for the community and leadership ability.

2. Policies that assure availability of services to all the people in the hospital's service area.
3. Participation of the hospital in community programmes to provide preventive care.
4. A public information programme that keeps the community identified with the hospital's goals, objectives and plans.

(iii) Economic viability :

Economic viability should be achieved by the hospital through taking these measures :

1. A corporate organisation that accepts responsibility for sound financial management in keeping with desirable quality of care.
2. Patient care objectives those are consistent with projected service demands, availability of operating finances and adequate personnel and equipment.
3. A planned programme of expansion based solely on demonstrated community need.
4. A specific programme of funding that will assure replacement, improvement and expansion of facilities and equipment without imposing too much cost burden on patient charges.
5. An annual budget plan that will permit the hospital to keep pace with times.

(iv) Orderly Planning :

Orderly planning should be achieved by the hospital through the following.

1. Acceptance by the hospital administrator of prim responsibility for short and long-range planning, with support and assistance from competent financial organisational, functional and architectural advisors.
2. Establishment of short and long-range planning objectives with a list of priorities and target dates on which such objectives may be achieved.
3. Preparation of a functional programme that describe the short-range objectives and the facilities, equipment and staffing necessary to achieve them.

(v) Sound architectural plan :

A sound architectural plan should be achieved by the hospital through the following :

1. Engaging an architect experienced in hospital design and construction.
2. Selection of a site large enough to provide for future expansion and accessibility of population.
3. Recognition of the need of uncluttered traffic patterns within and without the hospital for movement of hospital staff, patients, and visitors and for efficient transportation of supplies.

4. An architectural design that will permit efficient use of personnel, interchangeability of rooms and provide for flexibility.
5. Adequate attention to important concepts such as infection control and disaster planning.

(vi) Medical technology and planning :

Developments in medical technology are taking place so rapidly that now the use of sophisticated technology determines professional status.

The diffusion of medical technology vis-a-vis shortage of resources constantly plays on the minds of the planners.

Even in western countries, "rational" planning for medical technology is an evasive subject. The workshop on problems of planning of health services in urban areas in Europe felt that rational planning is aided by a hospital hierarchy of specialisation, and by national review agencies which have strong links with similar agencies in other countries.

The Principles of Hospital Planning includes

- Protection from unwanted and unnecessary disturbances to help speedy recovery
- Separation of dissimilar activities
- Control the nurse's station should be positioned strategically to enable proper monitoring of visitors entering and leaving the ward, infants, and children should be protected from theft and infection, etc.
- Circulation all the departments, yet keep them all together; separate types of traffic, yet save steps for everybody; that is all there is to hospital planning

1.7.2 Components of Hospital Planning

Fig. 1.13 provides the description of the hospital planning components.

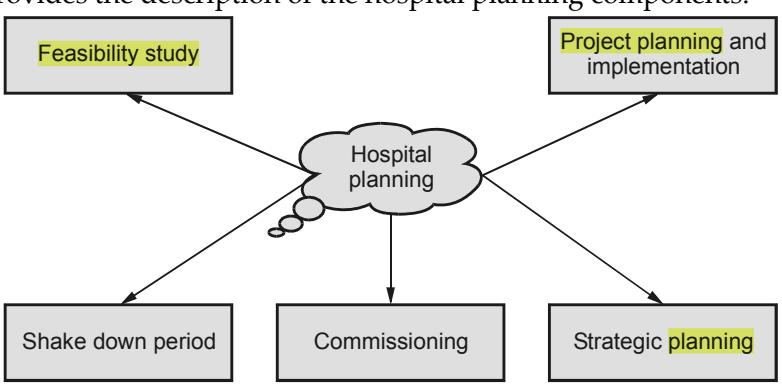


Fig. 1.13 Components of hospital planning

1.7.3 Steps of Hospital Planning

The important steps followed in designing the Hospital Planning is shown in Fig. 1.14.

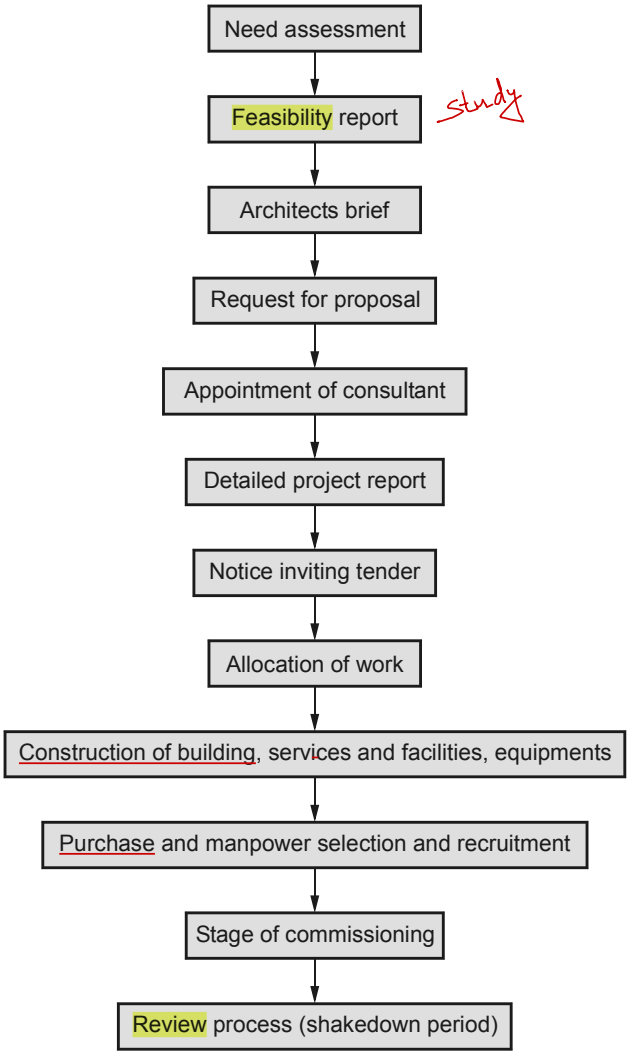


Fig. 1.14 Steps for designing the hospital planning

1.7.4 Impact of Regulations on Hospital Planning and Designing

- Patient safety is the reason for all of the regulations, codes, standards, etc., and to that end they do serve a good purpose.
- But most of the regulations, codes and standards are very prescriptive, meaning that they tell the designer what to do and in many cases how to do it. This method of prescriptive regulation can limit or eliminate the innovation in healthcare design.

- Additionally, there are so many regulations, rules, codes, and standards that once they are all found, read, understood, and applied, the design can be extremely complicated and costly. The designer needs a research team to vet out all the regulations before starting the project.

1.7.5 Recent Trends in Hospital Planning and Designing in the World

1. IT is becoming increasingly important

Due to government incentives for a fully meaningful Electronic Medical Records (EMR) system, hospitals need to integrate IT throughout the entire facility. Preparation for this included coordinating an array of data closets, support spaces and infrastructure for the EMR upgrade that would integrate current and future medical planning of campus and hospital buildings.

2. Make Space for Telehealth

Both for patients at home and those in medical facilities, telehealth is an increasingly integral mode of healthcare delivery. Installation of sophisticated patient monitors with robust communications platforms is enabling patients to consult seamlessly with physicians and care team professionals. Increasingly, telehealth is being utilized for specialty services like radiology, psychiatry, and dermatology as a way to obtain a specialist's opinion without the inconvenience of an additional office or hospital visit.

3. Acute Care Needs Continue to Grow

We will continue to see healthcare services moving from inpatient to outpatient facilities, but hospitals will also see growth in patient-day numbers. In 2050, 80% of older people will be living in low and middle income countries. Inpatients will increasingly be the sickest and most acute, requiring longer stays. Maximizing the efficiency of space and movement of medical staff to serve this inpatient population, including with more private rooms and fewer shared rooms, is critical to healthcare facility design.

1.8 Equipment Planning

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

Medical equipment is a vital component in healthcare delivery. .Equipment is a major part of project planning process. Usually 40 % of total project cost involves 20 % -M&E related equipment and 20 % -medical equipment cost.

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

Equipment planners are highly qualified equipment managers who are generally part of an equipment management group responsible for the overall management of the FF&E process. The outline of this process is shown in figure 1. The ultimate objective is to ensure all products selected are fit for purpose, within budget and, procured, delivered and commissioned in accordance with projects build programme.

A common format is to simply classify them as groups 1, 2 and 3. Depending on the projects requirements, the equipment planner may be required to manage either the medical only or both the medical and non-medical equipment.

To bring the best information on healthcare equipment and related management to the project team, an equipment planner should ideally be engaged, no later than the project's design phase Some value can also be added by having an equipment planner involved in the master planning phase.

The equipment planner can provide clinical consultancy on medical equipment as well as providing a more accurate preliminary FF&FE (Furniture, fixtures, and equipment) budget.

1.8.1 Equipment Planning Process

Medical equipment planning is an ongoing and iterative task that evolves throughout the lifecycle of a project and beyond into ongoing operations. The best time to bring a medical equipment planner onto a project is at the inception stage. This way, functional programmes and business cases can accurately depict the current and future demographic and clinical needs with viable technology, equipment and costing options.

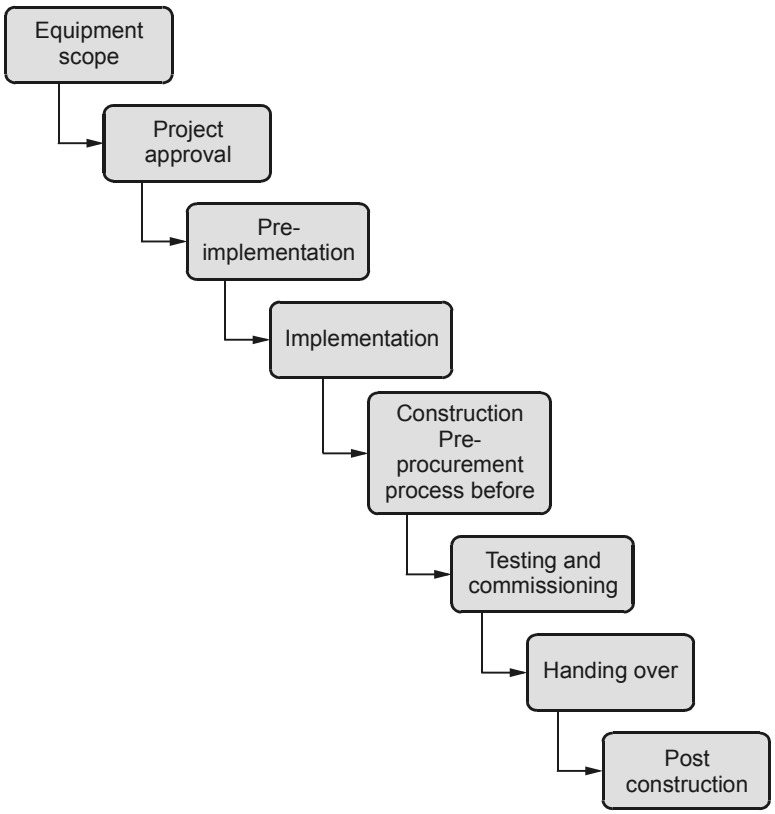


Fig. 1.15 Steps in equipment planning process

Equipment Planning Process involves following nine steps. Each step with its roles are brief below one by one.

1. Equipment scope identification

a) Preparation of equipment brief of requirement

b) Both fixed and loose equipment requirement

c) Equipment shall be latest technology

d) Equipment specification

e) Incorporation of ICT requirement

f) Determination of estimated cost

2. Project approval

Approved project cost inclusive of loose equipment cost.

Project cost = Building Cost + Loose Equipment Cost

3. Pre-Implementation

Pre-Implementation task includes the followings,

a) Value management conducted to match equipment scope and equipment costing

b) Adequate for function

4. Implementation

a) Evaluation of contractor proposal

b) Analyzing both fixed and loose equipment proposal with the specifications of quantity, distribution and specification of latest technology

c) Preparation of non-conformance report for the fixed and loose Equipment Documents.

5. Implementation / Construction

Pre-Procurement Process before Eq Procurement

a) Room data interaction – equipment requirement inputs (fixed & loose equipment)

b) Receive of Technical Specification Adherence (TSA) from PWD for procurement

c) Selecting the equipment

i. TSA approval

ii. Consultation (HOD, clinicians, medical staffs, technical staffs, etc)

iii. Interaction between project team /contractor/supplier

iv. Product presentation / factory visit

6. Implementation / Construction

Procurement Process

a) Procurement is carried out at 50 – 60 % project progress

b) Building is ready to accommodate placement / storage of equipment

7. Testing & Commissioning

a) Testing & commissioning of medical equipment (fixed & loose items)

b) Inventory counting

c) User training

8. Handing over

a) Assets registration - equipment inventory.

b) Equipment listing – Bill of quantity (room by room, departmental)

c) Associated documents -warranty, manual, license

9. Post-Construction

a) Defect liability period is either 12 / 24 months (from the date of practical completion)
b) Defect identification and rectification
c) Schedule maintenance shall be performed

1.9 Functional Planning

- Functional Planning (or) Functional-level strategy integrates research, marketing, production, and distribution to better connect products and services with the company's client base.
- Managers involved in developing strategies at every level must consider how their plans will affect individuals throughout the organization.
- The hospital administration under healthcare field is always changing and progressing at a rate unlike any other.
- Over the past few decades it has become more and more important to plan for the future in order for any healthcare practice to be successful for years to come. By planning for the unknown, hospitals, clinics, private practices and other organizations in the healthcare field can be better equipped for whatever may come along down the road.
- From the financial side of running an organization, to structural decisions within the hospital or clinic, planning is a necessity.
- A hospital strategic plan allows for more efficiency in all aspects of the business of running a practice, no matter how big or small.
- Functional Planning always works like the Strategic Planning fashion.

1.9.1 Importance of Functional Planning with Strategic Principle

The importance of strategic planning in healthcare should not go unnoticed by any hospital or health system looking to succeed not only in the short run, but long term as well.

The strategic principle is followed under the functional planning due to these reasons:

1. Strategic health planning involves creating objectives and setting goals for where a company would like to go in the future, and then constructing a plan to achieve these objectives.
2. Understanding the organization of the institution and how this organization is necessary for the entire system to succeed is important in creating an effective plan with specific strategies.

3. Having a sound foundation in which the organization is built upon is important so that communication and ideas can flow freely while implementing strategic healthcare planning.

Some of the key areas that a hospital strategic plan can significantly improve include:

- Company Culture
- Goals and Objectives
- Operating Budgeting
- Service Line Decisions
- Risk Management
- Capital Planning
- Cost Accounting
- Long Range Forecasting

Functional planning is the continual analysis, planning, and monitoring required to successfully meet goals and objectives. A typical strategic management process generally includes four components.

1. **Analysis and assessment** – analyze the current and internal environment assessment
2. **Strategy formulation** – develop the strategic plan
3. **Strategy execution** – translate the plan into tactical plans and actions
4. **Evaluation** – conduct ongoing evaluation of performance to strategy

1.9.2 Functional Responsibility

- In general, hospital healthcare managers juggle several responsibilities, including planning, directing, and coordinating other practitioners, departments, and groups.
- They work in a variety of hospital settings, ranging from human resources to specialized clinical areas. They must collaborate across disciplines, manage an organization's budget and finances and lead talent development.
- Healthcare managers handle business operations as well medical team needs. The scope of these responsibilities can change depending on a manager's level, with levels including :
    - Supervisors who oversee the day-to-day activities of teams of employees.
    - Department managers who oversee entire departments
    - Directors who oversee system wide activities and functions
    - Executives who oversee an entire hospital or a group of hospitals

All hospital healthcare managers work with physicians, make policy decisions, oversee patient care and budgeting and accounting, and lead marketing efforts to ensure their organization functions smoothly.

1) Departmental coordination and innovation

Managers can improve healthcare delivery by operating hospitals that deliver reliable, adaptable services. A healthcare manager may drive innovation in hospital processes and see tangible results in patient care. For example, low death rates among emergency patients might indicate managerial innovation.They must understand and direct the following forces that impact innovation:

i) Multiple stakeholders :

A manager's aim is to coordinate a variety of stakeholders and guide them to focus on a common goal. Employees such as doctors, insurance companies, technology distributors, patient advocates, etc., all have personal interests in hospital policy and operations

ii) The flow of funding :

Funding innovation is important, and managers direct the flow of funds from third-party investors, long-term investors, insurers, and other sources to the appropriate areas.

iii) Ever-Changing policy :

Policy impacting innovation is in constant flux with new federal regulations requiring rigid compliance. Managers must not only know about policy updates, but also communicate them to staff and implement them in the hospital.

iv) New technology :

Technology innovation requires managers to exercise solid timing, given that a hospital's infrastructure must adapt to new technologies. In addition, technologies must be adopted before any competitive advantage is lost.

v) Empowered patients :

Patients invest financially and intellectually in their own healthcare; empowered by the knowledge they can glean from the internet pertaining to their own circumstances. Innovative managers make it a point to address the empowered patient's concerns, recognizing that savvy patients are not complacent to just take the doctor's word at face value if that conflicts with their existing knowledge.

vi) Accountability :

It impacts innovation in that managers have to demonstrate effectiveness, safety, and other regulatory principles to accrediting organizations.

2) Managing teamwork :

Facilitating teamwork and collaboration are essential for managing a successful hospital. Managers can influence innovative teamwork by:

- Preparing, summarizing, and formatting information for staff consumption.
- Serving as a mediator between goals, strategies, and day-to-day activities.
- Promoting innovative operational approaches

Healthcare managers oversee team initiatives, especially frontline employees. Such teams collaborate to resolve patient and workflow issues. Thus, managers bridge informational gaps that ensure innovation reaches the right outlets.

3) Improving health care via lean management

Lean healthcare management approaches aim to eliminate error, expedite processes, lower costs, and improve healthcare quality.

In lean management strategies, big payoffs may come from small innovations. For example, one hospital reduced time in the recovery room by 28 minutes just by making a pager number more accessible. Lean management may also lead to results like these:

- Happier employees with fewer perfunctory, time-consuming issues to work around
- Patients having greater access to care because of shorter wait times.
- Layoffs being reduced because making processes more efficient saves money.
- Costly events not covered by insurance that should never happen, including bedsores, are eliminated by efficiency.
- The extent to which existing resources, such as equipment and space, are used increases eliminating costly, consuming, and ultimately unnecessary construction and expansion.
- Waste of resources, time, and money is reduced, enabling hospitals to become profitable.

Eradicating waste of all kinds is at the core of lean management approaches. Healthcare managers are needed to facilitate the implementation of these innovative approaches.

1.9.3 Seven Steps to Functional Planning via Strategic Planning

At hospital administration, the recommendation of following seven-step process for Functional Planning via strategic planning is motivated.

Step 1 - Review/Develop Vision & Mission

Although many organizations have created vision, mission, goals and objectives, these elements need to be reviewed on a continuous basis. The reason lies in the everchanging environment and business constraints forced upon organizations through government, payors, competition, physicians, patients, vendors etc. Each internal department's vision and mission must be aligned and supportive of the overall business strategy.

The mission of an organization is the reason it exists. Usually the mission takes the form of a statement, which conveys a sense of purpose to the employees, patients, physicians and the community. The mission sets the tone for goals and objectives.

Step 2 - Business and Operational Analysis

One of the key objectives of strategic planning is to understand internal strengths and weaknesses as well as external threats and opportunities, i.e. a SWOT analysis. It is critical to engage stakeholders from across the organization – and vendors as well - to provide their points of view. This involvement will not only improve your plan, it will create organizational ownership, which will be important for executing and sustaining the plan.

Look at these aspects from an internal and external perspective:

- Company culture
- Company image
- Organizational structure
- Key staff and overall personnel
- Access to resources
- Operational efficiency
- Operational capacity
- Market awareness
- Financial resources
- Information systems and resources

Step 3 - Develop and Select Strategic Options

- All possible strategies should be developed based on the inputs. Then the list should be narrowed down to strategies that are within the guiding priniciples of the organization.
- Guiding principles identify the "ground rules" and parameters that will inform decision making for your organization. For example, will your organization consider merging with or acquiring another organization to meet its goals? Do you want to outsource certain functions?

- Another decision-making criterion is your organizational capacity. For example, if a goal is to increase revenue in orthopedics by 7 %, are there enough physicians to support that increase in volume? Do they specialize in the services that will meet that goal? You should have a few strategies outlined before you go to step 4.

Step 4 - Establish Strategic Objectives

- This step narrows the list even more by applying various models (financial, etc.) to each strategy to determine the effect it will have on the organization.
- This step is also where key measures and timelines are established or validated. Once the strategies are tested in this way, it can be put together to form the strategic plan.
- The plan's components should be specific, measurable, achievable, realistic and time-bound (SMART).

Step 5 - Strategy Execution Plan

- Now a plan must be developed to implement the chosen strategic options. To be successful, you will need organizational ownership of the plan, which includes not only executive sponsorship, but also the active involvement of all staff members.
- Communicate the plan to all levels of the organization. Find champions in all areas. Define what is "in it for them." The clear (SMART) goals and staff involvement in the initial committees will help you now.

Step 6 - Establish Appropriate Budget and Resource Allocation

- Quite often, once the strategic assessment and plan is complete, leadership may not be able to allocate or assign appropriate funding, staffing or other resources to specific initiatives.
- The result of improper or inadequate budgets and staffing usually ends with failed strategic initiatives.
- It is critical to receive leadership commitment on budget and resources before execution of the strategic plan.

Step 7 - Execution Review

- One of the critical success factors for effective strategy deployment is constant and ongoing progress reviews.
- Appropriate reporting mechanisms must be included in the deployment. When issues, challenges, deviations or obstacles are identified, decisions and remediation are necessary,some which may even change the strategic direction. Therefore, it is important to decide who is involved in the review process, and what exactly is reviewed.

Two Marks Questions with Answers

Part - A

Q.1 List out the factors responsible for development of hospitals.

Ans. : The following factors played important role in the development of hospitals.

- Advances in Medical Sciences
- Development of Technological Sophistication and Specialization
- Development of Professional Nursing
- Advances in Medical Education
- Contribution by Industrialist
- Support by Health Insurance
- Role of Government

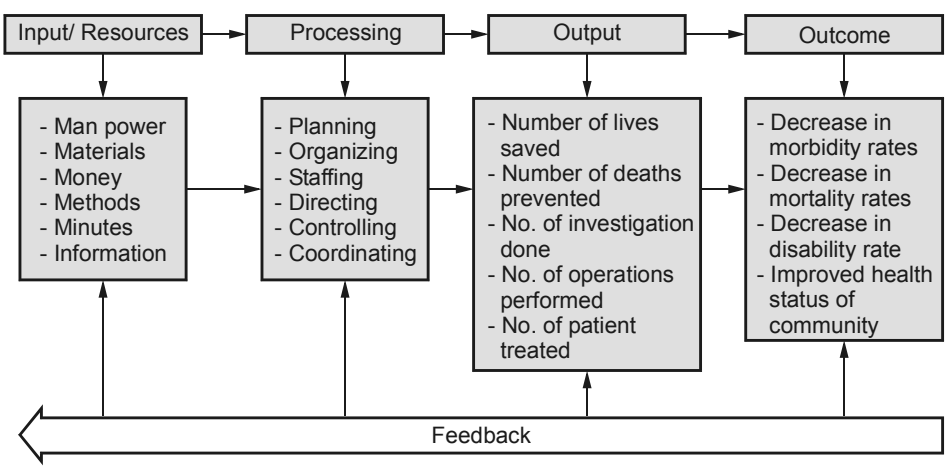
Q.2 Write the main functions of the hospital management system.

Ans. : The main functions of the hospital management system includes the following vital points.

- The hospital management system organizes the stable functioning of daily tasks and interactions.
- Hospital Management System is a special tool to support the smooth operating of the software components that are vital for the clinic administration.
- The hospital records management software keeps atrack of all the operations, stores the users' data, performs its analysis and generates the reports.

Q.3 Sketch the outline of Components of functions of Hospital administration.

Ans. :



Q.4 Elucidate the role of IT in Hospital Planning.

Ans. : Due to government incentives for a fully meaningful Electronic Medical Records system (EMR System), hospitals need to integrate IT throughout the entire facility. Preparation for this included coordinating an array of data closets, support spaces and infrastructure for the EMR upgrade that would integrate current and future medical planning of campus and hospital buildings.

Q.5 How does team work management pave way for successful hospital ?

Ans. : Facilitating teamwork and collaboration are essential for managing a successful hospital.

Managers can influence innovative teamwork by :

- Preparing, summarizing, and formatting information for staff consumption.
- Serving as a mediator between goals, strategies, and day-to-day activities.
- Promoting innovative operational approaches

Healthcare managers oversee team initiatives, especially frontline employees. Such teams collaborate to resolve patient and work flow issues. Thus, managers bridge informational gaps that ensure innovation reaches the right outlets.

Q.6 Write down the importance of functional planning with strategic principle.

Ans. : Functional planning is the continual analysis, planning, and monitoring required to successfully meet goals and objectives. At typical strategic management process generally includes four components.

1. **Analysis and assessment** – analyze the current and internal environment assessment
2. **Strategy formulation** – develop the strategic plan
3. **Strategy execution** – translate the plan into tactical plans and actions
4. **Evaluation** – conduct ongoing evaluation of performance to strategy

Q.7 Write the Impact of Regulations on Hospital Planning and Designing.

Ans. : Patient safety is the reason for all of the regulations, codes, standards, etc., and to that end they do serve a good purpose. But most of the regulations, codes and standards are very prescriptive, meaning that they tell the designer what to do and in many cases how to do it. This method of prescriptive regulation can limit or eliminate the innovation in health care design. Additionally, there are so many regulations, rules, codes, and standards that once they are all found, read, understood, and applied, the design can be extremely complicated and costly. The designer needs a research team to vet out all the regulations before starting the project.

Q.8 Enlist the Steps for designing the Hospital Planning.

Ans. :

- Need Assessment
- Feasibility Report
- Architects brief
- Request for Proposal
- Appointment of Consultant

Q.9 Write the Principles of Hospital Planning.

Ans. :

- Protection from unwanted and unnecessary disturbances to help speedy recovery
- Separation of dissimilar activities
- Control the nurse's station should be positioned strategically to enable proper monitoring of visitors entering and leaving the ward, infants, and children should be protected from theft and infection, etc.
- Circulation all the departments, yet keep the mall together; separate types of traffic, yet save steps for everybody; that is all there is to hospital planning

Q.10 Explain classification of hospitals based on ownership.

Ans. : The ownership based classification includes the sub types namely

- Public Hospital (Government hospital)

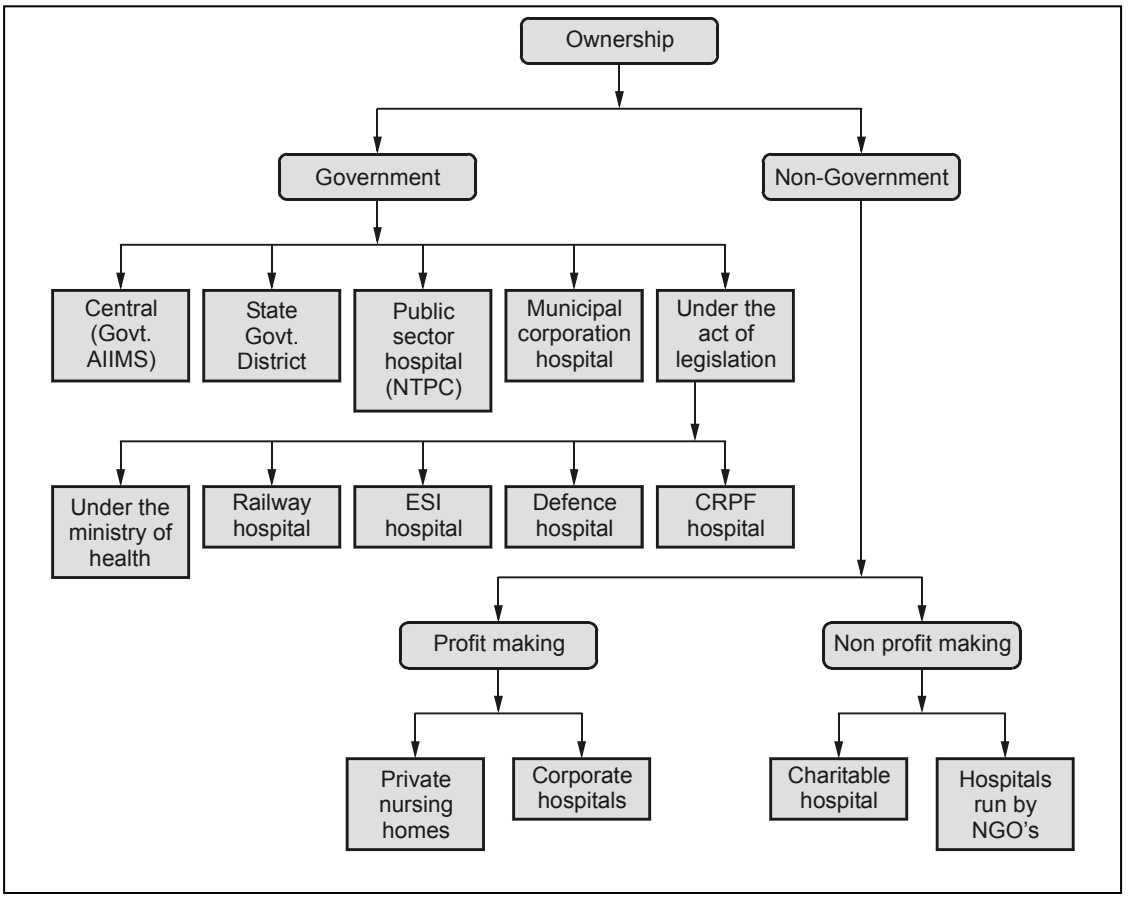
These hospitals are owned and managed by government and/or autonomous bodies e.g. Civil Hospital, Sargodha, Pakistan Institute of Medical Sciences, National Institute of Child Health etc.

- Private Hospital (Non- Government hospital)

Owned by private people or entrepreneur, can be further classified into.

a) Commercial

b) Non-profit



Review Questions

Part - B

Q.1 Explain in detail about the classification of hospitals.

Q.2 Explain about the hospital management system functions.

Q.3 Write down the Seven Steps of Functional Planning via Strategic Planning.

Q.4 Briefly explain the components of the functions of Hospital Administration.

Q.5 Write down the challenges faced in Hospital Administration.

Q.6 What is hospital planning ? Explain its principle involved in it along with its components.

❑❑❑

Notes

Unit II

Human Resource Management in Hospital

Syllabus

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

Contents

2.1 Human Resource Management

- Human Resource Management (HRM) is concerned with employees both as individuals and as a group in attaining goals.
- It is also concerned with the behavior, emotional and social aspects of personnel. It is concerned with the development of human resources i.e., knowledge, capability, skill, potentialities, and attaining and attending employee goals, including job satisfaction.
- Human resource management is pervasive in nature and it is concerned with the management of human resources of an organization consisting of all individuals engaged in any of the organizations activities at any level.
- HRM covers all levels i.e. low, middle and top and categories of employees such as unskilled, semiskilled, skilled, technical, professional, clerical, managerial and non managerial. It covers both organized and unorganized employees.

2.1.1 Human Resource Management in Hospitals

Human resource management is staff function through which managers recruit, select, train, and develop their employees and develop the organization as well. So it totally depends the way in which the personnel are recruited, selected, trained , developed and utilized by management largely determines whether the organization achieve its objectives or not.

Hospital organization presents a number of unique human resources management challenges. Managing human resources is the real challenge of hospital managers. The hospital is an institution dedicated to the attention of human suffering, the treatment of human ailments and the promotion of general health of the community, has to take care of the welfare of those who run it, i.e. its personnel. Fig. 2.1 reveals the environmental factors surrounding the hospital employee.

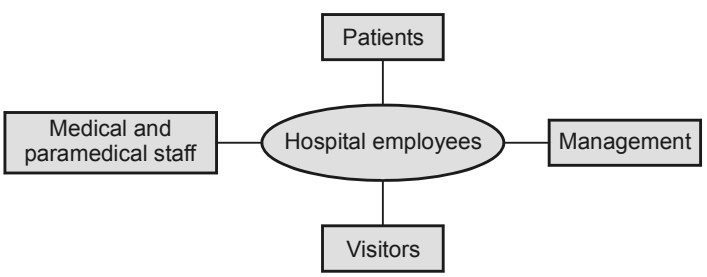


Fig. 2.1 Parameters surrounding the hospital employee

These factors acquire even more significance as hospital personnel not dealing with machines and tools, but with human beings. The human beings, with whom these employees are brought in contact with, belong to four groups: management, medical staff, patients and visitors. Their dealings with each of these four groups involve a wide range of interpersonal relationships.

Members of the medical staff may be working under stress due to the serious conditions of their patients. These are conditions little known to professionals in industrial organizations. Hospital employees must be given adequate training in the professional skills necessary to perform their daily tasks. They must also be trained in the art of getting along with people who are sick and worried. Therefore it is evident that human resource management in hospitals involves more complexities that in the average industrial situation.

2.1.2 A Brief History of Human Resource Management

Labors in hospital management have been practiced for thousands of years, and large-scale projects like China's Great Wall or dikes in the Netherlands wouldn't have been possible without labor process coordination. However, the significant changes that led us to human resources as we know it today began in England around 1760.

18th Century - "The Welfare Officers:" The Industrial Revolution of the 18th century shifted economics from agriculture to factories and required organizations to show absolute results for effort, relate them to costs, and sell them competitively. It also required a system to hire,pay wages, record employee work hours, and provide housing and health care. Worker oversight was managed by Welfare Officers or the Welfare Department.

19th Century - "Personnel Management:" Business and factory expansion led to a labor shortfall. Employees worked long hours under difficult conditions. To look for a solution, scientific ideas were applied to increase labor outputs, specifically the advocated by Frederick Taylor related to Personnel Management.

20th Century - "Human Resource Management:" Elton Mayo's disproved Taylor's Scientific Management approach to increasing productivity, and found that the primary drivers of motivation and productivity were not monetary factors. A host of new theories emerged based on this behavioral perspective and the term human resource management came into use.

21st Century - "Strategic Human Resource Management" and "Human Capital Management:"

The increase in technology- and knowledge-based industries is intensifying global competition. At the same time, there's a shortage of workers with appropriate skill sets. Consequently, many organizations have adopted strategic human resource management practices to make a long term impact on corporate success, and refer to their human resources activities as human capital management.

2.1.3 Objectives of Human Resource Management

Human resource management is concerned with the management of personnel at work. The way in which the personnel are recruited, selected, trained, developed and utilized by management largely determines whether the organization will achieve its objectives or not. Therefore, the personnel available to management in the organization need to be properly looked after, utilized and coordinated. It is through the combined efforts of the management as well as of its personnel, the objectives of an organization can be achieved. Without concerted and combined efforts, an organization cannot accomplish its objectives. Now it is universally recognized that the effectiveness with which personnel are coordinated and utilized is directly responsible for the success of any organization. Therefore, human resource management aims at obtaining and maintaining a capable work force so that the objectives of the organization can be achieved. Briefly, the following are the objectives of human resource management:

- Obtaining and developing the right personnel,
- Providing effective motivation and leadership.
- Paying attractive remuneration and treating them like brothers and sisters,
- Effective utilization of human resources in the achievement of organizational goals.
- Establishment and maintenance of an adequate organizational structure and desirable working relationships among all members of the organization,
- Securing integration of the individual and informal groups with the organization, and thereby ensuring their commitment, involvement and loyalty.
- Recognition and satisfaction of individual needs and group goals,
- Provision of maximum opportunities for individual development and advancement.
- Maintenance of high morale in the organization,
- Continuous strengthening and appreciation of human assets.

From these Objectives one can conclude that the emphasis has been laid on the following: recruitment, selection, induction, providing adequate salary, periodic appraisal, specific training, retirement compensation, individual development, providing

employees' welfare, better working conditions, and mutual confidence, etc. These are the life-blood of human resource management.

These objectives can be achieved by conducting the following human resource management functions.

- Anticipating and providing personnel for future openings from time to time.
- Seeking and attracting qualified applicants to fill vacancies.
- Determining the organizational structure and manpower needs to effectively meet the organizational objectives.
- Analyzing the applicants' qualifications for determining their suitability.
- Officially assigning each employee an appropriate position which clearly defines his responsibilities.
- Ensuring that new recruits are provided with appropriate training and information, to enable them to perform their duties effectively.
- Further providing for increasing the utilization of the employee's capabilities.
- Providing for the individual employee's development.
- Arranging programs as required for developing existing personnel.
- Providing facilities for the employees' enjoyment of the job and making the work place more attractive and satisfying.
- Providing the needed exchange of information throughout the organization.
- Building up rapport with the officially-recognized and legally established employees'
- Organizations in the best interests of both the organization and its employees.
- Developing effective work regulations and harmonious working relationships.
- Objectively appraising each employee's performance in relation to the duties and responsibilities assigned.
- Helping employees solve their personal problems.
- Developing facilities and procedures for the prevention of on-the-job accidents.
- Preventing diseases and physical ailments and at the same time caring for diseases, ailments and injuries suffered by employees on-the-job.
- Providing precautionary measures for safeguarding the organization and its property from fire, theft, etc.
- Developing improved employees' attitudes and conditions of work.
- Doing a human resource audit.

By no means can all the above-mentioned functions be found in every human resource department; but they do cover the range of tasks seen in many commercial organizations, industries and hospitals where human resource management has been established as a specialty. The jobs that the human resource department is called upon to perform are too numerous and too varied to admit any concise presentation. But the objectives of human resource management can be achieved only by the performance of these functions.

- To help the organisation to reach its goals
- To employ the skills and abilities of the workforce efficiently
- To provide organisation with well-trained and well-motivated employees
- To increase the employees satisfaction and self-actualization
- To develop and maintain the quality of work life
- To communicate HR policies to all employees
- To help maintain ethical polices and behavior

2.2 Fundamental Principles of Human Resource Management

- Human resource management is the management of an organization's workforce or human resources. It is responsible for the attraction, selection, training and assessment and rewarding of employees, while also managing organizational leadership and culture and ensuring compliance with employment and labor laws.
- HRM is a process of bringing an organization and its employees together so that the individual and organizational goals are met. HRM is development-oriented. It lays stress on the development of employee's potential, capacity, interest, and personality.
- HRM is a continuing and never-ending process. It is a constant function of organization whether be it an industry or a hospital.
- Human resource management is both a science as well as an art. It is a science because it consists of a well-recognized body of knowledge, principles, and techniques. It is an art because it deals with human beings, popularly called social animals that have feelings and emotions. It requires knowledge, tact, and presence of mind to effectively deal with human beings i.e. the people at work.

Human resource management of an organization represents one of its largest investments. Therefore, it is of utmost importance to deal with its human resources sympathetically and Tactfully. An effective management must direct the vision and effort of all managers towards a common goal.

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

- *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.*
- *Human resource policies of the organization should be fair to all. They should make a major contribution to the achievement of an organization's objectives as well as provide a conducive atmosphere of working to the employees so that their output is maximum.*
- *Human resources are the most important assets and their tactful management is the key to the success of an organization. The culture and values of an organization exert enormous influence on the organization. Therefore, organizational values and culture should be accepted and acted upon by one and all in the organization.*

The HRM model was developed by the American Society for Training and Development (ASTD). The output of this model is the quality of work-life, productivity, and readiness for change. In HRM model ASTD identified nine Human resource areas such as:

1. Training and Development
2. Organization and Development
3. Organization / Job design
4. Human Resource Planning
5. Selection and Staffing
6. Personnel Research and Information Systems
7. Compensation / Benefits
8. Employee Assistance
9. Union / Labour Relations

2.2.1 HRM Roles

HRM roles include the followings

a. To apply quality and productivity principles to improve HRM function.

b. To make consistent, clear, complementary and synergistic policies

c. To facilitate implementation of quality and productivity interventions

Every organization is made up of human resources, acquiring their services, developing their skills, motivating them to high levels of performance. Employee commitment to the organization and employee retention is essential to achieve the organizational objectives, since HRM is concerned with the "people" dimension in

management. Maintaining good people are critical to the success of every organization whether profit or non profit, public or private.

From small rural clinics to big city hospitals, human resources in healthcare will also feel the pressure. These professionals face issues like staffing shortages, employee burnout, and more. To overcome these hurdles, HR must better understand the how and why behind each one. To overcome these hurdles, the four biggest challenges faced by HR professionals today, and more importantly are discussed below.

1. Staff Shortages

One of the most pressing human resource issues in healthcare involves recruiting.

The Bureau of Labor Statistics "projects the need for an additional 203,700 new RNs each year through 2026 to fill newly created positions and to replace retiring nurses". In addition, it's estimated that there will be a total of 1.2 million vacancies for nursing positions by 2022.

Employers looking to hire the next batch of medical professionals need to make changes now to appeal to young candidates. There are a number of factors contributing to this problem. For instance, as members of the baby boomer generation continue to age, their massive numbers create a considerable workload for medical professionals. It's affecting the problem from the inside as well, as nurses from that generation are beginning to retire and leave the workforce in droves. They are different from their predecessors. Unlike baby boomers and Gen Xers who primarily sought competitive compensation, millennials value benefits and advancement opportunities far more than their predecessors. This means that employers looking to hire the next batch of medical professionals need to make changes now to appeal to their young candidates.

2. Turnover Rates

In addition to hiring shortages, hospitals and clinics are also struggling to retain the excellent staff members they already have. With so many jobs open to medical professionals, it's all too easy for staff to leave if they're unhappy or dissatisfied.

Over the last several years, the average turnover rate for hospitals has been creeping upward. In 2018, hospitals experienced the highest turnover rate in over a decade, and since 2014, the average hospital has turned over 87.8% of its entire workforce. Nursing leadership is critically important and has a significant impact on retention and recruiting. Effective nurse managers make sure their staff feels supported and mentored. The work of HR in hospitals and clinics can help retain nurses by addressing the changing demands

of the workforce, making their organizations more attractive to current employees, and ensuring supervisor employee relationships are flourishing.

3. Employee Burnout

- The issue of employee burnout is tangled up in the issues of staff shortages and turnover.
- Burnout is caused in part by staffing shortages, and it has a compounding effect on employee turnover. On top of that, burnout has a negative impact on both patient care and patient safety, as emotional, mental, and physical exhaustion leaves providers (doctors and nurse practitioners included) unable to perform their best. Those decreased satisfaction rates could be the result of emotional distance on the part of clinicians.
- Burnout tends to create a disconnect between providers and patients, with providers developing unfriendly, cynical, and less empathetic attitudes. This disconnect makes them less sympathetic to the needs of patients and leaves everyone involved unhappy about the experience. There are a few other factors that contribute to burnout as well, such as employees feeling underappreciated, underutilized, and as though they lack authority. Frequently, nurses feel as though they could do more, but aren't being allowed to. Workload also has a lot to do with burnout rates.

2.2.2 HRM Practices and Policies

HRM plays a significant role in global healthcare systems. Human resource management refers to the practices and policies needed to carry out the personnel aspects of management. These include:

a. Analyzing jobs
b. Planning manpower needs and recruiting competent people
c. Selecting best people
d. Appraising performance and potential on ongoing basis
e. Socializing, training and developing people
f. Managing compensation
g. Communicating
h. Building employee commitment and so on so forth.

2.2.3 Benefits of Human Resource Development

Human resource development (HRD) is concerned with the provision of learning and development opportunities that support the achievement of business strategies and improvement of the organizational, team, and individual performance.

Some of the benefits of Human Resource Development are as follows :

a. Systematic planning to support the organizational mission. Increased capacity to achieve the organization's goals
b. Clear definition of each employee's work responsibilities and link to organization mission
c. Greater equity between compensation and level of responsibility
d. Defined levels of supervision and management support
e. Increased level of performance and efficient utilization of employee's skills and knowledge
f. Cost savings through improved efficiency and productivity
g. Increased ability to manage change

2.3 Functions of HRM

The functions of HRM can be broadly classified into two categories, viz.,

(i) Managerial functions and

(ii) Operative functions.

I. Managerial Functions

Managerial functions of personnel management involve planning, organising, directing and controlling. All these functions influence the operative functions. (See Fig. 2.2).

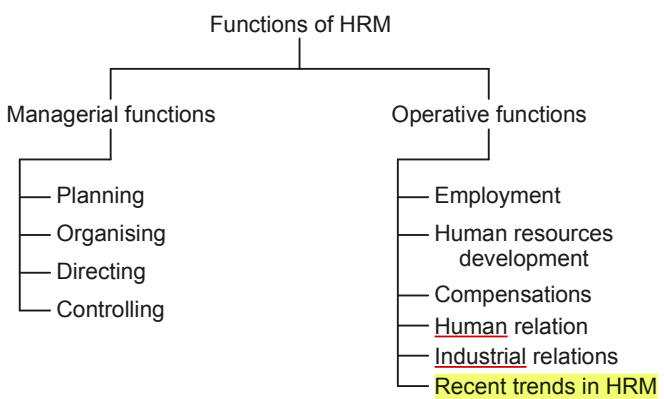


Fig. 2.2.Basic Functions of HRM

(i) Planning : It is a predetermined course of action. Planning pertains to formulating strategies of personnel programmes and changes in advance that will contribute to the organisational goals. In other words, it involves planning of human resources, requirements, recruitment, selection, training etc. It also involves forecasting of personnel needs, changing values, attitudes and behaviour of employees and their impact on the organisation.

(ii) Organising : An organisation is a means to an end. It is essential to carry out the determined course of action. In the words of J.C. Massie, an organisation is a "*structure and a process by which a co-operative group of human beings allocates its task among its members, identifies relationships and integrates it activities towards a common objective*." Complex relationships exist between the specialised departments and the general departments as many top managers are seeking the advice of the personnel manager. Thus, an organisation establishes relationships among the employees so that they can collectively contribute to the attainment of company goals.

(iii) Directing : The next logical function after completing planning and organising is the execution of the plan. The basic function of personnel management at any level is motivating, commanding, leading and activating people. The willing and effective co-operation of employees for the attainment of organisational goals is possible through proper direction. Tapping the maximum potentialities of the people is possible through motivation and command. Co-ordination deals with the task of blending efforts in order to ensure successful attainment of an objective. The personnel manager has to co-ordinate various managers at different levels as far as personnel functions are concerned.

(iv) Controlling : After planning, organising and directing various activities of personnel management, the performance is to be verified in order to know that the personnel functions are performed in conformity with the plans and directions of an organisation. Controlling also involves checking, verifying and comparing of the actuals with the plans, identification of deviations if any and correcting of identified deviations. Thus, action and operation are adjusted to pre-determined plans and standards through control. Auditing training programmes, analyzing labour turnover records, directing morale surveys, conducting separate interviews are some of the means for controlling the personnel management function and making it effective.

II. Operative Functions

The operative functions of human resources management are related to specific activities of personnel management, *viz.*, employment, development, compensation and relations. All these functions are interacted with managerial functions. Further, these functions are to be performed in conjunction with management functions as shown in Fig. 2.3.

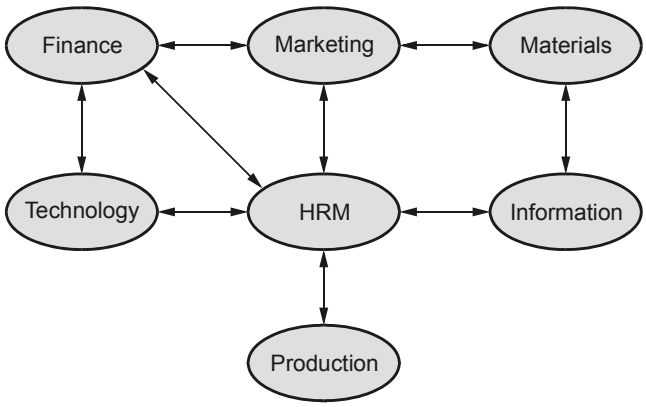


Fig. 2.3

1. **Employment :** It is the first operative function of Human Resources Management (HRM). Employment is concerned with securing and employing the people possessing the required kind and level of human resources necessary to achieve the organisational objectives. It covers functions such as job analysis, human resources planning, recruitment, selection, placement, induction and internal mobility.

(i) Job Analysis : It is the process of study and collection of information relating to the operations and responsibilities of a specific job. It includes :

- Collection of data, information, facts and ideas relating to various aspects of jobs including men, machines and materials.
- Preparation of job description, job specifications, job requirements and employee specifications which will help in identifying the nature, levels and quantum of human resources.
- Providing the guides, plans and basis for job design and for all operative functions of HRM.

(ii) Human Resources Planning : It is a process for determination and assuring that the organisation will have an adequate number of qualified persons, available at proper times, performing jobs which would meet the needs of the organisation and which would provide satisfaction for the individuals involved. It involves:

- Estimation of present and future requirements and supply of human resources based on objectives and long range plans of the organisation.
- Calculation of net human resources requirements based on present inventory of human resources.
- Taking steps to mould, change and develop the strength of existing employees in the organisation so as to meet the future human resources requirements.
- Preparation of action programmes to get the rest of human resources from outside the organisation and to develop the human resources in terms of existing employees.

(iii) ***Recruitment :*** It is the process of searching for prospective employees and stimulating them to apply for jobs in an organisation. It deals with :

- Identification of existing sources of applicants and developing them.
- Creation/identification of new sources of applicants.
- Stimulating the candidates to apply for jobs in the organisation.
- Striking a balance between internal and external sources.

(iv) ***Selection :*** It is the process of ascertaining the qualifications, experiences, skills, knowledge etc., of an applicant with a view to appraising his/her suitability to a job. This function includes :

- Framing and developing application blanks.
- Creating and developing valid and reliable testing techniques.
- Formulating interviewing techniques.
- Checking of references.
- Setting up a medical examination policy and procedure.
- Line manager's decision.
- Sending letters of appointment and rejection.
- Employing the selected candidates who report for duty.

(v) ***Placement :*** It is the process of assigning the selected candidate with the most suitable job in terms of job requirements. It is matching of employee specifications with job requirements. This function includes:

- Counselling the functional managers regarding placement.
- Conducting follow-up study, appraising employee performance in order to determine employee adjustment with the job.
- Correcting misplacements, if any.

(vi) Induction and Orientation : Induction and orientation are the techniques by which a new employee is rehabilitated in the changed surrounding and introduced to the practices, policies, purposes and people etc., of the organisation.

- Acquaint the employee with the company philosophy, objectives, policies, career planning and development, opportunities, product, market share, social and community standing, company history, culture etc.
- Introduce the employee to the people with whom he has to work such as peers, supervisors and subordinates.
- Mould the employes attitude by orienting him to the new working and social environment.

2.4 Profile of HRD Manager

In a Hospital/Clinical Laboratory-based healthcare organization, it is important to assess the performance of all levels of staff at the beginning and the assessment should be done at periodical time intervals.

The main task of HRM involves job analysis, manpower requirement, organization of workforce, measurement as well as an appraisal of performance, reward implementation, professional development, and constant maintenance of the workforce.

The human resource manager is responsible to feel overriding of different needs for both employees as well as the employer. The manager supervises all aspects of operations that are personnel-related that would include the following areas :

- Interview and hiring
- Doctor and nurse recruitment
- Compensation and benefits management
- Handling of claims
- Personnel counseling
- Employee training
- Performance evaluation
- Implementation of professional development programs
- Compliance with state and federal regulations
- Safety and sanitation the workplace
- Labor Relations and mediation
- Supervision of employee meetings
- Maintenance and/or improvement of employee retention and morale

Among the listed areas, the following are more vital to be considered.

i) Managing people

The Human Resources Manager oversees the department (HR) responsible for the hiring and firing of employees. This department also manages all the financial and time-related factors concerning an employee's work life. A Human Resources Manager has responsibility making decisions that have a direct effect upon the health, safety and financial well being of all employees. There are certain HR managers that qualify as counselors who have received a specialized training that may include receiving a bachelor's degree in Counseling. This may involve conducting one-on-one sessions helping employees deal with everyday challenges including marital, drug, alcohol, family issues and workplace issues affecting both their personal and employment well being and performance.

ii) Personnel claims against the business

Circumstances arise in any business where and employee feels it necessary to file a claim concerning some type of egregious behavior on the part of the employer or employer's representative. These situations can include injuries, layoffs, getting fired or possibly incidents of arrest or other related type experiences. Labor claims are specialty areas that human resource professionals are well-trained receiving the proper knowledge about state and local regulations concerning the disposition of such claims.

iii) Employee training and performance evaluation

Quality control is an important aspect for human resource management. But, unlike the quality control manager in a factory making sure that products are created according to the necessary specifications, quality control for human resource manager translates to providing the necessary training is that will ensure top on the job performance. Tests are developed by human resource managers to monitor skill levels that can be administered path prior to hiring as well as at different times throughout the employment. If it is the job of the human resource manager to work quite closely with both clinical and nonclinical department heads to develop relevant professional skills enhancement programs as well as providing continuing education opportunities for all employees.

iv) Human resource management is not a clerical position

The human resource manager at a clerical team who handled hiring and firing as well as payroll and bookkeeping. More thought and energy has been put into redefining the role of the human resource manager and has paved the way toward developing different specialized needs and roles for employees. This has resulted in the need for highly specialized training leading to creating human resource managers that have duties far beyond those of writing a check.

v) Getting an employee hand book

The human resource manager is also responsible for producing what is commonly referred to as an employee handbook. The HR manager will oversee operation collecting all the necessary data that can provide the answers to many employee questions. These are usually answers to common issues faced by all pulleys and a facility that are compiled in a book that is easy to navigate and can be given everyone.

Human resource manager is necessary for productive and effective healthcare. Health care systems depend upon effective human resource management. It is crucial that effective human resource management produces successful recruitment and retention for both clinical and not critical staff. Human resource management also plays the vital role helping to maintain staff morale, providing employees with opportunities for professional advancement, as well as providing ongoing training programs to ensure top quality health care service delivery.

vi) Getting the necessary education

All the leading colleges and universities have degree programs for people seeking a career in personnel, human resources or labor relations management. Each school may offer different types of focused education that leads to the reason human resources ministration or human resources management. Some may also offer specialized degrees concentrating on training and development or administration of benefits and compensation. It also depends upon which school investigated where these courses may be found. Somewhere in the study of business administration while others can be found in an education curriculum such as human services, communication or public administration. Some institutes of higher learning you have separate human resource departments. Obtaining advanced degrees has become increasingly the basic criteria for entry for many jobs. In some instances the background laws necessary if the job entails contract negotiations, mediation, or arbitration. It is highly recommended that individuals seek a master's degree in human resources, business administration, or labor relations with a concentration on human resources management when seeking top-level executive positions.

2.4.1 Human Resource Planning

All human resource planning has to be centered around a certain set of principles and actions. Usually, a third-party human resource consultant or employment agency plays a vital role in planning the fundamental necessities for human resource.

There needs to be a defined time span for the plan. A general human resource plan is often produced to cover a period of several years in order to mitigate the problems of forecasting variables that are imponderable. An example of a rolling plan is where a four year period of general forecasting is conducted and then in the first year of the next plan, human resources reviews and makes revisions for the next three years.

Details need to be established for the strategy. For bigger organizations, it may be necessary to have individual human resource plans and predictions for subsidiary units and functions. However, a smaller organization could get away with having only one human resource plan for their employees. Also, if there is a need, special provisions for recruitment or training in the future will be necessary in human resource planning if there is a need for a certain set of skills or jobs.

Human resource planning has to be in line with the most in-depth and precise information that's possible. Such private information is important in any case for the effective management of the business. Details of format and contents will naturally change, but they'll typically should include details of age, sex, qualifications and experience and of tendencies likely to effect future forecasts, such as job wastage, costs in occupations, salaries, etc. Independent of the routine set of data for employees records, special analyses may occasionally be essential to provide particular information.

Human Resource Planning has to be integrated into the other aspects of the organizations strategy and preparation. Senior management must provide a lead in stressing its value throughout the organization.

In larger organizations a central human resource planning unit accountable to senior management must be established. The main goals of this are toco ordinate and accommodate the demands for human resources from different departments, to standardize and supervise departmental assessments of requirements and also to produce a complete organizational strategy. In practice, the Human Resource and Development department would normally play a leading part in the task. In smaller organizations these obligations would probably be completed by a senior supervisor or even the managing director.

2.4.2 Role of HR Manager

In modern hospitals, different categories of staff work in different capacities. The doctors, the nursing staff, different types of technicians, management personnel contribute substantially to the smooth functioning of the hospital. Hospital employees are supposed to work with the single motto of making available to the patients, the services

upto their expectations. In hospital, employees have to work in different conditions and make use of different type of technology.

As multidimensional changes are occurring in the medical sciences in addition to the changes in the behavior profile of patients, management personnel, and human resources in the hospital is given due weightage. Hospitals need sophisticated technologies and skilled personnel for good patient care. It is difficult to offer quality healthcare services to patients because of the unavailability of professionally sound, technically skilled, and personally committed personnel in the hospital. Strong educational efforts, employee training, and development practices benefit hospital in various ways.

Professionally sound personnel bear the efficiency of offering quality health care services. Training and development program provides an opportunity to become professionally a high performer.

Human Resource (HR) managers oversee employee administrative affairs in an organization.

- The benefits of an HR department have gradually gained recognition in health care, owing to such challenges as economic instabilities, health care regulations, and a dearth of experienced personnel.
- A well-motivated and appropriately skilled and deployed workforce is crucial to the success of health system delivery.
- The actual methods used to manage human resources in healthcare are in themselves a major constraint or facilitator in achieving the objectives of any health organisation.

Hospital is a vital link in its overall chain, be he a skilled surgeon or an unskilled sweeper. The lower rungs of hospital staff should never be bracketed as labor1 in trade union terms. They should be, in fact, considered as essential to hospital functioning as a physician or a staff nurse. Recent trends indicate that employees can no longer be viewed as a commodity. The socialistic pattern of society, the advent of intervention by the State and the overall idea of a Welfare State must make the alert manager recognize the importance of human relations and his actions must result in social justice. Workers today are more progressive in their outlook. They are better organized today through trade unions. These factors highlighted the need to motivate them in the right direction, to develop their morale and contribute to happier management-employee relations. Human resource management can no longer be done by intuition or hunch. The human resource manager must be familiar with the relevant findings of the behavioral sciences. He should be aware of the contributions made towards it by psychology, business management and sociology, besides being conversant with the labor laws of the land.

There are a variety of job roles and job titles in this area of management. Here are some examples of job roles.

1. Human Resources Manager
2. Medical Staffing Manager
3. Assistant Director of Human Resources (workforce development)
4. Divisional Human Resources Manager

1. Human Resources Manager

Human Resource Manager could be working in a specialist trust providing mental health services for adults, older people, children and adolescents, and also substance misuse and specialist learning disabilities.

In this type of role, he would take a lead role in the trusts human resources agenda and lead on specific corporate HR objectives. Human Resource Manager could be responsible for them :

- Recruitment & retention of staff
- Maintenance of the attendance management process
- Handling formal grievance and disciplinary process and appeals
- The design and delivery of training and development programs
- Providing advice on principles and detail of employment legislation and good practice
- The maintenance of effective employee relations including participation in local formal
- Consultation machinery and processes of job evaluation, salary administration, and reward management.

2. Medical Staffing Manager

Working in a hospital, Medical staffing Managers have responsibility for all medical staff working within the trust, except for medical students. This would include responsibility for :

- Terms and conditions of medical staff
- Recruitment and selection of professional grade staff.

Medical staffing Managers advises and support medical staff on HR-related issues and could be involved with the international recruitment of medical staff, workforce planning and the Working Time Directive.

3. Assistant Director of Human Resources (workforce development)

Assistant Director lead the trust's development and implementation of a comprehensive training and development plan working in partnership with areas of the trust also delivering education. Delivery of the plan would involve liaison with partner organisations across the region. Key elements of such a post would be:

- effective leadership
- staff development
- work force planning.

4. Divisional Human Resources Manager

Here, Divisional Human Resource Manager will be one of four HR managers working within a university hospitals' trust for providing strategic development and leadership support.

2.4.3 Ways to Develop HRD Programs in Hospitals Training Programs

Training can be largely divided into two segments.

– The continual medical training given to doctors, nurses and paramedics.

– Service and behavioral training is given to the front-office staff, telephone operators as well as nurses.

Training Program for Nurses :

The Training Program for Nurses should not only focus on medical aspects but also on hospitality. Fig. 2.6 shows the various aspects of training for hospital employees.

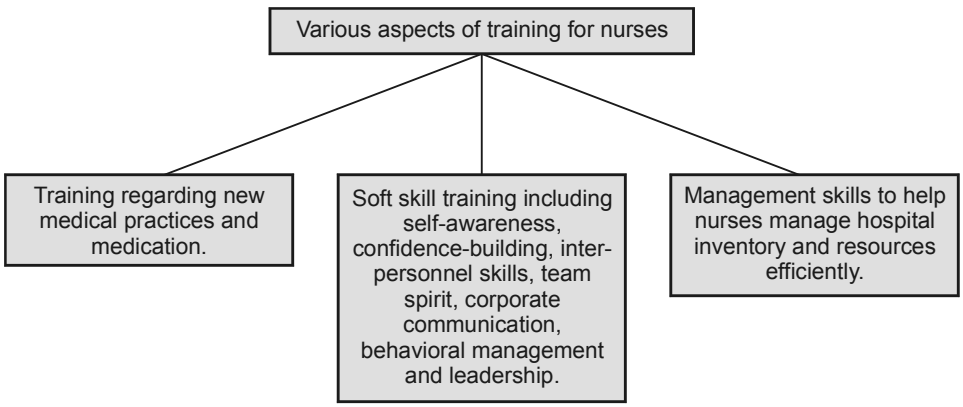


Fig. 2.6 Various aspects of training for hospital employees

Training For Improving Soft Skills :

- Self-awareness
- Confidence-building
- Interpersonal Skills
- Team Spirit
- Corporate Communication
- Behavioral Management
- Leadership.

Leadership Programmes

- To enhance the behavioral skills of its employees, hospitals should initiate leadership programmes for its doctors and also the staff.
- The environment in which health care professionals practice is one in which conflict and the need for negotiation abounds.
- In order to develop as managers and senior leaders, individuals must know how their peers, subordinates, and supervisors perceive them.

Internal Team-Building

- Training programmes are also effective platforms for internal team building.
- When employees from different departments of a hospital come together by dint of a training initiative, it gives them an opportunity to understand each other better.

Technical Training

- ECG, Echo, TMT, X-Ray, and also an aesthesia technicians, physician assistants, cath lab technicians and nursing care professionals.

Training to Handle Disaster Situations

- Hospitals are amongst the most vulnerable places in case of any natural disaster because it houses patients who may not be able to escape.

Training for Cleaning Staff

A hospital generates medical wastes which may be harmful if not properly disposed. As a result their training programmes include :

- How to handle bio-hazard, used syringes and other medical wastes.
- Separation of waste into recyclable and non-recyclable components.
- Learning how to operate hospital oriented cleaning machines.
- Maintain a log of cleaning activities done.

Feedback from Staff Members

- Regular feedback from hospital staff should be taken about the working environment and HRD programs being conducted in the hospital.
- This data can be used to analyze the problems faced by the employees and under take appropriate actions to help structure the programs in a better way.

2.5 Human Resource Inventory (HRI)

Human Resource Inventory (HRI) in every organization is essential for efficient delivery system, effective medical services in order to achieve patient satisfaction. Many studies done in the past on HRM stress the importance of HRM to achieve the goal of healthcare organization and emphasize the importance of training and development for all levels of staff at periodic intervals to improve the quality of healthcare services.

Well motivated and highly trained medical professionals are critical for the success of national healthcare forum. If the existing practices associated with HRM are not adequate, alternate approaches for practicing HRM should be designed and put to use for better outcome. All senior level managers should chalk out new innovations and strategies to achieve better outcome in HRM.

The mental health of healthcare workers is tant amount to all other things, so it would behave the health care HR worker to create an environment that fosters proper mental health. Human resources, as a practice, has changed drastically since the 20th century.

Considering the above facts, Hospital Management team participates in research for HR management according to emerging trends in healthcare.

Few tactics to attract the right healthcare talent are listed below,

1. Healthcare HR Will find new ways to recruit employees

Recruitment is one of the major challenge that healthcare HR workers face. With the rise of the digital age, employees are now available at the click of a button. However, to make the search process easier, it's imperative for HR to find an effective way to filter out the 'good' employees from the bad ones.

Over the past several decades, many patients had seen their healthcare providers as inefficient or unfriendly. As a result, the hospital experience is under going reinvention. This reinvention greatly affects HR in how employees are invested in, trained, and the technology implemented within the hospital locations.

2. Healthcare HR needs to know how to maximize available real estate

If there's one thing that today's healthcare HR needs to know, it's how to use the available building or campus space to create an optimal employee experience. The following questions are imperative for each HR worker to ask the employees:

- One of the best motivators for most healthcare employees has been receiving praise and recognition from their managers.
- Digital recognition through digitized rewards and recognition. Hence, to make your healthcare employees productive, digital recognition is a trend you need to implement. Another HR trend expected is peer to peer recognition. Start by using the social platforms and other a suitable platform for your healthcare employees to recognize and reward their contribution.
- Another interesting HR trend to focus is AI (Artificial Intelligence) driven human resources. Even though it is not expected to eliminate the usual human HR, it will transform and help to analyze the data. It will also assist in the primary repetitive HR tasks. When you use Artificial intelligence to recruiting the healthcare workforce, you will be able to eliminate bias. It will help to access the candidates based on their requirements without favouritism. It will also let your team focus on healthcare employee relations instead of being caught up in unexciting tasks.

The need for skills development is important for all healthcare employees no matter which stage of career they are at the moment. Constant learning is expected to be among the most popular. It is essential for any healthcare organization that wants to grow to provide learning opportunities to all health care employees. Through learning, your employees can be able to improve their skills and be able to give the best while working.

Your healthcare organization can have learning management systems that will help you to check and track your employees learning process accurately, and also help to promote collaboration between various departments in your healthcare company.

In most advanced countries, there is a usual trend where majority of healthcare employees are being hired on a contingent basis. This means you need to learn more about your workforce structure and whether you can reconsider structuring it. You need to learn and understand the type of healthcare systems and advanced technologies that can be implemented in your healthcare organization or hospital. Even though it is not practical for any healthcare organization to adopt a new workforce structure instantly, it is essential to be aware of the emerging HR trends. Keep in mind that your workforce is the most critical asset in your healthcare organization.

Another vital HR trend that most healthcare organizations are expected to focus on is fitness and wellness apps. Most healthcare companies these days are focusing on creating life and work balance. If you want your employees to be productive, and to be able to build a sustainable workforce, you need to balance work and life. To achieve this objective, you can introduce wellness and fitness app for your healthcare employees. The apps will help to create a balance between their professional and their personal lives.

- Use social media as an outreach and engagement tool
- Create internship opportunities for students and alumini
- Leverage sourcing tech and software to ease the interview process
- Target niche talent pools for long-term advancement
- The Patient Experience is Being Reinvented

2. Healthcare HR needs to know how to maximize available real estate

- Where do you go to do your best work?
- What is the best place for you to finish important tasks?
- Where do you avoid meeting or working?
- Where do you go to recharge?

3. Digitized rewards and recognition

One of the best motivators for most healthcare employees has been receiving praise and recognition from their managers. We all hope to see digitized rewards and recognition. Hence, to make your healthcare employees productive, digital recognition is a trend you need to implement. Another HR trend expected is peer to peer recognition. Start by using the social platforms and offer a suitable platform for your healthcare employees to recognize and reward their contribution.

4. HR bots (Artificial Intelligent driven HR in Healthcare Industry)

Another interesting HR trend to focus is AI (Artificial Intelligence) driven human resources. Even though it is not expected to eliminate the usual human HR, it will transform and help to analyze the data. It will also assist in the primary repetitive HR tasks. When you use Artificial intelligence to recruiting the healthcare workforce, you will be able to eliminate bias. It will help to access the candidates based on their requirements without favouritism. It will also let your team focus on healthcare employee relations instead of being caught up in unexciting tasks.

5. Learning management systems in healthcare Industry

The need for skills development is important for all healthcare employees no matter which stage of career they are at the moment. Constant learning is expected to be among the most popular. It is essential for any healthcare organization that wants to grow to provide learning opportunities to all healthcare employees. Through learning, your employees can be able to improve their skills and be able to give the best while working. Your healthcare organization can have learning management systems that will help you to check and track your employees learning process accurately, and also help to promote collaboration between various departments in your healthcare company.

6. Increase in part-time healthcare employment and contingent workforce management

In most advanced countries, there is a usual trend where majority of healthcare employees are being hired on a contingent basis. This means you need to learn more about your workforce structure and whether you can reconsider structuring it. You need to learn and understand the type of healthcare systems and advanced technologies that can be implemented in your healthcare organization or hospital. Even though it is not practical for any healthcare organization to adopt a new workforce structure instantly, it is essential to be aware of the emerging HR trends. Keep in mind that your workforce is the most critical asset in your healthcare organization.

7. Fitness and wellness apps to develop employee engagement

Another vital HR trend that most healthcare organizations are expected to focus on is fitness and wellness apps. Most healthcare companies these days are focusing on creating life and work balance. If you want your employees to be productive, and to be able to build a sustainable workforce, you need to balance work and life. To achieve this objective, you can introduce wellness and fitness app for your healthcare employees. The apps will help to create a balance between their professional and their personal lives.

"Development of advanced supply chain technology has not been a key focus, because the functionality in these models isn't likely to cause them to lose new business. But there are new options to consider."

Myth 1 : Supply chain is one of the biggest problems in hospitals.

The problem isn't supply chain; it's inventory management. With the majority of hospitals outsourcing supply chain functions to distributors, hospitals typically receive the supplies they need within 24 hours or less.

With the ability to quickly receive new supplies to virtually any location, hospitals aren't suffering from supply chain problems, but they do have inventory management

issues. As a result of poor technology and processes, hospitals struggle with overstocking, stock-outs, high supply costs, high labor costs and dissatisfied clinical staff.

Meanwhile, hospitals that have overcome problems associated with current inventory management systems and processes have reduced the cost of supplies and labor, while increasing nursing satisfaction.

Myth 2 : My ERP system does very thing I need.

ERP systems excel at meeting the needs of manufacturers, and today, hospital CFOs purchase ERP systems for financial and human resource functionality. Hospital supply chain managers are expected to adopt the supply chain module offered with the system, yet these modules can be difficult to use, create work flows that are labor-intensive and expensive, and can actually drive up the supply chain costs.

Myth 3 : There's no way to "see" inventory that's stored all over my hospital.

This may seem true in hospitals, yet examples of being able to see inventory anywhere in a system exist throughout retail. While hospital legacy ERP systems have not made the investments in the mobile- and cloud based technology to provide users with total visibility into their on-hand inventory, labor savings could quickly be achieved by giving clinicians the ability to find inventory in the hospital by using an iPod Touch, just like the customer representatives in a Lowes or Apple store.

Myth 4 : My reporting tools give me everything I need to know about our inventory.

While data exists, it can be difficult to access and then, even more difficult to use for decision-making. Many current hospital systems provide reports, with out providing recommendations for what action to take. To improve smart and accurate decision making, hospitals should identify an inventory management solution offering a rules-based recommendation engine, allowing a user to input variables into a report and receive recommendations for actions based on the data.

Myth 5 : I need to manage every item used in my hospital the same way.

Lean processes recommend elimination of "touches" and waste. Sixty years ago, automobile manufacturer Toyota implemented a supply management process called Kanban to manage high frequency consumable items used in manufacturing.

Since that time, Kanban (now also known as two-bin) systems have been proven by lean manufacturing processes to cost effectively manage lower-cost, high velocity supplies. Today, it's estimated that while 75-80 percent of items used by a hospital cost less than $20 each, thousands of dollars are spent capturing consumption of those items,

either for patient billing purposes (with little reimbursement) or with the belief that a single process is most cost effective.

Instead, the approach should fit the product and patient care required : using PAR, barcode scanning, cabinets and RFID-tracking systems all make sense for the 20-25 percent of the inventory that is either regulated or high value.

For low cost items, a two-bin approach provides visibility for supply management while reducing the labor costs of both clinicians and supply technicians.

Myth 6 : We're not overstocked.

Reality : Hospitals carry more inventory than needed toward the goal of preventing stock-outs; overstocking often takes place because there isn't adequate visibility to supplies on hand. Nurses report spending as much as 20-30 percent of their time on supply-related tasks, with much of this spent locating products. Overstocking happens as an attempt to help nurses have supplies they need, but there is an unintended consequence : overstocking costs more in both supply spend and labor to manage more items.

Myth 7 : Stock-outs are a fact of life.

Stock-outs are recurring events with today's inventory systems, but they can be easily eliminated. Stock-outs can occur because an organization lacks accurate velocity information about a product, but they are also caused when nurses remove supplies from inventory, in an attempt to eliminate stock-outs on their own.

The inventory problem is exacerbated when supply hoarding leads to waste, as items are overstocked and expire. Stock outs drive maverick spending when staff places orders directly, with out requisitioning through supply chain. Real time visibility to products, how many items are on hand, where they're located, and at what rate they're consumed can eliminate stock-outs and avoid associated problems.

Myth 8 : An inventory management system has to be expensive to work.

Historically, hospitals have been limited to expensive bolt-on modules from their ERP system vendors or cabinet based systems. These approaches require significant investments, including both financial and IT resources. Emerging solutions leverage cloud- and mobile based technology to implement inventory management solutions quickly—in as little as a week in some cases—without making large investments in hardware, while reducing the impact on internal IT resources.

Myth 9 : We don't really need mobile devices in our organization.

Mobile device adoption is growing quickly, with both business and clinical applications. What users are finding most convenient is the ability to use a single device for multiple applications, so today's nurses might be updating a patient record, checking for a drug interaction, while removing an item from inventory, using a single device loaded with multiple applications, all in a very simple, automated manner.

Myth 10 : Cloud-solutions won't work for what I need.

Hospital ERP managers often find their system one or more release levels behind because the cost to upgrade is prohibitive. Implementing cloud-based solutions puts the cost of maintaining servers and system upgrades on the solution provider. Using a cloud-based provider ensures hospitals can take advantage of new cost saving features in their inventory management solutions, as soon as they become available. And, supply data is well-suited for cloud solutions as it contains minimal if any HIPAA sensitive data.

"Hospitals have made significant investments in inventory management and still haven't gotten the results they need.

TOP 10 : Myths about hospital inventory management

Inventory solutions that are easy to implement, low cost with strong ROI, and easy for staff members to use cloud-based solutions and using mobile devices to deliver simpler ways to solve hospital's inventory management problems.

"As hospitals feel increasing pressure to reduce costs, drive quality and improve outcomes, addressing inventory management is imperative," said John Freund, CEO, Jump Technologies, Inc." Technology presents both a challenge and an opportunity.

Human Resource Management plays an important role in ensuring that the facilities delivery of services maintains the highest quality standards for optimum patient outcomes.

Analysing organizational objectives :

The main objective of Hilton hotel is to analyse the objectives of the organization which includes marketing, production, expansion, finance and sales which provides overall idea about the work to be done.

Inventory of present human resource :

The current number of employees, capacity, their performances and potential has been analysed by human resource storage system. It is helpful in willing the various job requirements, might be from internal or external source be easily estimated.

Forecasting demand and supply of human resource :

According to job profiles and positions requirements of human resources are to be estimated. Internal and external sources available to fulfil those requirements are also measured.

There should be a proper match of job specification and job description on one particular work, and profile of that person should be appropriate.

Estimating Manpower Gaps :

Human resource department compares human resource demand and supply, which provides information about deceit or surplus of human resource. Surplus tells that terminations are required and deceit tells requirement of new employees. To upgrade the skills of employees, proper development programs and trainings are done.

Formulating human resource action plan :

Human resource department plans are depended on whether there is surplus or de_cit in human resource in the organization. According to it a plan is finalized which includes new recruitment, interdepartmental transfer and training if there is de_cit of termination or voluntary retirement schemes.

Monitoring control and feedback :

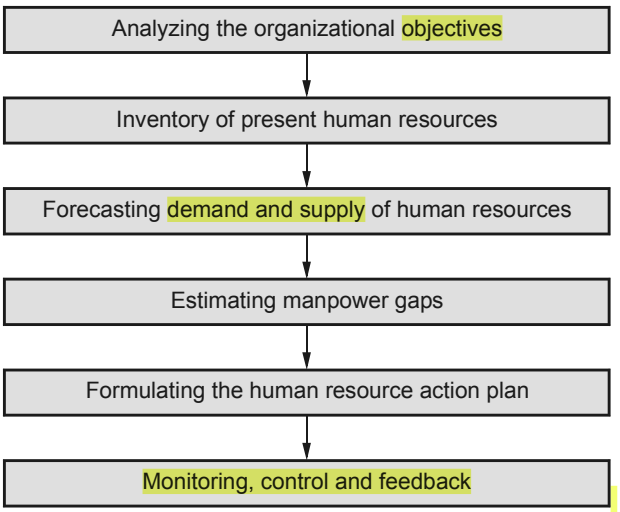
Human resources are planned according the inventories and requirements that are updated over a period. The plan is strictly monitored and the deficiencies are identified and sacked. There is a comparison between human resource plan and the actual implementation, which ensures that appropriate action and availability of the required number of employees for various jobs.

Factors influencing human resource planning :

Employment : Human resource planning is mostly affected by the employment situation in the country, if there is more unemployment there will be more pressure on the Hilton hotel from government to employ more and more people. If there is lack of skilled labour, then hotel will hire people from other countries also.

Organizational changes : There are regular changes in the Hotel Hilton, the organization keeps on upgrading the culture and system of the hotel and also shuts down some old systems. Due to all this there is always a need of removing and appointing new employees as per the requirements.

Technical changes in the society : As the technology is changing very fast, new people are required with new upgraded knowledge to scope up with new challenges. Sometime Hilton hotel retains their old employees and teach them new technology.



Components of Human Resource Management in Health Care

The purpose of HRM system is to produce, maintain, and develop a health care work force that allows the health sector to achieve its specific and social impact goals. The HRM system accomplishes its purpose through the inter-connected operation of several internal elements or components. They fulfill different types of functions: Strategic, operational, and support functions. The combined action of these elements produces some specific outputs and outcomes of the HRM systems.

Strategic Components :

Strategic components provide the general guidelines and framework for the functioning and interaction of the other components of the system:

a. **Policies :** Set the guiding principles for the functioning of all the other components of the Human Resource Management as a whole.
b. **Planning and strategic decision-making :** Helps to give dimension to and particulate the different elements of the system.

Operational Components :

These components focus on production and operation of the human resources. These components represent the supply and demand the HRM:

a. **Production :** Generates the human resources with the knowledge, skills, and attitudes to provide the required healthcare. The production component represents the supply side of the HRM system.

b. **Deployment :** Focuses on the appropriate distribution of these human resources where they are needed. This components reflects how supply and demand meets.

c. **Management and support :** Ensure that these human resources perform effectively, continuously and with the job satisfaction. This component represents the demand side of the HRM system.

Support Components :

These components provide the proper functioning of the operational components :

a. **Human resource administration :** Focuses on the several specific tasks of the administration of human resources as a specialized function.

b. **Regulation and quality assurances :** HRM system operate according to acceptable and pre-set criteria.

The inter-related functioning of the above components produces :

Outputs and outcomes : Exhibit for the each components.

2.6 Man Power Planning

Manpower planning is a technique to estimate and forecast the manpower requirements for an enterprise taking into consideration the existing and future objects of the enterprise. The estimates of human resources requirements are basedon the future plans of production expansion, nature of technology and structure of enterprises.

Manpower planning means to see whether the person to whom some work is assigned are capable to do it or not. The essence of manpower planning is the right man on the right job and the right job for the right man.

In other words , Manpower planning refers the process of determining and assuring that the organization will have an adequate number of qualified personnel.

Manpower planning involves the estimation of size and quality of the work force required by the enterprise to a accomplish its desired objectives. Shortage or surplus of manpower will be revealed by manpower planning, corrective steps can be taken in time.

Planning Significance of Manpower Planning includes the Importance of Staffing.

2.6.1 Staffing

- Staffing is now recognized as a separate management function.
- Previously it was considered to be a part of organization function of management. The reason for separating the staffing from organizing is to give proper emphasis to the actual manning of organizational roles.

- The staffing function has assumed greater importance these days because of rapid advancement of technology, increasing size of organizations and complicated behavior of human beings.
- The management of the enterprise must give due importance to human resources planning, recruitment, and selection, training, appraisal and remuneration of workers.

Nature of Staffing

The nature of staffing are as follows :

1. Managerial Responsibility

Staffing is a basic function of management. Every manager is continuously engaged in performing the staffing.

2. Manpower Forecasting

It provides a basis for recruitment, transfer and training of employees.

3. Cost Saving

It reduces labour cost by avoiding surplus manpower, over-staffing can be known quickly

4. Focusing Experts

It helps in identifying talented employee available in the organization. Training for promotion could be given to the talented employees

5. Business Diversification

It helps in the growth and diversification of business. Suitable manpower is made available to handle jobs. It leads to greater awareness of the significance of sound personnel management throughout the enterprise.

Importance of Staffing

Continuous Function Staffing function is to be performed continuously. Every manager is engaged in various staffing activities. He is to guide and train the workers and also evaluate their performance on continuous basis. Every manager should use human relations skill in providing guidance and training to the subordinates.

Successful staffing function provides the following benefits:

1. **Efficient Performance :** The efficient performance of the company depends on the quality of the people employed. This has increased the significance of staffing.

2. **Use of Latest Technology :** Many significant changes are taking place in technology. In order to make use of the latest technology, the appointment of right type of persons is necessary.
3. **Development of Manpower :** The management has to train and develop the existing personnel for future promotion. This will meet the requirements of the company in future.
4. **Optimum Use of Manpower :** Management has to spend money on recruitment and selection, training wages, salaries, etc. In order to get the optimum out from the personnel.
5. **Proper Motivation :** The workers are to be motivated properly through financial and non-financial incentives.
6. **Higher Morale :** Right type of atmosphere should be created for the workers to contribute to the achievement of the organizational objectives. This will increase the morale of the employees.

Elements of Staffing Process

The scope of staffing is very wide. The elements, steps or sub-activities of staffing process are as follows :

1. **Manpower Planning :** It is concerned with the determining the number and types of star required for the organization.
2. **Recruitment :** Recruitment is the process of searching prospective employees and encouraging them to apply for jobs in the enterprise.
3. **Selection :** Selection is the process of selecting best suited candidates for the jobs from among those who have applied for these jobs in the enterprise.
4. **Placement of Personnel :** The new employees need to familiarized with their units, supervisors and fellow employees. They should be placed on the jobs for which they are suited.
5. **Orientation or Induction Orientation :** Induction Orientation is a process of familiarizing the new employees with their enterprise, department, work unit, work group, superiors, fellows and subordinates etc.
6. **Remuneration :** Compensation of workers for their efforts involves fixation of their wages and salaries.
7. **Training :** The art of acquiring knowledge and skill of doing a particular job in a particular manner.
8. **Development :** The development of knowledge, efficiency and aptitude of different officers of managerial level so that they may contribute their feeling, cooperation and contribution towards the accomplishment of task.

Two Marks Questions with Answers

Part - A

Q.1 Define HRM.

Ans. :

- Human Resource Management (HRM) is concerned with employees both as individuals and as a group in attaining goals.
- It is also concerned with the behavior, emotional and social aspects of personnel. It is concerned with the development of human resources i.e., knowledge, capability, skill, potentialities, and attaining and attending employee goals, including job satisfaction.
- Human resource management is pervasive in nature and it is concerned with the management of human resources of an organization consisting of all individuals engaged in any of the organizations activities at any level.
- HRM covers all levels i.e. low, middle and top and categories of employees such as unskilled, semiskilled, skilled, technical, professional, clerical, managerial and non-managerial. It covers both organized and unorganized employees.

Q.2 List the objectives of human resource management.

Ans. :

- Obtaining and developing the right personnel,
- Providing effective motivation and leadership.
- Paying attractive remuneration and treating them like brothers and sisters,
- Effective utilization of human resources in the achievement of organizational goals.

Q.3 Write down the HRM roles.

Ans. : HRM roles include the following

a. To apply quality and productivity principles to improve HRM function.

b. To make consistent, clear, complementary and synergistic policies

c. To facilitate implementation of quality and productivity interventions

Q.4 What are the benefits of Human Resource Development ?

Ans. : Some of the benefits of Human Resource Development are as follows :

a. Systematic planning to support the organizational mission. Increased capacity to achieve the organization's goals

b. Clear definition of each employee's work responsibilities and link to organization mission

c. Greater equity between compensation and level of responsibility

d. Defined levels of supervision and management support

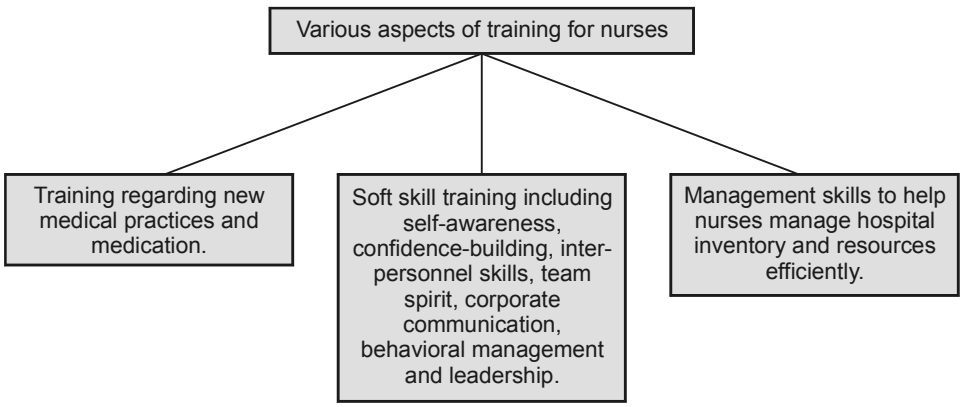
e. Increased level of performance and efficient utilization of employee's skills and knowledge

f. Cost savings through improved efficiency and productivity

g. Increased ability to manage change

Q.5 Sketch the various aspects of training for hospital employees.

Ans. :



Q.6 How can the behavioral skills of its employees be enhanced ?

Ans. :

- To enhance the behavioral skills of its employees, hospitals should initiate leadership programmes for its doctors and also the staff.
- The environment in which health care professionals practice is one in which conflict and the need for negotiation abounds.
- In order to develop as managers and senior leaders, individuals must know how their peers, subordinates, and supervisors perceive them.

Q.7 What does the training program include ?

Ans. : A hospital generates medical wastes which may be harmful if not properly disposed. As a result their training program include :

- How to handle bio-hazard, used syringes and other medical wastes.
- Separation of waste into recyclable and non-recyclable components.
- learning how to operate hospital oriented cleaning machines.
- Maintain a log of cleaning activities done.

Q.8 List out the HRM practices and policies.

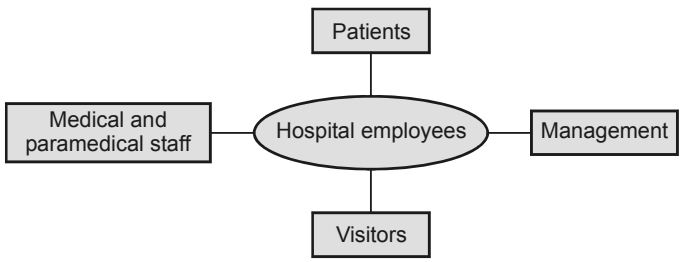
Ans. : HRM plays a significant role in global healthcare systems. Human resource management refers to the practices and policies needed to carry out the personnel aspects of management.

These include :

a. Analyzing jobs
b. Planning manpower needs and recruiting competent people
c. Selecting best people
d. Appraising performance and potential on ongoing basis
e. Socializing, training and developing people
f. Managing compensation
g. Communicating
h. Building employee commitment

Q.9 What are all the parameters surrounding the Hospital Employee ?

Ans. :



Q.10 List out the managerial functions in HRM.

Ans. :

- Planning
- Organising
- Directing
- Controlling

Review Questions

Part - B

Q.1 Explain the managerial and operative functions in HRM ?
Q.2 Explain about Manpower Planning and its significance.
Q.3 Explain in detail about the profile and role of HR manager ?
Q.4 Write few ways to develop HRD Programs in Hospitals Training Programs.
Q.5 Write down about Human Resource Inventory (HRI) in detail.
Q.6 Write the factors influencing Human Resource Planning.

❑❑❑

Unit III

Recruitment and Training

Syllabus

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

Contents

3.1 Departments in Hospital

Organization of each hospital varies according to the ownership and administration. The governing body of the hospital which is usually called board of trustees is responsible for the policies of the institution. Under the governing body there is a head of the hospital, who is administrator or director.

It is impossible for the administration to carry out the total work involved in the hospital management. Therefore, the responsibility is delegated to the departmental heads who are specialists in their field.

There are several departments are found in hospitals namely

i. Outpatient department (OPD)
ii. Inpatient Service (IP)
iii. Medical Department
iv. Nursing Department
v. Paramedical Department
vi. Physical Medicine and Rehabilitation Department
vii. Operation Theatre Complex (OT)
viii. Pharmacy Department, Radiology Department (X-ray)
ix. Dietary Department, Non-professional Services (Business Management)
x. Medical Record Department (MRD) and
xi. Personnel Department.

i) Outpatient Department (OPD)

Most hospitals now have an OPD. The advantage of OPD is that much of the investigative unit and curative work can be done there without admitting the client, thus curtailing medical expenses.

The scope of OPD includes the following :

1. Consultation, investigation, procedures, specialty services.
2. Preventive and promotive health care: Clinics, which include: diabetic, antenatal, postnasal and under five.
3. Rehabilitation services (physiotherapy, occupational therapy etc)
4. Health education
5. Counseling

ii) Inpatient Service (IP)

If OPD is the show window of the hospital, the IP is the heart of the hospital. The IP service provides lodging, diet and medical care. Conveniently, it can be divided into:

- Wards and rooms
- Nurses station
- Dietary services
- Sanitary facilities and other requirements
- The Ward can be Intensive Care Wards (ICU), Intermediate Care Wards and Isolation Wards.

iii) Medical Department

The medical departments may include, but not limited to the following :

Internal Diseases Department :

This Department includes specialities of cardiology (related to heart), dermatology (related to skin), diabetics (related to pancreas), endocrine glands (related to hormone), digestive system, hematology diseases (related to blood), infectious diseases, internal diseases, kidney and urology unit, neurology (related to brain and nerves), psychiatry clinic, lung diseases, and rheumatic diseases (related to joints and connective tissues).

Surgery Department :

This department deals with general surgery unit, orthopedics unit, urinary tracts surgery, plastic surgery, brain and neurology surgery, children surgery, ophthalmic surgery, and Ear Nose Throat (ENT) surgery.

Anesthesia :

Doctors in this department give anesthetics for operations.

Gynecology Department :

These departments investigate and treat problems of the female urinary tract and reproductive organs.

Pediatrics Department :

It is the department that deals with the medical care of infants, children, and adolescents, and the age limit usually ranges from birth up to the age of 18 years.

Dentistry Department :

This department deals with the diagnosis, prevention, and treatment of diseases, disorders and conditions of the oral cavity, especially the teeth, and to an extent related conditions in the jaws and face area.

Emergency Department :

An emergency department, also known as accident and emergency department, emergency room, or casualty department is a medical treatment facility specializing in acute care of patients who are present without prior appointment, either by their own means or by ambulance.

iv) Nursing Department

Nursing department provides nursing to patients at all general and specialized clinics in addition to specialized care services to inpatients at all units.

The nursing department is the organizational structure through which nurses provide nursing care for clients under the jurisdiction of the institution. The nursing department consists of nursing service and nursing education. The primary purpose of the nursing service is to provide comprehensive, safe, effective and well-organized nursing care through the personnel of the department. The personnel consists of nursing superintendent, assistant nursing superintendents, head nurses and staff nurses. All of these are registered nurses, other personnel who function in the nursing service department may include the auxiliary personnel nurse aids and domestics who handle the non-nursing services.

The nursing education section has the responsibility of preparing nursing students to become professional nurses. Uplifting the standard of nursing by inservice education and refresher courses etc., are included in the functions of this department. The personnel consists of principal or director of nursing education, the associate professors, assistant professors, tutors and clinical instructors.

v) Paramedical Department

Paramedical personnel, also called Paramedics, health-care workers who provide clinical services to patients under the supervision of a physician.

- Paramedical departments are adjunctive to the practice of medicine in the maintenance or restoration of health and normal functioning. They include :

Pathology Department

The following laboratories are usually found in the pathology department :

1. **Bacteriology laboratory :** This laboratory studies about the bacteria and their toxins.
2. **Biochemistry :** this is concerned with the chemistry of living organisms and of vital process.
3. **Haematology laboratory :** it is responsible for making haemoglobin determinations, coagulation time studies, red and white cell counts and special blood pathology studies for anaemia and leukaemia etc.
4. **Parasitology laboratory :** it studies the presence of parasites, the cyst and ovas of the parasites that are found in the faeces.
5. **Serology laboratory :** it does blood agglutination tests, Wassermann tests, V.D.R.L. etc.
6. **Blood bank :** it has the responsibility for collecting and processing all blood used in the hospital for transfusions. It makes studies on newborn infants who may have haemolytic diseases and does antibody studies on the prenatal client.
7. **Histopathology department :** it prepares tissues for gross and microscopic studies.

Laboratory services (LAB) must be available day and night. Must be located on the ground floor and should be easily accessible to the outpatients. Space requirement of Lab is :

- Primary space: Required for technical work.
- Secondary space: space utilized for administrative purpose.
- Circulation space: for unchattered movement of personnel and equipment.

There should be sufficient staff and work arrangement for the efficient functioning of the department.

vi) Physical Medicine and Rehabilitation Department

This department deals with clients who have functional disabilities resulting from disease conditions/injuries. This department can have physiotherapy, occupational therapy, speech therapy and vocational training. This department will be under the direction of a well – qualified physician who has special training in the field of physical medicine and rehabilitation. His staff should include therapists with qualification in the various specialties.

vii) Operation Theatre Complex (OT)

This consists of one or more operation theatres and other facilities. OT complex must be located in a place where there is easy and quick access to the delivery suite. These should be four zone – outer zone, clean zone, sterile zone, disposal zone. There should be a sterilization room with an autoclave. The number of OT depends on many factors. There should be an arrangement for good lighting and ventilation.

Delivery suite is the place where births take place. The delivery suite is divided into three zones are first stage room, second stage room, delivery room. The room should have good lighting and ventilation. It should have adequate number of staff.

viii) Pharmacy Department, Radiology Department (X-ray)

Pharmacy Department :

Pharmacy is a crucial factor in medical factor. It should be planned and organized well. The pharmacy department has the responsibility for selecting purchasing, compounding, storing and dispensing all drugs and medications. The pharmacy should be under the supervision of a registered pharmacist.

This department is responsible for providing patients with medicines prescribed by specialist physicians and provision of services corresponding to applicable drug precautions and professional regulations.

Radiology Department (X-ray)

The department must be located in a place where there is easy accessibility for OP and IP clients. Of the total space, the distribution for various rooms is as follows:

- X-ray rooms : 25 %
- Film processing : 10 %
- Administration : 30 %
- Waiting area : 5 %
- Circulation area : 30 %
- Sufficient number of staff should be available. Staff must be protected against radiation hazards. This department has the following services.
- Radiographic examinations and their interpretations
- X-ray, radium, radioactive cobalt and other radioactive therapy
- Ultrasonography, Echocardiogram, C.T. Scan, MRI and ECG.

ix) Dietary Department

The dietary department has the responsibility for the food service to the client according to their needs and doctor's prescription. This department is responsible for the health teaching in regard to proper diet of the client upon their discharge from the hospital.

Non-Professional Services (Business Management)

Admitting Department

The admitting department has the responsibility for admitting the client to the hospital. The importance of this department lies in the public relation that is maintained.

The client, his family and his friends must be treated with utmost respect, courtesy and tact. The enquiries made about the hospital and other clients are to be answered appropriately.

Administration

The administration of the entire hospital cannot be vested on the administrator alone. It is a collective responsibility of a group of people. The administrative staff, depending upon the size of the hospital, is composed of the administrator, the assistant administrator, the business manager and the departmental heads.

Purchasing Department

The purchasing department has the responsibility for purchasing all supplies and equipments for the hospital.

Accounts (Business Office)

This department has the responsibility for collecting the money which is owed to the hospital, paying for the supplies and equipment, handling all records pertaining to hospital finance, keeping records of assets and liabilities and assisting with budget. The business manager is responsible for the functions of the department. The accountants help him.

Housekeeping

The housekeeping department has one main function – to keep the hospital clean.

Laundry

The laundry takes care of the entire team linen of the hospital. It has the following functions :

- Washing the dirty linen
- Repairing the torn linen
- Replacing the condemned linen

Mechanical Department

Electricity, water supply, heat, air-conditioning etc., are looked after by the mechanical department.

Maintenance Department

The maintenance department keeps the hospital in a good state of repair. Carpenters, painters, welders, gardeners etc., are included in the personnel of this department.

Central Supply Department

The purpose of the central supply department is to prepare and furnish other departments with equipment and supplies needed in the client care e.g. syringes, needles, treatment trays.

Social Service

The social service department assists in obtaining financial aid for clients and their families. This department services also as a liaison between the client and community agencies.

Pastoral Care

Under the leadership of the chaplain, the pastoral care team meets the spiritual needs of the client.

Some departments function as a part of other departments already mentioned, e.g., the operating room functions as part of the department of surgery. The outpatient department is a combination of several departments. The emergency room functions along with the department of medicine. Sometimes according to the load of client care, the services may be given in special department such as intensive care, immediate care, and ambulatory care units.

Hospital Waste Management

It is newly set department which takes care of the disposal of the entire waste both solid and liquid.

Central Sterile Supply Department (CSSD)

This is important department which supplies sterile articles throughout the hospital. CSSD handles contaminated, clean and sterile articles.

Work flow in CSSD: Receiving – Washing – Drying – Accounting – Sorting – Packing – Sterilization – Sterile storage – Issue. The articles should move in one direction from receipt to issue. The location should be such that the wards and departments can have easy access.

x) Medical Record Department (MRD)

This is an integral part of every modern hospital. The guiding principle is "people forget, records remember." Functionally the MRD is divided into (1) Reception (2) Medical Records Library (3) Statistical Section.

- Weeding out of clients file, is done in successive years.
- OP Records : 5 years.
- IP Records : 10 years.
- Medico legal Records : 15 years.

Now with computerization the files can be entered into the computer and can be utilized when required.

Every health care facility should have arrangement for handling medicolegal cases. The hospital administration, as well as the doctors, nurses and other staff members should be made aware of the legal implications involved in the client's care, so that lot of problems can be avoided.

xi) Personnel Department

This department in the hospital must be well versed with law of the land especially the labour laws and is responsible for recruitment, selection, promotion, transfer, termination etc. The personnel department functions under the personnel officer who is qualified in the personnel administration. The personnel department has the following functions, directed to the welfare of the personnel.

- Recruitment of personnel
- Interviewing prospective employees
- Promotion and transfer of employees
- Termination of employment
- In service training programme
- Remuneration and incentives

- Safety
- Health programme
- Recreation

3.2 Recruitment and Selection

- Human resource management is a process of bringing an organization and its employees together so that the goals of the employees as well as those of the organisation are met.
- It is part of the management process which is concerned with the management of human resources in an organisation. It tries to secure the best from employees by winning their confidence and wholehearted cooperation.

Human resource management, therefore, involves all managerial decisions, philosophy, policies and practices that directly influence human resource. It is a process consisting of acquisition, development, motivation and maintenance of human resources. It means that human resource management includes human resource planning, job analysis, job design, acquisitions, training and development, compensation, benefits and rewards, safety and welfare, motivation, employee participation in management, organisational development, performance appraisal, job evaluation, human relations, employee counselling and human resource information system.

Personnel management is concerned with the manpower planning, recruitment, selection, orientation, salary administration, performance appraisal, training, working conditions, safety, welfare, promotion, transfer, collective bargaining, disciplinary action and resignation/termination/retirement. In another way, "Personnel Management or Human Resource Management is the planning, organising, directing and controlling the procurement, development, compensation, integration and maintenance of people for the purpose of contributing to organisational, individual and social goals."

3.2.1 Steps in Human Resource Planning

Human resource planning is a process that is part of the strategic plan. It involves addressing specific needs within the organization, based on the company's strategic direction.

- The first step in HR planning is determining current and future human resource needs. In this step, current employees, available employees in the market, and future needs are all analyzed and developed.

- In the second step of the process, once we know how many people we will need to hire, we can begin to determine the best methods for recruiting the people we need. Sometimes an organization will use head hunters to find the best person for the job.
- After the recruiting process is finished, the HR manager will begin the selection process. This involves setting up interviews and selecting the right person for the job. This can be an expensive process, so we always want to hire the right person from the beginning.
- HR managers also need to work through compensation plans, including salary, bonus, and other benefits, such as health care. This aspect is important, since most organizations want to use compensation to attract and retain the best employees.

The HR manager also develops training programs to ensure the people hired have the tools to be able to do their jobs successfully.

3.2.2 Role of Human Resources Manager in Health Sector

Human resources (HR) managers have a particularly important role in the health sector. Fig. 3.1 shows the tasks under the HR management cycle

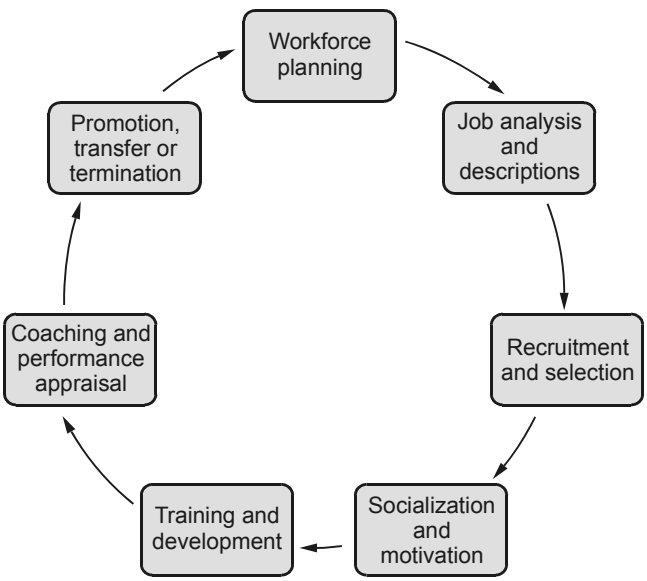


Fig. 3.1 HR Management Cycle

HR managers get involved in a wide range of activities, including:

- **Organisational development –** working with clinicians to design new ways of working and to reorganise the workforce to meet new priorities.

- **Staff development –** HR managers deliver the NHS commitment to creating a learning culture in which staff can consolidate their existing skills and build on their experience.
- **Recruitment –** arranging the whole recruitment process, from writing job descriptions and advertising to interviews with candidates and appointing and inducting of new staff
- **Administration –** ensuring all the day-to-day activities that affect people's working lives function smoothly: terms and conditions, contracts of employment, disciplinary matters and work-life balance.
- **People-management strategies –** developing plans so that the organisation's priorities and workforce strategies work together.

Many HR managers will prepare an inventory of all current employees, which includes their educational level and abilities.

Once the HR manager has performed the needs assessment and knows exactly how many people, and in what positions and time frame they need to be hired, he or she can get to work on recruiting, which is also called a staffing plan.

Staff should be clear on individual roles and responsibilities in terms of nursing, midwifery and care staffing capacity and capability. Whilst recommendations on staffing capacity and capability presented to the board should be the result of joint working and joint ownership of the issues, there are some distinct roles and responsibilities for different parts of the organisation involved in the staffing process. These are not intended to be comprehensive and will also change as innovation occurs and new roles develop.

3.2.3 Recruitment

Recruitment is an important job of the HR manager. Knowing how many people to hire, what skills they should possess, and hiring them when the time is right are major challenges in the area of recruiting. Hiring individuals who have not only the skills to do the job but also the attitude, personality, and fit can be the biggest challenge in recruiting. Depending on the type of job you are hiring for, you might place traditional advertisements on the web or use social networking sites as an avenue. It is important to keep in mind that the recruiting process should be fair and equitable and diversity should be considered.

Recruitment may be defined as the process of searching for prospective employees and stimulating them to apply for jobs in the organisation. The information generated in the process of writing the job description and the candidate profile may be used for

developing the 'situations vacant' advertisement. The advertisement may be displayed on the factory office gate or else it may be got published in print media or flashed in electronic media. This step involves locating the potential candidate or determining the sources of potential candidates. In fact, there are a large number of recruitment avenues available to a firm which would be discussed latter when we talk about the various sources of recruitment. The essential objective is to create a pool of the prospective test and the interviews are offered an employment contract, a written document containing the offer of employment, the terms and conditions and the date of joining.

Health staff is often recruited without conducting an in-depth analysis of competency requirements. There is a growing belief that it is simply impossible to improve a person's performance until specific competencies required for satisfactory or superior performance are identified. It is only after these competencies are identified that staff can be selected. Some new recruits may require skill or knowledge enhancement to be able to perform optimally.

3.2.3.1 Benefits of Recruiting

Engage patients, ward staff, hospital management and governors in assessing the quality of care. Receive training in Person, Interaction and Environment observations of care.

Identify areas of achievement and improvement to enable action planning. Encourage team reflection Get awarded and recognized for achievements. Achieve a continuous focus on improvement to quality of care for sick and older people.

3.2.4 Selection

Selection is the process of choosing from among the pool of the prospective job candidates developed at the stage of recruitment. Even in case of highly specialised jobs where the choice space is very narrow, the rigour of the selection process serves two important purposes :

i) it ensures that the organization gets the best among the available, and

ii) it enhances the self-esteem and prestige of those selected and conveys to them the seriousness with which the things are done in the organisation.

The rigour involves a host of tests and interviews, described later. Those who are able to successfully negotiate the test and the interviews are offered an employment contract, a written document containing the offer of employment, the terms and conditions and the date of joining.

After you have reviewed resumes for a position, now is the time to work toward selecting the right person for the job. The following task are carried out under the selection process.

1. Time to review resumes
2. Time to interview candidates
3. Interview expenses for candidates
4. Possible travel expenses for new hire or recruiter
5. Possible relocation expenses for new hire
6. Additional bookkeeping, payroll, 401(k), and so forth
7. Additional record keeping for government agencies
8. Increased unemployment insurance costs
9. Costs related to lack of productivity while new employee gets up to speed

Because it is so expensive to hire, it is important to do it right. First, resumes are reviewed and people who closely match the right skills are selected for interviews. Many organizations perform phone interviews first so they can further narrow the field. The HR manager is generally responsible for setting up the interviews and determining the interview schedule for a particular candidate. Usually, the more senior the position is, the longer the interview process takes, even up to eight weeks.

After the interviews are conducted, there may be reference checks, background checks, or testing that will need to be performed before an offer is made to the new employee. HR managers are generally responsible for this aspect. Once the applicant has met all criteria, the HR manager will offer the selected person the position. At this point, salary, benefits, and vacation time may be negotiated. Compensation is the next step in HR management.

3.2.4.1 Skills for Healthcare Management

Healthcare managers, also referred to as medical and health services managers. Healthcare managers serve in a variety of roles to pan, direct, and coordinate healthcare services in various organizations and settings. Within the industry, employment of medical and health services managers is projected to grow at a faster rate than the national average, with the predicting enhancements.

Healthcare managers direct entire facilities, specific departments, or medical practices and are therefore required to possess several skills including :

Analytical Skills – Understanding and abiding by current regulations, as well as adapting to new laws.

Communication Skills – Effectively communicating to convey policies and procedures to other health professionals and ensuring compliance with current regulations and laws.

Detail Oriented Skills – Paying attention to details, including organizing and maintaining the scheduling and billing information for substantial facilities like hospitals.

Interpersonal Skills – Discussing staffing problems and patient information with other professionals, such as physicians and health insurance representatives.

Leadership Skills – Hiring, training, motivating, and leading staff, as well as finding ways to creatively solve staffing and administrative issues.

Technical Skills – Staying current in healthcare technology advancements and data analytics for coding and classification software usage or Electronic Health Record (EHR) system implementations.

Critical Thinking – Identifying strengths and weaknesses, and finding alternative solutions or approaches to problems through logic and reasoning.

Active Listening – Offering one's full attention with regard to what others say, asking questions when appropriate, and not interrupting during inappropriate times.

Coordination – Adjusting one's actions with regard to another's actions for effective work collaboration.

Judgment and Decision Making – Examining both benefits and consequences of potential actions to help determine those most appropriate.

3.2.5 Sources of Recruitment and Selection

The recruitment and selection process are the platforms for success in any organization. The reason is that Human Resource (HR) has a significant role in the overall performance of any organization. Job redesigning, integrating information on job design in training and management development programs, and executing them to ensure that sound human resource policies and practices are developed, are all done by the HR department. It is vital to have a well-organized employment policy and strategy. Therefore, recruitment process in an organization must be effective to attract the best talent. The responsibility of the HR manager in a healthcare industry is versatile and complicated too. Manpower planning and recruitment takes a lot of thought process. The primary data collection for the study was conducted by personal conversation with the employees of the selected hospitals.

The HR specialists of the recruitment department of the organization frequently face new tasks. The largest confrontation in recruitment is to recruit the best potential aspirant

for the organization as they are already aware of lack of motivation and technological issues. Candidates for lower positions are not that rewarded. To find the best candidate for their organization, they have to face and overcome various issues.

3.2.5.1 Sources of Recruitment and Selection

Hospital Management or any Healthcare industry follows different approaches of recruitment and selection procedure which is shown in Table 3.1.

Table 3.1 : The sources of recruitment and selection process

Internal Sources	External Sources
Promotions and advertisements	Press advertisements
Retired employees	Internet advertisements
Transfers	Campus Recruitment through placements agencies and consultants
Employee Recommendations	
E-Recruitments	

Internal Sources

a. Promotions and advertisements

Firms offer promotion to existing employees because firms need not train them as they are familiar to the policies and working environment of the organization. This saves a lot of time,money and efforts. Employee is well-known with the working culture and functioning style. In addition, the purpose of promotion and advertisement in the hospital is to give an opportunity to the doctors to apply for the promotion. In this, vacancies in a particular department are notified. Interested candidates can make a formal application for the promotion. This technique helps in locating people who desire to shift in their own branch.

b. Retired employees

Many companies call or appoint doctors retired from army or from government hospitals of rural areas. This is useful as the doctors from military background or from rural area hospitals have already got better exposure (related to variety of patients and their diseases). The technique is beneficial because it gives a sense of pride to the retired army officers and it will help the organization to minimize the cost of recruitment, selection and training.

c. Transfers

Transfer is a process of recruitment. This concept is followed by the employers to fill the required position where there is scarcity of manpower.

d. Employee reference

In this source of recruitment, personnel are asked to recommend people for required position. Since the personnel is well-worse with the working environment of the firm, he will suggest only those people who can adjust to the situation.

e. E - recruitment

E- Recruitment is the utilization of technology to help the staffing process for a smooth functioning. The job searchers send their applications through e-mail or place their CV's on employment portal, which can be listed out depending upon their requirements. Now with emergence of employment portals, searching of job has become faster, simpler and easier. Employment portals are the accessible platforms through which recruiters and job seekers are linked to each other. These portals have gained acceptance because of the growing access and availability of connectivity on the internet. Employment portals were used for sourcing candidates for some of the following positions:

- Relationship Manager
- Nursing Candidates (Female candidates only)
- Dieticians
- Lab Technicians
- CSSD Technicians and many more.

External sources

The sources are as follows :

a. Press Advertisements

It is the most accepted and one of the oldest sources of recruitment method. Advertisements for the job are specified in well-known newspapers; the information about the job is given. Candidates were given a communicating address where they can send their application within a stipulated time.

b. Internet advertisements

Internet advertising has an impact because of its straightforwardness and its reach. Therefore, government and private firms are using the internet as a medium of advertisement to recruit desired candidates. Candidates can apply for their suitable jobs

from several employment sites like naukri.com, monster.com, etc. The internet is a definite standard to advertise and to reach the target audience easily and effectively.

c. Campus recruitments through placement agencies/consultants

When companies search for fresh graduates or new talent, then they start selecting the manpower through campus placement. Campus recruitment process is organized by various placement agencies for hiring the candidates in the various departments like doctors, technicians, nurses, etc. On behalf of client companies, there are various private consultancy firms that perform recruitment function by charging a certain fee. The reason is simple because, Indian companies are slowly but surely realizing that to survive in this competitive environment, they need to appoint the best people to work for them. If a firm decides to contract out its recruitment processes or activities, it will be essential to find and go for suitable recruitment consultancies, which can deliver results according to the necessities of the organization. Outsourcing decisions influences the strategic choices of the HR function.

As in healthcare industry, many hospitals hire female candidates for the nursing staff because there is a huge demand in the industry. For this purpose, a hospital approaches various colleges and universities wherein fresh B.Sc. nursing graduates were interviewed. The main purpose of this visit is to tie-up with the college as a result of which fresh nursing graduates would be directly placed with hospitals. This is an extremely important step considering the huge requirement of nursing candidates at private hospitals.

3.2.6 The Process of Recruitment and Selection

- Information about the vacant positions is obtained from the Head of Department (HOD).In case the position is new, the personnel requisition form is filled which is duly approved by the HOD, HR officer and a member of the governing council.
- If the position is not new, CV's are sourced from various job portals site. In case the requirement is really urgent, consultants are also referred. The HR team is given the information about the vacant positions for a particular opening.
- The CV's of the candidates are screened by the HR officer and appropriate CV's are forwarded to the concerned HOD for approval. If the CV is found suitable, the interview is scheduled.
- The candidates are informed about the first round of interview over the phone or through e-mail. In this initial screening, the HR officer judges the candidates on his/her communication skills.

- The HR officer attaches an assessment sheet to the candidates' CV. This assessment sheet is used for reference in the next round of interview.
- Only if the candidate is found suitable by the HR officer, they are sent for the second round of interview which is taken by the head of the concerned department and it usually deals with technical questions from his/her field. On the basis of the success/failure in second round, the HR team at hospitals prepares the remuneration packages. These are proposed packages which are then negotiated and finalized.
- Further, they are called for the medical check-up to determine whether the candidate is physically fit or not for the offered job. While coming for the medical check-up, the candidates are also required to carry relevant documents with them.
- When the candidate goes for the medical check-up, the proposal sheet of the candidate is prepared by referring the assessment sheet. This proposal sheet contains the grade of the candidate, CTC offered, and his/her reporting officer. This proposal sheet is attached to the offer letter which will be given to the candidate. Once the medical reports come, the fitness of the candidate is intimated to the concerned people in the HR Team. Once the candidate is found to be medically fit to join the hospital, the offer letter is given to the candidate with confirmed date of joining.

3.3 Training and Development of Hospital Employees

A Hospital is a place where Patients come up for general diseases. The most important asset of a hospital is the people who work there. Employees, whether they are the hospital's security guards, lab technicians, nurses or even physicians, are responsible for carrying out the hospital's duty to care for patients. Among the core activities of HRM, training and development are important.

In **Hospital management,** largely, personnel department has been associated with procuring and hiring the human resources. But, after the newly appointed employees join the organization, it is necessary to impart training to them in order to make them competent for the jobs that they are supposed to handle. In modern healthcare industrial environment, the need for training of employees is widely recognized to keep the employees in touch with the new technological developments. Every company must have a systematic training programme for the growth and development of its employees. It may be noted that term 'training' is used in regard to teaching of specific skills, whereas the term 'development' denotes overall development of personality of the employees.

Training frequently refers to on the job training or short course training. While education usually refers to more formal and long term training. At present, nonacademic public hospitals in many countries serve as training sites for health personnel both at undergraduate and postgraduate levels. The Hospital Authority plays a pivotal role in designing, organizing and delivery of training courses. Cost is not a concern for the provision of training services.

3.3.1 Training Guidelines

Training health-care personnel in implementing the policy is thus critical if a waste management programme is to be successful. The overall aim of training is to develop awareness of the health, safety, and environmental issues relating to health-care waste, and how these can affect employees in their daily work. It should highlight the roles and responsibilities of health-care personnel in the overall management programme. Health and safety at the workplace and environmental awareness are the responsibility of all and in the interests of all.

Employees to be trained

All hospital personnel, including senior medical doctors, should be convinced of the need for a comprehensive health-care waste management policy and the related training, and of its value for the health and safety of all. This should ensure their collaboration in the implementation of such a policy.

Separate training activities should be designed for, and targeted to, four main categories of personnel :

- hospital managers and administrative staff responsible for implementing regulations on health-care waste management;
- medical doctors;
- nurses and assistant nurses;
- cleaners, porters, auxiliary staff, and waste handlers.

Since action is needed at management level, by those producing the waste as well as by the waste handlers, training of all of these categories of personnel is equally important.

Medical doctors may be educated through senior staff workshops and general hospital staff through formal seminars. The training of waste managers and regulators, however, could take place outside the hospitals, at public health schools or in university departments.

Systematic needs assessments and evaluation of learning achievements and impacts on performance of personnel and hospitals are employed to guide the process.

Hospitals provide facilities like :

1. Consultation by Doctors on Diseases.
2. Diagnosis for diseases.
3. Providing treatment facility.
4. Facility for admitting Patients (providing beds, nursing, medicines etc.)
5. Immunization for Patients/Children.

Almost all workers wish to contribute to the hospital's productivity and toward the achievement of its goals; however the main obstacles to their endeavors may be lack of knowledge, insufficient training, and failures of process. Any country wishing to train its own doctors will need one or more teaching hospitals.

Human Resources Department in hospital can assist in the effective management of these "Human resources" by attracting and maintaining employees, providing the resources needed for them to successfully accomplish their assignments and to facilitate positive employee-employer relations.

The HR department in hospitals must conduct staff training such as :

1) Entry training / New-hire training /orientation training
2) Job training
3) On-going training / continuing education
4) Training for promotion
5) Refresher training

New-hire orientation training provides an overview of the job expectations and performance skills needed to perform the job functions. The orientation provides information about the hospital's mission, vision and values and helps build the employee's sense of identification with the organization. The orientation enables the new employee to become familiar with the entire organization and their own work area and department. Orientation training mostly comprises of topics, include fire and safety programs, universal precautions, physical facility of the hospital, organizational structure, plus a detailed review of the department policies where the new employee will be working.

The training program will allow staff the opportunity to develop new workplace skills as well as provide a program that allows and even encourages critical thinking and problem solving. The Human Resources Department does this by establishing policies

and procedures for the work environment and the effective management of employee workplace issues, establishing a performance management system for worker and ensuring that supervisors utilize these tools to the mutual benefit of both the individual employee and the hospital.

Continuing education encompasses everything from simple memos and news written by department directors to staff with news of a continuing education program for technical and administrative staff. An example of a continuing education program might be an Infection Prevention training for the cleaners, laundry and kitchen staff. Taking a look at hospital staff training programs, a number of factors creates problems.

Problems encountered in hospital staff training programs are as follows :

1. Lack of rational and systematic assessments of the needs for training at all levels.
2. Fragmentation and low accountability of responsible agencies in organizing training programs.
3. Low concern for associated costs by management, as they think training courses need a lot of money for mid- and high-level hospital employees.

An employee is now a key asset who can play a crucial role in further expansion of the organization. In future, hospital administration may change the attitudes and practices of hospital managers towards more cost consciousness. As a result, autonomous public hospitals may need specific payments in order to undertake training programs. They can even reject to perform these training programs if financial incentives are not strong enough. This raises the concern of cost escalation in organizing health personnel education in the future. Regulatory measures as well as financing mechanisms are thus needed.

Medical errors and adverse events in hospitals are common and many of them are potentially avoidable. In addition to their capacity to harm patients, these potentially avoidable outcomes can increase the length and cost of stay adding considerably to the economic difficulties of hospitals. Nowadays, consideration of patient satisfaction is an integral part of hospital management across the world and also an essential necessity for healthcare providers. Issues related to healthcare quality are crucial to any health system anywhere in the world.

The present problem seen in most of the hospitals is the shortage of trained and skilled employees that is measured in terms of the patient treatment, patient satisfaction and patient experience. Numbers of investigations are done in this field regarding quality care of hospitals and need of training of hospital employees in public and private hospitals. It is observed that people belonging to high class mostly prefer treatment from private

owned. Middle class go both to private and voluntary hospitals. Small percentage of middle class and all the lower class people prefer government hospitals for availing medical care services. This is the reason that prompted the researcher in studying public and private hospitals.

Workplace stress is persistent in the health care industry because of inadequate staffing levels, long work hours, exposure to infectious diseases and hazardous substances leading to illness or death, and in some countries threat of malpractice litigation.

Existing healthcare organizations are expanding by opening hospitals in new service areas and new organizations entering with state of art equipments, latest technology and marketing strategies. Consequently, competition in the healthcare sector is on the rise. Increased incomes and awareness levels are driving the customers to seek quality healthcare. The providers in turn need to be more innovative in their approach and offer quality services at competitive price. All this necessitates the systematic Human resource development by hospital administrators.

3.3.2 Need of Technical Training Programs for Hospital Employees

The primary aim of hospitals is to provide patient care of the highest quality. An often-overlooked truth is that efficient patient-care develops not from modern medical equipment and drugs alone but from the work force, a group of well-rewarded and motivated medical, paramedical, skilled and unskilled personnel. The assembly of these personnel, who are committed to institutional goals and their fulfillment, is not just a matter of chance. It is the result of sound professional administration and cordial human relations.

Management of human resources in health is a major challenge to health systems development. This includes planning for, production, deployment and utilization of health personnel. Although a number of measures have been instituted to meet this challenge, considerable gaps still remain. Developing effective health care organizations is increasingly complex as a result of demographic changes, globalization, and developments in medicine.

In the age of globalized economy and acute shortage of trained personnel, hospital administrators can raise physical and financial resources with some efforts, but the key factor for any hospital aiming to give superlative performance hinges on its human capital. Therefore, hospital administrators must invest this human capital to produce more motivated employees who may rise to any given challenge if they want to expand.

Many enlightened industrialists have started doing this for their existence in this highly competitive work environment and in the age of globalization.

Hospitals have started realizing that to retain an employee; they must first treat him on a human level, understand him and make him feel wanted. Companies are aware that superlative performance can be achieved provided the corporate goals are linked to the individual goals, needs and aspirations of the employees. It is essential for Hospital to have a well trained and motivated staff to manage the hospital operations. Success of the hospital organizations depend upon the patients, the employees and the effectiveness of the employee is very much depends on the training input given to the employees. The need for training is arise because of several reasons such as changing technology, demanding customers, thrust on productivity, improved motivation, accuracy of output, better management. Training is responsible for developing skills of the employees for future and also prepares them for promotion.

3.3.3 Need of Behavioral Training Programs for Hospital Employees

Hospitals provide medical care to the sick and needy. They are not in the business of manufacturing goods but for rendering service and are far more dependent than other organizations upon their employees' morale and commitment. Employees in such institutions are constantly facing the public. Institutions which provide medical care are generally criticized more for the attitudes of their personnel than for the quality of the care.

Patients and visitors are more impressed and concerned with the attentiveness, empathy and responsiveness of the health-care personnel than with the architecture of the hospital building, sophisticated machines or ward facilities like televisions, refrigerator, telephone, newspaper, barber, music, etc. Human behavior of two persons is not the same. It differs from person to person. The manager should try to understand-what causes this difference and how to cope with certain problems caused by their different behavior.

Good human behavior creates cordial human relationship and bad behavior creates bitter relationship. Hospital may provide knowledge through training and development programs which will help for maintaining cordial relationship among staff members. The managers must understand that the good of the individuals is also good for organization for maintaining good human relations.

The role of human relations in health organizations is concerned with the integration of people into a work situation. It is also concerned with motivating personnel to work together cooperatively and productively. The good labour relations include the output

fair and reliable treatment between the employees, in order the workers to be devotional in the hospital. Hospitals with good labour relations present a strategy of human resources that attributes high value in the workers as partakers. A healthy labour environment is characterized by reciprocal respect and collaboration of various branches of workers and recognition.

As the science and art of hospital administration are becoming more complex due to the rapidly extending field of hospital services, the advances in scientific field of medicine and surgery and increasing globalization and competition of its qualified and trained personnel, the importance of training and development practices of hospital employees is increased.

3.3.4 Essentials of Good Training

To sum up, the essentials of good training programmes can be stated as under :

(a) Training programme should be chalked out after identifying the training needs or goals. It should have relevance to the job requirements.

(b) It must be flexible and should make due allowance for the differences among the individuals as regards ability, aptitude, learning capacity, emotional make-up, etc.

(c) It should prepare the trainees mentally before they are imparted any job knowledge or skill.

(d) It must be conducted by well-qualified and experienced trainers.

(e) An effective training programme should emphasize both theory and practice. It should help in acquiring knowledge and its practical applications.

(f) It should have the support of the top management as it can greatly influence the quality of training.

(g) Lastly, an effective training programme should be supported by a system of critical appraisal of the outcome of the training efforts.

3.3.5 Training Effectiveness

Training effectiveness is the degree to which trainees are able to learn and apply the knowledge and skills acquired during the programme. It is influenced by the attitudes, interests, values and expectations of the trainees and the training environment. A training programme is likely to be more effective when the trainees want to learn, are involved in their jobs and have career plans. Contents of training programme, and the ability of trainers also determine training effectiveness to a certain extent. Some of the criteria to measure training effectiveness are the trainees' reactions, their extent of learning, improvement in job behaviour, and the results at the job. Training evaluation is discussed in greater details in this unit.

3.3.6 Benefits of Training

a. Benefits of training to the hospital organisation

The benefits of training to an hospital organisation are as follows :

i) Training is a systematic learning, always better than hit and trial methods which lead to wastage of efforts and money.

ii) It enhances employee productivity both in terms of quantity and quality, leading to higher profits.

iii) Training equips the future manager who can take over in case of emergency.

iv) Training increases employee morale and reduces absenteeism and employee turnover.

v) It helps in obtaining effective response to fast changing environment technological and economic.

b. Benefits of training to the hospital employee

The benefits of training activity to the employees are as follows :

i) Improved skills and knowledge due to training lead to better career of the individual.

ii) Increased performance by the individual help him to earn more.

iii) Training makes the employee more efficient to handle medical equipments. Thus, less prone to error and false analysis.

iv) Training increases the satisfaction and morale of employees.

3.3.7 Training Evaluation

- Training evaluation is a systematic process to analyze if training programs and initiatives are effective and efficient.
- Trainers and human resource professionals use training evaluation to assess if the employee training programs are aligned with the company's goals and objectives.

Management of training would not be complete without proper evaluation of training. Training is a very costly and time- consuming process. It is essential to determine its effectiveness in terms of achievement of specific training objectives. Individuals like to know how much they learnt or how well they are doing. The sooner employees know the results of a quiz or test, the sooner they can assess their progress. The sooner employees receive positive feedback from the trainer, the less time they will waste.

Self-graded tests and programmed learning kits provide the necessary feedback to a person on his progress on a particular subject. This principle does not necessarily mean frequent testing, but the more immediate the feedback on learning the more motivating it is likely to be.

Evaluation of training would provide useful information about the effectiveness of training as well as about the design of future training programmes. It will enable an organization to monitor the training programme and also to modify its future programmes of training. The evaluation of training also provides useful data on the basis of which relevance of training and its integration with other functions of human resource management can be examined.

3.3.7.1 The Need to Evaluate Training

- Training evaluation basically helps with the discovery of training gaps and opportunities in training employees.
- Training evaluation collects information that can help determine improvements on training programs and help trainers decide if certain programs should be discontinued.
- The training evaluation process is essential to assess training effectiveness, help improve overall work quality, and boost employee morale and motivation by engaging them in the development of training programs.

3.3.8 Methods of Training

After the types the categorization of method is listed below :

a. On-the-job training

b. Off-the-job training

(a) On the job training

Learning by doing is considered as the most effective method of training. The trainee is given the job to do by his immediate super ordinate or a supervisor. This method is very effective in case of turners, millers, and grinders etc who operate the machines for performing the jobs. Operators are given on the job training preferably There are four methods of on-the-job training described below :

i) **Coaching :** In this method, the supervisor imparts training by demonstrating the instructions about doing the job by doing it by himself. At the first instance the trainee observes him and then does the job which is supervised by the supervisor. For this type of training the supervisor has to spare a good amount of time.

ii) **Under Study :** Superior makes the trainee to assume the responsibilities, observe and experience the doing of job. This method is intended to prepare the trainee to fill up the vacancy of the superior in case he leaves or is promoted.

iii) **Position Rotation :** Every position is a bundle of jobs which where the person in that position needs to have full knowledge of each such element of job to become competent to handle the position. The method prescribes to put the trainee at each element of a job in that position where he works for the period till he learns all insights of the particular job and then shifted to another one till he completely gets the skills of performing the total job expected when he assumes the said position which is viewed from a long term placement of an employee.

iv) **Job Rotation :** Multi skilling and Zero absenteeism are popularized by Japanese Management Style of working. Job rotation is of short term duration and trains the employees to perform the job or activities related a particular task. Job rotated trainee can achieve the skills of milling, cutting, turning, welding and such other operations. Job rotation training can minimize the effect of absenteeism as a worker is capable of doing the job of an absent worker.

(b) Off the Job

Off the job implies that away from the job. This has a special benefit that the trainees are away from the work place and can concentrate more on training .The instructions and demonstrations can be given where the trainees can participate more freely and can have better interaction with the trainers. Thus unlike on the job where production expectation this method is more learning oriented.

i) **Vestibule Training :** Vestibule word has a connotation of an entrance or porch. This training is conducted in a hall or at a place where similar conditions where the actual job is performed are present. At such places physical resources and conditions are so organized that the trainees would experience the same environment. This method is more effective for line supervisors and followed where the number of trainees is large and made applicable to computer operators, clerks and machine operators. The method saves the engagement of resources in training from the work place. It is used where the trainees are to be placed at different locations.

ii) **Special Lecture cum Discussions :** The lectures are delivered by experts from the organization itself like executives and heads or resource person in the field. The focus in on imparting knowledge rather than skills. The trainees are benefitted by the experience of trainers and can be interactive about the doubts. The topics are related to health, safety, productivity, quality, etc.

iii) **Conference :** A gathering of experts is a place of experts who contribute to the stimulation for analysis and provoke thinking or some problems as the method includes giving some problem to trainees to work out the solution. The training is planned according to the need of the organization where it wants the collective thought process.

iv) **Case Study :** A case means a chunk of reality brought to the classroom for further analysis. Case renders some problem and demands alternative solutions for the same. The method is very effective when the trainees need to enhance their strategic and analytical skills. They also learn about group thinking and using multiple brains for arriving at the solution. The solution needs rational justification of a choice. This method is useful for enhancing ability to take quality decision which is an essential quality for a future manager.

v) **Role Play :** It is said that if you want to sell a fish then you need to become a fish. This the guiding principle of a role plays. The player goes into the shoes of the concerned entity and that reveals the expectations and other parts. The method brings to the surface real factors which need to be addressed; this is effective for making future managers as observational learning is strongly facilitated by this method.

3.3.9 Choosing the Right Training Method

The availability of a wide range of training methods and techniques poses a problem of choosing the one that solves the organizations' problems. Various training methods are compared on three grounds, as specified below :

1. Comparing on the basis of training objectives.

The most commonly specified training objectives, used as a basis for evaluating a training programme are :

- Realistic and manageable part of the job.
- Help with internalizing learning.
- Protection for participants and organization against mistakes.
- Learning to learn.
- Exposure to new ideas and methods.
- Experiments with behaviour.
- Membership of new reference groups.
- Setback to think about job as a whole.
- Intensive learning.

2. Comparing on the basis of learning process and its stages.

The training method is evaluated on the basis of the following characteristics of learning process :

- Training programme being realistic.
- Interaction and involvement of training programme.
- Experiences arising out of a training programme.
- Training programme practices.
- Feedback of training programme.
- Repeat practices and feedbacks.
- Conceptual understanding of task and change process.
- Creative experimentation in a training programme.

3. Comparing training methods on the basis of the available time, skills, facilities and resources.

Every training programme consumes several resources and the capacity of the organization to sacrifice the same can also be one of the bases of choosing a training programme method.

A well-structured and planned training session offers stronger understanding of the industry to the staff. It helps in building confidence amongst the employees and thereby enabling them to perform better. Continuous training also keeps the employees competent and at par with their peers at other similar organisations. Training improves staff productivity, keeps them motivated, and assures them that they are being valued, thereby improving staff loyalty and retention. Thus, this would in effect improve the operational and financial performance of the healthcare organisation impacting its bottom line.

Developing an effective and well planned training program is very crucial for the success and sustainability of the organisation. Staff training is a costly and time consuming process, as employees need to take out time from their work schedule. However, its outcomes and benefits to the organisation as well as to employees are worth the investment. In conclusion, training aids in providing quality care and better patient experience which is the ultimate goal of any healthcare organisation.

3.4 Leadership Grooming and Training, Promotion and Transfer

Although training may appear to be straightforward to most healthcare leaders, the effectiveness of follow up is anything but clear-cut. There is an investment of resources,

cost per employee, supplies, test fees, and lost revenue in terms of time away from the employees' current job duties when a hospital allows long-term instructional courses to be offered during regular business hours.

If the hospital is going to offer their employees 20, 40, or even 80 hours of instruction, management wants to know if the training was effective. After training is completed, the primary focus is on the individual employee's behavior.

Did the employees learn the material, and can they use it effectively in their current or future role? If, at the end of the training program, there is a certification test, the goal is to have all the trainees pass. If there is no official certification test, management stills want some type of assurance that the employees have learned the course material, and they know how to apply it. How does management gain that assurance ?

Years ago, training evaluation focused on "after the fact" reporting. It's quick and numbers-based (i.e., completion rates, attendance participation, and due date tracking), but this is just reporting on efficiency and operational activities. It's not evaluating the training's effectiveness.

Measuring the training's effect issued provides ideas on what to measure and how to measure the effectiveness of an organization's compliance program. Because training is a part of an effective compliance program, the ideas offered can be applied to all types of training.A review of the organization's documents to determine if the organization has established a method for evaluating the effectiveness of the program.

3.4.1 Evaluating Training Effectiveness

1. Review ways to measure compliance effectiveness training.
2. Understand how a knowledge survey works.
3. Develop metrics that support your underlying training objectives.
4. Select metrics that are not counterproductive to your goals.
5. Realize that training programs may fail for various reasons, including the underlying culture.

- A review of post-training incident logs to determine if employees' behavior has changed because of the training;
- The use of post-training tests or evaluations that include employee feedback and subsequent modifications of the training material, if needed; and
- The use of a knowledge survey post-training and up to six months after the training.

Effectiveness requires one to validate the results in a meaningful way to determine whether the employees learned the material or not. If not, technical assistance or other assistance may be provided before the participant moves on to the next subject or more advanced training modules. Training is always done with specific objectives. Validating through measurable metrics based on the specific objectives gives leaders the answers they need regarding the training's effectiveness.

Most professional associations that offer some type of certification maintain data on their pass/fail rate and, at times, will hold that data tight rather than release it through their website or other means. If the association's training curriculum states that 70% of trainees who attend the full course pass the certification exam the first time they take it, the hospital's management has a basic fact-finding benchmark to use to judge the success of their training. If ten employees were in the course and only four passed the certification test, the results are below the benchmark, and leaders need to dig deeper into the why. When participants do not learn what was intended from the training, it should prompt the training material to be revised or the instructor to deploy a different training methodology. If the training material has generated the desired results with other instructors, perhaps it is the instructor, rather than the students, who requires additional mentoring or training.

Evaluating the instructor Acquiring knowledge from experts (i.e., instructors) is not always an easy task. The instructor may be an expert in the field, but may not know how to coherently share their knowledge. The instructor being tested may have displayed a distinct set of behaviors when they were observed or interviewed, but not when they were teaching. At times, there can be interpersonal communication factors that may affect the instructor's ability to properly relay the knowledge to the employees/students.

The training objectives are sound and specific.

- The training material is accurate, complete, and easy to follow.
- The instructor is knowledgeable and a proven teacher.

Too often, the poor outcome is brushed off as a fluke. Often, organizations may hand the participants a course evaluation form when the training is over. It is an effortless way to get feedback, but it is not the best way to measure the training's effectiveness. Frequently, course evaluation forms are focused on meaningless items, with questions on the length of the program, the temperature in the room, and whether the donuts were fresh. Some organizations have moved these post-training feedback evaluations to a new level, a level in which the content of the training is evaluated with an assessment as to whether the participant knows more about the subject after training than before.

Choosing the metrics What management needs to know is if the training material is retained for longer than the time it takes to fill out the post-training evaluation form. Commonly today as knowledge assessment, the goal is to measure knowledge retention long beyond the "pass the test" phase - at least six months after the training event. The drawback for a knowledge assessment tool is it requires time to develop an effective pre and post-assessment. When the long-range objective is to affect behavior, passing the test, whenever it is given, does not guarantee the knowledge is going to be used by the employees when they are performing their daily duties. It is found that a lot of the training that is successfully delivered and confirmed by knowledge assessments does not get used at all or declines over time when not practiced or routinely used.

What metrics do you use to evaluate your training effectiveness? There are no set metrics to use to measure an organization's training effectiveness. What is important is that any metrics selected must be meaningful, decided on prior to the training event, and tracked over set time periods. It is important for Operations, Compliance, and Human Resources to agree on the metrics and how to report them to leadership to avoid overreaction to the data. The data alone provides little value. Its interpretation is a key factor, because it may include a root cause analysis to a known or unknown problem or lead to improvements in both additional training programs, operations, and the overall culture of the organization. One thing to avoid in selecting the metrics is to inadvertently incentivize negative behavior.

When designed, managed, and tracked properly, metrics are a valuable tool to help determine the effectiveness of your training programs.

When your basic fact-finding numbers indicate the training is not working, (i.e., six out of ten participants fail the exam), what action should leaders take? The easy answer is to label the training as ineffective, whether it was due to the design of the program or the instructor's skill set. The tougher answer may be assessing whether the failure of the training is a symptom that the organization's culture is not in tune with the training objectives. A well-designed pre/post knowledge assessment process would validate that the stated training objectives and programs designed for all employees, such as compliance training, were not only ineffective, but also identify why the training did not accomplish the desired behavior downstream. The root cause might be that management does not behave in a manner that demonstrates compliance is important to them, resulting in a misalignment between the specific training objectives and the reality of what is, rather than what the organization wants to pretend it is. In such a case, the outcome will not only be poor training metrics, but also overall poor compliance effectiveness throughout the organization.

3.4.2 Grooming Leaders

No organisation can do without a super leader someone who can recognise the 'skill set' of every employee, when these skills and mould him into the next rung leader. A super leader's brief is to spot and liberate the leader in every employee. And, this liberation cannot happen overnight. It is often the result of a continuous effort at developing individual capacity of every employee till they realise their optimum potential to act in a responsible manner.

Effective leaders invest in developing people's skills and competencies. Surveys have shown that organisations, which spend more that 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 super leader is to create an effective learning environment. This is characterised by a climate of trust and openness which leads to greater willingness to communicate about feelings and problems and a positive inclination for change.

Learning is also about making mistakes. In any work environment, there is learning curve. Performance generally goes down before it goes up. Super leaders are thus great learners who regard all mistakes as learning opportunities. They foster this attitude among their associates also by encouraging them to break old patterns of thinking, come out of their boxes, question routines and challenge assumptions.

One leading company introduced a suggestion system that rewarded thinkers of original ideas. The response from the employees was prompt and instantaneous. The system began to change established mindsets. Employees began to think more in terms of how to improve their productivity rather than remain disturbed by others' mistakes. In less than five years, inventories went down by 60 %, output shot up to 90 %, timely deliveries increased from 65 % to 95 % and sales increased by over 30 %.

The President of a well-known company pursues a very open- ended communication strategy with his subordinates. Instead of interacting only with a small coterie of key executives, he routinely summons big employee groups to his office and openly shares his vision for the company with them. Sometimes, the employees come up with their own suggestions on better alternatives. Needless to add, there is better understanding in this company than anywhere else. The employees are more committed to the company plan than even the boss himself.

3.4.2.1 Promotions

It becomes necessary for all organisations to address career related issues and promotional avenues for their employees. Managers need to design activities to serve employees' long-term interests also. They must encourage employees to grow and realise their full potential. Promotions are an integral part of people's career. They refer to being placed in positions of increased responsibility. They usually mean more pay, responsibility and job satisfaction.

All organisations need to establish wage and salary plans for their employees. There are various ways to prepare different pay plans depending on the worth of the job. Basically the price of the job needs to be determined. Compensation, therefore, refers to all forms of pay or rewards going to employees. It may being the form of direct financial payments like wages, salaries, incentives, commissions and bonuses and indirect payments like employer paid insurance and vacations.

The goal of this recommendation is to particulate clear and consistent philosophy for internal promotions to newly created or higher level positions where the internal candidate is qualified, willing and able to assume a new role.

Impact of promotion

The implementation of this policy has the capacity to :

- Improve employee retention.
- Reduce overhead and costs associated with unnecessary searches.
- Improve morale.
- Broaden opportunities for qualified candidates.
- Break down barriers to internal promotions.

The Management will promote only qualified and eligible employees to higher positions when vacancies arise in such higher cadre. Promotions will be effected strictly on the basis of merit, efficiency, and suitability for Para-medical staff and for other categories wherever applicable on the basis of past record of service, performance, requisite skills, seniority and state of health and suitability of the employee. The suitability of an employee for promotion will be decided solely by the Management. Upon promotion or regularization, the employee will be granted such benefit and increase in wages as may be decided by the management. The management's decision on promotions shall be final and conclusive.

3.4.2.2 Transfer

Change of Department / Rotation / Transfer :

Training is imparted to the employee at the time of Change of Department/Rotation /Transfer to other department in order to make him familiar of the new department, roles and responsibilities of the employee and equipment etc.

Transfer of hospital employee occurs due to the following reasons :

1. New ideas and skills need to be practised as soon as they are learnt. Unfortunately as humans we tend to forget 50 percent of what we learn within the first forty-eight hours unless the learning is reinforced. One time exposure to any learning is unlikely to make a permanent change in the behaviour and skills of the trainees. When on the job, both positive and negative reinforcements should be used. If behaviour is undesirable, then negative reinforcement such as denial of a pay raise, promotion, or transfer can be effective. However, during the orientation and training period, positive reinforcement is more effective than negative reinforcement.
2. The superior gives training to a subordinate as his understudy or assistant. The subordinate learns through experience and observation. It prepares the subordinate to assume the responsibilities of the superior's job in case the superior leaves the organization. The subordinate chosen for under-study is designated as the heir-apparent and his future depends upon what happens to his boss. The purpose of under study is to prepare someone to fill the vacancy caused by death, retirement, promotion, or transfer of the superior.
3. Individuals changing jobs, or preparing for future changes in their work, whether in their present organization or elsewhere, are potentially in need of training. There will be a need for induction and initial training for young people commencing employment or for adults joining a new department or organization; 're-induction' and updating for women returning to work after a break; training as a preparation for transfer or promotion or as part of a longer-term career development.

Two Marks Questions with Answers

Part - A

Q.1 List out few departments found in hospitals.

Ans. :

i. Outpatient Department (OPD)

ii. Inpatient Service (IP)

iii. Medical Department

iv. Nursing Department

v. Paramedical Department

vi. Physical Medicine and Rehabilitation Department

vii. Operation Theatre Complex (OT)

viii. Pharmacy Department, Radiology Department (X-ray)

Q.2 Write about Inpatient Service (IP).

Ans. : If OPD is the show window of the hospital, the IP is the heart of the hospital. The IP service provides lodging, diet and medical care. Conveniently, it can be divided into:

- Wards and rooms
- Nurses station
- Dietary services
- Sanitary facilities and other requirements
- The Ward can be Intensive Care Wards (ICU), Intermediate Care Wards and Isolation Wards.

Q.3 What is CSSD ?

Ans. : Central Sterile Supply Department (CSSD) is important department which supplies sterile articles throughout the hospital. CSSD handles contaminated, clean and sterile articles.

Work flow in CSSD :

Receiving, Washing, Drying, Accounting, Sorting, Packing, Sterilization, Sterile storage, Issue. The articles should move in one direction from receipt to issue. The location should be such that the wards and departments can have easy access.

Q.4 What are the functions of personnel department ?

Ans. : The personnel department has the following functions, directed to the welfare of the personnel.

- Recruitment of personnel
- Interviewing prospective employees
- Promotion and transfer of employees
- Termination of employment
- In service training programme
- Remuneration and incentives

- Safety
- Health programme
- Recreation

Q.5 What will be the impact of promotion ?

Ans. : The implementation of promotion has the capacity to :

- Improve employee retention.
- Reduce overhead and costs associated with unnecessary searches.
- Improve morale.
- Broaden opportunities for qualified candidates.
- Break down barriers to internal promotions.

Q.6 List out the two methods of training ?

Ans. :

- On-the-job training
- Off-the-job training

Q.7 Why is evaluation of training becomes necessary ?

Ans. :

- Training evaluation basically helps with the discovery of training gaps and opportunities in training employees.
- Training evaluation collects information that can help determine improvements on training programs and help trainers decide if certain programs should be discontinued.
- The training evaluation process is essential to assess training effectiveness, help improve overall work quality, and boost employee morale and motivation by engaging them in the development of training programs.
- Training evaluation is a systematic process to analyze if training programs and initiatives are effective and efficient.

Q.8 Explain the term "Training Effectiveness" ?

Ans. : Training effectiveness is the degree to which trainees are able to learn and apply the knowledge and skills acquired during the programme. It is influenced by the attitudes, interests, values and expectations of the trainees and the training environment. A training programme is likely to be more effective when the trainees want to learn, are involved in their jobs and have career plans. Contents of training programme, and the ability of trainers also determine training effectiveness to a certain extent. Some of the criteria to measure training effectiveness are the trainees' reactions, their extent of learning, improvement in job behaviour, and the results at the job.

Q.9 Write down the Problems encountered in hospital staff training programs ?

Ans. : Problems encountered in hospital staff training programs are as follows :

1. Lack of rational and systematic assessments of the needs for training at all levels.
2. Fragmentation and low accountability of responsible agencies in organizing training programs.
3. Low concern for associated costs by management, as they think training courses need a lot of money for mid- and high-level hospital employees.

Q.10 Define Selection.

Ans. : Selection is the process of choosing from among the pool of the prospective job candidates developed at the stage of recruitment. Even in case of highly specialised jobs where the choice space is very narrow, the rigour of the selection process serves two important purposes :

- It ensures that the organization gets the best among the available, and
- It enhances the self-esteem and prestige of those selected and conveys to them the seriousness with which the things are done in the organisation.

Review Questions

Part - B

Q.1 Explain in detail about recruitment and selection.

Q.2 List out and explain the various departments in hospital.

Q.3 Explain about the steps in human resource planning and the role of human resources manager in health sector.

Q.4 Write down the skills for healthcare management.

Q.5 Briefly explain about the training and development of hospital employees.

Q.6 Explain the two methods of training in detail.

❑❑❑

Notes

Unit IV

Supportive Services

Syllabus

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

Contents

4.1 Hospital Services

The hospitals also provide services related to research, development and training of healthcare professionals. According to the service type they provide, the hospitals can be divided into three groups : general hospitals, specialized branch hospitals and training hospitals. General hospitals provide interventions for all cases of emergency, employ specialist medical staff and conduct surgical operations when necessary. Specialized hospitals like chest and cardiovascular diseases hospital and kidney hospitals focus on specific diseases, certain age groups or organs and organ transplantation. Training and research hospitals like medical faculty hospitals are hospitals that have inpatient bed capacity, provide emergency services and surgical operations when necessary in addition to their duties related to the medical training and research.

The aspects of hospital services include three main services such as

1) Line Services
2) Supportive Services //Staff services
3) Auxiliary Services

1) Line services

Line service in the hospital is the care which is directly related to the patient treatment. Line Services include

- Emergency services
- Out-Patient services
- In-patient services (Wards)
- Intensive Care Unit (ICU)
- Operation Theatre (OT)

2) Support services

Support services are the services which are not directly related to patient care but, indirectly contribute in patient management. Support services include.

- Central Sterile Supply Department (CSSD)
- Diet Management
- Pharmacy Services
- Laundry
- Laboratory
- Radiology
- Nursing Services

3) Auxiliary Services

Auxiliary services in hospital activities which are directly related to neither care, nor support care, but contribute to facilitate the service. The Auxiliary service include

- Registration and Indoor case records
- Stores
- Transport
- Mortuary
- Dietary Services
- Engineering and Maintenance services
- Hospital Security

4.1.1 Medical Records Department

Medical Records Department is involved in keeping and organizing medical records (files) of outpatients and inpatients.

Over the years Medical Records Department has arises as a vital part of any health care organization or a hospital. The dictum is "People forget, but Records remember". Medical Records has become a specialty in its own right, and the Medical Record Officers and Medical Record Technicians have earned the right to be considered as specialist in their own field. This is so because patient care requires a chronological record of patient care and treatment, and this enables the clinical team, as well as the hospital administrator, to evaluate the quality of medical care, and the effectiveness of the hospital services.

As Medical Record Department is the most suitable department for computerization. Most of developed countries have adopted Health Record. The personnel working in the Medical Record Department answered that the computerization of essential and useful in Medical Record department & preparation of daily statistics with the help of computers decreases workload. As computerization is becoming an essential component of health information system. It is easy to retrieve the information if there is computerization.

The personnel working in the Medical Record Department answered that the computerization of medical records reduced their workload. A lot of Hospitals are going to implement E-health record documentation. But it is important to evaluate the existing system for feasibility in Establishment of Electronic health record documentation. E-health record will improve patient care and save time as it will be easy to get information about past disease and it will improve access to patient history. The personnel working in

the Medical Record Department answered that establishment of electronic health record documentation will improve patient care and save time. Moreover electronic health record documentation will provide immediate information during an emergency.

4.1.2 Objectives of the Medical Record Department

The objective of this chapter is to evaluate the existing medical record keeping system and evaluate the effectiveness of the current medical record system. The objectives include

1. To evaluate the existing medical record keeping system
2. To assess and evaluate the effectiveness of the current medical record system
3. To assess the logical and legal aspects of the current medical record keeping system
4. To identify the shortcomings if any & provide suitable recommendation to improve the existing Medical Recording system.

Time taken in retrieving a file reflects the efficiency of Medical Record Department. The personnel working in the Medical Record Department answered that files in the Medical Record Department are easily accessible. Time was assessed for retrieving a particular file on request according to Out-Patient & In-Patient records. The personnel working in the Medical Record Department answered that time taken for retrieval of outpatient records is 3 minutes and for inpatient records is 5 minutes. Decentralization of Medical Records leads to confusion. Centralization of filling system leads to proper arrangement of Medical Records and ease in retrieval of files on request.

The personnel working in the Medical Record Department answered that filing system should be centralized storing files for years necessitate a lot of space and if the space is not adequate then there will be complexity in storing files. Moreover there should be adequate working space for professionals working in Medical Record Department. The personnel working in the Medical Record Department responded that working space is inadequate. There should be adequacy of infrastructure & facilities in Medical Record Department for effective work flow. Infrastructure & facilities in Medical Record Department include sample number of rooms, file storing racks; computers & scanners.

The personnel working in the Medical Record Department answered there is no problem in storing of files & In-Patient case files are stored for 5 years and Medico Legal case files are stored for 10 years. ICD 10 is the coding system used now in most of the medical record department. It provides uniformity while comparing data. The personnel working in the Medical Record Department answered that In-Patient cases are classified according to ICD10 Coding System & they are filing Medical records in the numerical

manner. Scanning of files is helpful as it eliminates paper based files which require more space and are more prone to wear and tear. The personnel working in the Medical Record Department answered that the scanning & elimination of paper based file system is advantageous, feasible & it will improve accessibility to old medical records.

4.1.3 Functions of Medical Records Department

- As a general rule, "the most successful man is, the man who has the best information". The Medical Record is a scientific document, containing patient's identification dates, illness, history, physical examination, clinical findings, investigations, diagnosis, treatment given and end results.
- The Medical Record serves as a personal, impersonal and also legal document depend upon the place and tine of usage.
- The Out-Patient, In-Patient registration sections and Medical Record Department are computerized with net connection.
- Since it is a teaching hospital, the following staff members are working in the Medical Records Department as per the norms prescribed by the Medical Council of India (Refer Fig. 4.1).

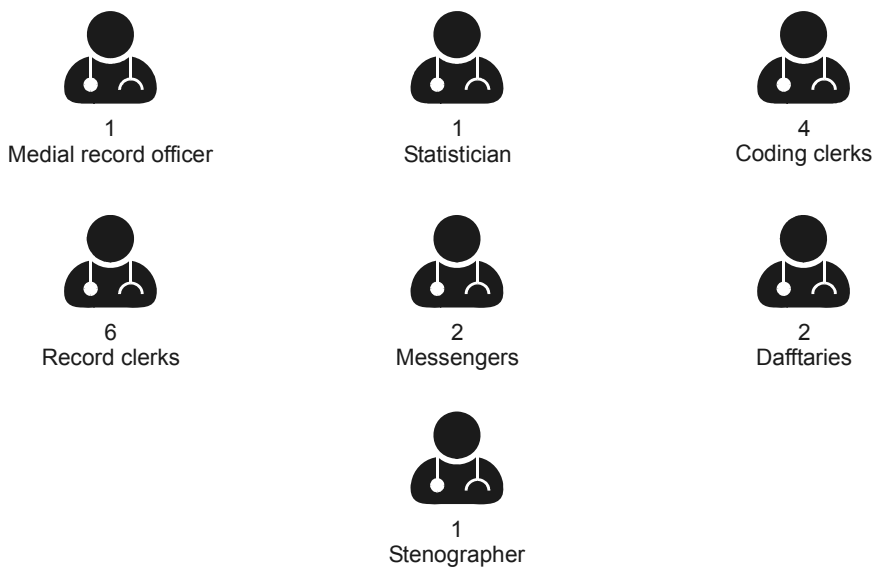


Fig. 4.1 Medical record servers

- The In-patient discharged case records are received from the office of the Nursing Superintendent along with the daily census register.
- Such received records are verified with the ward census registers for accuracy.

- Medico Legal case records and Death case records are separated from other case records.
- The Death register is being maintained, containing sufficient information about the patients died along with diagnosis and code no.
- The Accident registers are received from the Casualty daily and details of treated patients are entered in a separate Nominal Register for Medico Legal Cases for reference.
- Medico Legal Cases and Death case records are separately filed and kept under safe custody.
- The In-Patient discharged case records with are received daily, are being processed by coding clerk as follows (Refer Fig. 4.2) –

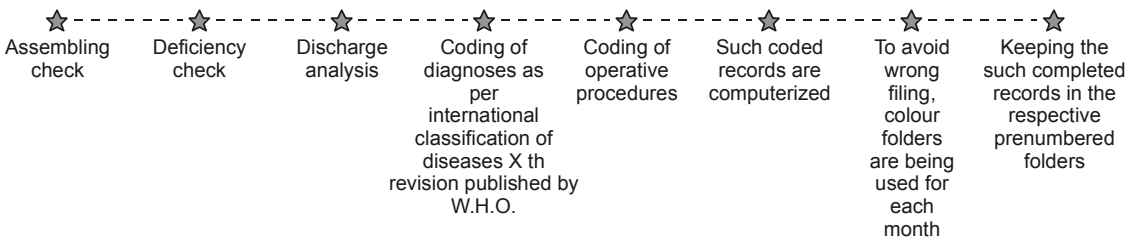


Fig. 4.2 In-Patient discharged case records

Out Patient Registration

- The centralized Out-Patient Registration section is functioning with two divisions, one for new cases and another one for Revisit case registration.
- In order to facilitate the physically challenged and senior citizens separate counters on each section are being maintained. Necessary computer operators for registration have been posed in the centre registration section.
- The In-Patients admission registration is also attached along with the O.P. Registration wing. Whenever patients are advised for admission, the desk clerk will take up the responsibility to get preliminary admission order from the admission counter and shall take the patient to the concerned wards. (Refer Fig. 4.3).

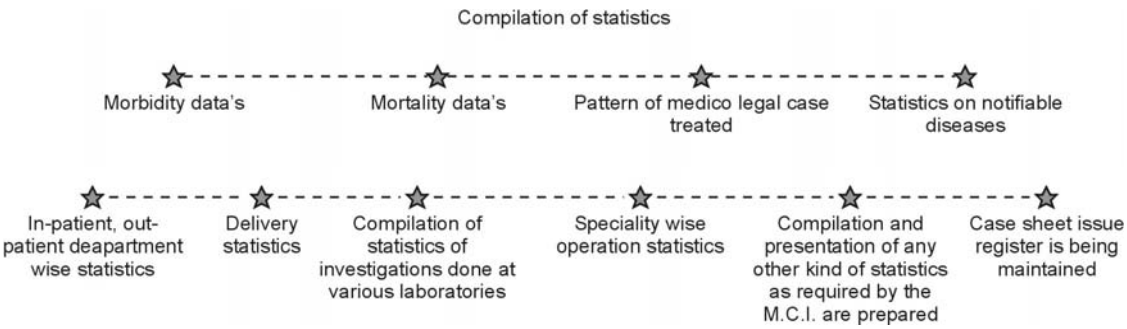


Fig. 4.3 In-Patients admission registration

4.1.4 Levels of Medical Care

It is customary to describe healthcare service at 4 levels, viz., primary, secondary, tertiary and quaternary care levels. These levels represent different types of care involving varying degree of complexity.

1. Primary Care Level :

Primary care providers may be doctors, nurses or physician assistants. Primary healthcare is the first level of contact with individuals, the family and community, where "primary health care" (essential healthcare) is provided. As a level of care, it is close to the people, where most of their health problems can be dealt with and resolved. It is at this level that healthcare will be most effective within the context of the area's needs and limitations.

In the Indian context, primary health care is provided by the Primary Health Centres (PHCs) and their sub-centres through multipurpose health workers, village health guides and trained Dais. Besides providing primary healthcare, the village "healthcare centres" bridge the cultural and communication gap between the rural people and organized health sector.

Sector : Healthcare

2. Secondary Care Level :

The next higher level of care is the secondary (intermediate) healthcare level. At this level more complex problems are dealt with. In India, this kind of care is generally provided in district hospitals and community healthcare centres which also serve as the first referral level.

Secondary care simply means you will be taken care of by someone who has more specific expertise. Specialists focus either on a specific body system or on a specific disease or condition. For example, if there is problem with heart and its pumping system, then the client need to consult a Cardiologist.

If someone is suffering from problems related to hormone systems and some specialize diseases like diabetes or thyroid disease, then he/she needs to consult an Endocrinologist.

3. Tertiary Care level :

The tertiary level is a more specialized level than secondary care level and requires specific facilities and attention of highly specialized health workers. This care is provided by the regional or central level institutions. For example, highly specialized equipment and expertise is required for coronary artery bypass surgery.

4. Quaternary Care :

Quaternary care is an extension of tertiary care and is more specialized and highly unusual, therefore every hospital or medical center cannot offer quaternary care. It includes experimental medicine and procedures.

The Fig. 4.4 reveals the various levels of the medical support services.

Fig. 4.4 Levels of medical support services

4.1.5 Other Supportive Services of Medical Department

Medical Records

Medical record is the assembly of notes, forms, reports and summaries of the patient during the treatment of illness. It includes written notations, clinical analysis, consultation summaries and so on.

It is document of facts, which contain statement by trained observer of the conditions found and of the application and result of examinations and therapy.

Characteristics of good medical record

- **Accurate :** Medical record should be accurate. Otherwise, there is no meaning of keeping medical records. To justify the purpose medical record should be accurate.

- **Complete :** It must contain sufficient data written in sequential order of events to justify the diagnosis and warrant the treatment.
- **Adequate :** Medical records should contain all the necessary information and complete progress not written by the attending doctor.
- **Comprehensive :** Medical records should contain comprehensive and adequate information to point and easily understood.
- **Economical :** Medical records should be economical. It should not be over burden economically on administration to maintain.
- **Properly planned :** Medical records should be kept according to scientific methods such as arrangements of shelves, filing, indexing, coding etc. should be on proper sequence and easy to understand.
- **Timely :** It should be time saving rather than time consuming to maintain, retrieve and enter the data and so on.

Components of medical record

Medical records comprise various forms, notes, data and sheets. Components of medical records can be categorized into main three components:

i) Social data :

It consists of general information regarding patient's identification such as his name, age, sex, community, religion, residential address, marital status, occupation, address and so on. Most of this information should furnish during the admission at the admission counter or during the registration of the patient.

ii) Administrative data :

It consists of patient's OPD registration number, name of the OPD, name of the unit head, X-ray registration number and other investigation, reference number. This information is helpful for coding, indexing and filing of the patient record and to maintain and retrieve the files systematically.

iii) Clinical data :

Clinical data could be collected at two levels – OPD and Ward. It consists of past history (family history and past illness), physical examination, provisional diagnosis, advice, follow-up at the OPD level. In the ward level, it consists of admission record, progress note, summary sheet, discharge summary, doctor's note, operation note, nurses bedside record, investigation report, graphic charts, recommendations and so on.

4.2 Central Sterile Services Department (CSSD)

CSSD refers to Central Sterile Supply Department. Usually at early days it was termed as SSD (Sterile Supply Department).

- The main objectives of both SSD and CSSD are the same i.e. to supply sterilized and disinfected equipments, free of bacteria to the user department.
- It is directly related to quality care provided by the hospitals and also related to positive impact of the society and the cost and benefits to the organization it self.
- It is the department responsible for processing, sterilizing and dispensing of almost all items for sterile equipment sets and dressings in the hospitals.

4.2.1 Need for Centralization

For economic reason, efficiency of operations and maintenance of high standard, hospitals have found it preferable for all reusable supplies and equipment requiring special cleaning, disinfection or sterilization to be handled centrally whenever possible.

Advantages

- Need for fewer supervisory staff.
- Greater care in overcoming staff deployment problems in case of absenteeism.
- Optimum equipment utilization.
- Smaller capital and power costs.
- Greater flexibility in production planning.
- Overall economy.

As the operation theatre department is the major consumer of this service, it is recommended to locate the department at a position of easy access to operation theatre department. It should have a provision of hot water supply. Department shall develop and implement the Standard Operating Procedures (SOPs) for transfer of unsterile and sterile items between CSSD and departments, sterilization of different items, complete process cycle, validation of sterilization process, recall, labelling, first in first out, calibration and maintenance of instruments.

The Sterile Processing Department (Central Supply, or Sterile Supply as it is also known), comprises that service within the hospital in which medical/surgical supplies and equipment, both sterile and nonsterile, are cleaned, prepared, processed, stored, and issued for patient care.

Until the 1940s, medical/surgical supplies were, for the most part, processed and maintained in the departments and patient care areas in which they were to be used.

Under this system, there was considerable duplication of effort and equipment, and it was difficult to maintain consistently high standards for sterilization technique and product quality throughout the health care facility.

As the number and variety of surgical procedures grew and the types of medical devices, equipment, and supplies proliferated, it became apparent that a centralized processing was needed for efficiency, economy, and patient safety.

- CSSD is a crucial function in any hospital that when integrated with a hospital ERP helps in automating the workflow in sterilization of hospital equipments viz., surgical tools and instruments, syringes, catheters/tubes/other rubber goods, lab equipments in various departments and procedure sets.
- Enables admin and operational staff to track and manage the inventory information of items that need to be sterilized in the form of packs/sets or individual quantity to be delivered to OT, pathology labs, ICU, emergency and wards in a hospital.
- Detailed records of cleaning, disinfection and sterilization.
- Implement infection control policy using CSSD module across all departments in a hospital that improves patient safety by enforcing and checking the controls necessary from time to time, to prevent cross infection.
- Report generation interface for the CSSD module.

4.2.2 Objectives of Central Sterile Services Department (CSSD)

The objectives of central service include the following :

- To provide inventoried supplies and equipment to customer areas.
- To promote better patient care by providing prompt and accurate service.
- To provide supplies of sterile linen packs, basins, instruments, and other sterile items.
- To maintain an accurate record of the effectiveness of the cleaning, disinfecting, and sterilizing processes.
- To strive for uniformity and simplicity in the trays and sets that the department provides.
- To maintain an adequate inventory of supplies and equipment.
- To monitor and enforce controls necessary to prevent cross infection according to infection control policies.
- To establish and maintain sterile processing and distribution standards.
- To operate efficiently to reduce overhead expense.

- To stay abreast of developments in the field and to implement changes as needed to stay current with new regulations and recommended practices.
- To review current practice for possible improvements in quality or services provided.
- To provide consulting services to other departments in all areas of sterile processing and distribution, including in- service education programs, review policies and procedures, and implementation of new processes.

4.2.3 Functions of Central Sterile Services Department (CSSD)

Sterile Processing Departments are typically divided into four major areas to accomplish the functions of decontamination, assembly and sterile processing, sterile storage, and distribution.

- In the decontamination area, reusable equipment, instruments, and supplies are cleaned and decontaminated by means of manual or mechanical cleaning processes and chemical disinfection.
- Clean items are received in the assembly and packaging area from the decontamination area and are then assembled and prepared for issue, storage, or further processing (like sterilization).
- After assembly or sterilization, items are transferred to the sterile storage area until its time for them to be issued.
- Several major functions are carried out in the distribution area: case cart preparation and delivery; exchange cart inventory, replenishment and delivery; telephone-order and requisition-order filling; and, sometimes, patient care equipment delivery.

i) Decontamination Process

Decontamination is the physical or chemical process that renders an inanimate object that may be contaminated with harmful microbial life safe for further handling. The objective of decontamination is to protect the preparation and package workers who come in contact with medical devices after the decontamination process from contracting diseases caused by microorganisms on those devices.

Steps in the Decontamination Process

1. **Transport –** Used supplies and equipment should be collected and taken to the Decontamination Area in the Sterile Processing Department in a way that avoids contamination of personnel or any area of the hospital. Equipment should be covered and supplies should be moved in covered carts, closed totes or containers, or closed plastic bags.

2. **Attire –** Personnel working in the decontamination area should wear protective clothing, which includes a scrub uniform covered by a moisture-resistant barrier, shoe covers, rubber or plastic gloves, and a hair covering. During manual cleaning processes, when splashing can occur, safety goggles and a face mask should be worn.
3. **Sorting –** Sorting begins at the point of use. Handling of contaminated items should be minimized unless the user of the device is already wearing full personal protective attire, such as following care in the operating room. In areas where workers are wearing no or minimal protective attire, sorting should consist only of removing disposable sharps and discarding other single-use items.
4. **Soaking –** This is necessary only if you have lumens or other complex designs that are filled with debris or if the devices are very bloody and cannot be rinsed or wiped at the point of use.
5. **Washing**

- **Detergent –** Should be compatible with the materials in the device and suited for the type of soil. Consult the recommendations from the device manufacturer.
- **Equipment –** Many types of cleaning equipment are available, the most commonly used are :
    - **Washer/decontaminator –** The washer/decontaminator is used to clean heat-tolerant items. The cycle consists of several washes and rinses, followed by a steam sterilization cycle appropriate for the types of items contained in the load. Although subjected to a cycle designed to sterilize clean items, items processed in a washer/decontaminator should not be assumed to be sterile at the end of the process. The reason for this is that items enter the washer/decontaminator with an unknown, but probably very high, level of microbial contamination, which the sterilization cycle may not be able to completely destroy.
    - **Ultrasonic –** The ultrasonic washer is used to remove fine soil from surgical instruments after manual cleaning and before sterilization. The equipment works by converting high-frequency sound waves into mechanical vibrations that free soil from the surface of instruments. The high-frequency energy causes microscopic bubbles to form on the surface of the instruments and as the bubbles implode, minute vacuum areas are created, drawing out the tiniest particles of debris from the crevices of the instruments. This process is called cavitation.

- **Inspection –** After cleaning, all instruments should undergo inspection before being packaged for reuse or storage. Box locks, serrations, and crevices should be critically inspected for cleanliness. Instruments with cutting edges such as scissors, rongeurs, chisels, curettes, etc., should be checked for sharpness. There should be no dull spots, chips, or dents. Hinged instruments such as clamps and forceps should be checked for stiffness and alignment of jaws and teeth. Tips should be properly aligned, jaws should meet perfectly, and joints should move easily. Ratchets should close easily and hold firmly. Any instruments with pins or screws should be inspected to make sure they are intact. Plated instruments should be checked to make sure there are no chips, worn spots, or sharp edges. Worn spots can rust during autoclaving. Chipped plating can harbor soil and damage tissue and rubber gloves. If any problems are noticed during the inspection process, these instruments should be either cleaned again, or sent for repair depending on the problem observed.

ii) Assembly & Packaging Process

After the instruments have been cleaned and inspected, they are typically assembled into sets or trays according to recipe cards that detail instructions for assembling each set or tray. Instruments and other items that are prepared for sterilization must be packaged so that their sterility can be maintained to the point of use. The materials and techniques used for packaging must allow the sterilant to contact the device during the sterilization process as well as to protect the device from contamination during storage and handling before it is used. The time between sterilization and use may range from a few minutes to several weeks to many months. The packaging material selected must also permit the device to be removed aseptically.

Types of Packaging

- Textiles
- Nonwovens
- Pouch packaging
- Rigid container systems

iii) Sterilization Process

Bacterial spores are the most resistant of all living organisms because of their capacity to withstand external destructive agents. Although the physical or chemical process by which all pathogenic and nonpathogenic microorganisms, including spores, are destroyed is not absolute, supplies and equipment are considered sterile when necessary conditions have been met during a sterilization process.

Methods

Reliable sterilization depends on contact of the sterilizing agent with all surfaces of the item to be sterilized. Selection of the agent to achieve sterility depends primarily upon the nature of the item to be sterilized. Time required to kill spores in the equipment available for the process then becomes critical.

Steam

Heat destroys microorganisms, but this process is hastened by the addition of moisture. Steam in itself is inadequate for sterilization. Pressure, greater than atmospheric, is necessary to increase the temperature of steam for thermal destruction of microbial life. Death by moist heat in the form of steam under pressure is caused by the denaturation and coagulation of protein or the enzyme-protein system within the cells. These reactions are catalyzed by the presence of water. Steam is water vapor; it is saturated when it contains a maximum amount of water vapor.

Direct saturated steam contact is the basis of the steam process. Steam, for a specified time at required temperature, must penetrate every fiber and reach every surface of items to be sterilized. When steam enters the sterilizer chamber under pressure, it condenses upon contact with cold items. This condensation liberates heat, simultaneously heating and wetting all items in the load, thereby providing the two requisites: moisture and heat.

Non living thing can survive direct exposure to saturated steam at 250 F (120 C) longer than 15 minutes. And 134c longer than 4 to 7 mint as temperature is increased, time may be decreased. A minimum temperature-time relationship must be maintained throughout all portions of load to accomplish effective sterilization. Exposure time depends upon size and contents of load, and temperature within the sterilizer. At the end of the cycle, re-evaporation of water condensate must effectively dry contents of the load to maintain sterility.

Ethylene Oxide

Ethylene oxide is used to sterilize items that are heat or moisture sensitive. Ethylene oxide (EO) is a chemical agent that kills microorganisms, including spores, by interfering with the normal metabolism of protein and reproductive, processes, (alkylation) resulting in death of cells. Used in the gaseous state, EO gas must have direct contact with microorganisms on or in items to be sterilized. Because EO is highly flammable and explosive in air, it must be used in an explosion-proof sterilizing chamber in a controlled environment. When handled properly, EO is a reliable and safe agent for sterilization, but toxic emissions and residues of EO present hazards to personnel and patients. Also, it takes longer than steam sterilization, typically, 16-18 hrs. for a complete cycle.

EO gas sterilization is dependent upon four parameters : EO gas concentration, temperature, humidity, and exposure time. Each parameter may be varied. Consequently, EO sterilization is a complex multi-parameter process. Each parameter affects the other dependent parameters.

Others

Dry heat : Dry heat in the form of hot air is used primarily to sterilize anhydrous oils, petroleum products, and bulk powders that steam and ethylene oxide gas cannot penetrate. Death of microbial life by dry heat is a physical oxidation or slow burning process of coagulating the protein in cells. In the absence of moisture, higher temperatures are required than when moisture is present because microorganisms are destroyed through a very slow process of heat absorption by conduction.

Quality Assurance

To ensure that instruments and supplies are sterile when used, monitoring of the sterilization process is essential.

iv) Administrative Monitoring

Work practices must be supervised. Written policies and procedures must be strictly followed by all personnel responsible and accountable for sterilizing and disinfecting items, and for handling sterile supplies. If sterility cannot be achieved or maintained, the system has failed. Policies and procedures pertain to:

- Decontaminating, terminally sterilizing, and cleaning all reusable items; disposing of disposable items.
- Packaging and labeling of items.
- Loading and unloading the sterilizer.
- Operating the sterilizer.
- Monitoring and maintaining records of each cycle.
- Adhering to safety precautions and preventive maintenance protocol.
- Storing of sterile items.
- Handling sterile items ready for use.
- Making sterile transfer to a sterile field.

Mechanical Indicators

Sterilizers have gauges, thermometers, timers, recorders, and/or other devices that monitor their functions. Most sterilizers have automatic controls and locking devices. Some have alarm systems that are activated if the sterilizer fails to operate correctly. Records are maintained and review for each cycle. Test packs (Bowie-Dick test) are run at least daily to monitor functions of each sterilizer, as appropriate. These can identify process errors in packing or loading.

Chemical Indicators

A chemical indicator on a package verifies exposure to a sterilization process. An indicator should be clearly visible on the outside of every on-site sterilized package. This helps differentiate sterilized from unsterilized items. More importantly, it helps monitor physical conditions within the sterilizer to alert personnel if the process has been inadequate. An indicator may be placed inside a package in a position most likely to be difficult for the sterility to penetrate. A chemical indicator can detect sterilizer malfunction or human error in packaging or loading the sterilizer. If a chemical reaction on the indicator does not show expected results, the item should not be used. Several types of chemical indicators are available :

- Tape, labels, and paper strips printed with an ink that changes color when exposed to one or more process parameters.
- Glass tube with pellets that melts when a specific temperature is attained in sterilizer.
- Integrating or wicking paper with an ink or chemical tablet at one end that melts and wicks along paper over time under desired process parameters. The color bar reaches the “accept” area if parameters are met.

Biological Indicators

Positive assurance that sterilization conditions have been achieved can be obtained only through a biologic control test. The biologic indicator detects no sterilizing conditions in the sterilizer. A biologic indicator is a preparation of living spores resistant to the sterilizing agent. These may be supplied in a self-contained system, in dry spore strips or discs in envelopes, or sealed vials or ampoules of spores to be sterilized and a control that is not sterilized. Some incorporate a chemical indicator also. The sterilized units and the control are incubated for 24 hours for Bacillus stear other mophil is at 131 to 141°F (55 to 66°C) to test steam under pressure, for 48 hours for Bacillus subtilis at 95 to 98.6°F (35 to 37°C) to test ethylene oxide.

A biologic indicator must conform to USP testing standards. A control test must be performed at least weekly in each sterilizer. Many hospitals monitor on a daily basis; others test each cycle. Very load of implantable devices must be monitored and the implant should not be used until negative test results are known. Biological indicators also are used as a challenge test before introducing new products or packaging materials, after major repairs on the sterilizer, or after a sterilization failure. All test results are filled as a permanent record for each sterilizer.

Example : Hydrogen peroxide plasma sterilizer

Hydrogen peroxide is activated to create a reactive plasma or vapor. Plasma is a state of matter distinguishable from solid, liquid, or gas. It can be produced through the action of either a strong electric or magnetic field, somewhat like a neon light. The cloud of plasma created consists of ions, electrons, and neutral atomic particles that produce a visible glow. Free radicals of the hydrogen peroxide in the cloud interact with the cell membranes, enzymes, or nucleic acids to disrupt life functions of microorganisms. The plasma and vapor phases of hydrogen peroxide are highly spermicidal even at low concentrations and temperature.

4.3 Pharmacy Services

4.3.1 Hospital Pharmacy

Pharmacy is one of the most extensively used therapeutic facilities of the hospital. It is also one of the highest revenue generating centers. A good pharmacy is a blend of several things :

Qualified personnel, Modern facilities, Efficient organization and operations, sound budgeting and the support and cooperation of the medical, nursing and administrative staff of the hospital.

The specialty of hospital pharmacy has been defined as the department or services in a hospital, which is under the direction of professionally competent, legally qualified pharmacist, and from which all medications are supplied to the nursing units and other services,

- Special prescriptions are filled for ambulatory patients and outpatients,
- Narcotic and other prescribed drugs are dispensed, where biological are stored and dispensed, injectable preparations should be prepared and sterilized, and where professional supplies are often stocked and dispensed.

4.3.2 Role of Clinical Pharmacist

1. Medicine Assessment

Patients' medicines requirements are regularly assessed and responded to, in order to keep them safe and optimise their outcomes from medicines.

On admission or at first contact patients' medicines are reviewed to ensure an accurate medication history, for clinical appropriateness and to identify patients in need of further pharmacy support.

The pharmacy team provides the leadership, systems support and expertise that enables a multidisciplinary team to :

- Reconcile patients' medicines as soon as possible, ideally within 24 hours of hospital admission to avoid unintentional changes to medication.
- Effectively document patients' medication histories as part of the admission process.
- Give patients access to the medicines that they need from the time that their next dose is needed.
- Identify patients in need of pharmacy support and pharmaceutical care planning.
- Identify potential medicines problems affecting discharge (or transfer to another care setting) so that they can be accommodated to avoid extending patients' stays in hospital.

2. Care as an inpatient

Patients have their medicines reviewed by a clinical pharmacist to ensure that their medicines are clinically appropriate, and to optimise their outcomes from their medicines.

a. Pharmacists regularly clinically review patients and their prescriptions to optimise outcomes from medicines (timing and level of reviews adjusted according to patient need and should include newly prescribed medicines out of hours) and take steps to minimise omitted and delayed medicine doses in hospitals.

b. Patients targeted for clinical pharmacy support have their medicines' needs assessed and documented in a care plan that forms part of the patient record.

c. Pharmacists attend relevant multidisciplinary ward rounds, case reviews and/or clinics.

d. Patients, medical and nursing teams have access to pharmacy expertise when needed.

e. The pharmacy team provides the leadership, systems support and expertise that enables patients to :

- Bring their own medicines into hospital with them and self-administer one or more of these wherever possible.
- Have their own medicines returned at discharge where appropriate.

3. Monitoring patients' outcomes

Patients' outcomes from, and experiences of, treatment with medicines are documented, monitored and reviewed.

a. As part of a multidisciplinary team, pharmacy team members monitor:

- Patients' responses to their medicines
- Unwanted effects of medicines.

b. Appropriate action is taken where problems (potential and actual) are identified.

c. The pharmacy team provides the leadership, systems support and expertise that enables healthcare professionals to:

- Help patients to avoid adverse events resulting from their medicines
- Document, report and manage any adverse events that do arise.

4. Continuity of care for patients not admitted

Patients who are taking medicines at home or in non-acute care settings have access to continuing supplies of medicines and to pharmacy services and support appropriate to their care.

a. Systems are in place to ensure patients whose care does not involve admission can access medicines when they need them.

b. Patients (and/or their healthcare professionals) have access to the pharmacy expertise that they need to optimize their medicines.

4.3.3 Responsibility of Pharmacist in Hospital Pharmacy

Pharmacy means a making availability of all the drugs and pharmaceuticals needed for patients care, according to the hospital formulary, the right drug in the right formulation and dosage. This section is often combined the central sterilization and stores. The staff has to be well trained and has to be looked after properly at all levels by the pharmacist. The role of private hospital pharmacy in ensuring proper care in preparation, labeling, storage and distribution of drugs and sterilized material is of prime significance.

Private hospital in modern era cannot do without good and qualified pharmacist who has to supervised and control the performance of his subordinates. A well organized pharmacy will function effectively and contribute to the whole integrated hospital organization. A pharmacist renders a valuable service to medical staff. Pharmacist will contribute to the education of nurses in the uses actions and dosage of drugs. It is pharmacist duty to have in stock at all times and adequate supply of the proper quality. Thus, a service of a qualified pharmacist is essential.

The service of a qualified pharmacist is listed below

1. Drug Distribution Standard

Every pharmacist manager shall be responsible for the purchasing, receiving, storage, distribution and disposal of drugs in the pharmacy.

2. Interpretation

- All areas of practice pharmacy support personnel may be utilized to reduce the professional time committed to the mechanics of the drug distribution service without reducing the professional and legal control.
- Community Practice.
- Hospital Practice.

3. Procurement of Drugs

- The purchase of all drugs shall be under the supervision of a pharmacist and in accordance with the formulary standard.
- The pharmacy department shall establish and maintain adequate records of drug purchases necessary for inventory control and legal requirements.

4. Receiving/Storage of Drugs

- Narcotic and Controlled substances shall be delivered to the institution's pharmacy department directly or, where applicable, to the receiving area and subsequently delivered to the pharmacy department forthwith.
- The pharmacist manager shall be responsible to ensure established policy and procedures provide for the proper storage of received drugs when storage within the pharmacy department is not possible.
- The pharmacist manager shall be responsible to ensure established policy and procedures provide for the security of all medication received during the time elapsed from the actual receiving until it is stored properly by the pharmacy.

- All drugs (including investigational drugs, patient's own medication from home and clinical evaluation packages (i.e. samples) within the pharmacy and throughout the hospital) shall be stored under proper conditions of sanitation, temperature, light, humidity, ventilation, regulation and security.
- The pharmacy personnel shall make regular inspections of all drugs storage areas. A written record shall verify that :
  - Disinfectants and drugs for external use are stored separately from internal and injectable medications.
  - Drugs requiring special environmental conditions for stability are properly stored.
  - No outdated drugs are stocked.
  - Narcotics and controlled drugs substances are being stored with proper measures of security.
  - Drugs are not being overstocked.
  - Drugs which may be required on an urgent or emergency basis are in adequate and proper supply.
  - Patient medications no longer required are returned to pharmacy.
  - Standards of neatness and cleanliness are consistent with good medication handling practices.

5. Inventory Control

The pharmacist shall maintain an inventory control system. There shall be drug recall procedures that can be readily implemented.

Ordering the text of the medication orders shall include :

- The patient's name, age, hospital number and location.
- The name of medication and dosage.
- Route and frequency of administration.
- Duration of treatment, if limited.
- Name of authorized prescriber.
- Date the order was written.
- The time the order was written, if deemed appropriate.
- For verbal orders, the name and signature of the person who received the order.

If pediatric patient, weight of child Provisions shall be made for sending the medication orders to the pharmacy department and subsequently retaining the original medication order on the patient's chart. Medication orders should be cancelled automatically when a patient goes to surgery and orders shall be rewritten postoperatively. All orders should be reviewed and rewritten by the physician when a patient changes service. The use of standing orders shall be discouraged. The use of standing orders, if considered necessary, shall be approved individually by the appropriate hospital committee (e.g. Medical Advisory Committee). They shall be reviewed annually and revised as necessary. They shall be available in a preprinted format so that a copy can be appended to the medical record and signed by the prescriber. The prescriber shall authorize their use and shall individualize each medication order according to the individual patient's needs.

6. Medication Profiles

The pharmacy department shall work toward developing a medication profile system for patients of the hospital. Medical profiles, once developed, should be reviewed before dispensing the patient's medication.

Dispensing shall be restricted to the pharmacist or authorized personnel under the direction and supervision of the pharmacist. The pharmacist shall be responsible for the following :

- Determining the authenticity and appropriateness of the medication order before dispensing.
- Selecting auxiliary labels and/or cautionary statements.
- Monitoring patient profiles, if available, for the detection of inappropriate drug therapy.
- Final check on all aspects of the completed prescription.

A stop-order procedure shall be developed for use when a definite number of doses or a time limitation for administration has not been stipulated by the physician on the drug order. Drug specific automatic stop-order policies shall be appropriate for the type of treatment given in the hospital. There shall be a system to notify the prescriber of the impending expiration of the medication order so that appropriate patient reassessment is completed prior to rewriting the order. Pharmacists shall use standardized terminology, metric units, and generic nomenclature of all drug labels to minimize confusion. There shall be a list of abbreviations and symbols approved by the Pharmacy and Therapeutics Committee. Medication labels shall be typed or machine printed and shall be free from erasures and strikeovers. The labels shall be firmly affixed to the container. Medication containers shall not be altered by anyone other than pharmacy personnel.

7. Unit-Dose Medication System

Unit-dose systems shall dispense medications contained in, and administered from, unit-dose packages. Not more than a twenty-four hour supply of unit dose medication shall be provided to the acute patient care area at any time. The medication profile, if available, shall be utilized for the individual medication doses to be scheduled, prepared, distributed and administered on a timely basis. Unit-dose carts or medication trays shall be used as medication storage facilities on the ward. The particular tray for a specific patient shall be labelled with the patient's name, location and hospital number.

The following information shall be indicated on the individual dosage package :

- Name of drug
- Strength
- Expiry date
- Lot number

8. Individual Patient Prescription

Medications shall be dispensed in individually labeled prescription containers. The amount of drug dispensed shall be determined by hospital policy. Medication for administration shall be labeled with the following information :

a) Name of the patient and location
b) Name and strength of the drug
c) Dose
d) Route of administration
e) Accessory or cautionary statements as required
f) Date dispensed
g) Name of hospital

9. Controlled Dosage System Medications

It shall be dispensed in individually-labeled controlled dosage cards/containers. The system shall be designed so that each dose is designated for a specific time of administration. The amount of the drug dispensed shall be determined by hospital policy. Medication for administration shall be labeled with the following information :

a) Name of the patient and location
b) Name and strength of the drug
c) Dose
d) Route of administration

e) Accessory or cautionary statements as required

f) Date dispensed

g) Name of hospital

The pharmacist shall exercise professional judgment at completion of the dispensing procedure to ensure the right drug is dispensed for administration to the right patient, in the right dose, via the right route, at the right time. The processing of emergency "stat" orders shall be determined through written hospital policy.

10. Delivery Medication

It shall be delivered to the ward from the pharmacy with the least amount of delay. All parts of the transportation system shall protect the medication from pilferage and breakage. Special procedures for delivery of Narcotic and controlled medication shall be established to ensure that the drugs are delivered promptly, intact and placed in proper storage areas.

11. Returned Medications

Owing to the inherent danger, drugs having different lot numbers and expiry dates should not be combined. Medications dispensed for administration, but not used, shall be returned to the pharmacy. Procedures for returning drugs to stock shall be instituted. These shall include the following considerations :

a) Integrity of returned drug package.

b) Proper storage of the drug on the nursing care station The following types of medication shall be discarded :

   a) Any opened topical medications (including ophthalmic, otic and nasal medications)

   b) Opened multi-dose and single dose vials.

   c) Any medication handled by the patient.

   d) Any medications returned by ambulatory patients.

   e) Improperly stored medications.

   f) Any open or used I.V. ad mixtures.

   g) Any opened liquid medications.

12. Ward Stock Medications

The pharmacy shall establish a list of ward stock medications for each ward and that list shall be reviewed on an annual basis by the pharmacy department. The supply, distribution and control of ward stock medication shall be the responsibility of the

pharmacy department. Narcotic and Controlled drugs may be provided as a special form of ward stock and shall be stored in a secured area in accordance with legal requirements. Other specified drugs shall be stored in a like manner. Emergency drugs shall be readily accessible and stored appropriately.

Medication Stored on the Ward Medication shall be stored securely on the ward and available to authorized personnel only.

13. Investigational Drugs

Investigational and emergency release drugs shall :

a) Be used only under the direct supervision of the principal investigator.

b) Be approved for use by the appropriate hospital committees.

c) Be administered by personnel only after they have been given appropriate pharmaceutical information about the drugs.

d) Be the responsibility of the pharmacy department for storage and distribution.

14. Administration of Medication

Within the institution, written policies and procedures governing the safe administration of drugs to patients shall be in place, and shall include the following :

a) Drugs shall be administered only upon the order of a medical or dental practitioner who has been assigned clinical privileges or who is an authorized member of the house staff.

b) All medications shall be administered by appropriately licensed personnel in accordance with laws and regulations governing such acts.

c) Whenever medications are added to parenteral products, acceptable precautionary measures shall be developed which would include proper auxiliary labeling regarding the name and amount of drug added, the date and time of the addition, patient's name and the person who prepared the mixture.

d) Medication shall be given as near the specified time as possible.

e) The patient for whom the medication is intended shall be positively identified in accordance with hospital policy.

f) All administered, refused or omitted medication doses shall be recorded in the patient's medical record or chart, according to established procedure. Information to be recorded shall include the drug name, dose and route of administration, the date and time of administration and the initials of the person administering the dose.

g) Self administration of medication by patients shall be permitted when specifically ordered by the physician. Where a self administration program is part of a planned patient teaching program, the policies under which it operates must be documented and approved by the hospital. Pharmacy shall be involved with the patient medication education program.

h) All medication errors shall be reported according to the "Medication Error and Incident Standard".

i) Adverse drug reaction reporting.

j) Procedures for drug administration by respiratory technologists.

15. Patient's Own Medication

If patients bring their own drugs into the hospital, these drugs shall not be administered unless they can be identified and written orders to administer the specific drugs are given by the physician. If the drugs the patient brought to the hospital are not to be used during hospitalization, they shall be stored securely and, if appropriate, returned to the patient at time of discharge. Drugs which are not returned to the patient shall be destroyed by the pharmacy department in accordance with hospital and legal requirements.

16. Alcoholic Substances

The pharmacy department shall ensure policies and procedures are developed for the control, distribution and storage of all alcoholic substances for compounding and dispensing purposes. The institution shall have a special permit from the Manitoba Liquor Commission for the medical use of alcohol.

4.3.4 Professional Standards for Hospital Pharmacy Services

1. Patient focus

Communication with, and the involvement of, patients and carers is an integral component of safe, effective pharmacy services.

- Patients and their carers are treated with compassion, dignity and respect by pharmacy staff.
- The views of patients and their carers are actively sought to inform the development and delivery of pharmacy services, enabling patients to have direct input into the services that they receive.

2. Information about medicines

Patients and their carers have access to information and support in order to make informed choices about the use of medicines or the implications of choosing not to take them.

a. The pharmacy team provides the leadership, systems support and expertise to enable the organisation to :

- Provide patients with information about medicines and their unwanted effects, in a form that they can understand.
- Give patients the opportunity to discuss medicines with an appropriate healthcare professional.

b. Pharmacists support the provision of clear, understandable information about medicines throughout the organisation.

c. Patients and their carers can ask to see a pharmacy team member or call a help line to discuss their medicines, or how pharmacy services can support them to improve health and well being through public health services and activities.

3. Adherence to medicines

Helping patients to make the most of medicines Systems are in place to identify patients who may need adherence support, or to allow patients to request support.

a. Patients' beliefs about, and experiences of, taking, their medicines are routinely explored by healthcare professionals to assess the impact on adherence. Where difficulties are identified, further specialist input is provided by the pharmacy team.

b. Medicines regimes are simplified as far as possible and/or appropriate aids and charts are made available to support patients.

c. Liaison with other healthcare professions or agencies outside the organisation is undertaken where ongoing support is needed.

d. When care is transferred to another setting, patients are referred or signposted to appropriate follow-up or support. For example, if high-risk medicines are changed during admission or new medicines are started.

4.4 Food service in Hospitals

"Food is your medicine – hence let your medicine be your food" - Hippocrates, circa 400 BC.

Food service in hospitals is often given a low priority instead of being recognized as an integral and important part of patient treatment and care. Up to now there have been no nationally agreed minimum guidelines for patients in acute hospitals. Good nutrition is needed to ensure that the treatment the patient receives in hospital is as effective as possible. The number of patients who have good nutritional status, therefore, is a sound indicator of the quality of care provided by the hospital. It must be recognized that providing nutritious and appetizing food is a key part of high-quality, effective hospital treatment. Significant problems in the nutritional care and support of the undernourished and vulnerable patient include: limited food choice, the way food is served and lack of help for those unable to feed themselves properly. One major step in improving the food provided in hospitals is to ensure that hospital menus meet the needs of the patients; these menus should provide sufficient choice to offer adequate nutrition for all patients. The focus should be moved away from the production and serving of specific diets. Instead more attention should be given to frequent provision of appropriate energy-dense meals for undernourished patients. As well, since Ireland is now a multi-cultural country, every effort needs to be made to incorporate suitable dishes in menus.

A variety of menus is needed in hospitals to cover the requirements of many different types of patients. It is important to emphasize that the national Healthy Eating Guidelines are rarely appropriate for the hospitalized patient. Such guidelines are aimed at maintaining a healthy weight and helping to prevent long-term diseases such as heart disease. But patients admitted to hospital generally have nutritional needs that would not be met by following such guidelines. They often have higher energy needs or smaller appetites than healthy people and many patients entering hospital have already lost weight due to their illness. Because of this, the standard hospital menu for patients should not be based on low-fat and high-fibre healthy eating guidelines. It is more appropriate to offer high-protein and high calorie food in the standard menu and to have a healthy eating menu as an option.

4.4.1 Hospital Food Guidelines

- The standard menu for acute hospitals should be energy-dense and high-protein, providing at least 40% of energy from fat.
- A healthy-eating menu should be available for patients who are not malnourished or at risk of malnutrition. This menu should provide around 35% of energy from fat. (See Appendix 3 for patients who may be given this menu.)
- A menu with at least 50% energy from fat should be available for patients with a poor appetite, high energy requirements and low food intake.

- Texture-modified menus should be available for patients with chewing or swallowing difficulties. These should provide at least 40% energy from fat.
- The standard menus must reach the minimum recommended daily amount (RDA) for protein and all vitamins and minerals.
- All menus must take into account the ethnic and religious needs of patients.
- All menus must, where possible, take into account patients' preferences.
- Patients must receive accurate descriptions of menu dishes to allow them to make informed choices. Picture menus must be available to aid patients with low literacy skills or poor vision.
- Menus must be developed in consultation with the hospital's clinical nutritionist/dietitian or the health board's clinical/community nutritionist/dietitian, the catering manager and the nutrition steering committee. Standard recipes should be used, where appropriate.
- Only evidence-based therapeutic diets should be prescribed.
- The nutritional status of the patient must be considered when therapeutic diets with a low fat content are indicated.
- The eating abilities and nutritional status of patients on texture-modified diets must be continually assessed.
- The clinical nutritionist/dietitian or physician should be aware of the patient's use of 'alternative diets' and the influence these might have on nutritional status.
- Feedback from patients about the acceptability of the food provided should be sought.
- The nutrient content and portion size of food should be audited per dish annually, or more often if the menu changes.
- In the planning stage, it should be documented that the nutrient content of the food is sufficient. This should be carried out in consultation with the clinical nutritionist/dietitian.
- Nutrient databases should be improved, with more reliable data on nutrient losses with different food-service systems.

4.4.2 Promoting Good Nutritional Care in Hospitals

Hospital food service can present especially complex features and is often considered to be the most complicated process in the hospitality sector with many interrelated factors impinging upon the whole. The siting of hospital wards, often at considerable distances

from the kitchen, adds an additional logistics burden and in consequence, a long stream of possible delays between production, service, delivery and consumption. This stretched, continuous and staggered food cycle has potential negative effects on the safety and quality of food and presents a challenge to any hospital food service manager. Access to a safe and healthy variety of food is a fundamental human right. Proper food service and nutritional care in hospitals has beneficial effects on the recovery of patients and their quality of life. The number of undernourished hospital patients is unacceptable and leads to extended hospital stays, prolonged rehabilitation and unnecessary costs to health care.

4.4.3 Food Chain

The nutritional status of the patient depends on a chain of interacting links. A failure in any one of these links leads to failure of the whole chain.

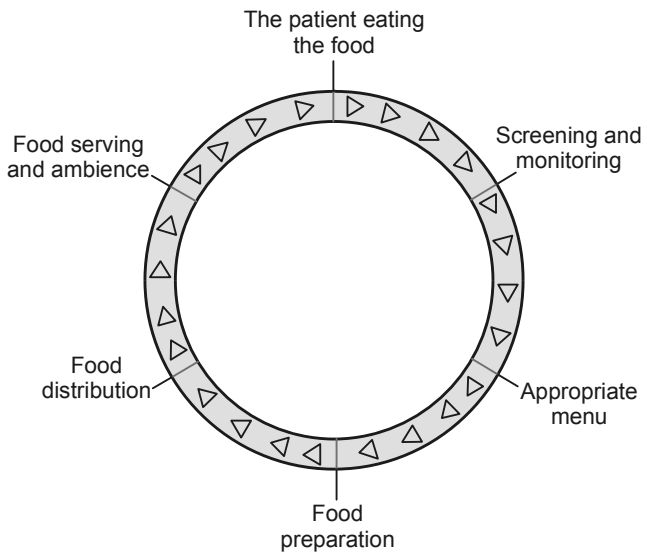


Fig. 4.5 The food chain

The length of time a patient spends in hospital and the cost of that stay is linked to the patient's nutritional status.1 Under-nutrition in sick patients is associated with :

- Impairment of every system in the body: muscle weakness, particularly in respiratory muscles; reduction of the ability of the immune system to function; and alterations in the structure and function of the gut.
- Delayed wound healing.
- Apathy and depression.
- Reduction of appetite and the ability to eat.
- Higher rates of mortality.

These changes combine to increase both the length of time a patient spends in hospital and the cost of that stay. Apart from this, the patient's quality of life is severely affected, both while in hospital and after discharge. All patients have a right to safe, nutritious food. They expect that their nutritional needs will be fulfilled during hospitalisation. The benefits of providing nutritional support have been documented in several clinical situations. While some patients may benefit from special techniques of nutritional support (by the enteral or parenteral routes), most depend on ordinary hospital food to improve or maintain their nutritional status in order to optimize their recovery from illness.

4.4.4 Obstacle to Avoid in Food Service

Several actions must take place to ensure a patient has adequate food intake while in hospital. These include :

- Screening the patient for nutritional risk.
- Monitoring dietary intake.
- Modifying the hospital menu according to patient preferences.
- Ensuring that the service and ambience of mealtimes are focused on the patient with reduced appetite
- Proper food preparation and distribution.

The five major factors outlined to avoid the obstacle in food service are :

1. Lack of clearly defined responsibilities in planning and managing nutritional care

The responsibilities, duties, and tasks of different staff categories in nutritional care and support and food service seem to be unclear in most European hospitals. As a consequence, routine nutritional risk screening and assessment is generally not performed. Neither is nutritional counselling commonly practised. Finally, the use of nutritional support for undernourished patients and at-risk patients is sparse and inconsistent. The responsibilities of both management and staff for nutritional care should be clearly assigned.

2. Lack of sufficient education in nutrition among all staff groups

Physicians' education contains few lessons addressing nutrition-related topics. Teaching has lagged behind nutritional research, increasing the gap between knowledge and practice. Nurses generally find it difficult to identify at-risk patients and set up nutritional treatment plans. Dietitians receive the most up-to-date training but responsibilities in practice are varied due to lack of clinical awareness of the benefits of

nutritional care and lack of support and access to adequate financial resources. Food-service staff may not be aware of the importance of providing highly nutritious food to ill patients. As a result, they may not have a strong enough influence in the allocation of budgets. Also, management may lack sufficient awareness about the benefits of nutrition and thus not recognise its importance. A general improvement in the level of nutrition education of all staff groups is needed.

3. Lack of influence of patients

The basic patient right to safe nutritious food is an integral part of this programme and should be communicated to patients and their families, according to hospital policy.

Patients attending hospital often find it difficult to adjust, from food cooked in their own homes, to meals produced through large-scale methods of production and service. This may result in poor intake of food and weight loss, without the patient recognising that losing weight will increase their chances of complications from a disease. Patients can miss meals because of fasting or tests and are often unaware that extra meals and snacks are available. Where a choice between menus is offered, care must be taken to help the undernourished patient choose appropriate food, as they may select low-calorie foods if these are available on a menu. Additional factors such as hours of meal service and disturbances during mealtimes affect the way patients eat and enjoy their food. The provision of meals should be individualised and flexible. All patients should be able to order extra food and be informed about this possibility. Patients should be involved in planning their meals and have some control over food selection. Menus targeting specific groups should be developed.

4. Lack of cooperation between staff groups

In general, the simplest way to ensure that the patient eats well is to have close collaboration between patients and the medical, nursing, dietetic and food-service staff. In practice, such collaboration seldom occurs.

Hospital managers, physicians, dietitians, nurses, catering managers and food-service staff should work together toward the common goal: optimal nutritional care of patients. Hospital management should give priority to facilitating this cooperation.

5. Lack of involvement by the hospital administration

Management may not consider food service to play a particularly important role in the service the hospital provides. The food service is often regarded as an issue that can be addressed apart from patient treatment and as a simple task that any food operator can

handle. But good hospital food service requires skilled food-service operators. Management should be able to define exactly what the food service should include.

Providing meals should be regarded as an essential part of treating patients and not just as a 'hotel service'. Hospital management should acknowledge responsibility for the food service and the nutritional care of patients, and give priority to hospital food policy. When assessing the cost of the food service, it should take account of the costs of complications and prolonged hospital stay due to under-nutrition.

Besides the five main barriers above, research has highlighted the following as helping to improve nutritional care and support in hospitals :

- Developing and validating simple food recording methods.
- Nutritional support that improves both nutritional status and clinical outcome (including physical and mental functioning and quality of life)
- Protein and energy-dense food that improves patient outcome.
- Methods to ensure that patients eat ordinary hospital food.
- Methods to assess patient satisfaction with the food available.
- The influence of food service practice on food wastage.
- The influence of food service practice on nutrient losses.

4.4.5 Responsibilities and Skills of Food Service Workers

Food service supervisors and technicians take a two-year course at a community college and at least one person on each shift is required to have a Food Safe Level 1 certification. Each health care facility also conducts in-house training that orients workers to the specific demands of the work within that facility. Dietary orders for special needs patients – such as those with diabetes, heart conditions, allergies – or those who are recovering from surgery, are usually initiated by physicians and dieticians. These are often revised based on information from other health care workers who frequently monitor a patient's progress. This means some diets may be modified to take into account the needs of a patient who can't to chew (i.e., when a tooth is broken) or for some other reason is unable to eat solids.

Developing modified diets and keeping track of the "paper trail" associated with each patient is the job of the food service supervisor. The supervisor also monitors patients' eating habits and food preferences. Food is labeled according to patient and location within the facility, a task that is the responsibility of food service workers.

Each patient has a dietary chart that for each meal indicates their food dislikes, allergies or dietary restrictions (such as gluten, salt, sugar or lactose-free) and special food requirements such as whether the food needs to be thickened, minced or pureed. The food service worker must be familiar with each patient's restrictions, are held accountable for all food orders, and are expected to observe diet changes for individual patients.

For most patients in hospitals meals are a high point in the day and a time for companionship and support. This is especially the case in long-term care facilities. In these facilities, food service workers still deliver food to individual rooms, they are able to interact with patients and to observe whether or not patients are actually eating the food given to them. This is an important function, particularly with elderly patients.

Many food service workers are frustrated by the increased pace of work that makes the meal rushed and often leaves little time for patient contact. The result is that more trays are coming back with uneaten food. In many cases the trays for patients with swallowing difficulties or those who otherwise require more time to eat are left sitting on carts and are not distributed early.

Food service workers are particularly troubled by these changes in hospital routines and are conscious of the implications this has for patients. Even small dietary issues can be very important to people in long-term care facilities where the meals are the highlights of an elderly resident's day.

4.5 Laundry Services

4.5.1 Housekeeping

- Housekeeping may be defined as the provision of a clean, comfortable and safe environment.
- Hospital housekeeping is an essential public service agency.
- Good housekeeping has direct effect on the health, comfort and morale of patients, doctors, visitors and hospital personnel.
- It is not confined to the housekeeping department, as every member of staff in the establishment should be concerned with the provision of these facilities in their own department.

Among the various supporting services in a hospital, the laundry and linen is one of the important services. No hospital can pursue its activity of patient care even for one day without the aid of proper linen and laundry services.

The cleaning and laundry department takes care of the entire linen of the hospital. It has the following functions :

1. Washing the dirty linen
2. Repairing the torn linen
3. Replacing the condemned linen

One laundry operator can wash linen of 25 to 30 beds. One laundry orderly can assist in washing the linen of 50 – 60 beds. The appointment of Laundry Supervisor, Mechanic and Clerk and the number employed depend upon the size of the hospital. One supervisor, one laundry mechanic and one laundry clerk are required in each shift. One washerman can take care of 150 to 200 kg linen per day. Each operation in operation theatre produces 7 to 8 kg of soiled linen. Each delivery in labour room produces 7 to 8 kg of soiled linen. Each ward patient produces about 5 to 6 kg of bed linen.

4.5.2 Objective of Laundry Services

The objective of this service is to provide adequate quantity linen to the indoor patients, the operation theatres, the outpatient and other patient care areas of the hospital. It is an important factor in quality of services and patient satisfaction. It has found that, most of the hospitals 92.5 % does not have owned or in-plant laundry. They get the laundering done by contract system i.e., from Dhobis. Whereas, merely 7.5 % (9) hospitals have a laundry attached to it. It is located in the building adjacent to the main complex of the hospital. All the activities of the hospital laundry services like washing, mending and replacement are done in the hospital premises. Out of these, 8 hospitals have manual laundries and one hospital run mechanized laundry. Mechanized laundry service is convenient, safe, dependable and cheaper in comparison to other methods, but the introduction of mechanized laundry in sample hospitals is rather unsatisfactory due to lack of knowledge and investment. Whereas establishment of manual laundries are considered to be feasible for the sake of generating and utilizing additional human resource in the hospital organization. It is an important supporting service to every hospital which required sufficient human resource as per their size and specialization.

4.5.3 Main Types of Hospital Laundry System

Laundry is an important factor in quality of services and patient satisfaction. There are four types of hospital laundry system :

(1) Contract, (2) in plant, (3) cooperative, (4) linen rental.

In the present sample area, many of the private hospitals are small in size and they do not have the financial capacity to establish its own. In this situation the cooperative type of joint laundry services system is recommended. It has seen that, in 4.2 % (5) hospitals, laundries staff strength is one; in 2.5 % (3) hospitals laundries have two workers and 0.8 % large hospital run laundry with three workers. None of the hospitals' laundry found to have more than three staff strength. The staff strength of laundry depends on the size, specialization and bed capacity of hospitals. Collectively, 14 employees are working in nine private hospitals to provide adequate quantity linen to their patients' care. Maximum numbers of hospital laundries have one employee. From the above analyses it is clear that, among the various supporting services in a hospital, the linen and laundry is one of the important services which is not considerable by concerned hospital authority. There is sample scope for installation of own laundry in every private hospital and can create good amount of job opportunities to unemployed peoples.

Linen and laundry services are one of the most important support services in the present day hospitals. The laundry services include a wide range of activities and services pertaining to procurement, washing, cleaning, disinfection and distribution of clean linen to hospital inpatient and outpatient areas. Hospital Laundry is very different from laundry services maintained in Hospitality Industry. The hospital laundry deals with linen which is soiled from various body fluids i.e. Blood, Urine, Feces etc. This type of linen requires be disinfecting and servicing before putting them into washing machines. There are items which require careful and delicate handling. The goal of linen and laundry is to provide regular and timely supply of clean linen to the satisfaction of patients and staff. Laundry should be able to provide adequate quantity of right quality linen to indoor patients, Operation Theatres, Out Patient Departments and other areas of the hospital for the medical and paramedical personnel engaged in providing health care. An efficient and effective Linen and Laundry services can enhance patient experience and reduce the risk of cross contamination. Laundry and its products should preserve the patients' dignity, promote the patient care and be appropriate to patient group, gender, clinical status, religion and beliefs.

1. The laundry services can be in house or outsourced. As a rule only following items may be cleaned in the laundry.
   i. Hospital patients linen.
   ii. Hospital curtains.
   iii. Hospital Kitchen linen.
   iv. Hospital staff uniforms.

v. Other authorized items like blankets, mattresses and pillows Staff personal clothing is not cleaned in the hospital laundry.

2. Segregation and Collection of soiled linen.
3. All linen after use will be collected in each department / ward and segregated into potentially infective and not potentially infected. The former will include all linen which has been soiled with body fluids and will be kept separately.
4. Personnel working in the receiving and sorting area are required to wear a long gown, mask and gloves. He should keep his hands away from his or her mouth and eyes and thoroughly wash his or her hands when leaving the receiving and sorting area. No eating and drinking is allowed in this area.
5. Sluicing / Treatment of soiled / infected linen.
   i. All infected linen / linen soiled with body fluids will be soaked in 0.5 % bleaching solution for 30 minutes then washed with water & detergent to remove bleach before handing over for washing.
   ii. Handing taking over of linen with the laundry staff. The soiled linen is tied into bundles and an entry made. The infected linen is accounted and handed over separately. If possible all linen is inspected for tears and damage at this point to avoid dispute.
6. The linen is washed, dried and ironed by the laundry staff. Infected linen is washed separately. The linen is returned to the health facility where it is properly taken over and a record made of the same. Repairs will be carried out on torn linen.
7. Clean linen should be stored in a dry place on racks. Clean linen is transported on a clean trolley.
8. Laundered linen is issued to the patient at the time of admission and taken back at the time of discharge. Linen if soiled by body fluids is frequently changed.
9. Blankets can be dry cleaned or hand washed. Hand-washing can be done by first soaking for 15 minutes in lukewarm water. The soap suds are squeezed through the blanket and then rinsed in cold water at least twice. The blanket should not be twisted or wrung. It should be dried by spreading it on a clean surface.
10. Pillows and mattresses can be washed with soap and water and left to dry in the sun.
11. Blankets pillows and mattresses can be fumigated if required by keeping them in a closed room and the room is then fumigated.

12. Linen soiled with faeces pus and blood should be sluiced in 0.5 % bleaching solution in the ward or central storage area for 30 minutes followed by washing with clean water & detergent before handing in the laundry it should be washed separately then subjected to boiling with frequent stirring. The addition of 0.3 % washing soda enhances the effect of boiling.

4.5.4 Responsibilities and Skill of Laundry Workers

Laundry work associated with health care facilities carries responsibilities and risks that differ substantially from hotel laundry work. The laundry requirements of specific hospital units are unique and require specialized knowledge and skill acquired by workers through experience and training on-the-job. Similarly, the distinct substances encountered in a hospital laundry relate to bodily fluids and contact with them makes this type of work especially hazardous.

Laundry workers require distinct skill to deal with the special laundry needs of different hospitals and specific units within health care facilities. For example, isolation laundry is washed in separate manually loaded machines. Workers must be especially conscious of heavily stained items that require treatment with appropriate chemicals and must be washed often and then rewashed. Different fabrics cannot always be mixed because of the different heat and chemicals used in the cleaning process. Special training and skill are needed for the requirements of operating room laundry. Surgical gowns and other operating room supplies are laundered separately because they are made from microfibre, a specialized fluid-resistant material. Operating room linens (gowns, sheets, coverings, pants), in particular, require higher levels of cleanliness and scrutiny than laundry associated with most other units.

The importance of an efficient laundry service to the effective work of a hospital cannot be over estimated. A supervisor at one hospital which had contracted out its laundry to a private, commercial laundry, explained some of the problems with the privatized service, When aprons were sent out, they would come back so tangled up that it would take hours to sort out – they had to be thrown out. Rags and uniforms sent out would never come back, or if they did they were tangled up with underwear, socks and pads that didn't belong to anyone in the facility. Uniforms would be washed with heavily soiled items, and come back unwearable. Staff would have to take their uniforms home to be washed." Ultimately the problems this hospital experienced were so serious that the laundry work was brought back in the hospital itself.

Two Marks Questions with Answers

Part - A

Q.1 Write the advantages of CSSD.

Ans. :

- Need for fewer supervisory staff.
- Greater care in overcoming staff deployment problems in case of absenteeism.
- Optimum equipment utilization.
- Smaller capital and power costs.
- Greater flexibility in production planning.
- Overall economy.

Q.2 Explain the objectives of Central Sterile Services Department (CSSD).

Ans. : The objectives of central service include the following :

- To provide inventoried supplies and equipment to customer areas.
- To promote better patient care by providing prompt and accurate service.
- To provide supplies of sterile linen packs, basins, instruments, and other sterile items.
- To maintain an accurate record of the effectiveness of the cleaning, disinfecting, and sterilizing processes.

Q.3 What is Decontamination Process ?

Ans. : Decontamination is the physical or chemical process that renders an inanimate object that may be contaminated with harmful microbial life safe for further handling. The objective of decontamination is to protect the preparation and package workers who come in contact with medical devices after the decontamination process from contracting diseases caused by microorganisms on those devices.

Q.4 List the various types of Packaging.

Ans. :

- Textiles
- Nonwovens
- Pouch packaging
- Rigid container systems

Q.5 Define Mechanical Indicators.

Ans. : Sterilizers have gauges, thermometers, timers, recorders, and/or other devices that monitor their functions. Most sterilizers have automatic controls and locking

devices. Some have alarm systems that are activated if the sterilizer fails to operate correctly. Records are maintained and review for each cycle. Test packs (Bowie-Dick test) are run at least daily to monitor functions of each sterilizer, as appropriate. These can identify process errors in packing or loading.

Q.6 Define Sterilization Process.

Ans. : Bacterial spores are the most resistant of all living organisms because of their capacity to withstand external destructive agents. Although the physical or chemical process by which all pathogenic and nonpathogenic microorganisms, including spores, are destroyed is not absolute, supplies and equipment are considered sterile when necessary conditions have been met during a sterilization process.

Q.7 List any 4 characteristics of good medical record.

Ans. :

- **Accurate :** Medical record should be accurate. Otherwise, there is no meaning of keeping medical records. To justify the purpose medical record should be accurate.
- **Complete :** It must contain sufficient data written in sequential order of events to justify the diagnosis and warrant the treatment.
- **Adequate :** Medical records should contain all the necessary information and complete progress not written by the attending doctor.
- **Comprehensive :** Medical records should contain comprehensive and adequate information to point and easily understood.

Q.8 Write down the objectives of the Medical Record Department.

Ans. : The objective is to evaluate the existing medical record keeping system and evaluate the effectiveness of the current medical record system. The objectives include :

1. To evaluate the existing medical record keeping system.
2. To assess and evaluate the effectiveness of the current medical record system.
3. To assess the logical and legal aspects of the current medical record keeping system.
4. To identify the shortcomings if any & provide suitable recommendation to improve the existing Medical Recording system.

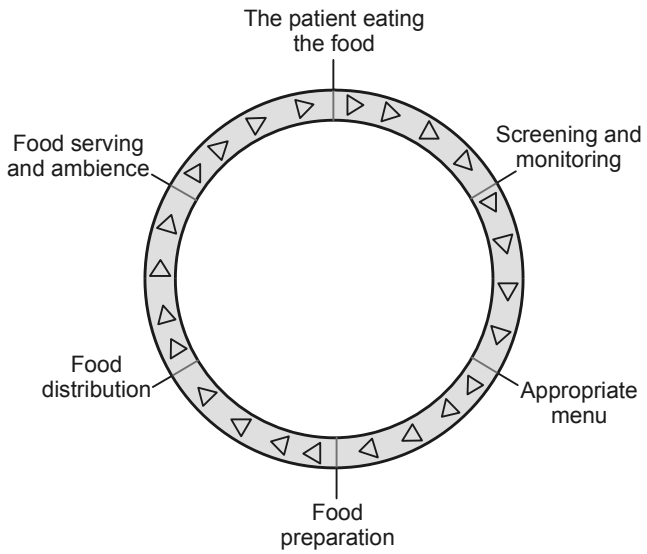
Q.9 List few Auxiliary Services.

Ans. : Auxiliary services in hospital activities which are directly related to neither care, nor support care, but contribute to facilitate the service. The Auxiliary service include

- Registration and Indoor case records
- Stores
- Transport
- Mortuary
- Dietary Services
- Engineering and Maintenance services
- Hospital Security

Q.10 Sketch food chain.

Ans. : The food chain



Review Questions

Part - B

Q.1 Explain in detail about food chain and obstacle to avoid in food service.

Q.2 Explain in detail about laundry services.

Q.3 Brief about the responsibility of pharmacist in Hospital Pharmacy.

Q.4 Explain about Decontamination Process ?

Q.5 Write down about the need, advantages, functions and objectives of CSSD ?

Q.6 Explain about the levels and components of medical care ?

❑❑❑

Unit V

Communication and Safety Aspects in Hospital

Syllabus

Purposes - Planning of Communication, Modes of Communication - Telephone, ISDN, Public Address and Piped Music - CCTV.Security - Loss Prevention - Fire Safety - Alarm System - Safety Rules.

Contents

5.1 Purposes - Planning of Communication

The care of patients now almost inevitably seems to involve many different individuals, all needing to share patient information and discuss their management. As a consequence there is increasing interest in, and use of, information and communication technologies to support health services.

Indeed, if information is the lifeblood of healthcare then communication systems are the heart that pumps it. Yet, while there is significant discussion of, and investment in, information technologies, communication systems receive much less attention. Whilst there is some significant advanced research in highly specific areas like telemedicine, the clinical adoption of even simpler services like voice-mail or electronic mail is still not commonplace in many health services.

The hospital manage shall ensure clear, accurate and timely communication and information management (both internal and external) to ensure informed decision-making, effective collaboration and cooperation, and public awareness through the use of common terminologies, integrated communication and an efficient system of alert.

5.1.1 Importance of Communication in Health Care

For hospitals and health care institutions, ensuring that patients receive proper care takes more than performing procedures and making diagnoses. Communication is a crucial component in all steps of the health care process. Whether it is a clinic accurately sharing patient information with another facility, or a group of doctors, nurses, specialists, and other staff at a hospital discussing how to treat current and incoming patients, the need for concise, effective communication is always present in the health field.

Organizations with strong communication policies can enrich their patients' health, while those that don't have effective procedures in place can negatively impact patient well-being. Health care professionals and institutions need to recognize the importance of communication in health care in order to thrive.

Poor communication has been a factor in 1,744 patient deaths and over $1.7 billion in malpractice costs nationally in the past five years, according to a study published in Fierce Healthcare. This shows that better communication methods would benefit both patients and health care providers. Effective communication — both intrahospital and interhospital is important for health care providers to protect their patients, save on costs, and increase day-to-day operating efficiency. Meanwhile, patients benefit from increased access to their medical histories, which reduces chances of medical errors.

A Focus on patient safety, when considering the importance of communication in health care, patient safety is one of the top reasons to create an effective communication structure in any health care organization. Inadequate communication is often a leading cause of in-hospital deaths. In a retrospective review of 14,000 in-hospital deaths, communication errors were found to be the lead cause, twice as frequent as errors due to inadequate clinical skill, notes a 2006 study in the Clinical Biochemist Review. While communication errors can have severe consequences, these issues are often relatively easy to fix, meaning many patient deaths caused by communication errors are preventable. That fact alone is one of the most important reasons why communication is so important for patient safety.

5.1.2 Purpose of Robust Communication System in Every Hospital/Healthcare Zone

The following establishments are made to fulfill the purpose of the robust communication system in every hospital.

i) Appoint/ designate a public information spokesperson to coordinate hospital communication with the public, the media and the health authorities.

ii) Establish an information desk to provide the requisite information at regular intervals and to serve as a hub for volunteer mobilization and management. The list of casualties along with their status shall be displayed at a prominent place outside the casualty / emergency ward, in both english and the local language, which shall be periodically updated.

iii) Develop a robust communication protocol, including streamlined mechanisms for information exchange between hospital administration, department heads and facility staff.

iv) Brief hospital staff about their roles and responsibilities during crisis situations.

v) Establish mechanisms for timely information management and reporting to supervisory and other relevant stakeholders. (neighboring hospitals, private practitioners and pre-hospital networks etc.)

vi) Ensure availability of reliable and suitable primary and back-up communication system (installation of suitable equipments depending upon the size, location and critical units in the hospital which will get activated in times of emergency; select staff to be trained on the usage of such equipments).

vii) Draft key messages for communicating effectively to the stakeholders (patient, staff, public etc.) in preparation for the most likely disaster scenarios.

viii) Maintain a database containing the contact information of all the hospital staff and other relevant stakeholders and update it periodically.

5.1.3 Planning for Communications (within and outside the Hospital)

Communications is one of the main problems in major emergencies and disasters. Information transfer has to be reduced to most important facts only. Multiple means of communications should be planned to communicate with hospital staffs and administrator.

The currently available communication networks which should be looked into for availability in the hospital are;

- Internal telephone exchange (for the hospital).
- Landline phones.
- Private mobile/cellular phones.
- Mobile/cellular phones in Closed User Group (CUG) for hospital staffs only provided by the hospital.
- Loudspeakers/ public address system.
- Wireless sets for security and ambulance personnel.
- The communications room.

An area should be identified as communication room within the hospital and all internal and external communications must be made from here. This communication room should be in continuous contact with the command centre/control room.

All important numbers of hospital personnel, police, district functionaries of administration other nearby hospitals etc. should be clearly mentioned in the communication plan and should also be present in the communication room/ telephone exchange.

5.1.4 Modes of Communications Methods

There are two types of communication methods that health care institutions use that are crucial to patient safety and well-being: interhospital and intrahospital.

Interhospital communications involve information sharing among multiple sites or institutions. This includes transmissions between facilities owned by the same organization and between completely separate health care entities. Moving patients from one facility to another, sending medical records, and transporting vital medical equipment all require clear communication between sites.

However, hospitals often encounter obstacles in communicating effectively with one another. A study conducted by the Center for Health Information and Decision Systems (CHIDS) found that poor inter hospital communication costs the industry upward of $12 billion annually. Inadequate communication drives up costs by preventing institutions from accessing patients' medical files, which may create a need for duplicate tests and second opinions that would not otherwise be necessary.

Intrahospital Problems with communication also occur among personnel within the same hospital. Intrahospital communication is any information sharing within a singular institution whether it involves coordinating room changes, scheduling surgeries, assigning further tests, or even setting up appointments. When doctors, staff, and patients are not effectively sharing information, the efficiency of each process may decrease, potentially resulting in unnecessary costs or even danger to patients. Patient record delays, lack of procedural coordination, and even serious medical errors may all be consequences of poor communication.

5.1.4.1 Other Modes of Communication

There are different modes in which healthcare professionals can work to optimize the safety of patients which include both verbal and nonverbal communication, as well as the effective use of appropriate communication technologies.

Methods of effective verbal and nonverbal communication include treating patients with respect and showing empathy, clearly communicating with patients in a way that best fits their needs, practicing active listening skills, being sensitive with regards to cultural diversity and respecting the privacy and confidentiality rights of the patient.

To achieve the best communication with patients, nurses must be prepared to learn, understand and apply various aspects and applications of communication in various fields of nursing.

Emphasis must be placed on the importance of communication between nurse and patient and nursing education must focus on the communication skills. Likewise, (patient) communication is rarely "unidirectional" and the failure by nurses to recognize two-way communication can lead to negative conclusions and attitudes. However, communication is not only verbal and it can happen without words, and is an ongoing process. Non-verbal communication is expressed by facial expressions, gestures, posture and physical barriers, such as distance.

Nurses must be able to analyze patient communications during stressful situations and understand non-verbal cues to ensure patient safety. Additionally, nurses must

understand that no two people communicate in exactly the same manner. Listening is important in communication; listening lets a nurse assess a situation to formulate a response for care.

To use appropriate communication technology, healthcare professionals must choose which channel of communication is best suited to benefit the patient. Some channels are more likely to result in communication errors than others, such as communicating through telephone or email. It is also the responsibility of the provider to know the advantages and limitations of using electronic health records, as they do not convey all information necessary to understanding patient needs. If a health care professional is not practicing these skills, they are not being an effective communicator which may affect patient outcome.

The goal of a healthcare professional is to aid a patient in achieving their optimal health outcome, which entails that the patient's safety is not at risk. Practice of effective communication plays a large role in promoting and protecting patient safety.

Each health care system has multiple forms of communication that administrators and staff must be trained to use properly and efficiently. When even one of these communication methods fails, patient safety can be put at risk. A minor printing mistake could lead to incorrect dosages, or incomplete information may keep a doctor from knowing about a crucial allergy. Understanding how standard communication methods work is the first step in ensuring that a hospital is running as smoothly as possible, for both the patients' and the hospital's sake. To that end, here are some of the most common ways that hospitals and other health care systems communicate and share information.

i) Transmitting Patient Data

Patient records are shared securely via inter- and intrahospital communications. Delays in receiving records can cost hospitals millions of dollars each year in unnecessary expenses. Patient data are used to create a through medical history and provide appropriate medical care. When patient data aren't shared between departments or other health care organizations, there may be a much higher chance of practice errors and subsequent increased costs.

ii) Sharing Research Findings

The health care industry relies on research to create and improve tools and procedures. However, some third-party researchers — such as those who work for private companies or pharmaceutical labs — are reluctant to share their findings with providers because of competitive pressures in their industries.

For health care techniques to evolve, providers must implement communication systems that allow researchers to quickly and easily collaborate, both within the same organization and across multiple organizations.

iii) Collaborating with Colleagues

Intrahospital communication relies heavily on collaboration between colleagues. Patients, lab technicians, doctors, and staff all need to be in constant communication to create a system that operates as smoothly as possible. Inter-colleague collaboration also includes entering information accurately into databases, especially shared ones. Inaccurate communication between departments can lead to errors in database entry, which, in turn, can potentially risk patient safety.

Hospital managers and other leaders must communicate frequently with doctors, staff, and patients. All hospital leaders and managers not only oversee administrative staff and tasks but can also play a vital role in individual patient health care plans. To be effective, they should maintain open lines of communication with those around them and also facilitate information sharing between hospital departments and with other institutions.

iv) Telemedicine Advancements

Health care professionals are increasingly embracing telemedicine, which involves using a variety of internet-connected technologies to serve patients remotely. These technological tools play essential roles in health care communications, according to the American Telemedicine Association.

Hospitals and other health care organizations use internal online networks, or intranets, to create more efficient communication processes. This makes patient record sharing and cross-departmental communications much easier. What once may have been communicated via printed files and memos can now be shared electronically within the organization and sent to other organizations.

Telemedicine goes even further by allowing patients to receive medical care and advice from the comfort of their own homes. Using state-of-the-art communication tools, patients and health care providers are able to discuss health concerns via video chat, often eliminating the need for the patient to visit the provider's office. Not only does this cut down on costs for both the provider and the patient, but it also creates a seamless communication experience for everyone involved.

5.1.4.2 Teamwork and Communication

During complex situations, communication between health professionals must be at its best. There are several techniques, tools, and strategies used to improve communication. Any team should have a clear purpose and each member should be aware of their role and be involved accordingly.

To increase the quality of communication between people involved, regular feedback should be provided. Strategies such as briefings allow the team to be set on their purpose and ensure that members not only share the goal but also the process they will follow to achieve it.

Briefings reduce interruptions, prevent delays and build stronger relationships, resulting in a strong patient safety environment. Debriefing is another useful strategy. Healthcare providers meet to discuss a situation, record what they learned and discuss how it might be better handled. Closed loop communication is another important technique used to ensure that the message that was sent is received and interpreted by the receiver. Communication between healthcare professionals not only helps achieve the best results for the patient but also prevents any unseen incidents.

5.1.4.3 Internal Communication(IC) Technologies used In Hospitals

Internal Communication(IC) in hospitals is a holistic approach to communicate and it is designed. Hospital Human Resource (HHR) Management which encompasses all its' departments. The object communication is to create a common consistent platform for information exchange hospital-wide.

Effective internal communication is vital because hospitals deal with human lives directly. This sign impacts medical decision making leading to life or death situations.

Communication has to be done with the systemic approach and strategic planning for deliver in care. Healthcare Consulting Firms (HCF) can help in making optimal use of knowledge and generated in the hospital for better communication. This produces best patient outcomes and hospital revenues and reputation.

Most hospitals use Hospital Information System (HIS) with digitised records for storing, maintaining, retrieving patient information and also administrative/operational data. The widely used communication technologies include.

- Electronic Dashboards
- Mobile Computing
- Electronic Health Records(EHR)
- Digital Voice Communication

- Hospital Intranet and Emails
- Handheld Wireless Devices
- Digital Radiography

A) Challenges Faced by Internal Communication(IC)

Risks in patient safety due to

- Gaps in timely availability of patient information.
- Real-time difficulties in contacting medical staff immediately.
- Unclear verbal commands.
- Misinterpretations in executing physician's instructions.
- Overlooking changes in health status.
- Absence of collaboration between hospital staff including physicians, nurses, technicians.

Difficulties faced by hospital employees in keeping pace with technology developments and in healthcare communications causing high attrition rates. Lack of consolidated and comprehensive view of internal information creating confusion with lists and call schedules of physicians and other medical staff. Need for adherence to regulatory and compliance issues in hospital communication mechanics could be independent of specific technologies used.

B) Ways to Enhance The Internal Communication In Hospitals

i) Fostering an environment that encourages and promotes better collaborating teamwork of hospital staff

This helps in collective decision making rather than taking calls which is detrimental to patient care. Consolidated information makes hospital staff their roles and responsibilities. It also enhances employee engagement and productivity.

ii) Developing a seamless and integrated information system

By doing this, critical information may be accurately communicated to the authorized staff involved in patient care.

For diagnostic test results and contact details of patients may be instantly conveyed to physician expedite faster treatment. Likewise, they may be alerted on patient admissions on emergencies. This creates a seamless, consistent experience for the patient and ensure quality care.

iii) Constantly reviewing and updating the hospital policies and terms

For hand healthcare regulations, enhanced accreditation requirements or internal process modification necessary. Clear internal communication to employees ensures that required changes and consistently implemented across the hospital.

iv) Equipping hospital staff with adequate skill sets and training

It is important for the employee is able to fully understand and utilize the hospital communication system. This sufficient training and repeated practice on communication aspects and also on technical advancements. Thus fear of failures and resistance to change is overcome.

v) Using strategic top management driven approach for clarity

Clearly communication goals and expectations, hospital managers and administrators can help employees under work towards them. This may be enabled through periodic memos, emails, meetings an manuals.

5.1.4.4 Benefits of Effective Communication in Nursing

The benefits of effective communication in nursing are often unseen and undervalued. Nurse communication is just as much an art as it is a science where the art involves establishing a human connection with the patient or co-workers while the science relates to the tool and technology that facilitates such connections. People are social beings and we need care from others, especially when we are at our most vulnerable. With hospitals typically employing four times as many nurses as physicians, nurses are likely the ones that provide patients with the compassion and empathy needed on the journey to recovery.

Nurses provide patients with deep interpersonal, intellectual, technical abilities and skills at the point of care and beyond. To do so, they must possess more than just clinical knowledge, they need interpersonal communication skills. According to the US National Library of Medicine at the National Institutes of Health (NIH), communication in nursing is a vital element in nursing in all areas of activity and in all its interventions, such as prevention, treatment, therapy, rehabilitation, education, and health promotion.

The benefits of effective communication in nursing include the following :

1. Immediate understanding of a patient's condition and needs from the initial point of care and triage and throughout treatment and release (from an acute care environment) and beyond, nurses are the first, and primary, caregivers. These caregivers quickly assess, evaluate, and work to understand a patient's condition. In nearly every case, nurses are the first and best line of communication regarding patient health to other team members.

Their ability and effectiveness of communication is critical to providing great care.

2. Understanding the emotional state of patients, because nurses spend more time with patients than most other caregivers, the amount of personal communication they have with patients is important for the understanding of a person's physical and emotional well-being. The communication nurses have with patients means they may be able to provide a deeper level of care individually. This granular information can be significant in a patient's long-term health. This level of communication also can help them make decisions on appropriate treatment plans and when implementing care protocols with other healthcare professionals.
3. Understanding the social determinants of health Social determinants of health are the social, physical and environmental conditions in a person's life that affect overall health status. The social determinants of health, such as poverty, unemployment, food insecurity and lack of stable housing, have been shown to increase rates and severity of chronic conditions and lead to greater morbidity and mortality. Communicating effectively with patients to understand what some of their social determinants may be can greatly increase patient health and wellness, key components.
4. Tracking changes in care understanding patient needs and concerns allows nurses to target their communication and clinical strategies toward specific patient preferences. Doing so also means they can track patient progress regularly, measuring deviations in near real-time. Outcomes-based on regular communication can then be forwarded to other caregivers on the team. When a nurse is a good listener and frequently checks in on her patients, she is able to reduce both physical and emotional distress.
5. Identifying specialized needs a patient may have needs outside their medical care. For example, some patients may have specialized diets or particular religious beliefs. Nurses can ensure this information is provided to the right people so that quality of care isn't compromised, and the patient's requirements are met.
6. Advocating for patients

   According to the American Nurses Association's (ANA's) "Code of Ethics for Nurses", patient advocacy includes a therapeutic relationship and communication between nurse and patient. As an advocate, a nurse act as an informer to the patient's decision-making, standing by the patient and enabling the patient to make his or her own decisions. Nurse advocates bridge communication gaps between the patient, other professions and the healthcare system. Likewise, when a nurse can identify patient worries, she or he can help alleviate fears and create a better experience for the patient. Nurses provide reassurance and assistance for patients. They can help to explain a diagnosis or give recommendations on how to follow a treatment plan or take medications. They also follow-up with the physician for things like lab results or critical information.

Health IT can play a major role in supporting strong nurse-patient communication. For example, tablets can contain tools to help patients become acquainted with the hospital and their care teams, and promoting a more positive experience during their stay. Thus, nurses don't just need to rely on their own interpersonal skills and memory. Clinical communication and collaboration solutions can help nurses communicate with other care team members and record important information about patients. These same technologies can help nurses communicate important information to patients. Nurses can reconcile meeting documentation requirements through the healthcare technology with their interpersonal skills to create a positive patient experience.

5.1.4.5 Nurse Communication Skills for Success

1. Non-Verbal Communication

You can communicate a powerful message without saying a word. Non-verbal nurse communication skills include making eye contact and controlling the tone of your voice. Appropriate body language, posture, and simply adding a smile can go a long way in nurse communication with both patients and colleagues.

2. Active Listening

Listen to understand; not solely to respond. This is one of the best principles for active listening. When speaking to a colleague or patient, lean forward and nod your head to let them know you are engaged. Maintain eye contact.

3. Personal Relationships

With practice, you can learn to show care, compassion, and kindness while obtaining and providing information to patients. You must be able to demonstrate a level of interest in the collaborative relationship. This will help the patient feel accepted and build their trust in you.

4. Inspire Trust

Always keep your word. Never make promises you may not be able to keep. When you are with a patient, be present. Listen to your patients and take all their complaints or concerns seriously.

5. Show Compassion

Treat patients with respect and dignity. Being in the hospital can be scary. Patients may feel depressed, helpless or even frightened. Put yourself in the shoes of your patient. Doing so will help you convey empathy while using your nurse communication skills.

6. Cultural Awareness

Every patient is unique. They may come from different countries, cultures or religions. Common practices and gestures are not accepted by all cultures. Consider your actions and strive for cultural awareness every time you communicate with a patient.

7. Educating Patients

This nurse communication skill is at the heart of nursing. You must be able to explain disease processes, medications, and self-care techniques to patients and their families. Break down medical jargon into simple terms. Education should be collaborative. Ask patients questions and use teach-back techniques when possible.

8. Written Communication

This is essential for nurse-to-nurse communication. Always ensure your written communication is concise and easy to understand. Write in complete sentences that are grammatically correct. Only use approved abbreviations and terminology that is universal.

9. Presentation Skills

Nurses in leadership positions are not the only ones who need this skill. You may be asked to present to nurses or other staff members on a small or large scale. Plan your message. Create pleasing visual aids that add value to the presentation. Know your audience and understand what they want from your presentation.

10. Verbal Communication

Verbal nurse communication skills are of the utmost importance. Always consider your audience.

5.1.4.6 Communication and Decision Making

Effective communication is essential to ensure that the person receives the care they need for a speedy recovery. Effective communication can also ensure that the rights and dignity of the person are upheld. Communication is difficult for some people with disability (e.g. person may be non-verbal and unable to tell the health professional what is wrong). It may also be a challenge for health staff who may not know/understand how to communicate effectively with the person. This can sometimes lead to communication breakdowns between Health staff, the person / disability support staff .Faulty perceptions can also impact on the provision of patient centred care. It is important that the health professional reads this information to understand the specific communication needs of the person.

5.1.4.7 Effective and Ineffective Communication

The use of effective communication among patients and healthcare professionals is critical for achieving a patient's optimal health outcome. Communication with regards to patient safety can be classified into two categories :

- Prevention of adverse events and
- Responding to adverse events.

Use of effective communication can aid in the prevention of adverse events, whereas ineffective communication can contribute to these incidences. If ineffective communication contributes to an adverse event, then better and more effective communication skills must be applied in response to achieve optimal outcomes for the patient's safety.

5.1.5 Information and Communication Technologies -Telecommunication

Without communication, the foundation of a health care facility's ability to support uninterrupted patient care crumbles. From verbal codes to the technological means of delivery, a health care facility must be able to trust its communication system.

Hospitals and health care facilities must ensure a robust, reliable telecommunications network to support every form of communication. From digital data access and voice networks to mobility solutions, facilities must strategically integrate each form into its overall operational plan.

The best way to ensure a reliable telecom network is to fully audit your existing telecom system. For an accurate audit, there are five critical aspects every health care provider must consider to ensure that its communication networks are primed and ready for maximum efficiency.

5.1.5.1 Equip Data Networks with Enough Bandwidth

Health care has never before been so Internet-dependent. From smartphones and tablets to web-supported electronic health records (EHRs), the Internet is driving the future of medicine. As the health care industry's digital footprint grows, its basic supporting infrastructure - bandwidth - must grow with it.

As one of the most critical components of a telecom network, failing to invest in enough bandwidth, or to prioritize bandwidth provisions properly, will result in an overload of data fighting for a limited space in its thoroughfare. This can result in poor download speeds, errors, jitters, latency and dropped packets - all of which can be detrimental to a high-functioning data network. Fig. 5.1 shows the view of Voice over IP.

Fig. 5.1 Voice over IP

Preventing this digital traffic jam begins with assessing your data needs. Though each individual facility will require a different bandwidth depending on the intensity of its Web-driven data usage, every facility must define its critical data applications. These are the Web-intensive applications that must be fully functional 100 percent of the time and should be given top priority on a Quality of Service (QoS) template — a hierarchy for bandwidth allocation.

By properly configuring your QoS template within your data circuit, all data applications will be assigned tiered priority for bandwidth usage, with the most critical designated for the first order of bandwidth. Most likely, these applications will be those directly related to your most essential communication, such as a Voice over Internet Protocol phone system, or those that directly affect patient care, such as medical imaging.

It's also important to consider the future needs of the health care facility. What does its growth look like? What Web-dependent technologies is your IT team considering for future investment? Having a data road map for the next three to five years, will help you know how to plan for future growth. It's important to make sure data bandwidth is scalable now and well into the future, so that you can quickly adapt to your evolving telecommunication needs without major construction or contract renegotiations.

5.1.5.2 Examine Backup Network Strength

Medical data are some of the world's most protected and valuable information and should be treated as such. A health care facility's data must always be staunchly protected and able to withstand unexpected server outages, human errors and natural

catastrophes. Redundant data networks, or backup services, can be the defining technology to your facility's longevity.

Most of a hospital's backup techniques are governed by regulatory compliance, so make sure that your supporting network infrastructure is built to support the extent of your backup requirements as well. Often, your data will be sent through a telecom network to a data center hundreds of miles away.

To keep backup networks efficient and resilient, facilities should consider the size of their backup data, bandwidth availability and minimal latency during file transfer. Some hospitals could be transferring multiple gigabytes of data every day across hundreds of miles to their off-site locations. If the bandwidth is too small and the data's deployment schedule non-incremental, your backup network will become bogged down with latency, preventing a reliable and timely system for securing backup data. Fig. 5.2 shows the supporting device for backup power.

Fig. 5.2 Backup power

It's also important to test your backup restoration on a regular basis to make sure your network is fully operational. We see less than 2 percent of businesses that have tested restoration off backup tape, but it is critical to provide assurance that your data be harvested and used when you need it.

5.1.5.3 Support Voice Services

Telephony can be seemingly basic, but voice services should not be an afterthought for a health care facility. Facilities first must examine their current voice architecture to ensure sufficient voice lines to support a seamless flow of communication. Accomplish this by answering the following questions.

- What is the daily volume for all inbound and outbound calls ?
- What areas field the most traffic ?
- Are any inbound calls being dropped or blocked due to volume ?
- Are there old voice lines in the network that aren't being utilized ?
- How many fax lines are needed ?

Once you have these answers, consider the Return on Investment (ROI) of your current infrastructure. Adding or arranging your voice lines to fit peak traffic patterns under your current system prevents major infrastructure overhaul. Your facility also may benefit from Internet Protocol telephony, such as Session Initiation Protocol (SIP) trunking, which allows voice communications to operate over data rather than a traditional phone line.

If you need to add lines to ease the flow of voice traffic or connect your facility's telephone system to other sites, utilizing SIP trunking eliminates the cost of Basic Rate Interfaces and Primary Rate Interfaces and does not require a public switched telephone network to add additional lines, thus providing a large amount of flexibility and scalability for a minimal price.

Beyond voice architecture, health care facility managers should ensure that these lines can remain open during emergencies. Critical redundant features such as call redirection and enhanced 9-1-1 should be installed and effective. All hospitals should have a formal disaster recovery plan in place for their telephone system, which may include :

- Backup cell phones on each floor or every nurses' station.
- Analog lines that can be accessed on an emergency basis.
- A separate backup power supply strictly dedicated to the phone systems.

Deploy telecom advancements

Health care providers should look to the telecom industry for the latest generations and innovations of communication technology.

For example, Unified Communication (UC) systems have matured into sophisticated and secure avenues for both internal and external collaboration through various mediums, such as videoconferencing, data sharing and unified messaging. Additionally, as EHRs become increasingly standardized, mobile technology has added both internal and patient-facing efficiencies, such as the use of tablet kiosks to onboarding patients.

Telecommunication lends itself well to telemedicine. Direct communication links between hospitals and independent providers or networking doctors across the globe can make the vast expanse of medical care within reach of every facility and patient. Fig. 5.3 shows the view of Voice over IP.

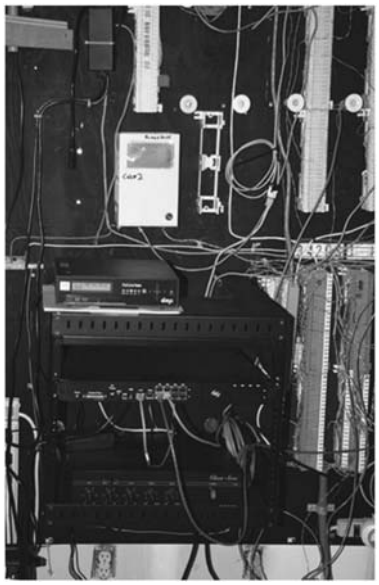


Fig. 5.3. Voice over IP

When adopting telecom advancements, facilities must predetermine their impact to existing networks. For example, UC solutions require more bandwidth than basic solutions. There also may be instances, such as a point-to-point connection or a Web-based e-health patient service, in which data networks as they currently exist are unable to support a telemedicine system. For example, some telemedicine applications require their own private, high-speed network to receive desired results.

Bandwidth, circuitry and security all may have to be revamped, so be sure this factors into your overall budget and expectations when deploying new technology.

5.1.5.4 Secure Mobility Across all Platforms

Physicians, pharmacists and other health care staff are rapidly adopting mobile technology. In fact, according to health care research firm Manhattan Research LLC, 72 percent of physicians used tablets last year. This year, nine in 10 health care providers will use smartphones, according to a report compiled by medical app company Epocrates Inc. Although these technologies ease data input, the "anywhere, anytime" aspect of mobile platforms makes sensitive data vulnerable to external and guest networks.

Ideally, companies should provide mobile devices to their staff. This maximizes an organization's access and control over its wireless network security and device data security. If supplying devices is not feasible, it is crucial that they deploy Mobile Device Management (MDM) software. MDM software tracks, monitors and manages data and applications used by all facility staff. Many are specifically coded for HIPAA compliance

and allow a remote data wipe if a device is lost or stolen. They also can lock down certain applications when you're in the hospital.

By the same token, health care facilities must provide a robust security foundation on their wireless network. This should include the latest firewalls and Wi-Fi protected access 2 encryption. Facilities also should track who has access to its primary network where sensitive data is stored. Consider investing in multiple layers of authentication to access the network to ensure that only the selected employees have entry.

These five essential checkpoints are only the tip of the iceberg when it comes to operating a fully efficient and reliable telecommunications system with the highest ROI. As a best practice, managers should collaborate proactively with their telecom providers at least twice a year to ensure that all issues and new technologies are discussed and that your facility is fully equipped for seamless communication

5.2 Public Address and Piped Music

Abletek has worked with a wide range of healthcare services and the National Health Service (NHS) in support of new installation projects and on-going support and maintenance for over 10 years. From small GP surgeries to large new build hospitals, we are experienced, specialist audio and acoustic engineering contractors with extensive knowledge and experience of working within the healthcare industry market sector.

5.2.1 Emergency Department (ED) Communication

Reliable and effective audio communications within hospital ED's is essential. Our audio systems provide 'readiness' and co-ordinated audio announcement services to Accident and Emergency (A&E) and wider ED department control (eg. majors, minors and paediatrics).

5.2.2 Healthcare and NHS Audio Applications

Typical Healthcare and NHS audio applications

- Traditional and IP Public Address (IP PA) / Tannoy.
- Next Patient / Call for Patient.
- Audio over IP (AoIP) Applications.

5.2.3 Healthcare Tannoy and Public Address (PA)

Many healthcare organizations including NHS trusts, use Public Address (PA), 'Tannoy systems to co-ordinate staff and to also inform the general public. Healthcare professionals, doctors and nurses rely on audio systems, messages and announcements in

many ways to help them to provide effective and efficient communications. Fig. 5.4 shows the view of healthcare Tannoy.

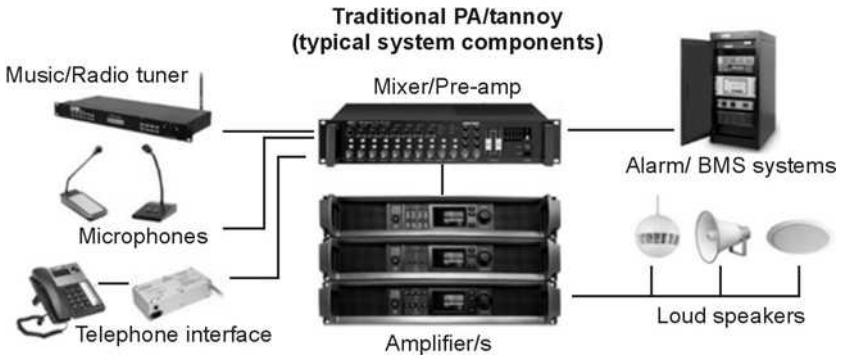


Fig. 5.4 Healthcare tannoy

5.2.4 Healthcare IP Audio (AoIP) Applications

Healthcare settings can employ Audio over IP (AoIP) technologies and applications to improve their existing traditional audio systems and communications capabilities (between staff, patients and visiting public). For example, using a network audio message playback unit (time scheduled or manual trigger) to alert the public of any notices or events - Or, perhaps using IP microphone/s or an IP console to provide location flexibility. For new healthcare projects and installations, IP audio can also be used to create audio design solutions and capabilities not possible with traditional audio technologies. For example, IP audio system devices and IP speakers can be directly controlled and monitored from the network (could be used to control volume outputs by time of day or to simply alter speaker group/zone configuration by software).

5.2.5 Next Patient Call

Healthcare professionals, doctors and nurses can employ a next patient 'call' audio system to co-ordinate and control patients between reception/waiting areas to triage, treatment and consultation rooms. Next patient call systems provide effective audio and sometimes visual alerts and information to inform and route patients to different rooms or departments.

The user function and design of these systems can be made to provide simple voice 'call' announcements (made by individual staff members) or more elaborate through integrated audio / visual systems to provide enhanced and sometimes automated next patient 'calls'.

5.3 CCTV Security

Urgent care centers, healthcare facilities and hospitals are perfect locations for video surveillance. Hospital CCTV and surveillance cameras allow you to effectively monitor large areas with minimal manpower while helping to increase security and control costs. Patients and employees can feel safer and security breaches can be held in held in check. Surveillance can help to provide visual evidence in case of incidents help to increase productivity and to prevent false claims. With newer HD surveillance cameras can be monitored from several locations at once so all security personnel can access a live feed at all times.

5.3.1 Hospital Security Camera Benefits

- **Safety & security** - Security cameras installed throughout a hospital prevent crime, medical insurance claims, break-ins, and allow security operators to monitor the property for patients in trouble or unauthorized visitors in restricted areas.
- **Employee productivity** - CCTV cameras present throughout the property helps to improve employee communication between departments or buildings, therefore heightening productivity.
- **Dishonest claims** - False claims can be a big problem for hospitals. Visitors and patients will sometimes falsely claim to have been injured while on hospital property, having detailed visual footage from the hospital's security cameras can help to disprove such claims. This helps to save the hospital from paying out large unwarranted insurance claims.
- **Employee disputes** - When you have clear, detailed proof of video employee disputes can easily be resolved. Incidents in question can solve disputes quickly when using surveillance cameras.
- **24hr Real-time monitoring** - Hospital cameras can be monitored or viewed from various different platforms such as PC, Mac, iPhone and Android. Cameras no longer have to be monitored and view from one single location.
- **Digital HD storage** - Digital storage from security cameras has many advantages for Hospitals. Cameras systems enable the hospital to store digitally recorded footage onto digital video recorders with large capacity hard-drives. This footage can then be easily accessed by authorized users. Since the video footage is digital, searching for a specific time or date is instant and this allows for more improved searching capabilities.

- **Visual evidence** - When investigators need help solving an incident or crime, surveillance cameras will provide them with the visual evidence they need. Best of all your surveillance system can backup incidents directly to a USB drive, email or network drive so they may continue the investigation from there police station.
- **Video monitoring** - With iPad and Tablet supported digital video recorders hospital employees can easily monitor specific areas from anywhere on the local network. Employees can even monitor their stations and hallways from another building or the floor.

5.3.2 Healthcare Surveillance Risks

- **Reliance** - CCTV cameras are a very important aspect and tool for hospitals but it's crucial for hospitals to maintain a good level of physical security personnel on staff.
- **Privacy concerns** - Patient privacy is important and should be considered when installing security cameras. Do not install cameras in those areas considered private or in those areas where their privacy may be captured on video.
- **Camera tampering** - Tampering can be an issue especially when cameras are installed on low-level ceilings or hallways. A tampered with a camera can be damaged or can interrupt video from recording. We suggest you consider other security measures if you notice and interrupted signal or misaligned camera.

5.3.3 Medical Facilities Security Camera Configuration

There are certain factors that should be considered when deciding to install video surveillance cameras in a hospital or healthcare facility :

- Do you currently have security systems in place ?
- Are you short staffed or have minimal security personnel ?
- Are there multiple buildings at the hospital ?
- Do you have an adjacent parking lot or structure ?
- Have you experienced past criminal activity on the property ?
- Have you had issues with break-ins ?
- Have you had employee or visitor disputes that would have needed visual investigation ?
- Have there been any insurance claims made against the hospital in the past ?
- What areas are most critical and require video surveillance ?

5.3.4 Hospital Camera Setup Advice

- Install security cameras so they may monitor and record all exit and entries of the hospital building its imperative to capture detailed video of those leaving and entering the premises.
- Hallways should monitor and recorded as well. All activity from employees, visitors and patients can be visually monitored by guards and staff.
- Cameras should be installed at all fire escapes and in elevators.
- Parking garages and lots should also be monitored. This includes all loading areas.
- Restricted areas should have cameras installed to maintain that only authorized users are granted access.
- Both the exterior and interior of the hospital should have cameras installed.

5.3.4.1 Key Findings and Camera Location

The list below summarizes the key finding and patterns found :

1. **Camera locations :** Surveillance use is extensive in hospitals, most typically focused on narcotics or drugs storage, infant nurseries, and public entries, corridors, and waiting rooms.
2. **Legacy analog common :** Many hospitals still use analog CCTV. With money for updates thin, many hospitals continue to operate analog systems indefinitely.
3. **Privacy limits recordings :** Even countries without privacy laws generally observe patient privacy rules and do not record cameras that potentially see sensitive records or areas.
4. **Full-time operators typical :** Many, if not most, hospitals employ full-time security staff so that cameras are viewed 24/7/365.
5. **Cameras / VMSes :** Among brands, legacy analog providers are still common, but the favored IP providers are the big incumbents that often are 'safe' choices compared to cheaper, but lesser-known and riskier offerings.
6. **System integrations :** Integrating video surveillance with other systems is uncommon. Most hospitals do not integrate systems, however when it does happen infant protection and nurse call systems are common.
7. **Storage :** Hospital video is typically retained for 30 days, with cost being the major limiting factor.

8. **A&E firms write bad specs :** Of the various designers and specifiers, the worst overall result comes from general architecture and engineering firms. Almost all responses describing engineer-firm headed designs did in negative terms, calling their resulting specs mediocre at best.
9. **Needed improvements :** Overall, more cameras to cover more areas are needed. However, integrating other systems with video surveillance and better upgrade funding were also cited as big needs.

Hospitals use surveillance extensively, especially for keeping 'high value' items like drugs and infants safe. Many responses explained that cameras are used everywhere, but as a matter of funding priority high-traffic areas are covered first. Public entries, corridors, waiting areas, and garages were specifically mentioned as priorities, regardless of hospital size or geographic location.

5.4 Loss Prevention

With skyrocketing insurance costs and ever-increasing malpractice awards, there can be no doubt that hospitals must strengthen their risk management programs. Failure to do so can lead to out-of-control losses; inability to find, much less afford, insurance coverage; loss of contracts; and plunging morale among staff. These failures also may lead to loss of the community trust, damaged reputation and jeopardized market share. This article will focus on how hospitals can successfully improve their risk management programs. More specifically, it will focus on improvements to a hospital's loss reduction systems.

As a working definition, we use "risk management" to mean a systematic effort to reduce the probability that losses will occur, consisting of three components: loss prevention; loss reduction (or mitigation); and risk financing. The value of loss prevention work is premised on the general rule that it costs less to prevent a liability claim than it does to resolve one after it has occurred. In a similar vein, the value of loss reduction work is based on the rule that it costs less to resolve a claim before it escalates into full-blown litigation. Finally, risk financing ensures that adequate resources are available if losses are unavoidable.

In response to recent changes in the insurance markets, most hospitals are restructuring or have already restructured their risk-financing programs. One way that hospitals have changed their risk-financing structures is to self-insure, with significant retention of financial risk (SIR) prior to triggering of reinsurance. Some hospitals have formalized the self-insurance obligation through trusts or captive insurance companies. Although this shift in risk financing structures may eliminate or reduce insurance

premiums, it exerts additional pressure on the loss prevention and mitigation components of the risk management program to protect the assets of the organization which are at financial risk.

On loss prevention, most hospitals have institutionalized clinical quality processes designed to keep variation within an acceptable range and to minimize adverse events. There is a considerable amount of information available on clinical quality and physicians and other medical personnel typically have an active interest in these processes. To maintain accreditation with JCAHO and to maintain quality standards, most hospitals have been at least somewhat successful at identifying risks and preventing unexpected events.

However, not nearly as many hospitals have focused on, or have been as successful in improving, their mitigation programs - the institution's ability to manage the reaction to an adverse incident. The obstacles to success in this area are myriad and there are fewer professional resources available to assist in this process, especially as insurance companies and brokers have curtailed risk consulting services.

High quality hospitals have focused attention on the effectiveness of their risk management systems, in light of the hardened insurance market. Many such hospitals have concluded that a restructuring in which the hospital retains more risk is not prudent without a corresponding effort designed to strengthen and improve the hospital's risk management program. Many of the successful hospitals encountered and overcame similar challenges to improving their mitigation programs. This article will examine some of the typical challenges faced, and how they were addressed.

5.4.1 Psychological Barriers to Introspection on Losses

Whereas most hospitals acknowledge the importance of identifying, discussing and addressing the root causes of problematic events, some naturally are reluctant to do so. Not only is the subject matter intimidating to some and abhorrent to others, the discussions are typically fraught with ego and other emotional issues relating to blame for the event. There is also concern about confidentiality and exacerbating already potentially significant legal exposure. To top it off, dealing with these issues may bring into internal conflict power brokers within the organization.

Regardless of this disinclination to air "dirty laundry," unless the reluctance to address these issues is overcome, an effective risk management program will be impaired. Conversely, facilitation by a skilled third party can be invaluable by providing senior management with the impartiality and expertise necessary to get the conversation started, and keep it on track as the self-evaluation continues. The cost associated with using an

outside expert must be weighed against a failure to improve loss reduction functions in the hospital. With concerns about confidentiality and privileges, the involvement of attorneys and other professionals should be considered to create the environment necessary to foster accurate self-evaluation and improvement planning.

- Utilize advanced facilitation and mediation techniques to help with emotionally charged discussions.
- Seek out and use third parties for their expertise and greater objectivity.

5.4.2 Hidden Costs and Intangible Losses

A critical step in evaluating the performance of the risk management program is accurately assessing the true cost of risk. Some hospitals underestimate the cost of adverse events because they have not accounted for hidden costs and intangible losses attendant to resolving such situations.

For example, time losses for administration, nursing, customer service, public relations, technical, risk management and other personnel involved in claims handling and legal proceedings can be significant, but often is hidden. A surprising amount of hospital staff resources can be expended in resolving incidents and claims when the time spent by such personnel is tracked and measured. We recommend examining incident reports and studying the process of how the organization responds to incidents - doing so can reveal the expenditure of time by personnel that is not being captured as a cost of responding to the incident.

Furthermore, intangible losses and costs from adverse events and poor risk management must not be overlooked. Although difficult to calculate, the loss of trust, reputation, and good will in the patient and physician communities, and among peers, can be among the most devastating losses. Mechanisms may be created or borrowed from other industries to assist in factoring these intangible losses into the final calculation of the cost of risk. The use of savvy marketing specialists can help organizations gain insight that is not otherwise available, as to the perceptions of the community and marketplace.

- Analyze the hospital's incident report data to generate a complete roster of personnel involved in handling an incident and study the amount of time and effort they expended beyond their normal duties.
- Create a methodology for factoring in the value of intangible losses when considering the cost of adverse events. Look at methodologies used by JCAHO, Leapfrog and other standards organizations and use industry standards as benchmarks.

- Pay attention to media coverage and local and regional rankings and contextualize with claims and adverse events.

5.4.3 Top-Down Bottom-Up Commitment to Improvement

Nearly all hospitals with highly effective risk management programs have a "top- down/bottom-up" commitment to quality and customer-service orientation - especially as they relate to prevention and mitigation. Commitment of the organization sustains the active participation of the many different people involved in managing risk and mitigating losses. While commitment at the board level creates the mandate to improve the risk management program, the commitment of individuals throughout the hospital is required to fully implement plans to improve prevention and mitigation functions.

Board-level commitment to quality improvement and risk management activities is critical to success. Western Professional Insurance Company describes this as a "commitment from the governing board and administration evidenced by the dedication of resources necessary to support implementation and day-to-day program activities." When changing risk management philosophy and behavior, board commitment helps overcome the inertia of an organization and its affiliates. It allows the organization to prioritize the use of assets for loss prevention and loss reduction activities. Managed tactically, board commitment can be a source of patience and stamina, both of which are necessary to make positive and lasting changes to the hospital's risk management program. It can assist senior management in bridging the gap between the hospital and the independent medical staff on potentially divisive issues.

A spouse of a hospital board member was admitted on an emergency basis. The board member spent a considerable amount of time in the hospital attending to his spouse. After observing the functioning of the hospital, it became the board member's mission to substantially improve and revamp the quality assurance and loss reduction functions of the hospital. He chaired the quality standards committee of the board, recruited several influential members to serve on the committee and began exerting pressure on senior management to focus attention on improving quality assurance and loss reduction functions. This level of board commitment forced the organization to overcome inertia and make the difficult choices required to create sweeping changes in risk management philosophy and practices, including the decision to change the interaction between the nursing establishment and the leadership of the independent medical staff.

Most hospitals cannot afford to wait for personal epiphany to intervene at the board level. We have seen senior management effectively use outside advisors to assist in the process of creating the commitment at the top levels of the organization. One of the most effective ways that we have observed is a high-quality presentation to the board during a retreat. Many boards have an annual or semi-annual retreat with senior management to allow for more detailed and lengthy discussions about items of strategic importance to the organization. Usually conducted away from the hospital campus, retreats offer some psychological distance from day-to-day demands and allow interested parties to behave in a somewhat more detached manner when discussing a potentially uncomfortable topic, such as losses relating to general and professional liability. Guest presentations often get the conversation started and skilled facilitation can lead to renewed commitment from the board on the issues of quality and risk management.

- Board level support for quality and risk programs is key to ensuring the availability of the resources needed by an organization to excel in quality and risk management.
- Senior management needs to work with the board to create the vision/mission statement for quality and risk management programs, translate the concepts into practice throughout the organization, and create performance measures that can demonstrate improvement.
- Change to the risk management program requires personnel throughout the organization to change behavior and commit to the purpose for making changes. If they do not understand and believe in the risk management program principles, their behavior will reflect that and will be perceptible to patients and families. We have seen hospitals use the highly regarded guides on structuring risk management programs and still fail because the employees closest to the patients were not oriented to the new program and its basic principles.

A hospital was in the process of changing its loss reduction program to provide a greater degree of participation from the nurse managers. Senior management felt that in many cases, the nurse managers already had established positive working relationships with patients and their families over comfort and care issues and were influential in the relationship between the hospital and the family in the loss mitigation context. When the plan was rolled out, nurse managers had not fully accepted the formalization of their responsibilities in the loss reduction function. Assuming that the nurse managers were "plugged in" to the system, the risk manager was frustrated repeatedly when they failed to respond to situations requiring loss reduction activity. In the risk manager's view, significant opportunities to handle relationships with patients' families were lost, leading

to greater expenditures of time and resources to resolve situations. Nurse-manager acceptance did not occur until after the Chief Nursing Officer personally met with each manager to reinforce the message and address individual concerns.

The first critical point to focus on earning bottom-up commitment occurs during the design of the improvement plan. At that point, the input of all stakeholders should be considered to maximize the perception of participation. Broad-based participation from the employees during the planning stage tends to make broad-based acceptance of subsequent changes easier to achieve. Trained facilitators are highly effective in this process - especially if the interviews are designed to protect the identity of the staff member and the facilitator is perceived as being independent.

A hospital attempted to obtain the input of its workforce on certain quality issues using voluntary surveys and random interviews. Their response to the voluntary surveys was poor; less than 3 % of the employees turned in a completed survey. Employees approached the interviews with suspicion and concern about whether their identities would be associated with the input that they gave. Senior management terminated the project, and waited for a period of time before taking a different approach. They then engaged an outside firm to conduct anonymous interviews with the employees. Instead of relying on voluntary or random participation, the outside firm had a two-stage process where they first sought to identify the opinion leaders at all levels in the workforce as determined by their peers. They interviewed the opinion leaders in confidence and produced a wealth of information concerning risk management issues as seen from the "trenches." By targeting the opinion leaders, the hospital had an advantage in earning the bottom-up commitment of the organization regarding improvements to the risk management program.

- Get the input of many people - especially opinion leaders - to give them the opportunity to own a piece of the changes that are to come. Use third party interviewers for confidentiality to allow people to speak without fear of reprisal.
- Make sure that people know what the hospital expects of them regarding participation in the risk management program and that they agree to live up to the expectation.

The second key point to focus on earning bottom-up commitment occurs during implementation of the improvement plan. At that point, training and education should be carefully crafted to ensure comprehension and successful orientation. Hospitals need to ensure that key players are adequately oriented and trained on concepts, practices and specific processes. Beyond specific training for the key personnel, certain general concepts

regarding risk management should be part of the orientation for all employees of the hospital. This will serve to reinforce the bottom-up commitment of the employees to the hospital's risk management program. There is a more detailed discussion of training issues later in this article.

5.4.4 Inability to Restructure Across Organizational Divisions

A significant impediment to achieving meaningful improvement in risk management can be a generalized institutional unwillingness to restructure across divisional lines and through stratified hierarchies. In practical terms, this may be manifested in intra- and inter-departmental conflict, and hospital-medical staff conflict. The natural organizational resistance to change often is magnified if such change (even if demonstrably necessary) would require changes to departmental or positional responsibilities and/or reporting relationships.

As mentioned previously, "top-down, bottom-up" commitment helps with overcoming these issues. Implementing a restructure of the system for mitigation that changes departmental relationships must be done with sensitivity to existing cultures and practices. The techniques for building "bottom-up" commitment are particularly relevant to the process of orienting departments to new responsibilities in the loss reduction system.

Particular attention must be paid to engaging the medical staff, in terms of identifying issues, developing methods of addressing them, and maintaining adherence to the newly developed practices. As leaders of the care team, physicians have a special relationship with patients and their families. Beyond the critical input of physicians in the clinical quality and loss prevention system, physicians can greatly influence loss reduction efforts. Numerous articles and writings on risk management issues emphasize that cooperation from the physician can greatly impact the resolution of a loss situation, especially when the physician has an excellent relationship with the patient.

Working with physicians on loss reduction can be complicated when dealing with independent medical staff. Typically, independent physicians have separate risk financing arrangements (i.e., different malpractice insurer) than the hospital. There are many opportunities for a potential plaintiff to use "divide and conquer" tactics to pit the physician against the hospital. Without coordination, one party can settle quickly with the potential plaintiff, funding the litigation "war chest" and leaving the other party in the "cross-hairs." In the long run, it would be better for the physician and the hospital to create a mitigation system before a loss situation arises so the parties know how to coordinate their efforts toward a resolution of the situation in advance of ever needing to

do it. Also, involving the physicians in the clinical quality (i.e loss prevention) efforts builds strong unity of purpose between the hospital and physician and encourages physicians to take a proprietary interest in the operations of the hospital even as they maintain their independence.

- An independent medical staff requires extra attention and work in designing risk management programs.
- Find ways to involve physicians, first in loss prevention activities, and then growing to include mitigation efforts as well.

If early recognition and rapid response to adverse events are keys to mitigation efforts, they are even more effective when utilizing a well-planned strategy. It is widely recognized that rapid response to adverse events is more effective than a slow response or inaction. However, a rapid inappropriate response can be more damaging than no response at all. One way to ensure that a rapid response maximizes the opportunities for positive resolution of an adverse event is to gather as much information as is reasonably possible and consult with the right professionals early to plan the response.

Many hospitals fail to contact professionals early enough in the process. The reasons for such failures can range from simple inattention to a desire that the issue will go away without the involvement of outside professionals. Some risk managers are concerned about involving outside professionals because of budgetary constraints. The same principle holds true with respect to notifying claims personnel with the hospital's brokers and insurers. Often, these professionals are brought in later in the process to respond to escalation from patients and their families, as opposed to early when escalation might have been avoided.

To some extent, the terms of insurance policies will dictate when and for what types of events the insurer must be notified in order for coverage to ensue. Nearly every insurer in the general and professional liability market for hospitals prefers to know about situations earlier than later and would like to have closer relationships with their insured hospitals when it comes to handling those situations prior to the litigation stage.

Having such a relationship can benefit both parties. The hospital often is able to access resources of the insurer that can assist in analyzing the potential claim, give guidance as to the value of the potential claim, and provide advice on resolution strategies. The insurers, on the other hand, can experience firsth and how the hospital's loss reduction efforts function and either gain confidence in the hospital's risk management program or offer suggestions for improvements.

Attorneys often can add considerable value when involved in building the strategy for the response to an adverse situation. Whether in-house or outside, attorneys with considerable professional liability litigation experience are important resources for risk managers in discussing issues such as litigation-preparation strategies, confidentiality, mandatory reporting requirements, etc. Regular meetings can create continuity of communication and ensure that incidents are covered and developments in each case are monitored by the risk manager and counsel.

A hospital developed a close working relationship with one of the leading local malpractice defense attorneys. The relationship blossomed when the hospital began self-insuring its professional and general liabilities. The law firm negotiated a flat monthly fee to cover weekly meetings with the risk manager and for general telephonic consultations. This was done to encourage the use of counsel early and regularly in devising strategies in response to adverse events. When an incident developed into a claim, the hospital and the firm would then use a different fee schedule for attorney hours devoted to the claim. With this strong link between risk manager and attorney, the hospital enjoyed considerable success in resolving a large number of disputes at an early stage and with very low cost.

- Use professional resources early in the process so they are able to render advice prospectively.
- Litigators and insurance claims representatives have knowledge and experience that can be valuable in strategizing responses to an adverse event.
- Be creative with fee structures to remove disincentives to using professionals early in the process.

5.4.5 Personnel Issues

The "rubber meets the road" when people must actually execute the risk management program. We have seen issues arise when hospitals' hiring, training, and retention programs fail to ensure that individuals with the required skills and experiences are employed. This is especially the case for key positions such as risk managers and other managers who have significant contact with patients and their families.

At a general level, every employee of the hospital is a potential loss reduction participant through the delivery of excellent customer service. Many successful hospitals take concepts and practices from the hospitality industry. These hospitals relied on the power of every employee to create an atmosphere of courtesy, respect, integrity and compassion, which in turn are critical assets when handling an incident with loss potential. Excellent customer service can create relationships with patients and their families that are marked by these attributes.

Managerial employees of the hospital must be skilled in interpersonal relations and have greater knowledge and training about risk management principles and procedures. Rapid and appropriate response to an event with potential loss consequences is a hallmark of a good loss reduction program. While there are many different ways to handle interactions with patients and their families, managers are authority figures and are often required to respond in some fashion before bringing in other risk management resources. Effective loss reduction requires specialized skills including the ability to facilitate conversations under extreme stress, negotiate emotionally charged situations, maintain honest and appropriate communication with patients and their families, and actively participate in the entire risk management processes. These skills help maintain the atmosphere of respect, trust, and compassion, which is critical to successful loss reduction activity.

Failure to ensure that individuals with the proper skill sets are employed at each level is problematic for a hospital, and this problem becomes more acute in key management positions. Advanced skills matched with advanced training regarding interpersonal relations and risk management techniques produce the best loss reduction performance. Reinforcement of these skills through the performance evaluation process further enhances the system and helps with retention of consistently high performers.

Hospitals that pay special attention to their personnel issues have workforces that are better aligned and execute better on customer service and risk management issues. When the human resources and training functions are integrated and consistently set the expectations regarding advanced interpersonal and risk management skills, we have seen overall better relations with customers and incidents of good will forming a positive foundation for resolution of potential claims, before litigation is commenced. This is not a new concept and most organizations appear to have embraced it on paper, but we have seen plenty of organizations that do not use these tools to ensure that the "right people" end up in the "right jobs."

We reviewed job descriptions from many sources and found that some employers went no further than to say that employees were expected to comply with policies regarding quality and customer service, which were described in separate documents. We were encouraged to find that many employers were more explicit in their expectations. Unfortunately, we observed that in the recruiting phase, many of these hospitals did not actively screen applicants for the specialized skills and experience to match up with the job descriptions. Then, in the performance evaluation stage, we found that less attention was paid to whether the employee was actually performing up to expectations regarding customer-service issues and loss reduction - and a far heavier emphasis was placed on technical skills and productivity.

With respect to managers, we expected to and did find that the screening process for managerial applicants was more rigorous than the same for general employees. Still, a formal method of screening for advanced interpersonal skills was not commonly utilized in the interview process. And, a common but flawed scenario involved internal candidates moving into managerial positions essentially through attrition, seniority, or superior technical ability.

We strongly recommend that hospitals examine their personnel systems to determine if they are hiring and promoting the very best candidates for every position - especially key managerial positions.

- Clearly state the hospital's expectations regarding ability to deliver excellent customer service and participate in loss reduction activity.
- Actively screen applicants to find those who have the highest likelihood of succeeding based on their technical, interpersonal and other skills and properly orient and train new employees regarding customer service and loss reduction activity.
- Use performance evaluations to measure employees' participation in customer service and loss reduction activity.

5.4.6 Training Issues

It is widely accepted in the industry that training and education are key components to any comprehensive risk management program. Every hospital that we have seen has training and education programs already in place regarding risk management issues. In evaluating the effectiveness of these programs, we have consistently seen issues arise in two major areas: failure to train all appropriate staff, and ineffective design of the program to achieve the desired results.

In addition to the risk manager, there are a number of potential players in the incident response who should be trained as part of the risk management team - especially those who have the closest contact with patients and patients' families. Depending on the risk management model used by the hospital, each person who is counted on to participate in the loss reduction activity needs appropriate training and education. Some organizations have taken the view that every employee is a potential player and needs at least some basic risk management training. Others focus the training on risk managers. The variations between those two extremes are many. Where we have seen problems arise is when the reach of the training program does not match up with the risk management program design and when training is not refreshed on a periodic basis to keep up with

employee turnover. It is not possible for a risk management program to succeed if the people who are relied upon to perform important duties are not trained and refreshed periodically.

- Closely analyze the appropriate employees to receive risk management training.
- Train everyone on whom the risk management program is designed to rely.
- Retrain periodically to cover for employee turnover and to keep employees "fresh."

Changing people's behavior, especially when under stress, requires a style of training that locks in new behavioral patterns. Risk management skills need to be utilized in stressful situations and in interpersonal contexts. Didactic, lecture-format sessions typically are insufficient to create lasting behavioral changes. To achieve the desired results, training programs must take into account the various learning styles of the employees who are receiving the training and must be rigorous enough to overcome old behaviors and habits.

Some people learn best by reading, others by watching, and others yet by doing. Training programs to teach risk management and especially loss reduction activities must include aspects of all three learning styles to ensure the broadest reach possible. We have observed that repetition of the message while varying the learning style is an extremely effective means of teaching risk management principles and procedures. Additionally, we have seen that active participation by the employees during the training through role plays and other activities is highly effective in ensuring that the desired behavior is exhibited in "live" situations. There is no substitute for the opportunity to practice new behavior in a safe environment before having to perform under pressure.

One training program that yielded very favorable results used the following structure :

1. The trainer first defined a single risk management principle and then facilitated discussion to test for comprehension;
2. Using one of the class members, the trainer demonstrated use of the principle in a role play;
3. The class was divided into role-playing groups and were given the opportunity to practice and critique each other while the trainer roamed and observed; and
4. The trainer brought the groups back together and allowed the class members to share observations regarding the role play and to ask further questions.

We have also found that risk management concepts can be more readily embraced if the employees can relate the concepts to personal experience. Whereas risk prevention concepts can become very technical and clinically oriented, many of the core concepts of

risk reduction are based on common-sense interpersonal issues. Establishing an atmosphere of trust and collaboration is critical to resolving conflicts between hospitals and patients without the need to resort to litigation. A "sense of betrayal often contributes to the anger that fuels litigation and the desire for punitive action." Most people have been in at least one stressful situation in which they needed to quickly build trust with another person. Tapping into common experiences debunks any mystery concerning risk management activity and makes the mastery of basic loss reduction skills seem more readily achievable.

- Pay attention to the design of the risk management program to ensure that it is effective for all different types of learning styles.
- Give sample opportunities for students to practice desired behaviors in the training setting.

5.4.7 Difficulties in Data Collection and Interpretation

Successful execution of risk management program improvements depends on access to information. Timely, relevant, and accurate data allows the hospital to take appropriate actions. Systems for collecting the needed information must be designed to ensure the collection of the right data, at the right time, from the right people. Risk managers and others must properly interpret the available data in a timely fashion to inform loss reduction as well as loss prevention strategies.

An ideal data collection system for risk management programs would draw information from various sources throughout the hospital but would remain a separate system to preserve confidentiality and applicable privileges. Certainly, medical records will be reviewed in cases of adverse medical events. Incident reports would provide a considerable amount of information. Other sources could include shift schedules, maintenance reports, personnel records, quality assurance reports, etc.

With documentation already being such a significant issue for every hospital, additional reporting requirements for risk events can create complexity and additional pressure on employees. Care must be taken in creating and implementing the risk management data collection system to anticipate training issues. Attention must be paid to the design of the information flow and retention concerning incidents and risk management. Not only is it critical for the system to provide feedback in "real time," it also must provide meaningful trending data for continuing improvement opportunities. It must support performance measures so the ultimate success of the effort can be demonstrated. Finally, collection and distribution of information must be accomplished in a way that preserves confidentiality and peer review and any other applicable privilege.

Hospitals encountering problems with risk management data collection have problems with things like employees not properly documenting incidents, having a culture of "under" inclusiveness in reporting of incidents, failure to deliver information to those who need it in a timely fashion, and inability to translate information into action plans for loss prevention.

We have seen a very successful risk management data collection system that works from a quality assurance program. The hospital developed an online quality assurance form that fed into a confidential data-base that was maintained as part of the quality assurance/peer review system. Every employee was trained to sign onto the hospital network and complete a form in the event they witnessed or were involved in an occurrence with quality implications (anything from a slip and fall in the parking lot to a sentinel event). Department managers and other supervisory personnel were further trained to identify certain quality incidents as needing the attention of risk management. The risk manager would receive an e-mail message inviting him to go to the quality assurance database and look up the report. If warranted, the risk manager would migrate the information over to a risk tracking program that would chart progress of the resolution until completed.

- The design of the data collection system for risk management must be sensitive to issues of confidentiality and privilege issues.
- The system must collect the right data from the right people at the right time and deliver the information to those who need it to strategize a response to adverse events.
- Many of the employees who are the most likely to be providing data to the risk management system already have numerous other reporting responsibilities and the training on the risk management system must be clear to avoid poor documentation.
- Data must be collated and reviewed for trending and strategic planning for loss prevention activities.

At any time, but particularly during a period in which hospitals are increasing the amount of retained financial risk of losses, it is imperative that hospitals develop and maintain effective risk management programs, especially loss reduction efforts. A successful risk reduction effort will entail an honest assessment of the performance of the existing system, the organization's comprehensive commitment to improvement - including the hospital's board and senior managers and the engagement of high-quality advisors, such as legal counsel and consultants. Finally, a hospital should be attuned to

customer/patient service skills when hiring - particularly nurse managers - and must implement a through and regularly reinforced training program to enhance these interpersonal skills. A hospital that ignores the value of affirmatively and effectively handling an adverse event is simply hoping for a positive outcome, without having developed behavior and processes that would produce one. Much as no student realistically seeking good marks takes a final exam without diligent study, we suggest that no hospital expecting to limit its exposure should be similarly unprepared. Conversely, a hospital that adopts these recommendations likely will see tangible returns on its investment, in the form of losses that ultimately are prevented or reduced. Unfortunately, every hospital will experience adverse events, no matter how carefully it works to prevent their occurrence. Given the inevitability of such events, we advocate preparation for such situations, so that the hospital does not suffer devastating losses in their wake.

5.5 Fire Safety

5.5.1 Fire-fighting, Security and Safety

Private hospitals can be victims of fires, thefts and accidents. It would result in indiscipline, dissatisfaction and poor image of the hospital. Fire-fighting and security staff must be well-trained in preventive measures along with their routine task. The whole staff must be thoroughly familiar with the fire alarm system, and other accidental events in the hospital. The whole staff must be put under the control of specially qualified officer. The job responsibility of this departmental staff in hospital is different from the staff in an industrial organization. Because the hospital deals with people who are suffering and are anxious. They are not only the custodians of security but are also responsible for contributing (indirectly) to the welfare and happiness of the patients in many ways. They should learn to use special approach in discharge of their duties. They are like `armed forces` having special and important role to play.

Fire safety & protection is matter of vital importance concerning everyone in the hospital industry. After the grief-stricken incidence of Kolkata question of safety of patients have raised in India. Unawareness of safety measures specially among staff of hospital led to death toll of more than 90 persons including patients as well as staff. Whole incidence turned out as an eye opener for government as well as health care provider.

For fire safety and protection in hospital an intelligent building design is needed to cater to various potential emergency situations to avoid further incidence of same kind.

The main objective of fire safety design of buildings should be assurance of life safety, property protection and continuity of operations or functioning. The designer must recognize the type of danger posed by each component and incorporate effective counter-measures in hospital. Fire Protection Engineering has made substantial strides in its professional development and all should be implemented.

Many old hospitals, mostly government hospitals, do not have fire safety equipments like sprinklers. Even the roads inside big hospitals, which should be 6 metres wide, are blocked with parked vehicles. If a fire breaks out, the fire tenders cannot even enter. Therefore norms and codes for building design & fire safety should be followed not only for high rise hospital buildings but also for small set up or nursing homes properly. Fire Codes process is a complex process which integrates many skills, products and techniques into its system. It has been observed that a big hurdle in the way of efficient fire safety measures is the blocked staircase area in most private hospitals across India. The staircase is usually blocked by locked glass doors, meant to restrict the entry of patient's relatives or other unwanted people; instead of giving priority to safety. This could be resolved by keeping security guard to keep outsider at bay and leaving the staircase open for emergencies.

5.5.2 Hospital Engineering Service Provision for Fire Protection According to NABH

1. Fire fighting installation approval must be obtained.
2. Location of control room should be easily accessible.
3. Control panel & manned, PA equipment should be connected with detection system or fire alarm system.
4. Pumps and pump room.
5. Two separate pumps i. e .Electric and diesel pump should be available.
6. Provision of forced ventilation should be there.
7. Arrangement of filling fire tenders.
8. Four way fire inlet must be present in case of emergency.
9. Proper access for Fire tender to fire tanks.
10. Fire drill should be performed.
11. Yard Hydrants should be available.
12. Ring main and yard hydrants should be as per strategic locations.
13. Two way fire heads to charge the ring main.

14. Landing hydrant & hose reels.
15. Wet riser system must be installed.
16. First aid Fire fighting appliances must be in working conditions.
17. First aid equipment cabinets.
18. Provision of escape routes - escape stair.
19. Sprinklers system - basement & bldg. above 15 M in height.
20. Automatic smoke detectors / heat detectors.
21. Provision of fire alarm system & fire extinguishers.

5.5.3 Regulations as Per National Building Code 2005

1. All high-rise buildings need to get NOC as per the zoning regulations of their jurisdiction concerned.

2. A road which abuts a high rise should be more than 12 metres wide, to facilitate free movement of fire services vehicles, specially the hydraulic platform and turn table ladder.
3. Entrance width and clearance should not be less than 6 metres or 5 metres, respectively.
4. At least 40 percent of the occupants should be trained in conducting proper evacuation, operation of systems and equipment and other fire safety provisions in the building, apart from having a designated fire officer at the helm.
5. The buildings should have open spaces, as per the Zonal Regulations.
6. Minimum of two staircases with one of them on the external walls of the building. They should be enclosed with smoke-stop-swing-doors of two-hour fire resistance on the exit to the lobby.

5.5.4 General Recommendations for Fire Safety in Hospitals

1. Hospitals of high rise buildings are found to be utilising the cellars for generators and transformers, which is strictly prohibited.
2. Canteens, OP blocks, dormitories and pathological labs are not allowed in cellars.
3. Regular refresher training courses for the fire brigade personnel.
4. Recommendation for creating Rural Fire Services in areas which are not at present under any full time Fire Service cover.
5. Augmentation of Municipal Hydrant System.

6. Adoption of best practices from other city codes like mumbai, delhi and hyderabad by State Government for fire safety.
7. Clarifying position of CFO and Fire Protection Consultant in approval procedures.
8. Recommendation for establishment of disaster control room for cities.
9. A passing reference to NBC rules like provision of fire doors, fire separating walls, fire exit & fire lifts should not be overlooked.

Fire safety measures have four Parameters namely means of access through approach roads, open spaces, means of escapes like external staircases and fire fighting equipment. Thus provision of all these is necessary from safety point of view within hospital premises. An effective fire program calls for an understanding of the hospital fire plan & the active participation of every employee at all times. Also at least 1 well trained fire officer should be elected at every hospital. There is no better protection against fire than constant vigil to detect fire hazards, prompt action to eliminate in safe conditions & a high degree of preparedness to fight fire.

Everyone should remember that every big fire starts from small one therefore nothing should be considered insignificant within hospital premises. Some hospitals lack trained staff to handle such emergencies therefore frequent mock as well as evacuation drills must be taken. Panic & confusion are the greatest hazards of fire and they can be countered only by sufficient preparedness which should be avoided by means of hospital staff in case of fire emergency.

5.5 Alarm Systems

Despite numerous strategies and guidelines aimed at establishing proper use of clinical alarms, patient harm still occurs. These patient safety issues often signal problems pertaining to inappropriate alarm use, ineffective alarm coverage or delayed alarm response.

To implement an effective and efficient alarm management system, a hospital's culture, practices and technology must be addressed.

5.5.1 Competing Priorities

Clinical alarms alert health care providers to changes in a patient's health and prompt the health care team to respond. To work properly, the caregiver needs to be within range to hear the alarm. Given the recent advances in current alarm coverage systems, several alarming devices, including physiologic monitors, can be networked so alarm notification not only emanates from the bedside device, but also triggers alarm notifications from a central location - typically the nurses' station.

Other enhancements include enunciators that provide audible alarms in locations where it may be difficult to hear device alarms and remote displays in strategic locations that mirror the central station display.

Each hospital faces competing budget, time and resource constraints that can become barriers to addressing alarm issues. These factors can particularly hinder changes that could improve alarm coverage strategies and reduce alarm fatigue. Therefore, addressing alarm management issues appropriately demands a multidisciplinary team approach with special focus on planning, design and implementation.

Gathering input from key stakeholders during the initial stages of alarm management planning for new or existing hospitals and units is essential to building optimal alarm coverage models and reducing safety issues such as alarm fatigue and missed events.

Internal hospital stakeholders can include representatives from the areas of health facilities, nursing, clinical engineering, clinician champions, executives and Information Technology (IT). If incorporating an alarm integration staff, it will be important to include external stakeholders such as medical device vendors and manufacturers that design the middleware capable of capturing and propagating information to health care devices.

Other external stakeholders may include architects tasked with building or renovating hospital buildings and units. The role of facilities and IT leaders in the planning process cannot be overlooked, because they will be responsible for ensuring that hospital units will have the wiring for alarm integration systems. For example, IT will need to run cabling conduits for these systems. During the planning process, it may be advisable to run conduits everywhere possible and ensure that cables are wired for video, power or network, and located in the hallways, walls and ceilings for devices such as enunciators, remote display monitors and wireless access points.

While this might seem like a financial inconvenience, long-term savings can be anticipated because most hospitals want to expand unit capabilities. Having to install cabling after the physical structure has been set in place can be expensive. Facilities departmental leaders even will be responsible for ensuring structural capabilities, including proper hallway backings to sustain or support display monitors. Communication between facilities and all staff will be essential to ensure optimal alarm management structure and processes.

5.5.2 Improvement Framework

Infrastructure provides the framework for alarm management improvement. It refers to elements like architectural layout, staffing patterns and care models, alarm coverage

models and policies currently in place. Architectural layout includes the actual physical design and structure of the hospital's units, such as patient rooms, nursing stations and hallway layouts. Staffing pattern reviews consider and address the depth of experience or capabilities of nurse providers and their capacity to provide effective care in each hospital unit.

Alarm coverage models refer to the manner in which clinical staff monitors patients within the unit. These can be centralized or decentralized. In the typical decentralized model, nurses rely on direct alarm notification from central station displays or remote displays. Another decentralized model uses unit-based monitor technicians to watch central station displays and provide alarm notification to nurses; however, use of monitor technicians is less common because of the associated cost.

Many hospitals are implementing remote centralized monitoring surveillance rooms as a way to manage clinical alarms better. These rooms house technicians who continuously monitor central station displays from multiple care areas and provide alarm notification to nurses via phones or pagers.

Alternatively, an increasing number of hospitals are considering alarm integration systems for ancillary alarm notification. These systems transmit designated clinical device alarms to the alarm integration system and then to the appropriate caregivers via clinician-worn communication devices, such as pagers or wireless phones. Each alarm coverage model has its advantages and challenges, but thorough planning is the key to the success of each. Policies include the plan or course of action established to ensure appropriate and consistent alarm response and coverage.

Each hospital's alarm system must be customized to the specific area's workflow to effectively enhance alarm notification and facilitate prompt alarm response. Because of this, hospitals must take a deep look at their care areas and alarm management practices as well as their culture and technology. Facilities professionals especially need to be involved in solutions related to infrastructure, because this has a dynamic relationship with other related factors in improving a hospital's alarm management system.

For example, what happens to clinical alarm response protocols or escalation plans in a 36-bed intensive care unit supersized for patient privacy, quiet and family comfort? Modern hospital floor plans include emphasis on patient and family privacy, quiet environment and larger size area, all designed to improve patient healing and comfort. Although well-intentioned, these trends present many new alarm management challenges, and the old ways of alarm notification and response do not work.

5.5.3 Key Factors of Alarm Management

Properly addressing the following key factors pertaining to alarm management infrastructure significantly can improve the efficacy and efficiency of alarm management systems :

i) Architectural layout

Hospital physical layouts can unwittingly create inefficiencies, often fatiguing responding nurses and creating unnecessary or confusing coverage plans. It is important to limit the size of care areas within larger hospital units so that nursing staff, while maintaining an acceptable distance from patient rooms, can still physically observe and hear alarms. Creating smaller areas within these larger units also will help nurses to respond more promptly to clinical alarms.

The planning and design team may consider establishing unit zones based on current floor designs. For instance, architectural boundaries can be established by fire doors that often can be used to differentiate zones.

Other issues include having private patient rooms with the doors closed. For example, some hospitals may require isolation room doors that close automatically in ventilation units, compromising the audibility of alarms outside in the hallways.

A strategy that may be employed to reduce missed alarms includes enunciators to increase alarm audibility. However, enunciator placement in the unit and alarm sounds emanating from the enunciator also must be taken into consideration. For example, if the speakers produce the same sound for all alarms, this could create or add to an environment of alarm fatigue for the nursing staff and lead to patient dissatisfaction due to increased noise levels.

Therefore, it will be imperative to solicit input from all stakeholders, including clinicians, nursing supervisors, clinical engineering and IT to understand device capabilities, architectural and design limitations, and to strategize accordingly to avoid these issues.

ii) Alarm escalation and coverage plan

Often, improper alarm escalation plans can lead to alarm management inefficiencies. To reduce alarm fatigue and improve patient coverage, ECRI Institute recommends that hospitals assess whether to establish escalation plans delineated by zone.

This type of escalation plan could improve alarm response times significantly. Take this scenario, for example: The primary care nurse is prompted by an alarm. If the alarm is not addressed in a timely fashion, the alarm could then escalate to a designated nurse

or buddy nurse. If the buddy nurse does not respond within a specified time, the alarm would escalate to the assigned set of nurses within the zone.

Rather than having alarms propagate to all nurses in the unit, alarms would propagate to a subset of nurses. Creating practices like this could allow for a more efficient and timely response to clinical alarms by nursing staff.

iii) Policy revision and standardization

Policies can vary immensely between units. While some variations may be necessary based on factors such as patient acuity, others may be unnecessary and can complicate alarm management practices.

In these instances, it may be critical for hospitals to standardize transport routes to better track and locate patients in the event of device failures or lack of wireless networking. Discussing these strategies during the planning and design process could ensure proper network coverage in pertinent areas and improve the floor design to allow for efficiencies (i.e., transport routes).

iv) Nurse staffing and communication

Proper nurse staffing ratios, staffing numbers per shift and communication within each hospital unit are essential. Establishing device inventory can help to reduce gaps and communication errors during shift changes, especially considering that some nursing staff may forget to return communication devices after shift completion. Having the appropriate number of communication devices can help all nurses promptly respond to patient alarms.

v) Thorough analysis

Many hospitals attempt to remedy alarm fatigue without the thorough analysis and planning that is required.

Hospitals should place emphasis on tailoring strategies to the unique context of the unit or hospital, taking into account such elements as patient population, staffing patterns and care model, architectural layout, and alarm coverage models.

A good rule of thumb is to maintain clear focus on the goal of making patient care safer by minimizing vulnerabilities, reducing risk and continually improving the effectiveness and efficiency of alarm management.

5.5.4 Impact of Design on Clinical Alarm Management

Hospitals are now more like hotels than patient care centers. Rooms are now naturally lit, brightly designed and geared more toward patients and families. These modern, single-patient hospital rooms are setting a new standard in terms of providing patient and family comfort, privacy and convenience.

Ultimately, this improves patient satisfaction scores, but is it threatening the efficacy and efficiency of alarm coverage models ?

Nurses are now expected to cover more ground while treating patients, leading to increased nurse response times and a reduction in patient visibility. This design also has been said to burden nursing staff and reduce the audibility of alarms as well as the quality of alarm management. For facilities going to this new model of patient care units, strategies to reduce delayed alarm response must be deployed.

These strategies include :

i) Place remote displays in strategic hallway locations

While patient visibility might be compromised, nurses still can monitor patient vital signs without having to travel long distances between the patient room and central nursing station.

ii) Install enunciators

Given the spacious floor layout, alarms from distant patient rooms may not be audible. Strategically installing enunciators can help to fix this problem.

iii) Create alarm zones

Creating alarm zones on floors allows designated nurses to respond to a specific section of the hospital unit.

iv) Consider installing an alarm escalation plan

Under this system, if a charge nurse does not respond within a specified time, the alarm will escalate to a designated nurse or group of nurses within the zone. By implementing an alarm escalation plan and only notifying the pertinent clinical staff, health care facilities can reduce overall alarm fatigue.

v) Costs to consider when improving clinical alarms

Establishing a multidisciplinary team during the planning and design phase of hospital building and renovation plans is an effective first step toward a safer and potentially more economical alarm management system.

Hospitals that want to incorporate or expand alarm management capabilities without a proper infrastructure in place have found this to be quite a costly initiative. In general, it is easier and less expensive to expand upon or upgrade equipment when proper infrastructure needs initially are considered.

The following considerations can make future alarm management systems more effective and can cost hospitals less money to implement :

vi) Run conduits everywhere

Running conduits throughout the entire facility, even though they will not necessarily be used right away, may seem like a financial waste. However, expansions to hospital units and technology systems are not unusual. It would be more costly to add conduits after a hospital is built than before building plans are implemented. So, be sure to run conduits to ensure that cables are wired for all possibilities and located in ceilings, hallways and walls for all devices that could be used to enhance alarm coverage.

vii) Ensure structural integrity

In numerous instances, expanding nurse coverage capabilities and improving response time requires applying remote display monitors in the unit hallways to improve patient monitoring. Improper backing could render this an improbability or significantly add to structural costs that could have been mitigated with proper planning.

viii) Test current system

Often, hospitals can implement strategies like alarm integration systems and other upgrades without testing the capacity of the system in place. It is essential for hospitals to determine whether current components are expandable or upgradeable before purchasing modern systems that may be incompatible with current cabling and wiring.

5.6 Safety TIPS/Rules

Each year, nearly 444,000 individuals die due to avoidable hospital errors. Fortunately, care providers, support staff, and consumers acting in unison can improve patient safety outcomes.

Through safety focused team initiatives, organizations can improve team performance. Patient safety involves avoiding errors, limiting harm, and reducing the likeliness of mistakes through planning that fosters communication, lowers infection rates, and reduces errors.

Care providers, patients, and support staff share the same goal; the best possible treatment outcome. The following seven principles outline tips that some health organizations implement to achieve this goal.

Managers have a responsibility for the safety of their staff and patients. They should ensure that their staff is aware of this policy and of any fire risk assessment findings for the areas under their control. They are responsible for monitoring staff training and should be proactive about identifying and eliminating any poor fire safety on site. Any concerns must be reported promptly to their Directorate Manager and the Fire Safety Team. Managers must be familiar with the evacuation arrangements for their premises/area of work and should take initial charge of the incident with assistance from the Fire Wardens and their colleagues as necessary during an emergency. They will :

- Arrange for staff to receive induction, fire warden and annual update training and maintain an up to date training record; patient areas must ensure there is a fire warden on duty for all shifts.
- Ensure that the induction checklist is completed for all staff new to the work area.
- Organise simulated fire evacuation drills in conjunction with a member of the fire safety team.
- Ensure that an evacuation plan is in place, including provision for the safe and effective evacuation of all vulnerable visitors, staff and patients.
- Ensure the use of PEEP to support the individual needs of staff when considering means of escape if identified.
- Ensure that all staff are aware of fire evacuation procedures within their immediate work area.
- Undertake fire risk assessment reviews and complete the workplace fire safety checklist with support from the Fire Safety Team when necessary.
- Assist in audit and monitoring processes.
- Respond immediately to the fire zone and liaise with the Fire Warden at the scene of the alarm, taking initial charge of the incident (Fire Incident Manager).

5.6.1 Establish a Safety and Health Management System

The assessment tool for hospitals, published by the Occupational Safety and Health Administration (OSHA), suggests that care providers should formulate guidelines that determine enterprise safety and health management system performance. To encourage compliance with safety protocols, it is important that administrators include all managers and employees in appropriate decision-making processes and perform regular

organizational performance reviews. Regular reviews provide a dynamic indicator of whether an organization has achieved intended outcomes. Furthermore, administrators can use this information to adjust organizational policies as needed.

i) Build a rapid response system

To aid organizations in planning rapid response systems (RRSs), the Agency for Healthcare Research and Quality (AHRQ) has developed Team STEPPS™, or Team Strategies & Tools to Enhance Performance & Patient Safety. Rapid response teams (RRTs) comprise one vital part of an RRS. The AHRQ suggests that health organizations determine the overall RRS framework using STEP assessment :

- Status of the patient
- Team members
- Environment
- Progress toward goal

Team STEPPS™ also outlines appropriate decision-making models for varying scenarios, such as Failure Modes and Effect Analysis (FMEA), Probabilistic Risk Assessment (PRA), and Root Cause Analysis (RCA).

ii) Make sure that employees know and understand safety policies

Employees and employers must understand their roles in organizational safety. In addition to training each new employee about hospital safety, administrators should update staff members regularly about related policy changes. Additionally, employees must understand the duties involved with upholding patient safety. Furthermore, every medical organization should clearly outline safety policies and procedures.

Employees must feel safe to voice concerns. Therefore, along with a clearly outlined procedure for managing and reporting issues, effective safety training includes reassurance that administrators will receive information with impartiality.

iii) Develop a safety compliance plan

Hospital administrators continually monitor and evaluate how employees follow established policies. Institutional governing boards and boards of directors use this information to adjust organizational policies as needed. Compliance programs benefit health organizations in many ways, including but not limited to :

- Building community trust as a responsible organization.
- Developing compliance standards suitable for the community and organization.
- Establishing a framework to evaluate employee and vendor compliance.

- Maintaining insurance claim integrity.
- Mitigating or eliminating illegal activity.
- Promoting positive treatment outcomes.
- Providing a centralized compliance outlet.

By developing and maintaining a safety compliance plan, organizations - small and large - promote safe treatment environments.

iv) Practice patient-centered care

Patient-centered care is a hot topic among debates about service quality. Health administrators, hospital media communication, and legislators use the catch phrase often. In fact, insurers linked payouts, in part, to the degree that care facilities adopted patient-centered care well before the implementation of the Affordable Care Act.

In the past, health advocates worried that the philosophy might undermine efforts to provide evidence-based treatments. Today, however, evidence-based treatment supporters view patient-centered care as a critical framework for establishing and promoting desired wellness outcomes.

v) Communicate safety information to patients

Historically, consumers played a passive role in their recoveries and, with vague comprehension, followed treatment plans unquestioningly. In this environment, patients placed absolute trust in care providers. Today, however, practitioners understand that educated patients can assist in reducing medical errors. Additionally, with the wealth of information available online, it is important that patients understand what health-related facts apply to their unique circumstances.

Contemporary patients increasingly participate in their own recovery planning. As educated consumers, they receive safer treatment, because care providers and health advocates have empowered them with the ability to ask the right questions and notice potential problems.

vi) Incorporate safe hospital design

Traditional hospital design focused on operational efficiency rather than patient safety, designating interconnected work areas in close proximity. However, patient-centered building design includes structural characteristics such as air quality, critical information proximity, noise dampening, and standardized feature locations, as well as fixtures that reduce contagion spread, such as employee hand sinks, in all treatment areas. Additionally, engineers design modern hospitals with wiring that supports advanced

technology that reduces errors, with extra emphasis placed on areas designated as drug dispensaries. Most importantly, safe building designs incorporate planning to measure and benchmark facility conditions and characteristics, such as ease of information access, noise levels, scalability, and other factors. Patients, employees, and administrators can eliminate most hospital errors by working as a team. However, it takes planning, commitment and work to maintain a safe hospital environment.

Two Marks Questions with Answers

Part - A

Q.1 List the widely used communication technologies in hospitals.

Ans. :

- Electronic Dashboards
- Mobile Computing
- Electronic Health Records(EHR)
- Digital Voice Communication
- Hospital Intranet and Emails
- Handheld Wireless Devices
- Digital Radiography

Q.2 Explicate the healthcare surveillance risks.

Ans. :

- **Reliance** - CCTV cameras are a very important aspect and tool for hospitals but it's crucial for hospitals to maintain a good level of physical security personnel on staff.
- **Privacy concerns** - Patient privacy is important and should be considered when installing security cameras. Do not install cameras in those areas considered private or in those areas where their privacy may be captured on video.
- **Camera tampering** - Tampering can be an issue especially when cameras are installed on low-level ceilings or hallways. A tampered with a camera can be damaged or can interrupt video from recording. We suggest you consider other security measures if you notice and interrupted signal or misaligned camera.

Q.3 Write down the general recommendations for fire safety in hospitals.

Ans. :

1. Hospitals of high rise buildings are found to be utilizing the cellars for generators and transformers, which is strictly prohibited.

2. Canteens, OP blocks, dormitories and pathological labs are not allowed in cellars.
3. Regular refresher training courses for the fire brigade personnel.
4. Recommendation for creating Rural Fire Services in areas which are not at present under any full time Fire Service cover.

Q.4 Write the purpose of robust communication system in every hospital/healthcare zone.

Ans. : The following establishments are made to fulfill the purpose of the robust communication system in every hospital.

i) Appoint/ designate a public information spokesperson to coordinate hospital communication with the public, the media and the health authorities.

ii) Establish an information desk to provide the requisite information at regular intervals and to serve as a hub for volunteer mobilization and management. The list of casualties along with their status shall be displayed at a prominent place outside the casualty / emergency ward, in both english and the local language, which shall be periodically updated.

iii) Develop a robust communication protocol, including streamlined mechanisms for information exchange between hospital administration, department heads and facility staff.

iv) Brief hospital staff about their roles and responsibilities during crisis situations.

Q.5 Elucidate effective and ineffective communication.

Ans. : The use of effective communication among patients and healthcare professionals is critical for achieving a patient's optimal health outcome. Communication with regards to patient safety can be classified into two categories :

- Prevention of adverse events and
- Responding to adverse events.

Use of effective communication can aid in the prevention of adverse events, whereas ineffective communication can contribute to these incidences. If ineffective communication contributes to an adverse event, then better and more effective communication skills must be applied in response to achieve optimal outcomes for the patient's safety.

Q.6 What are all the challenges faced by Internal Communication(IC) ?

Ans. : Risks in Patient Safety due to

- Gaps in timely availability of patient information.
- Real-time difficulties in contacting medical staff immediately.
- Unclear verbal commands.

- Misinterpretations in executing physician's instructions.
- Overlooking changes in health status.
- Absence of collaboration between hospital staff including physicians, nurses, technicians.

Q.7 List few healthcare and NHS audio applications.

Ans. : Typical healthcare and NHS audio applications

- Traditional and IP Public Address (IP PA) / Tannoy
- Next Patient / Call for Patient
- Audio over IP (AoIP) Applications

Q.8 Write down the advantages of Hospital Security Camera.

Ans. :

- **Safety & security** - Security cameras installed throughout a hospital prevent crime, medical insurance claims, break-ins, and allow security operators to monitor the property for patients in trouble or unauthorized visitors in restricted areas.
- **Employee productivity –** CCTV cameras present throughout the property helps to improve employee communication between departments or buildings, therefore heightening productivity.
- **Employee disputes** - When you have clear, detailed proof of video employee disputes can easily be resolved. Incidents in question can solve disputes quickly when using surveillance cameras.
- **24hr real-time monitoring** - Hospital cameras can be monitored or viewed from various different platforms such as PC, Mac, iPhone and Android. Cameras no longer have to be monitored and view from one single location.

Q.9 Write the points to be remembered while setting cameras in hospitals.

Ans. :

- Install security cameras so they may monitor and record all exit and entries of the hospital building its imperative to capture detailed video of those leaving and entering the premises.
- Hallways should monitor and recorded as well. All activity from employees, visitors and patients can be visually monitored by guards and staff.
- Cameras should be installed at all fire escapes and in elevators.
- Parking garages and lots should also be monitored. This includes all loading areas.
- Restricted areas should have cameras installed to maintain that only authorized users are granted access.
- Both the exterior and interior of the hospital should have cameras installed.

Q.10 List the hospital engineering service provision for fire protection according to NABH.

Ans. :

1. Fire-fighting installation approval must be obtained.
2. Location of control room should be easily accessible.
3. Control panel & manned, PA equipment should be connected with detection system or fire alarm system.
4. Pumps and pump room.
5. Two separate pumps i.e. electric and diesel pump should be available.
6. Provision of forced ventilation should be there.
7. Arrangement of filling Fire tenders.
8. Four way fire inlet must be present in case of emergency.

Review Questions

Part - B

Q.1 Explain Fire security in hospitals.

Q.2 Write the Surveillance risks, advantages of CCTV camera.

Q.3 Explain about communication and decision making.

Q.4 Explain how nurse communication skills leads to success and its benefits.

Q.5 Explain the Internal Communication(IC) technologies used in hospitals and the challenges faced in it.

Q.6 Write down the purpose and importance of communication in hospitals.

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SOLVED MODEL QUESTION PAPER

(As per New Syllabus)

Hospital Management

Semester - VII (ECE, CSE, IT) Opent Elective - II

Time : Three Hours] **[Maximum Marks : 100**

Answer ALL Questions

PART A - (10 × 2 = 20 Marks)

Q.1 *Write the main functions of the hospital management system.*
(Refer Two Marks Q.2 of Chapter-1)

Q.2 *How does team work management pave way for successful hospital ?*
(Refer Two Marks Q.5 of Chapter-1)

Q.3 *List the objectives of human resource management.*
(Refer Two Marks Q.2 of Chapter-2)

Q.4 *What are the benefits of human resource development ?*
(Refer Two Marks Q.4 of Chapter-2)

Q.5 *What are the functions of* ***personnel department ?***
(Refer Two Marks Q.4 of Chapter-3)

Q.6 *Write down the problems encountered in hospital staff training programs ?*
(Refer Two Marks Q.9 of Chapter-3)

Q.7 *What is decontamination process ?* **(Refer Two Marks Q.3 of Chapter-4)**

Q.8 *Write down the objectives of the medical record department.*
(Refer Two Marks Q.8 of Chapter-4)

Q.9 *Explicate the healthcare surveillance risks.* **(Refer Two Marks Q.2 of Chapter-5)**

Q.10 *Write the purpose of robust communication system in every hospital/healthcare zone.*
(Refer Two Marks Q.4 of Chapter-5)

PART B - (5 × 13 = 65 Marks)

Q.11 a) **i)** *Write down the seven steps of functional planning via strategic planning.*
(Refer section 1.9) **[8]**

ii) *Write down the challenges faced in hospital administration.*
(Refer section 1.6) **[5]**

OR

b) **i)** *Briefly explain the components of the functions of hospital administration.* **(Refer section 1.5)** **[8]**

ii) *What is hospital planning ? Explain its principle involved in it along with its components.* **(Refer section 1.7)** **[5]**

Q.12 a) **i)** *Explain the managerial and operative functions in HRM ?* **(Refer section 2.3)** **[8]**

ii) *Explain about manpower planning and its significance.* **(Refer section 2.6)** **[5]**

OR

b) **i)** *Write down about Human Resource Inventory (HRI) in detail.* **(Refer section 2.5)** **[8]**

ii) *Write the factors influencing human resource planning.* **(Refer section 2.4.1)** **[5]**

Q.13 a) **i)** *Briefly explain about the training and development of hospital employees.* **(Refer section 3.3)** **[8]**

ii) *Write down the skills for healthcare management.* **(Refer section 3.2.4.1)** **[5]**

OR

b) *i) Explain the role of various departments in hospital.* **(Refer section 3.1)** **[8]**

ii) Explain in detail about recruitment and selection. **(Refer section 3.2)** **[5]**

Q.14 a) *i) Explain in detail about food chain and obstacle to avoid in food service.* **(Refer section 4.4)** **[8]**

ii) Write down about the need, advantages, functions and objectives of CSSD ? **(Refer section 4.2)** **[5]**

OR

b) *i) Explain about the levels and components of medical care ?* **(Refer section 4.1.3)** **[8]**

ii) Brief about the responsibility of pharmacist in hospital pharmacy. **(Refer section 4.3.3)** **[5]**

Q.15 a) *i) Explain the Internal Communication (IC) technologies used in hospitals and the challenges faced in it.* **(Refer section 5.1.4.3)** **[8]**

ii) Write down the purpose and importance of communication in hospitals. **(Refer section 5.1)** **[5]**

OR

b) *i) Explain fire security in hospitals.* **(Refer section 5.5)** **[8]**

ii) Write the surveillance risks, advantages of CCTV camera. **(Refer section 5.3)** **[5]**

PART C - (1 × 15 = 15 Marks)

Q.16 a) *i) Write few ways to develop HRD programs in hospitals training programs.* **(Refer section 2.4.3)** **[10]**

ii) Explain about communication and decision making. **(Refer section 5.1.4.6)** **[5]**

OR

b) *i) Explain how nurse communication skills leads to success and its benefits.* **(Refer section 5.1.4.5)** **[10]**

ii) Explain about decontamination process ? **(Refer section 4.2.3)** **[5]**

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