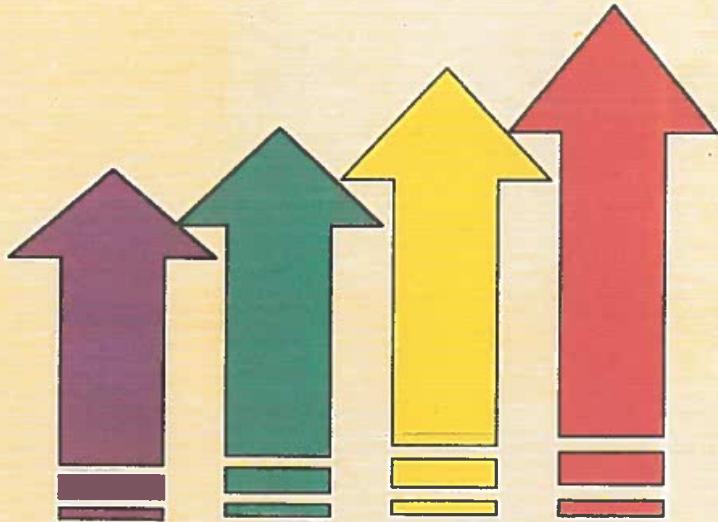


Management
&
Marketing



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Pharmaceutical Management & Marketing

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Fist Edition: June 2002
Published by: Tariq Academy D-Ground.
(Smosa Chowk) Faisalabad
Ph: 546964 Fax: 733350

To

Our Families for unselfishly enduring our endeavors



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Preface

A great number of Pharmacists, after their graduation, chooses career in marketing or management. The success of graduate pharmacists adopting such jobs demands a clear understanding of the subject at graduation level. We felt lack of textbooks on the subject of pharmaceutical management and marketing. This scarcity in the availability of textbook on the subject has acted as catalyst for compiling '*Pharmaceutical Management & Marketing*'. This book has evolved from series of the lectures delivered to the Pharmacy students in the Department of Pharmacy, Islamia University, Bahawalpur.

The '*Pharmaceutical Management & Marketing*' is a simple and concise material, what can be very complex on the subject. We believe that the concepts presented simply are of more interest and attractive for the students.

This book has four parts including organization management, production management, marketing and sales management and retail management. Organization management describes management, manager, planning, organizing, staffing – human resource management, leading, controlling, coordination & managerial communication, and creativity & innovation. In production management, various elements of production management have been elaborated. Marketing & sales management gives information on the market management, the product, pricing, place – channels of drug distribution, promotion, advertisement, detailing, and sales & other forms of promotion. The retail management comprised of the management of Pharmaceutical retail business.

We understand that the suggestion, criticism and comments would improve the text further and thus, will be highly appreciated.

Dr. Mahmood Ahmad,
Nadeem Irfan Bukhari

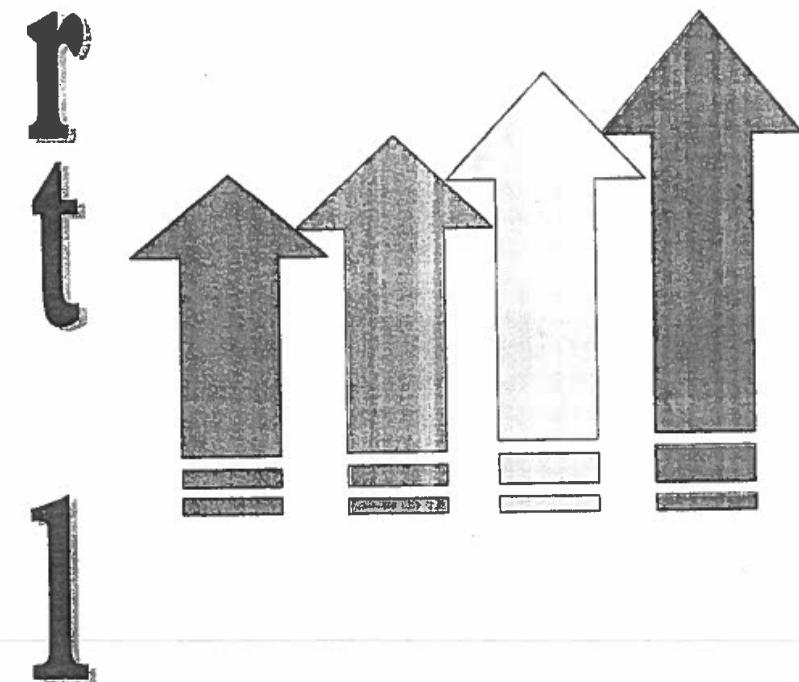
May 2002

Foreword

Books on the subject of Pharmaceutical Marketing or Management were very limited therefore, such book was highly desirous. The book, 'Pharmaceutical Management & Marketing' is a comprehensive, concise and understandable presentation on the subject available to our Pharmacy students. I congratulate and appreciate its authors, Dr. Mahmood Ahmad and Mr. Nadeem Irfan Bukhari for nice and very useful book on the subject.

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P Organization a Management



MANAGEMENT

Management is designing and maintaining of an environment in which individuals working together in groups can accomplish their selected objectives within an organization. Effective planning, organizing, directing and controlling the human efforts directed towards specific ends in a company, department, or a section within an organization can achieve this environment. In this context, management may be defined as an art and science of planning, organizing, directing and controlling human efforts within the organizational framework and economic environment of the firm to achieve its objectives.

Management can be defined in other words also. It is the activity which plans, organizes and controls, operations of the basic elements of men, materials, machines, methods, money and market providing direction and co-ordination and giving leadership to human efforts so as to achieve the objectives of an enterprise. Or simply, the management is the organization and control of human activity directed towards specific ends. Management is thus, a process to coordinate the activities of planning, organizing, directing and controlling human efforts and resources to achieve specific objectives that one individual, acting alone cannot achieve by remaining within the organizational frame work (Figure 1).

The management and administration, though interrelated and used synonymously, yet have distinct meanings. Administration is responsible for the operation of entire organization. It is involved dominantly, in directing and less dominantly in planning and coordination. Administration facilitates the management process in an organization. The basic functions of administration in an organization include:

1. Enforcing the policies and daily management
 2. Establishing the organization structure to carryout its programs
 3. Financial management
 4. Providing, maintenance and safe-guarding of appropriate resources of an organization
 5. Looking after the weakness influencing any aspect of organization
-

As compared to administration, the management is directly related to the resources in order to control, manipulate and direct them for gain. Management requires the knowledge of organization's objectives, policies and the resources that can be called upon to accomplish the predefined objectives. Planning, coordination and leading are more prominent areas in management as compared to in administration. The management is also responsible for continued employment and satisfaction of all associated with it.

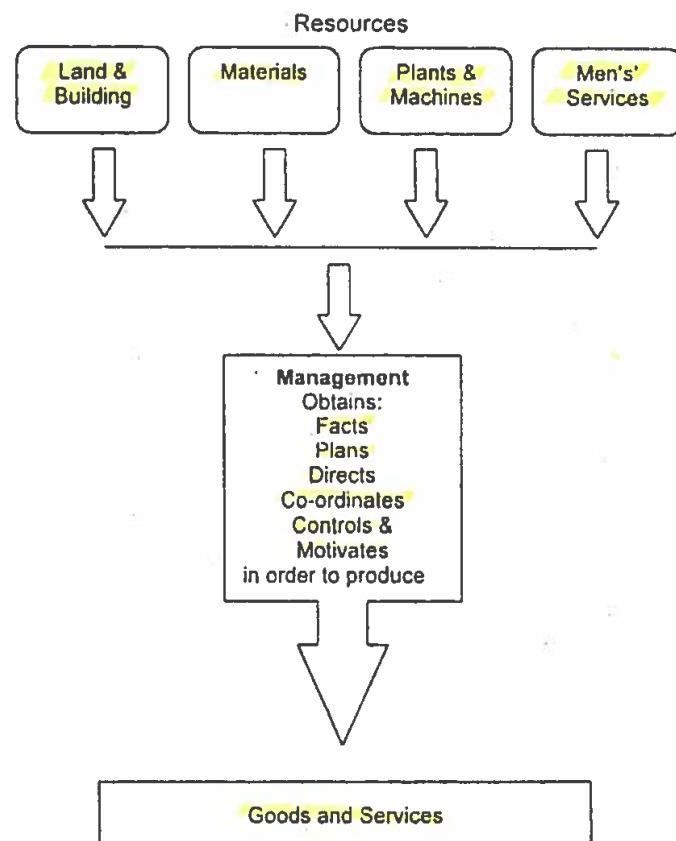


Figure 1: Management – the coordination of the resources of an enterprise

For a clear understanding of the pharmaceutical management, the

following terminologies and concepts must be understood:

Enterprise

A pharmaceutical enterprise refers to a company, firm or organization involved in pharmaceutical business. Sometimes, an enterprise may also be called as unit, institute, establishment or corporation. What may be name used to represent, an enterprise have people working in groups to convert resources into desired goods and/or services. All the firms involved in the conversion of resources into pharmaceutical products/services are collectively called as the pharmaceutical industry. A pharmaceutical firm thus, is a part from whole of the pharmaceutical industry.

Entrepreneur

The entrepreneur means an individual with ability to see an opportunity, to obtain necessary capital, labor, and other inputs, to know how to put them together into an operation successfully. This individual also has the willingness to take the personal risk of success or failure. Simply, the owner of an enterprise is referred to as entrepreneur.

Resources

The money, land/building, men's services, available materials and machines are the resources of an organization. These resources are sometimes also refers to as inputs. In an organization, these inputs are converted into the products or services that are called outputs. A detail of these resources available with an organization is mentioned as:

Money

Money is certainly needed to purchase and maintain building, machines, carryout operations, material purchase and for hiring and securing efficient staff. Usually the money is also referred to as capital.

Land and Buildings

Land is a convenient location to fabricate buildings and other facilities necessary for the operations of a pharmaceutical industry. Land and building are relatively permanent and are also called fixed assets. It is worth-mentioning that the Drug Act 1976 indicates some conditions for location and the building of pharmaceutical manufacturing units. A pharmaceutical factory is to be situated in a place away from open sewage, drain, or public lavatory. It may not be located near any other factory that produces large quantities of dust or smoke which may interfere or

adversely affect quality of the environment of its products. The factory shall be located in a sanitary place, remote from filthy surroundings, preferably not in a congested residential area.

The building of a pharmaceutical organization should be of suitable size and constructed to facilitate adequate cleaning, and maintenance and permits manufacture of drugs under hygienic conditions. The building should be so constructed that all the regulations of good manufacturing practice (GMP) can be implemented.

Men's Services (Manpower)

The manpower is required for planning, controlling, procuring and performing other business operations, quality control and for effective promotion of the pharmaceutical products. The personnel are also essential for secretarial and other non-technical jobs. In some pharmaceutical firms, manpower is also involved to design and to undertake research and development of products.

According to the Drug Act 1976, the pharmaceutical workers free from contagious or obnoxious diseases are an obvious requirement in a pharmaceutical industry. Their clothing should consist of uniforms suitable to the nature of their work and should be clean. Adequate facilities for personnel cleanliness, such as, clean towels, soap and hand-scrubbing brushes must be provided separately for each sex.

Materials

Materials are the physical elements that are consumed in the process of producing outputs and are referred to as variable assets. These are converted into pharmaceutical products to be sold. The materials usually employed in pharmaceutical manufacturing fall in following categories.

Raw materials: Raw materials are the ingredients that go into the final product and are essential for the pharmacological action of the drug product.

Excipients: The materials which are the part of final product but they are inert and have no pharmacological action. They are necessary to make the dosage form or their delivery in biophase.

Packaging materials: Packaging material inventory is the stock of the parts and other basic inputs used in the packages of the pharmaceutical

products. These comprised of tablet packaging materials, closures, bottles, ampules, vials, cartons, etc.

Operating supplies: Operating supplies are the materials used for maintenance, repair or facilitate production but do not become part of the final product. These materials are usually small in number and bear less expense compared to other inventories. Nevertheless, they are essential to the operation of plant. Examples of such items include stationary and other office-related materials, repair tools and parts, lubricants, and cleaning supplies.

Finished goods: Finished-goods inventory consists of stock of unsold final products. Finished goods are stored at the manufacturing facility itself or at some point in the distribution channel.

Machines

Machines are the fixed assets of a pharmaceutical firm and include plants, equipments and tools necessary to carryout operations of pharmaceutical manufacturing, for provision of storage conditions, handling and transport of materials and finished products. The heating, ventilating aids, power plants, office equipments and furniture also fall in this category. It is officially required that the necessary equipments should be provided for the manufacture and packaging of pharmaceuticals. The requirement of equipments for various departments would be different.

Productivity

Productivity is the ratio between output and input. This definition applies in an enterprise, industry or economy as a whole. In this text the term productivity is used to mean nothing more than an arithmetical ratio between the amount produced and the amount of resources used in course of its production. The inputs include land, equipments, materials and manpower. Output refers to the products or the services. The goal of management demands maximum output with expenditure of minimum resources (Inputs) but essentially without compromising on the quality. Several examples of productivity are mentioned below.

Productivity of Land

The space in a pharmaceutical industry can be utilized effectively by allocating proper area for equipments and for all operations carried out. In this way, the productivity of a firm can be increased many folds while

utilizing less space.

Productivity of Materials

Production of number of product units from material nearest to the theoretical yield is the productivity of materials. If a skillful pharmacist can produce a practical yield of 990 bottles from a theoretical yield of 1000 bottles, an unskilled person may produce 950 or fewer bottles from the same batch size. The skillful pharmacist is, therefore, producing 4% more bottles.

Improving method of production

If a packer in a packaging department has been producing 30 packs within an hour and improved methods of work enable him to produce 40 packs in the same time, the productivity has increased by 33.5 percent.

An increase in production does not by itself indicate an increase in productivity. If the input of resources goes up in direct proportions to increase in the output, the productivity will stay the same. Furthermore, input increases by a greater percentage than output, and then higher production will be achieved at the expense of a reduction in productivity. In short, higher productivity means that more is produced with the same expenditure of resources.

Effect of increased productivity

An increased production at the same cost, or production of same amount at less cost is a gain to the community as a whole, which may take various forms. Higher productivity provides opportunities for raising the general standards of living, including opportunities for:

1. Larger supplies of pharmaceutical products at lower prices
2. Higher real earnings for pharmaceutical industry leading to investment for further advance in technology
3. Improvement in working and living conditions of workers, including shorter hours of work and increase in profit sharing
4. In general, a strengthening of the economic foundations of country and human well-being

Productivity in Industry

A number of products being utilized in daily life are the outputs of industry. Likewise, the drugs are the products of pharmaceutical industry. A greater productivity in an establishment leads to the greater

opportunities of producing products abundantly, economically in quantities and at affordable price. Products produced abundantly at affordable price will meet the requirements of every family in a community. The productivity of a certain set of resources (inputs) is therefore, the amount of goods or services (outputs) that are produced from them.

The resources at the disposal of a manufacturing company have been mentioned in earlier section. An appropriate blend of all these resources determines the productivity of a pharmaceutical enterprise and the management of that company is responsible for ensuring the best use of all these resources.

Hierarchy

Hierarchy is a frequently used word used in defining various aspects of management. It means ladder, and the pecking order or ranking of personnel in an organization. In terms of management, it is used to designate chain of command, ranking and who is accountable to whom.

IMPORTANCE OF STUDYING MANAGEMENT

The study of management is important for the following three reasons:

1. A society depends on specialized organizations to provide products and services. Such organizations are guided and directed by the decisions of management. Management establishes the conditions under which workers are provided jobs, income and the customer's life styles, products, services, protection, healthcare and knowledge. It would be difficult to find anyone in our society who is neither a manager nor at least affected by the decisions of a manager.
2. Having the basic knowledge of pharmaceutical management, a pharmacist will be able to become a better employee who knows the various managerial functions, performance appraisal systems and ways of motivations.
3. Individuals not trained as managers often find themselves in managerial positions. Many individuals presently being trained to be production pharmacist, research & development pharmacist, development, sales promotion pharmacist, hospital pharmacist, and retail/community pharmacist, etc. These will one day earn as manager and will manage a specific job. So a pharmacist must have basic knowledge of pharmaceutical management, in advance to tackle their new responsibilities.

SCOPE OF MANAGEMENT

Management is applicable and essential in all the organized operations as well as at all the levels of organization in an enterprise. In pharmacy, management is required in pharmaceutical activities such as:

- Production/manufacturing of pharmaceuticals
- Marketing of pharmaceuticals
- Research in pharmaceuticals
- Clinical trials of drugs
- Hospital pharmacy department in a hospital
- Retail/community pharmacy
- Drug distribution
- Depot/chain pharmacies
- Drug information centers/poison control centers.

In short, in all activities requiring human beings need management.

ROLE OF MANAGEMENT

The essence of management is decision-making. Its unique role is selection between alternative means of moving towards an objective. The decision making process involves the following steps mentioned in Figure 2.

Identifying and defining problem: Any task under consideration is referred to as a problem. However, it may be a real obstacle or trouble in organizational activity or operation. Recognition of the obstacle, in this case is the first step in its solution.

Analyzing problem: The next step in decision-making is the investigation of problem or task under question with respects to all possible dimensions.

Developing alternative solutions: After analyzing, more than one solutions of the problem or courses of action for achieving specific task are proposed. The developed alternatives must be workable and any one of them can be adopted.

Deciding upon best solution: All the alternative solutions or courses of actions are evaluated carefully. The feasible and one that is expected to

work well is selected.

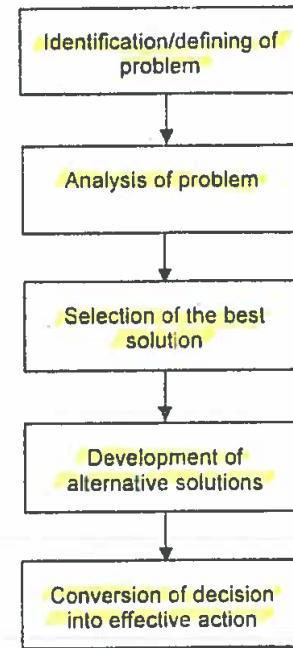


Figure 2: The decision making process

Converting the decision into effective action: The selected solution or action is then implemented. Again, after some time period, the course of action is evaluated for its success. In case of failure, the process is again started from the first step.

The success of any organization is based on the efficient management. If the management fails to do, the enterprise will fail in the end. In such a case, the resources available in the organization become un-coordinated like the efforts of four horses without a driver. The enterprise, like a driverless coach, moves forward jerkily, held up for the lack of material, and equipments, because the machines are badly chosen and even more badly maintained, or because employees are unable or unwilling to do their best.

An effective management demands the following:

1. **Organizational objectives/policies:** The organization objectives are the initial step for the success of a firm. Whole policies, programs and operations of a firm depend on its objectives.
2. **Resources:** As has been mentioned in preceding section, the resources include men, materials, machines and money. All these resources have their own importance. The resources, used coordinately are required to carryout operations and activities within an organization. Resourcefulness of firm, thus dictates its success.
3. **Capability of decision makers:** The knowledge and courage of decision makers is regarded as their capability. Efficient management has the capability to select the best to achieve the predefined targets. The other capabilities of decision makers include farsightedness, judgment and resourcefulness. These are also needed so as a manager can predict the future of courses of actions and decide the best amongst them.
4. **Authority:** Power to implement in organization is the authority. It is needed to get the work done in organization. The authority delegated to manager is vital for planning, organizing, leading and coordination and in decision-making as well.

TECHNIQUES OF MANAGEMENT

Management techniques are systematic procedures of investigating, planning or controlling management problems. Since, management deals with human beings, it can never be completely scientific, and must be regarded partly as an art. The scientific techniques are applied to materials governed by known physical laws.

On the other hand, techniques of management are applied to people and must rely on people and thus, it is to be ensured that they are properly applied. Management techniques can only be successfully applied by an individual who has an understanding of people by experience of dealing with them. Two fundamental principles of management are:

Adequate decision

The decision must be adequate to solve the problem. A partial decision may create such consequences that are not favorable for a firm.

Authority equated with responsibility

The authority delegated to manager must be equivalent with responsibilities assigned. A manager must be accountable for the authority

he uses.

STYLES OF MANAGEMENT

There are primarily five distinct styles of management that have evolved from the days of classic capitalism. The style of management varies in organization to organization. Though some management styles no longer persist in modern industrialized societies yet a single or blend of the below-mentioned styles may be used in pharmaceutical industry.

Captain-of-Industry style (Predated to 1885)

Captain-of-industry is a pre-dated management style that came into existence before industrialization and persisted till the establishment of scientific management in 1885. Strong individualistic person who is the boss of an enterprise has represented captain-of-industry style. This style is based on authority centralized to the head of the organization. The mode of communication has been in the form of directives and order giving. In this style of management, the pay scale is not justified according to the job performed. There is a pressure on the workers for productivity and this style does not support for the participation of subordinates.

The captain-of-industry style of management gradually declined as industrial society became more mature and got institutionalized. The social pressure via legal regulations and introduction of the scientific management were also the causes of the decline of captain-of-industry style. The scientific management has been elaborated in hard-nose style of management in next section.

Hard-Nose style (mid 1910's to 1930's)

Till 1914, due to various commercial laws, corporate policies became more restrained in commercial dealings. However, under the increasing competitive influence brought about by these laws, management seeks newer ways to compete. Armed with the techniques of scientific management, large corporations were in a position to demand high standards of work performance, thus lowering the unit production cost. This economic and political background provided the basis for the hard-nose policy of management.

The hard-nose style is based on the scientific management and having more emphasis on high standards of work performance to lower the unit production cost. The scientific management is broadly defined as the application of scientific procedures, techniques, and tools to operating,

strategic, and policy problems in order to develop and help evaluate the solutions. As a discipline, management science includes all rational approaches to the management decision making that are based on the application of scientific methodology.

Scientific management was based on dividing each job into small tasks units identifiable and measurable in terms of time required to perform a single task. These divided elements are then organized into a work cycle for each job and, by using stopwatches and statistical procedures performance standards were set.

Thus, in this management style, the pay scales were justified strictly according to performance of the workers based on strict standards. An employ was considered as working unit, robot and the productivity was achieved through pressure. The drawback of scientific management is that the workers were reduced to an almost robot level and the incentives were based only on fulfilling the work standards.

Human-Relations style (1940's and early 1950's)

The human-Relation style was emerged due to the growth of unions, insufficiency of workers and increased need of production of ammunition needed in armed factories for World War II. Thus, it was necessary to motivate employees through good human relation programs to increase the productivity in ammunition industry. The philosophy of this management style was also established further by two other factors; firstly the price stabilization, which eased the competitive pressures, and secondly the research findings of the social scientists. This was an era when fringe benefits became an important consideration instead of fixed pay increments. The managers employed other fringe benefits additional to pay increments to motivate the workers for increase in productivity.

Management-by-Pressure style (early 1950's to mid 1960's)

This style of management originated under the economic conditions following World War II. These conditions were characterized by increased demand, and high prices and costs. To meet these conditions, management exerted pressure and combined the hard-nose and scientific management approaches. Without returning to the old hard-nose policy, except in labor negotiations, management exerted pressure to increase productivity, hold cost down, and attain a larger share of the growing market. Pressure was exerted to produce more by gearing promotion and other economic incentives to productivity, while maintaining increased

fringe benefits, but putting less reliance on the policy of good human relations. Meanwhile, the scientific management had not ignored. On the contrary, the tools of scientific management had been bit refined in this approach. This was the era when a good manager was known as someone "who could make things happen".

Management-by-Objectives style (beginning in the mid 1960's)

The management by objectives (MBO) is described as a process whereby the seniors and subordinate managers of an organization jointly identify their common goals. They also define each individual's major area of responsibility in terms of results expected of him, and use these measures as guidelines for operating the unit and assessing the contribution of each of its members.

Formulation of this style was based on the analysis of the previous management styles, synthesis of better aspects of the previous methods, and well-deigned behavioral science research. MBO gathers the best in all previously mentioned management styles. Goal-orientation, shared goals, and greater subordinate participation are few features of this style to enlist. It obviously has some of the better characteristics, philosophy, and concepts of the pressure style. The MBO is simple in context but requires extraordinary insight into various elements of the system.

The some of the features of various management styles have been presented in Table 1.

Merits of MBO

The following are the merits of management by objective style:

1. The MBO utilizes the basic organizational structure to make it work effectively
2. Stimulates growth and development of organization by involving all of its employees
3. Attainment of mutually determined objectives between employees and the supervisors
4. Especially applicable in professional and managerial employees and may extend to the departmental supervisors, technical positions or clerical employees with some modification in methods of setting standards and measuring results.
5. Helps to overcome many chronic managerial problems

Management style	Features
Captain-of-Industry	<ul style="list-style-type: none"> • Based on authority centralized to the head • Communication in directive/order giving • More pressure on workers • Pay scales not according to performance
Hard-Nose	<ul style="list-style-type: none"> • Based on scientific management theory • Centralized authority • Pressure on the workers • Pay scales according to job performance • More emphasis on performance
Human-Relations	<ul style="list-style-type: none"> • Based on good human relations • Less centralized authority • Productivity by motivation • Fringe benefits along with fixed salary • Emphasis on the workers' esteem
Management-by-Pressure	<ul style="list-style-type: none"> • Based on combination of hard-nose and Scientific management styles • Less pressure as compared to hard-nose style • Refined aspects of scientific management • Fringe benefits but less human relations
Management-by-Objectives	<ul style="list-style-type: none"> • Goal-oriented • Shared goals • Combines merits of all other management styles • More subordinate participation • Realizes the esteem of workers

Table 1: Features of various management styles

Implementation of MBO

The MBO can be implemented in organization effectively by the following steps:

1. Goal setting: The goals are established for firms as a whole as well as for the subordinates and workers. The firm goals, called overall organization goals are to be achieved by the executive(s) or by principal manager(s). The goals for a firm may be to earn profit, have a competitive position in industry, expense control, increased productivity or research success.

The responsibilities are assigned to the subordinates and workers to achieve the overall objectives of the firm. The subordinates required mentioning their own goals with mutual agreement of manager. These goals are called specific goals. Usually, subordinate's goals are set in terms of routine duties, problem-solving goals, creative goals, and personal development goals for the year. The manager help

- subordinates in accomplishing their personal goals
- 2. Formulation of action plans: After setting of overall and specific goals, action plans are developed that focus on the methods, procedures or activities necessary to pursue these goals.
- 3. Determination of the means to measure the results: The means for measuring of results after predefined period are devised. This is undertaken to measure the results against the goals.
- 4. Measuring results against goals: The results are reviewed after a specified time period that may be monthly, quarterly, or yearly for assessment of success. However, some goals are immeasurable before one year. Frequent result measurements are better as the goals can be altered or modified on manifestation of repeated failure.
- 5. Modification in goals/criteria: Making modification in goal is sometimes essential. Some goals are unrealistic and firms and individuals fail to achieve them. Other times, the measuring criteria are too strict. In such a case, goals or criteria are to be modified or altered. After specified period, the goals are again measured for success.
- 6. Annual review of results: At the end of a year, the results of achievements are assessed against the goals for firm as well as for the employees. Under MBO, employees participate in this assessment. New goals are established for the next year based on the results and performance in the past year. Obviously, in setting goals for the next year, the workers are to be challenged to do even better. This cycle is repeated for each year.

MANAGERS

An individual carrying out the managerial functions of planning, organizing, staffing, leading and controlling is called manager. Thus, the managers are needed to plan, organize, hire staff, supervise, direct and guide the group of workers in an organization in pursuit of organizational objectives. The success of a firm largely relies on the efficiency of its managers. Performance of managerial functions mentioned above in organization prerequisites some abilities in managers. The details of manager's functions and roles and various types of a manager have been given in forthcoming text.

FUNCTIONS OF MANAGER

The functions of a manager are of diversified nature and largely depend on the size and type of a pharmaceutical concern. These functions include the action of planning, organizing, staffing, directing or leading and controlling. In practice, all functions are performed simultaneously but with more or less importance given to each function. For example, in a newly established enterprise, planning function precedes all other functions. The following is the spectrum of manager's functions:

Planning (Chapter 3)

Planning is the determination of course of action, way to perform, time to perform the task and the person required to accomplish it to achieve organizational objectives. The planning starts with a decision, a commitment of human, material resources or reputation following an analysis or a proposal.

Planning is a function of all managers, although the character and amplitude of planning will vary with each manager's authority and with the nature of policies and plans outlined by supervisors. The ability to plan effectively is a principal factor in the success of a manager. A true manager is one who has been given certain degree of choice and planning responsibility. The effectiveness of a plan pertains to the degree to which it achieves the purpose or objectives. Plans are efficient if they achieve

their purpose at a reasonable cost, measured in terms of time or money or production as well as the degree of individual and group satisfaction.

Organizing (Chapter 4)

Organizing involves establishing an intentional structure of the roles for people to fill in an organization. It is intentional in the sense that all the tasks necessary to accomplish goals are assigned and, it is anticipated, assigned to people who can do them best.

The purpose of an organizational structure is to help in creating an environment for human performance. Although the structure must define the tasks to be done, the roles so established must also be designed in the light of abilities and motivations of people available.

Designing an effective organizational structure is not an easy managerial task. Many people are found in making structures fit situations, including both defining the kinds of job that must be done and finding the people to do them effectively.

Staffing (Chapter 5)

Staffing involves filling in, and keeping filled positions in the organizational structure. Identifying work-force requirements and recruiting, placing, promoting, appraising, compensating, and training or developing jobholders so that tasks are accomplished effectively and efficiently are included in staffing.

Staffing is identified as a separate managerial function usually performed by a separate department rather than done by a manager. A separate department for staffing in an organization is required due to the following various reasons.

1. Staffing of organizational demands knowledge and approaches not usually recognized by practicing managers, who often think of organizing as just setting up a structure of roles
2. Making staffing a separate function facilitates placing an even greater emphasis on the human elements in selection, appraisal, career planning and manager development
3. An important body of knowledge and experience has been developed in the area of staffing not possible for a manager to grasp this broad knowledge
4. The managers often overlook the fact that staffing is their responsibility - not that of the personnel department

To be sure, this department provides valuable assistance, but it is the job of managers to fill the position in their organization and keep them filled with qualified people.

Leading (Chapter 6)

The managerial function of leading is defined as the process of influencing the people so that they will contribute to organization and group goals. It has to do predominantly with the interpersonal aspect of managing. As a matter of fact that the most important problems arise from people, their desires and attitudes, their behavior as individuals and in groups. The effective managers need to be effective leaders to rectify these problems. Since, leadership implies follower-ship and people tend to follow those who offer a means of satisfying their own needs, wishes and desires. It is understandable that leading involves motivation, leadership styles, approaches and communication.

Controlling (Chapter 7)

Controlling is the measurement and correction of the worker's performance in order to ensure that enterprise's objectives and plans devised to attain them are being accomplished. Planning and controlling are closely related and may be viewed as the blades of scissor that can only work when used in pair. Without objectives and plans, control is not possible since performance has to be measured against some established criteria.

Controlling is the function of every manager from managing director to supervisor. The primary responsibility for the exercise of control rests on every manager charged with the execution of plans. Although the scope of control varies among managers, those at all levels have responsibility for the execution of plans, and control is therefore, an essential managerial function at every managerial levels.

The basic control process, whenever it is found and whatever is being controlled, involves three steps:

1. Establishing standards
 2. Measuring performance against these standards
 3. Correcting variations from standards and plans
-

Co-ordination (Chapter 8)

Co-ordination, the essence of manager-ship, is for achieving harmony

among individual efforts toward the accomplishment of group goals. Each of the managerial functions is an exercise contributing to co-ordination.

Since, an organization is a collection of several people having different interests, their efforts toward mutual goals do not automatically mesh with the efforts of others. It thus, becomes the central task of manager to reconcile differences in approach, timing, effort, or interest and to harmonize goals to contribute, ultimately to organizational goals.

ROLES OF MANAGERS

The several major roles that managers play in firms are categorized into interpersonal, informational and decisional roles, the detail of which is presented in preceding section.

Interpersonal

Figurehead

A manager is symbol of authority and leadership. So he performs symbolic duties of legal or social nature.

Leader

Leadership is the basic managerial role that a manager plays. The manager builds relationship with subordinates and communicates with, coaches and motivates them and promotes innovation to achieve the defined goals.

Liaison

A manager acts as liaison between a firm and its external environment. He has to maintain network of contacts outside work units to get help and information that can affect any aspect of the organization.

Informational

Monitor

As monitor, a manager seeks internal and external information about issues that can affect organization.

Disseminator

The managers transmit meaningful information obtained from internal or external sources to organization's people.

Spokesperson

A manager may transmit information to public and Government about the organization.

Decisional

Disturbance handler

A manager takes corrective actions when organization faces any difficulty or crisis.

Entrepreneur

Manager acts as initiator, designer and promoter of change and innovation in an organization.

Resource allocator

A manager distributes resources such as time, money, equipment and human resources for specific task or operation.

Negotiator

Manager represents the organization in major negotiations affecting the manager's areas of responsibility.

TYPES OF MANAGERS

All managers carryout managerial functions, but the time spent for each function may differ. The managers can be divided into three groups on the basis of relative time spent for each managerial function.

Top-level managers

The managers at very top level of hierarchy are ultimately responsible for managing of entire organization. They are few in number and report to the board of directors of a firm. Other typical titles may be given to the top-level managers include chief executive, chief executive officer, executive director, president, etc. The top-level managers are responsible to see the overall planning for organization and maintenance of the overall control over progress of organization.

The top-level managers spend more time on planning and organizing than do the lower-level managers. At the top management level, conceptual, design abilities and human skills are especially valuable but there is relatively little need for technical abilities. In large companies, chief executive, a top-level manager can utilize technical abilities of his

subordinates. However, in smaller firms technical experience of manager is quite important.

Middle-level managers

Middle-level managers are beneath the top-level managers who are responsible for the work of managers at lower level. These managers, sometimes supervise the operating personnel. Other titles of middle-level managers are chief, departmental head, senior manager, etc. The middle-level managers spend less time on planning and organizing. At this level, there is a less need of conceptual skills. However, human skills are still essential while the technical skills gain importance.

First-level supervisors

The managers at the lowest level of hierarchy are directly responsible for work of operating employees. These managers function at the interface between management and that of the workforce of the organization. The other designations for these managers are first-line manager or just supervisor.

The first-level managers are responsible for seeing routine operations in pursuit of organizational goals. Thus, they are extremely important for success of the organization. Leading of subordinates takes a great deal of time for first-line supervisors. Technical skills are of greatest importance at the supervisory level. Human skills are also helpful during frequent interactions with subordinates.

ABILITIES REQUIRED FOR MANAGERS

Some minimum abilities are required to act out managerial functions of planning, organizing, staffing, leading and controlling. Most of the required pre-requisites are as follows:

Knowledge base

The knowledge base relevant to a particular managerial job is an important requirement for managers. Knowledge base is the information about an industry, its goals, plans, policies, technology, practices, company culture, etc. The exclusive knowledge base enables the managers to accomplish so much within short period of time and to take action with only small bits of information at their disposal.

Key skills

The ability to engage in a set of behavior functionally related to one and

other and that lead to a desired performance level in a given area. Three types of skills, namely technical, human and conceptual skill are needed for success of a manager.

Technical skills

The skills that reflect understanding of and proficiency in a specialized field are called technical skills. The examples of technical skills are tablet manufacturing, quality control, etc. in a pharmaceutical organization.

Human skills

The human skills are associated with manager's ability to work well with others as group member and as leader. These skills include intelligence, creative, ability to convince, ability to communicate, ability to decide, logical thinking approach and sense of responsibility.

Intelligence: The intelligence is an important human skill needed in a manager. It helps in understanding of various aspects of organizations and to deal with combination of technical, economic, financial and legal elements in order to explain them to others in a best possible way.

Creative: Creativity is an individual's innate ability to generate new ideas or conceive new perspectives on existing ideas. This ability in a manager can help in effective decision-making and problem solving.

Ability to convince: A manager interacts with subordinates, suppliers, and customers. Thus, a manager must be able to convince the people. He should make all subordinates to understand in the same manner that they all act as the manager wants them to do.

Ability to communicate: A successful manager is competent enough to express himself in written and verbal form of communication. Communication in any organization is very vital aspect and is need for normal functioning of an organization, leading, and coordination of the workers.

Decision ability: A manager should be quick in decision-making. Decision-making is needed in the determination of how work could be done, resolution of conflicts, and selection of one of the best course of action among various alternatives.

Logical thinking approach: Managers' way of thinking should be logical and they must be able to scrutinize and verify the facts. Logical thinking approach is also known as scientific approach.

Sense of responsibility: A good manager performs his job with full sense of responsibility. He feels responsible to his job, seniors and subordinates.

Conceptual Skill

Skills related to the ability to visualize the organization as a whole, and to understand the interrelationships among organizational parts are conceptual skill. A manager must have conceptual skills. The concept and other skills are significant ingredients in the organizational performance.

PLANNING

Planning is the determination of goals and objectives for future and deciding appropriate means for achieving them. The objectives may be of an organization, a department or an individual in it. In an organization, planning is a primary management function and the outcome of planning function is a plan. The plan is a written document that specifies the predetermined courses of action. The effectiveness of a plan pertains to the degree to which it achieves the purpose of objectives. The efficiency of a plan, however, refers to its contribution to purpose and objectives, offset by costs and other factors required to formulate and operate it.

IMPORTANCE OF PLANNING

The purpose of planning is to provide information concerning conditions surrounding a proposed course of action so that element of risk can be known and taken into consideration in making a decision. The element of risk can never be eliminated, but recognition of the degree of risk involved in the proposed plans is necessary. As the knowledge gained is accumulated in the fact-gathering stages of planning, more will be learned of possible meaningful factors affecting a plan, and risks can be dealt with or at least recognized. In this way, at the minimum, the risk can be lessened in planning, since various facts uncovered are taken into account as the plan is formulated. The lack of knowledge of planning, on the other hand, will increase the risk in any plan and may cause its failure. The unsuccessful plan results into failure of a firm.

In an organization, planning is needed at all levels. All managers and supervisors are engaged in planning including determination of objectives, evaluation of internal and external environment, determination of actions and alternative action and budgeting. The specific benefits of planning are:

Execution of managerial functions

The planning logically precedes execution of all managerial functions other than planning, e.g., organizing, staffing, coordinating and leading.

All these managerial functions must be planned if they are to be effective.

Coordination of efforts

Planning is an important technique for achieving coordinated efforts of people in an organization. An effective plan specifies objectives both for the total organization and for each part of the organization. By working toward planned objectives, behavior of each part will contribute to and be compatible with the goals for the total organization.

Offers management development

The future state of the organization can be improved through planning. The planning can move the organization towards 'make things happen' rather than 'let things happen'. The act of planning is also beneficial for managers because it sharpens managers' ability to think, intellectual, etc.

Develops performance standards

An effective plan defines the expected behavior and performance standards of workers in an organization. As plans are implemented throughout an organization, the objectives and course of action assigned to each individual and group are the bases for standards that can be used to assess their actual performance.

Furnishes standards for control

Any attempt to control without plans will be meaningless. Since there is no way to tell whether individuals are achieving their targets (the result of the task of control) unless they first know what goals have been defined for them (part of the task of planning). Plans thus furnish the standards of control.

Provides room for change

An effective plan of action allows room for change in objectives. The longer the time between completion of a plan and accomplishment of an objective, greater is the necessity to include contingency plan. If management has considered the potential effect of the change, it can be better prepared to deal with it.

TYPES OF PLANS

The management planning involves the development of several types of plans in making planning effective. The plans are varied as they encompass any course of future action. The plans can be classified in

various ways. According to time horizon, plans are long-, intermediate- and short-term. In terms of recurring use, the plans are categorized on the basis of how frequently they are used. Under this basis, the plans may be single-use plans or standing plans. The single-use plans are aimed at achieving a specific goal that once reached is most likely not recurred in future, e.g., programs, projects, etc. The standing plans however, provide ongoing guidance for performing recurring activities. Policies and procedures are the major types of standing plans.

The various types of plans, in general are discussed below:

Purposes or Missions

Purpose or mission is the organization's unique purpose and fundamental reason for existence or scope of operation that distinguish one organization from other of its type. A mission indicates unique insight into the organization's value and its future direction. Purposes or missions are the fundamental task of a pharmaceutical enterprise or any part of it. In any social system, enterprises have basic functions assigned to them by society. For example, the purpose of a pharmacy business generally is production and distribution of pharmaceutical goods and services. The purpose of a highway department is the design, building and operation of a system of highways. Interpretation of laws and their application is the purpose of courts. The purpose of a University is teaching and to carryout research, and so on.

The terms purpose or mission are often considered having the same meanings, however, sometimes can be distinguished. For example, the purpose of a pharmaceutical firm may be manufacturing and distribution of drugs through a different mission as 'better health through research'.

Objectives or Goals

Objectives or goals represent not only the end results of planning but also the ends towards which organizing, staffing, leading, and controlling are aimed. Objectives or goals are guides for future actions.

Goal is a broader term, encompassing longer time horizon. Objective, on the other hand, refers to more narrow targets and shorter time frames. An objective of a business might be to make a certain profit by producing pharmaceutical products, while a goal of the manufacturing department might be to produce the required number of products of required quantity and quality at a given cost and within specific time period.

Goals may be of different time horizons. Long-range plans span for time period of 5 years or more depending upon the stability of environment. These plans address long-range issues of the organization. Intermediate-range goals involve period varying from 1-5 years. While 1 year or less is the time span for short-range goals.

Strategies

Strategies are the courses of actions adopted and development of resources necessary to achieve predefined objectives of the enterprise. Simply it is general program of actions for accomplishing the objectives. A strategy might include such major policies as marketing of products directly rather than through distributors, or concentrating on proprietary products only. The strategies furnish a framework for guiding, thinking and action and thus have importance in guiding planning.

Policies

Polices are general guide that specifies the broad parameters within which organization members are expected to operate in pursuit of organizational goals. Normally the policies do not dictate exactly what actions should be taken, however, they provide general boundaries for action and help decide issues before they become problems. These are general statements or understandings which guide or channel thinking in decision-making. Some policies are not statements and are merely implied from manager's actions. However, in this case, a policy must be consistent with and contribute to, objectives of firm.

Policies ordinarily exist on all levels of the organization and range from major company policies, through department policies to minor policies applicable to the smallest segment of the organization. This segment may be any aspect related to manufacturing, research, designing a new product, marketing, personnel or sales and finance. The examples of some policies are: to hire only a certain university-trained pharmacists, to encourage employees' suggestions, to set competitive prices, etc.

Procedures

The prescribed series of related steps taken to accomplish certain objectives are called procedures. Procedures describe the manner or method by which work or future activity will be performed. They are guides to action and not to thinking and detail the exact manner in which certain activities must be accomplished. These are usually written as

procedural manuals. The devising of procedure enhances the job performance of the workers in an organization. The well-established and formalized procedures written in 'Standard Practice' of a firm are the standard operating procedures (SOPs). In a pharmaceutical organization, existence of SOPs for each step in each department is prerequisite of Good Manufacturing Practices (GMP).

Unlike policies, procedures provide detailed step-by-step instructions as to what should be done.

Rules

Rules are general statements of specific actions or non-actions to be taken in a given situation, allowing no discretion or alternative. A rule may or may not be a part of procedure but it is not a procedure since it permits no deviation from a stated course of action and no way interferes with the rest of procedure for handling orders. A rule although serves as guide like policy yet unlike policies it allows no discretion in its application. Rules reflect managerial decisions that certain action must or must not be taken. Examples of some of the rules may be:

- No smoking in any department of firm
- No eating in quality control laboratory or production facility
- Documentation of each material received in raw material department

Programs

Program is combination of goals, policies, procedures, rules, task assignments, steps to be taken, resources to be employed and other elements necessary to carry out a given course of action. A program is a sequence of activity designed to implement policies and accomplish nonrecurring objectives. It gives a step-by-step approach to guide the action(s) necessary to reach a predetermined goal.

Some examples of programs are as follows:

- A five years program for status improvement of workers in an organization
- Program of launching a new line of antihypertensive within two years

Programs may compose of several different projects and may take more than 1 year to complete. Frequently they have their own budgets. A primary program may require many supporting programs, which call for coordination and timings. Since, the failure of any part of a network of

supporting plans means a delay for the major program as well as unnecessary costs and loss of profits.

Projects

The projects are plans that coordinate a set of limited-scope activities that do not need to be divided into several major projects in order to achieve important non-recurring goals. A project may be one in set of related plans in a program. Like programs, projects often have their own budget.

Budgets

Budget is a statement of expected results expressed in numerical terms and may also be called as 'numberized program'. It may be expressed in financial terms, in terms of labor-hours, unit of products, or machine-hours, or in any other numerically measurable term. The budget is the fundamental planning instrument in many companies. A budget forces a company to make in advance - whether for a week or for five years. Owners and managers usually develop a master budget and component budgets. The master budget is an overall financial plan that looks similar to the income statement and balance sheet. The details of the master budget are contained in a series of component budgets.

PROCESS OF PLANNING

The process of planning fundamentally requires setting of goals and devising best means to achieve these established goals. These two steps are also referred to as the basic components or elements of planning. The overall planning process include:

Goal setting

The goal setting involves diagnosis of opportunities, establishing goals and developing premises.

Diagnosis (analysis) of available opportunities

Prior to goal setting, the real starting point for planning is the awareness of available opportunities in the organization's external as well as internal environments. One of the necessary components of diagnosis is taking of a preliminary look at possible future opportunities clearly and completely in light of firm's strengths and weaknesses. Understanding problem to be solved, and to know what is to be expected to gain are the other ingredients in diagnosis. Setting realistic objectives, a next step in planning

depends on such awareness. Planning requires a realistic diagnosis of the opportunity situation with respect to the a) market, b) competition, c) want of customer, d) firm's strengths and e) its weaknesses.

Establishing goals

Establishing goals, a core step in planning is to establish goals and objectives for the entire enterprise and then for each subordinate work unit. This is to be done for short- and long- term ranges. Objectives specify the expected results and indicate the end points of selected activities, points for placing primary emphasis, and the accomplishments achieved by network of strategies, policies, procedures, rules, budgets, and programs.

Enterprise's objectives give direction to the major plans, which, by reflecting these objectives, define the objective of every major department. Major department objectives, in turn, control objectives of sub-departments or their sections, and so on down the line. The objectives of the sub-departments will be more accurate if their managers understand the overall enterprise objectives and the derivative goals. Managers should also have the opportunity to contribute their ideas for setting their own goals and those of the enterprise. Management by objective (Chapter 1) demands the setting of objectives for individuals as well.

Developing premises

The third logical step in planning is to establish, circulate, and obtain agreement to utilize critical planning premises such as forecast, applicable basic policies, and existing company plans. The forecasting is making assumption about the future environment of a plan. It is important for all managers involved in planning to agree on the premises. The future forecasting is important in premising in terms of the following:

- a. Kind of market?
- b. Volume of sales?
- c. Prices?
- d. Type of products?
- e. Technical developments?
- f. Wages rates?
- g. Tax rates and policies?
- h. Type of new plans?
- i. Political or social environment?

- j. Ways of financing the future expansion?
- i. Long-term trends?

Because the future is so complex, it would not be profitable or realistic to make assumptions about every detail of the future environment in a plan. Therefore, practically, premises are limited to the assumptions critical or strategic to a plan, that is, those that most influence its operation.

Procedure outlining

Outlining of the procedure for achieving objectives is the next step that includes determination of alternative course of action, evaluating alternate courses of action, and selecting the best amongst them.

Determining alternate courses

The next step in planning is to search for and examine possible courses of action, especially those not immediately apparent. There is rarely a plan for which reasonable alternatives do not exist, and quite often an alternative that is not obvious proves to be the best. Usually, large number of alternatives exists for a plan. However, even with the help of mathematical techniques and computer, there is a limit to the number of alternatives that can be thoroughly examined. The planner must usually make a preliminary examination to discover the most fruitful possibility.

Evaluating alternate courses

After the determination of available alternative courses, each alternative is evaluated for its feasibility and profitability. Under this evaluation, the alternate courses are judged that which alternative will give the best chance of meeting the predetermined goals at the lowest cost. After seeking out alternative courses and examining their strong and weak points, the next step is to evaluate the alternatives by weighing them in the light of premises and goals. One course may appear to be the most profitable but may be much expensive and have a slow payback. Another may look less profitable but may involve less risk. Still another course may better suit the company's long-range objectives.

As mentioned before, there are many alternative courses in most of the situations. This coupled with number of variables and limitations to be considered makes evaluation of alternate courses exceedingly difficult. Because of these complexities, the newer methodologies and applications of operations research and mathematical as well as computing techniques have their primary applications to the field of management.

Selecting a course

This is the point of decision making at which the plan is adopted. Occasionally, an analysis and evaluation of alternative courses will disclose that two or more course of actions are advisable. The manager may decide to follow several courses rather than the one best course to accomplish certain objective.

Monitoring progress

The selected course of action, after its implementation, is monitored for its success. This appraisal of course of action is continuous and will indicate the need for formulation of supportive plans or some modification in the existing ones.

Formulating derivative plans

When a decision is made, planning is seldom complete, and formulation of derivative plans is indicated. Derivative plans are almost invariably required to support the basic plan.

Numbering plans by budget

After decisions are made and plans are set, the final step is to number them by converting them into budgets. The overall budgets of an enterprise represents the sum total of income and expenses, with resultant profit and surplus, and the budgets of major balance sheet items such as cash and capital expenditures. Each department or program can have its own budgets, usually of expenses and capital expenditures, which tie into the overall budget.

If a pharmacy is not doing well from a management viewpoint, frequently the reason is found in a failure to implement at least one of the steps in planning. The hospital pharmacist, for instance, must recognize technological developments and cost reduction in unit dose systems and begin planning to employ new drug control systems where practical. The drug wholesaler must anticipate a labor strike in a large market, which may necessitate planning for a lower level of buying activity for its own.

The planning should, and indeed must, take into account external forces that may affect the outcome. These forces should be readily identifiable as part of planning, and in planning, provision must be made for assessment of progress toward the accomplishment of desired objectives.

ORGANIZING

Organizing is the next management function after planning. It implies an intentional structure of roles and positions of personnel in an organization for achieving coordinated functioning. The activities of all personnel in an organization must be coordinated so that they can work effectively and smoothly in groups in an organized way to meet the organizational objectives. To accomplish co-ordination, an organization is divided into small sections or units. In every section, the personnel roles are specified, responsibilities are assigned to workers and authority to one individual is delegated.

STRUCTURING AN ORGANIZATION

The purpose of organization process is to achieve coordinated effort through a structure of roles and authority relationships. Thus, the anatomy of organization provides foundation within which an organization functions. Designing of an organization involves the following:

Establishing objectives

The organization's overall objectives are predetermined during planning process. These objectives are classified as short-, mid- and long- term objectives. The activities, procedures, personnel and equipments required depend on the objectives of the organization. Establishing objectives has been mentioned earlier in Chapter 3.

Identification of activities

All necessary activities necessary to accomplish predetermined objectives must be identified. Identification of all activities and means to accomplish them is necessary for achieving objectives. The identified activities and tasks define the jobs of individuals and the organizational units. The specification of tasks and activities associated with a particular job is called job designing. The way the jobs are configured, or designed influences the employee's motivation to perform well.

Clustering of activities - departmentalization

Efficient and smooth working cost effectively requires grouping and arranging of allied activities into units to facilitate the accomplishment of objectives. The number of groups, branches, or divisions in an organization depends on the diversity of services and availability of the personnel and other resources. The identified activities may be more than the divisions or sections in an organization due to the cost consideration. Usually, the activities with more or less same nature are merged with each other. Departmentalization will further be elaborated in the proceeding sections.

Delegation of authority

Each group of activities is assigned to a head or manager with sufficient authority necessary to supervise it. Authority is a power to make decisions and is a motive force that a head uses to make subordinate act in the manner directed. The manager of a division will manage to carryout all the division's activities. After delegation of authority, a head assigns the responsibilities to the subordinates to undertake necessary assigned activities to the best of their abilities.

Provision for coordination

Provision of coordination is tying the groups together horizontally and vertically, through authority relationships and information flows. Coordination is achieving harmony among individual efforts or activities of sub-units of a department towards the accomplishment of group goals. Coordination is attained by settling the differences in personnel approach, timing, effort, or interest and by harmonization of goals to contribute to organizational goals. Coordination can be achieved by leading and communication.

The relationship between structuring and other management function has been shown in Figure 1.

STRUCTURE OF ORGANIZATION

Organization structure, also called organogram is a formal pattern of interactions and coordination designed by management to link the tasks of individuals and groups in achieving organization goals. Organizational structure can be considered as anatomy or framework of the organization. Organogram is usually represented by organization chart as illustrated in Figure 2.

An organization chart is a line diagram that outlines organization's structure, grouping of position into specific units, reporting relationships from lower level and channel of communicating information. Structure representation provides visual map of the chain of command or hierarchy. The chain of command is the line of authority that links each employee with the top organizational position through a managerial position at each successive layer between. Organogram, thus helps workers identify their supervisors and trace the line of authority through the organization all the way to the top positions. Organization may have either a formal or informal structure.

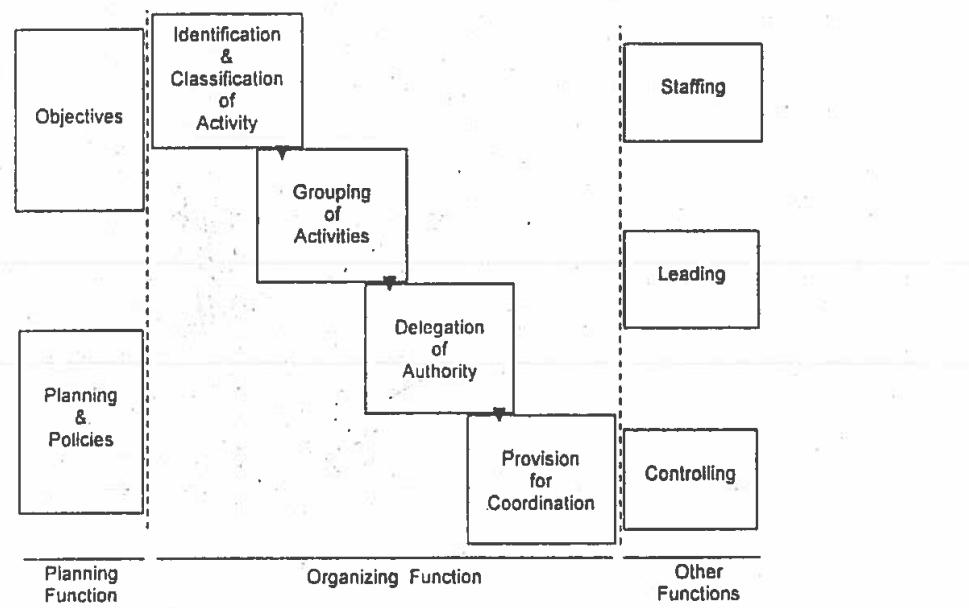


Figure 1: Structuring an organization and its relationship with other organizational functions

Formal structure

The word 'formal' reflects 'designed by management' or official. In this context, in formal structure, policies, rules, procedures, job descriptions and other documents specify what actions are to be taken under a given set of circumstances. Formal organizations clearly specify jobs for its every member and worker and thus, are durable and planned. They are

relatively inflexible because of their emphasis on order.

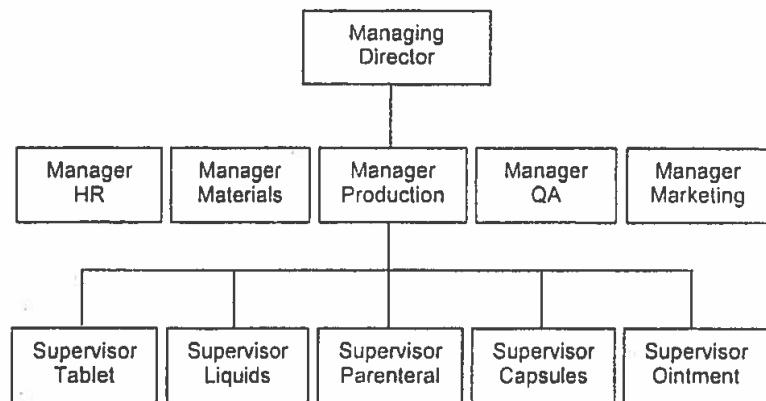


Figure 2: Organogram for a manufacturing unit. For simplicity, line of authority of Production department only has been illustrated. This can be further extended down to the pharmacist and worker level. (HR = Human Resource; QA = quality assurance)

Informal structure

A network of personal relations is not required or established in the informal organization. In such structure, network of personal relations arises spontaneously as people associate with one another. The informal organizations are loosely organized, flexible, ill defined and spontaneous. These organizations can be converted into formal ones when the relationships and activities are defined and structured.

DEPARTMENTALIZATION

Departmentalization, one aspect of organizing is the establishment of various units or departments based on allied activities as mentioned before. The word department designates a distinct area, division or branch in organization over which a manager has authority for the performance of specified activities.

A department, as the term generally used, may be the production department, quality control department, purchase department, accounts department, sales department or materials department. The four most common types of departmentalization are functional, product, territorial, hybrid and matrix.

Functional departmentalization

The functional departmentalization is the grouping of activities in accordance with the functions of an organization. Function as the basis for departmentalization is one of the widely used approaches in almost every pharmaceutical organization. The departmentalization based on function is logical and time-tested.

A pharmaceutical organization undertakes the creation of products or delivery of pharmaceutical services and thus, various basic functions can be identified as departments. The production department combines activities directly related to the manufacturing of pharmaceutical products or delivering of pharmaceutical services. Marketing is concerned with the promotion and sales of the products and services. Human resources department is responsible for hiring and retaining of organizational members and enhancing their efficiency. Finance is responsible for collecting, safeguarding and managing the financial resources. Accounts department handles delivery of pays to the employees, financial reporting and meeting the need of external sources.

Product departmentalization

A structure in which grouping of activities in an organization is based on the similarity of products, services or markets. Product division is grouping of activities on the basis of a single product or product line or at least a relatively homogeneous set of products. The departments based on the products have their own functional specialists who perform work associated with the products of their specific divisions. In this arrangement, each division contains the major functional resources it needs to pursue its own goals with little or no reliance on other divisions. Since each division works as separate companies, divisional structures are sometimes referred to as self-contained structures.

Various pharmaceutical firms group their activities as sections for groups of products such as antibiotics, antihypertensives, etc. Other basis for grouping of activities may be the types of dosage forms such as liquid, semisolid or solid dosage sections. Such type of division is usually evident at the manufacturing level in pharmaceutical firms. However, this could but fall under the product departmentalization, since the major resources are not independent for each product line. The organizations adopting such structure have large difference in their product lines. The large difference in the product lines makes coordination difficult within a functional departmentalization.

Territorial departmentalization

Territorial departmentalization or departmentalization by geography or territory is evident in marketing to serve different geographic areas. The activities of the marketing department are physically or geographically dispersed though, with the similar products. A manager is made responsible for each territory, that is, responsible for the market of pharmaceuticals in his region.

Hybrid departmentalization

Hybrid departmentalization based on combining of functional and product departmentalization in the same organization structure. It attempts to incorporate advantages of both structures.

VERTICAL COORDINATION

Vertical coordination is the linking of activities at the top of the organization with those at the middle and lower levels in order to achieve organizational goals. Following are the various approaches used for the vertical coordination.

Formalization

Formalization is the degree to which written policies, rules, procedures, and job descriptions specify what actions are to be taken under a given set of circumstances. Policies provide general guidelines with which members of organization are expected to operate and procedures spell out actions to be taken under certain recurring situations. Rules specify what should or should not be done in a given circumstances and the job description details the activities associated with particular jobs. Thus, formalization specifies the expected behaviors of workers in advance and is one of the common methods of achieving vertical coordination.

Span of management

Span of management or span of control is the number of subordinates a manager can supervise effectively. The number of subordinates who are directly accountable to a manager must be reasonable so that he can effectively interact, supervise and coordinate them. Organizational levels exist because there is a limit to the number of persons a manager can supervise effectively, even though this limit varies depending on situations. This implies that span of management influences the number of hierarchical levels in an organization. Large number of hierarchical or management levels is a tall structure and has a narrow span of control. A

flat structure, on the other hand has a few hierarchical or management levels and wide spans of control. A tall organization raises administrative overhead due to having more managers to be paid, slow communication and decision-making and encourage the formation of routine jobs. Both of the above organization structures have been illustrated in Figure 3 and 4.

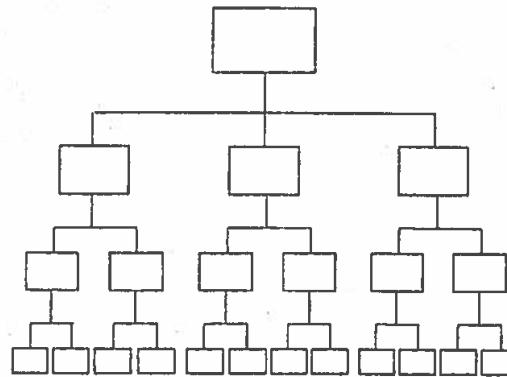


Figure 3: Organization with tall structure and narrow span

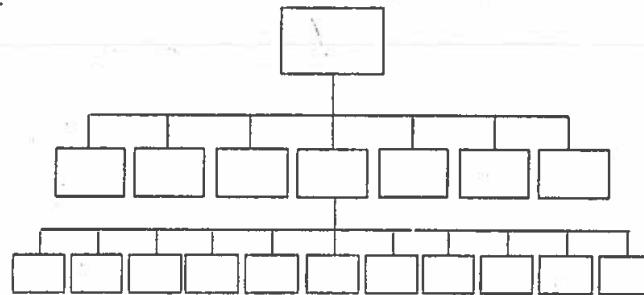


Figure 4: Organization with flat structure and wide spans

Centralization-decentralization

Centralization refers to the degree of retention of decision-making authority at the top organizational levels. In centralized organization, all decisions are made by one individual, the top manager. Contrary to the centralization, decentralization is the extent of the distribution of decision-making authority throughout the organization. Here, all the

decisions are made collaboratively by all members of the organization. Organizations stay between these two extremes. These are more or less centralized but never absolutely centralized or decentralized. Varying blend of centralization and decentralization can be used for vertical coordination since both approaches have their own merits.

Centralization has several merits. It coordinates effectively the activities of organizational units by reducing the duplication of efforts and resources of different units. Better decision-making as the top managers have broader experience and knowledge. Additionally centralization promotes strong leadership in an organization because much of the power remains at the top level.

Decentralization also has number of advantages. Encouraging decision-making at lower level promotes generation of productive ideas, ease the heavy workloads of executives and motivates the workers. The workers are closer to the problem and thus may make good decision.

Delegation

Delegation is the assignment of part of a manager's tasks to other, along the authority necessary to achieve expected results. Delegation is another means of vertical coordination. It is closely related to the centralization-decentralization. However, delegation is done with decentralized structure than with a centralized one. Since delegation enables work to be done at the lowest level possible, it allows the hierarchy to more efficient. Furthermore, delegation of authority facilitates training of subordinates so as they can fill the future managerial positions. The other advantage of delegation is that it encourages managers to develop their decision-making ability and motivates to contribute in a competitive environment.

Line and staff position

Configuration of line and staff positions is another approach used for vertical coordination. A line position has authority and responsibility for achieving the major goals of the organization. A staff position primarily provides specialized expertise and assistance to the line position. Relationship between the line and staff positions in an organization must necessarily affect the operation of the enterprise.

STAFFING – HUMAN RESOURCE MANAGEMENT

Staffing is one of the activities in the human resource management (HRM). The HRM is hiring the people, their retention and enhancing their effectiveness in achieving organization's goals. Planning, identifying workforce requirements and recruiting, placing, promoting, appraising, and compensating are the activities of HRM department. Its other significant activities include the employee training or developing jobholders so that tasks are accomplished effectively and efficiently. Filling of organizational roles demands special knowledge and approaches for selection, appraisal, career planning and manager development. In some organizations the staffing is delegated to the managers as well. However, in such a case, HRM department provides valuable assistance.

PROCESS OF HUMAN RESOURCE MANAGEMENT

As indicated in Figure 1 below, various elements of human resource management include job analysis, human resource planning, staffing, development and evaluation and compensation.

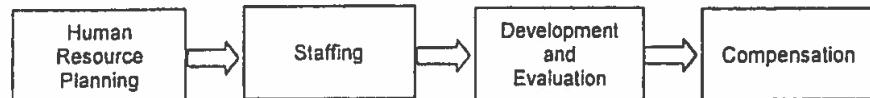


Figure 1: Elements of human resource management.

Job analysis

Job analysis is the collection of information concerning the purpose of a specific job, its major duties, conditions of its performance, and the knowledge, skills and abilities needed to perform it effectively. Job analysis helps in developing the job descriptions. Job description is a statement of the duties, working conditions and other significant requirements associated with a particular job. The job description is strongly related with the job specification. The job specification is a statement of the education, previous work experience, skills and abilities

required to perform a particular job. Both of these help for complete understandings regarding job and the qualifications required for it.

Determination of personnel required

In a pharmaceutical firm producing pharmaceutical products or offering services, a variety of personnel are required. These include technical, professional, skilled and unskilled staff. Employing sufficient number of personnel, matching with organization's workload is required for efficient working cost effectively. The number of personnel required is based on scope and range of products produced, workload, spectrum of duties that can be assigned to individual and the degree of automation.

Staffing

Staffing is combined activities targeted to attract and select individuals for positions to achieve organizational goals: Recruitment and selection are the two activities of staffing.

Recruitment

Recruitment is a process of finding and attempting to attract potential job candidates capable of effectively filling job vacancies. Recruitment does not mean just to acquire a pair of hands but for recruiting, job descriptions and job specifications are critical. A variety of sources exists for acquiring personnel. The personnel for vacant positions can be attracted by an advertisement in National press. In this way, external candidates are attracted and encouraged to apply for jobs lying vacant in an organization. This is called external recruitment.

In internal recruitment, called job posting is a practice of notifying the vacant posts at the organization notice board. Some organizations offer individuals on internship training to fill the vacant position, obviously after recognition of one's hardworking, training and capabilities. Both, the external and internal recruitments have merits and demerits mentioned in Table 1.

Selection

Selection is the process of determining which job candidate best suit organizational needs. This selection is based on the evidence of the required competency and proof of moral character. For the selection purpose, usually a 'job application form' is so designed that all the vital information of employee can be obtained. This vital information includes

personal history, education, previous jobs, skills, etc. All of the above information is matched with the position that the applicant seeks. This information is also helpful as an evidence of the reasons for selection of an employee.

Recruitment	Merits	Demerits
Internal	<ul style="list-style-type: none">• Candidate's already orientation of organization• Availability of reliable information about candidate• Lower recruitment cost• Upward-mobility opportunity incite motivation in workers	<ul style="list-style-type: none">• May be with less innovation• Selection with more susceptibility to office politics.• Need of extensive training• Disruption of the candidate's current work• Disappointment of unsuccessful contenders
External	<ul style="list-style-type: none">• New candidate with innovative ideas• Broader experience• Familiarity with competitors• Potential for new specialties	<ul style="list-style-type: none">• Less reliable information about candidate – chances of mistakes• Disappointment in internal candidates• Need of orientation to the organization• Costly

Table 1: Merits and demerits of internal and external Recruitment.

Selection interview, employment test and simulation exercise are the major selection methods. Interview is an in-depth conversation conducted for the purpose of assessing a candidate's knowledge and capabilities. Some organizations assess the job applicant's characteristics through paper-and-pencil responses in employment test. Simulation exercise is another way for assessing the candidate's ability. Under this, employee is offered to participate in an artificial but job-similar work or activity and the candidate is asked for role-playing. Asking a candidate for detailing simulating the environment as doctor's office is the example of this selection method. This method is adopted in selection of medical representatives.

DEVELOPMENT AND APPRAISAL

The individuals after selection become the members of an organization. The interests of organization as well as that of the individual go parallel for enhancing individual knowledge, skills and abilities. A selected individual wants to enhance his professional capabilities to perform well besides to increase his worth and value. The organization, intends to enhance the effectiveness of organization members. To achieve the purpose, organizations have various development programs. Training and

development is a planned effort to facilitate employees' learning of job-related behaviors to improve their performance. This performance may be strictly current job-related or related to the job to be done in future. Pharmacists selected for pharmaceutical marketing are compulsorily trained for their jobs. Training in production department is not that frequent as practices in marketing department. However, training can enhance the performance of the production people as well.

Types of training programs

Various types of training program are orientation training, skill training, and on-the-job training. The orientation training is usually a formal program designed to provide new employees with the information about an organization and their jobs. Skill training is oriented toward providing specialized knowledge and developing facility in the use of method, processes and techniques associated with a particular discipline. Under this sort of training, the employees learn various aspects of their jobs. On-the-job training is learning simultaneously during performing the job. This is very cost effective training.

APPRAISING

Appraising is the process of expectations for employee's performance, measuring, evaluation and recording the employee's performance relative to those expectations. Provision of feedback is also included in appraising. Evaluation of the performance of an individual is critical for management. This process is used for a variety of other management activities including determining merit pay increase, planning for true performance goals, determining training needs and observation of the promotional potential of the employees. This has been discussed in detail in controlling (Chapter 7). Performance evaluation is a joint task of personnel department and that of the immediate manager of an individual. Periodical evaluation of a worker can establish the need for training of that individual in particular aspect.

COMPENSATION

Compensation refers to the direct return or reward in cashable forms given to an individual per month for time worked. The direct returns are wages and payments paid as remuneration for time spent on working (called time worked). These consist of a base pay, merit increase, bonuses, etc. Compensation consists also some indirect benefits that the employees receive as a part of their employment relationship with an organization.

These benefits are in the forms of compensation beyond wages for time worked and include workers welfare plans, services and income supplements, etc.

The compensation is set usually according to a pre-established pay structure implemented in the organization. Personnel with strong capabilities or rare specialty are in a position to demand their own compensation.

RETAINING EFFECTIVE WORKFORCE

Retaining the workers with an organization though the activity of HRM, yet it is a collaborative responsibility of the human resource department, administration and management. Employees with learning, experience, and acquiring skills become more valuable. Other organizations are willing to hire such individuals or the individuals themselves want to earn more by joining some other organizations. Quitting one organization to join another for earning more is called turnover. The turnover of skilled workers is harmful for an organization in various ways. Disruption temporarily, of the work and difficulty of hiring the worker of same level are the common problems. New employee need time to gain the same level of skills. Sometimes excessive training is needed for new entrant.

Workers' turnovers can be reduced by skill-matched compensation and good employees-management relations. Management should make timely and appropriate responses to the issues affective employees. Furthermore, management should also help employees to effectively handle their usual conflicting responsibilities of work and family.

LEADING

Leading involves influencing the work behavior of workers towards achieving organizational goals. The people can be influenced by utilizing several motivational approaches that focus on individual needs. Motivation and leadership are two approaches used for influencing the people.

MOTIVATION

Motivation is the set of forces that causes people to behave, with tendency to persist in a favorable manner to achieve a goal or reward. The psychology of learning indicates that a desired behavior such as high quality workmanship, good attendance, and loyalty can be induced in workers by reward and the way they are administered. Motivation is immeasurable, since it is an internal force. However, the behavior of an individual is a gauge for his motivation. Employees' performance is the function of one's ability to work, degree of motivation (desire to do job) and the working conditions like tools, materials and information needed for the job.

The motivation process begins with a desire to fulfill needs, which reflects a deficiency within the individual. The needs can be classified into various types and there is a definite rank order of human needs. This has been mentioned in the forthcoming section. The provoking of needs leads to actuation of a chain of events. The individual wants a specific action, gets tense, initiate action and either gets satisfied or unsatisfied. Unsatisfaction then again starts the sequence as mentioned in Figure 1.

In an organization, a worker also has needs. The management searches for ways to satisfy these needs in such a way that the behavior of the workers can be modified to facilitate achieving the organizational goals. The need satisfaction of the workers is evaluated and the workers' future needs are determined which the workers strive as the next needs after meeting a previous need. Then the firm searches for the ways to satisfy the new needs. This is known as the motivation framework and has been

mentioned in the Figure 2.

HISTORICAL APPROACHES FOR MOTIVATION

It is important to review earlier approaches for employee motivation. In general, motivation theory has evolved through three different eras:

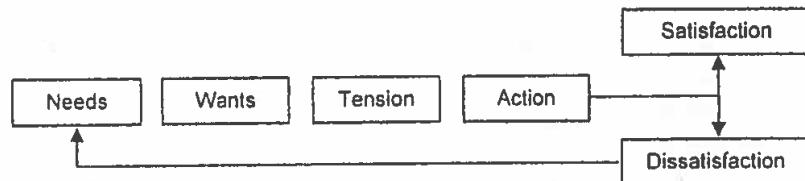


Figure 1: the motivation process

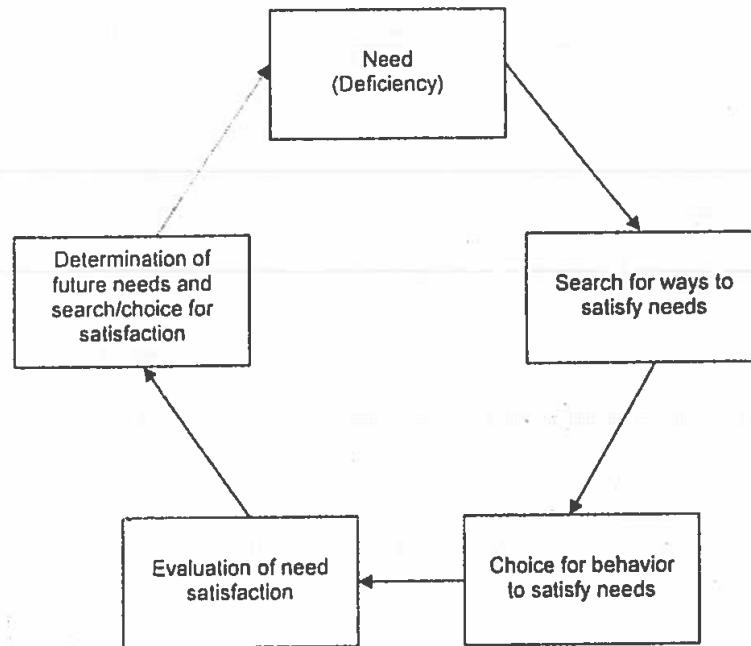


Figure 2: Motivation Framework

Traditional Approach

Under the traditional approach for employee motivation, it is assumed

that management knows more about the jobs being performed than the workers doing them. It further considers that the work is inherently unpleasant for most people and that the money they earn is more important for them than the nature of the job they are performing. It means, according to this approach, people could be expected to perform any kind of job if they are paid enough.

Although the role of money as a motivating factor cannot be detached, yet proposals of the traditional approach takes too narrow a view of the role of monetary compensation and also failed to consider other motivational factors.

Human Relations Approach

For employee motivation, the human relationists emphasize role of social processes in the workplace. Their basic assumptions point that the employees want to feel useful, important and to belong to a social group. These needs are more important than money in motivating employees. For example, a manager might allow a workgroup to participate in making a decision, even though the decision had already been determined. This symbolic gesture of appearing to allow participation is expected to enhance motivation, even though no real participation takes place. However, enhancement of motivation with false impression of contribution and participation has been objected and overruled.

Human Resource Approach

The human resource approach for employee motivation carries the concepts of human needs and motivation one step more distant. The human relationists believe that the false impression of contribution and participation could enhance motivation. The human resource view assumes that the contributors themselves are valuable to both individuals and organizations. It assumes that people want to contribute and are able to make genuine contributions. Management's task, then, is to encourage participation and to create a work environment that makes full use of the human resources available.

MOTIVATIONAL THEORIES

Motivation is a complex phenomenon for which several theories attempt to make it understandable. These theories, known as motivational theories address various elements in the process of motivation. Several motivational theories include need, cognitive and reinforce theories as

mentioned below:

Need theories

The need theories argue that people behave because they have internal needs that they attempt to fulfill. These theories are also called content theories or content perspectives on motivation because they focus on "what factors" motivate people. Various need theories are as mentioned below:

Hierarchy of Needs Theory

The concept of need hierarchy, a version most popular in management field was developed by Abraham Maslow. According to this theory, people are motivated to satisfy various needs and that these needs can be arranged in a hierarchy of importance. There is a rank-order priority of needs and once a basic want is met the people strive for the next need in order. Maslow's hierarchy of needs suggests that people must satisfy five groups of needs in order. These are physiological, security, belongings, esteem and self-actualization.

Physiological needs: The physiological needs are also called primary, basic or innate needs and are for sustaining human life itself and include food, water, clothing, shelter, sleep and other physiological satisfaction. These needs are inborn and not conditioned by experience. In organizational settings, adequate wages and the work environment itself, which provides rest rooms, adequate lighting, comfortable temperatures, and ventilation, generally satisfy physiological needs.

Security needs: Social needs are included in acquired or secondary needs. Security needs is feeling of free from physical danger or sufferings and the fear of loss of a job, health, property, food, clothing, or shelter. This need, like all other secondary needs dependents on experience and is learned. Security need is physiological in context and is related to innate physiological need for self-preservation.

Belongings needs: The belonging needs, like social needs are related to social processes and include the need for love and affection. These needs are satisfied for most people by a combination of family and community relationships outside of workplace. A manager can help satisfaction of these needs by allowing social interaction and by making employees feel like part of a team or of work group.

Esteem needs: These are egoistic needs under social needs and primarily concerned with individual's view of conception of self. The egoistic needs are also personal derives and are called higher needs. These comprise of two different sets of needs; need for a positive self-image and self-respect and the need for recognition and respect from others. This kind of need produces such satisfactions as power, prestige, status, and self-confidence. A manager can help the satisfaction of esteem needs by giving job titles, spacious offices, and similar rewards as appropriate.

Self-actualization needs: Self-actualization needs include self-realization and self-accomplishment. Like esteem needs, these needs involve realizing of one's potential for continued growth and individual development. The self-actualization needs are perhaps the most difficult for a manager to get accomplished. It is the desire that one is capable of becoming to maximize potentials and to accomplish something.

Many managers have accepted Maslow's concept of the need hierarchy. But research has revealed certain shortcomings and defects in the theory. Some research has found that five levels of need are not always present and that the order of the levels is not always the same as postulated by Maslow.

In response of such criticism, Clayton Alderfer proposed an alternative hierarchy of needs theory.

ERG theory of motivation

The ERG theory suggests that the people's needs are grouped into three possibly overlapping need categories viz., existence, relatedness, and growth. The existence needs correspond to the physiological and security needs of individuals. The relatedness needs focus on the way people are related to their social environment. The growth needs, on the other hand, include the needs for self-esteem and self-actualization.

The ERG theory, further suggests that if needs remain unsatisfied at this higher level, the individual become frustrated, regress to the lower level, and begins to pursue those things again. For example, a worker previously motivated by money (existence needs) may have just awarded a pay raise sufficient to satisfy those needs. He or she subsequently can attempt to establish more friendships to satisfy relatedness needs. If for some reasons, the employee finds that it is not possible to develop better friendship with others in workplace, the employee eventually gets

frustrated and regresses to being motivated to earn just more money.

Although the ERG theory assumes that motivated behavior follows a hierarchy somewhat in the same fashion as suggested by Maslow, there are two important differences. Firstly, the ERG theory suggests that more than one level of need can cause motivation at the same time. For example, it allows for the possibility that people can be motivated by a desire for money (existence), friendship (relatedness), and the opportunity to learn new skills (growth) all at once. Secondly, the ERG theory incorporates frustration-regression element. Maslow maintained that one need must be satisfied before an individual can progress to a higher need level (from security to belongings, for instance). The individual, then is, motivated by higher-level needs until they are satisfied.

Two Factors Theory

Frederick Herzberg developed the two factors theory, which is also called motivation-hygiene theory. It suggests that individual's satisfaction and dissatisfaction are influenced by two independent sets of factors, i.e., motivation factors and hygiene factors. The motivation factors influence satisfaction and are related specially to the work content. The factors presumed to cause dissatisfaction are called hygiene or maintenance factors and are related to work environment.

In this theory, entirely different sets of factors are reported to be associated with satisfaction and with dissatisfaction. An individual might identify "low pay" as causing dissatisfaction but would not necessarily mention "high pay" as a cause of satisfaction. Instead, different factors such as recognition or accomplishment have been cited as causing satisfaction. Table 1 given below lists two sets of factors identified by Herzberg which may cause either satisfaction or dissatisfaction.

Herzberg argued that there are two stages in the process of motivating employees. In first stage, all the dissatisfaction parameters are eliminated and in the second stage, the satisfaction parameters are promoted. According to Herzberg, these two stages can be accomplished by ensuring that the hygiene factors are not deficient and giving of employees the opportunity to experience motivation factors.

1. Ensuring that the hygiene factors are not deficient: Pay and security must be appropriate, working conditions must be safe, technical supervision must be acceptable, and so on. By providing hygiene factors at an appropriate level, the manager does not stimulate

- motivation but merely ensures that employees are “not dissatisfied”.
2. Giving employees the opportunity to experience motivation factors:
The employees must be exposed to the motivation factors including achievement and recognition. The result is predicted to be a high level of satisfaction and motivation.

Motivation Factors	Hygiene Factors
Achievement	Supervisors
Recognition	Working conditions
The work itself	Interpersonal relationships
Responsibility	Pay and Security
Advancement and growth	Company policy and administration

Table 1: Two sets of factors affecting satisfaction or dissatisfaction

Acquired needs theory

The need hierarchy and the two factor theories of motivation identify a number of individual needs and then attempt to arrange them in some kind of order of importance. In other content view of motivation, proposed by McClelland has focused more on the important needs themselves without being concerned about ordering them. The three needs most often discussed are the needs for achievements, affiliation and power.

Need for Achievements: The need for achievements is the desire to accomplish a goal or task more effectively than in the past. People with a high need for achievements are expected to have a desire to assume personal responsibility, a tendency to set moderately difficult goal, a need for specific and immediate feedback, and pre-occupation with their task. David C. McClelland, the psychologist who first identified this need, argues that this need is assumed to be important for managerial success. Studies have found that achievement training can induce this need and the people who complete this training can make more money and receive promotions faster than other managers.

Need for Affiliation: The need for affiliation is the desire for human companionship and acceptance. People with a strong need for affiliation are likely to prefer (and perform better in) a job that entails a lot of social interaction and offers opportunities to make friends.

Need for Power: The need for power is the desire to be influential in a

group and to control one's environment. Research has shown that people with a strong need for power are likely to be superior performers, have good attendance records, and occupy supervisory positions. The successful managers as a group tend to have stronger power motives than less successful managers.

Cognitive theories of motivation

The cognitive theories are also called as process theories or process perspectives on motivations and concerned with how motivation occurs in people. Process perspectives are approaches to motivation on focus why people choose certain behavioral options to fulfill their needs and how they elevate their satisfaction after they have attained these goals. The most important process perspectives on motivation are expectancy theory, equity theory and attribution theory.

Expectancy theory

Expectancy theory suggests that motivation depends on the degree of individual wants for something and expectancy to get it. Under this theory, the motivation depends on the expectation of the individual. The expectancy theory argues that an individual considers following three issues before he expends the efforts necessary to perform at a given level:

Effort-to-performance expectancy: Effort-to-performance ($E \rightarrow P$) expectancy is the individual's perception of the probability that one's effort will lead to the required performance level. This assessment may include evaluation of one's own ability, as well as considering the adequacy of contextual factors such as the availability of resources. If a person feels that he is well qualified for a project and that the available resources are adequate, his $E \rightarrow P$ expectancy would be high.

Performance-to-outcome expectancy: Performance-to-outcome ($E \rightarrow O$) expectancy is the individual's perception that his performance will lead to a specific outcome. These outcomes are in terms of some rewards such as bonus, promotion, or good feelings of accomplishment.

Valance: With valance component, an individual assesses the anticipated value of various outcomes. Expectancy theory recognizes that an individual may experience a variety of outcomes, or rewards in an organizational setting. A high performer, e.g., may get bigger pay raises, faster promotions, and more praise from the supervisor. On the other hand, one may also be subjected to more stress and induce displeasure

from co-workers. Each of these outcomes has an associated value or valence. An index of how much an individual desires a particular outcome is the attractiveness of the outcome to the individual.

The expectancy theory can be elaborated by an example of a fresh pharmacist looking for job. The pharmacist will not apply for a position in research and development with a starting salary of 50,000 Rupees per month, even though he wants a job because he realizes that there is a little chance of getting it.

The next advertisement he sees a job of secretary with a starting salary of 2,000 rupees per month. Even though the pharmacist realizes that he could probably get the job, will not apply because he does not want it. However, he will apply for a job of a production pharmacist with a starting salary of 8,000 rupees because he expects reasonable chances of getting it.

The basic expectancy model of employee motivation leads to effort and that effort, when combined with employee's ability and environmental factors, results in performance. Performance, in turn, leads to various outcomes, each of which has an associated value called its valence.

Satisfaction-performance theory

An interesting extension of expectancy theory has been proposed by Porter and Lawler, which suggests that there may indeed be a relationship between satisfaction and performance. High performance may lead to high satisfaction. Performance results in various rewards for an individual. The rewards may be extrinsic or intrinsic. The pay and promotions are the examples of extrinsic rewards while some of the intrinsic rewards are self-esteem and a feeling of accomplishment.

Equity theory

Equity theory suggests that people are motivated to seek social equity in the rewards they receive for performance. Others can define equity as an individual's belief that the treatment one is receiving is fair relative to the treatment received by others.

According to equity theory, outcomes from a job include pay, recognition, promotions, social relationships, and intrinsic rewards. To get these rewards, the individual makes inputs to the job, such as time, experience, effort, education and loyalty. The theory suggests that people view their outcomes and inputs as a ratios and then compare it to the ratio of

someone else. The comparison process looks like this:

$$\frac{\text{Outcomes}(self)}{\text{Inputs}(self)} = \frac{\text{Outcomes}(other)}{\text{Inputs}(other)}$$

When individual compare rewards of other in own or other organization, they may feel it equity or inequity. The inequity may provoke dissatisfaction.

Attribution theory

Attribution theory suggests that individuals observe behavior, including their own, and then attribute cause and meaning to it. Attribution theory also suggests that individuals can alter their perceptions and thus can be motivated by evoking them with certain factors. Managers need to be aware of these effects because they may lead to unexpected and even unwanted change.

Reinforcement theory

The reinforcement theories try to explain the workers' behavior due to consequences in the environment. This theory is based on the Law of Effect according to which the behaviors having pleasant or positive consequences are more likely to be repeated and that behaviors having unpleasant or negative consequences are less likely to be repeated. In behavior modification, four types of reinforcements are available to help managers influence behavior including positive reinforcement, negative reinforcement extinction and punishment.

Positive reinforcement

A technique, aimed at increasing a desired behavior, which involves providing a pleasant, and rewarding consequence to encourage that behavior. Praise, pay raise, etc., are the pleasant rewards which an individual receives. Such positive rewards lead to repetition of the desired behaviors.

Negative reinforcement

Negative reinforcement involves provision of unpleasant stimuli so that an employee demonstrates a desired behavior in order to stop the disagreeable stimuli. Like positive reinforcement, negative reinforcement focuses on increasing a desired behavior, but it operates in a different way.

The negative reinforcement may make the individual feel negatively towards the manager providing such reinforcement. This situation may switch the worker to a low performer.

Extinction

Extinction is a technique that involves withholding previously available positive consequences associated with a behavior in order to decrease that behavior.

Punishment

Punishment is a technique that involves providing negative consequences in order to decrease or discourage a behavior. Examples are criticizing the unwanted behavior, suspending an individual without pay, etc. punishment differs from negative reinforcement. It aims to decrease or discourage an undesirable behavior, whereas negative reinforcement tries to increase or encourage a desirable behavior. Punishment usually applied after demonstration of undesirable behavior. Conversely, negative reinforcement occurs before the individual engages in an undesirable behavior.

Social learning theory

The social theory combines the elements of both the cognitive and the reinforcement approaches. It argues that learning occurs through the continuous interactions of people behavior, various personal factors, and environmental forces. Social learning argues that three cognitively related processes are important in explaining people behavior: symbolic process, observational learning and self-control.

Symbolic processes

The symbolic processes are the various ways that people use verbal and imagined symbols to process and store experiences in representational forms (words and images) that serve as guide to future behavior. According to the social learning theory, people rely on the symbolic processes and attempt to solve problems through the use of symbols without keeping in view all the alternative courses of actions. The symbolic processes incorporate a cognitive element called self-efficacy, the belief in one's capabilities to perform a specific task. Compared to ($E \rightarrow P$) expectancy, it is more oriented towards the confidence about ones capacities. It is useful in explaining the levels of the goals people set, task effort and persistence.

Observational learning

Observational learning is people's ability to learn new behaviors and /or assess their probable consequences by observing others. Contrary to the arguments associated with reinforcement theory, people do not actually have to perform a behavior by themselves to learn about the consequences. The process of observing and attempting to imitate the behavior of other is called modeling. Modeling takes place in four stages. In attention stage, people select a model for observation because of the perception of model's success and skills. In retention stage, people retain information about the behavior through mental images and words. In reproduction stage, people try to attempt to reproduce the same behavior. The final stage is motivation whereby people are motivated to adopt the model behavior. Reinforcement facilitates this state.

Self-control

Self-control or self-regulation is the ability of an individual to exercise control over one's own behavior by setting standards and providing consequences (both rewards and punishments) for one's own actions. Self-control enhances performance when people make their rewards conditional on reaching a challenging present level of performance.

REWARD SYSTEMS FOR MOTIVATION

An organization's reward system is its most basic tool for managing employee motivation and controlling the employees. Organizational rewards can affect attitudes, behaviors, and motivation. Thus, it is important for managers to clearly understand and appreciate their importance. An organizational reward system consists of the formal and informal mechanism by which employee performance is defined, evaluated and rewarded. The primary rewards in most organizations are pay, promotions, benefits, and status.

Effective reward systems

An effective organizational reward system, as identified by Lawler must have the following four characteristics:

1. Able to meet the needs of individual for food, shelter and other basic necessities
2. Favorably comparable with those offered by other organizations. Unfavorable comparisons with people in other settings result in feeling of inequity

3. Equitable reward distribution. When some employees feel underpaid compared with others in the organization, the probable results are low morale, absence and poor performance
4. Able to recognize that different people have different needs and choose different paths to satisfy those needs

Instruments for motivation

A variety of rewards and methods for achieving them are available to employees. Organizational reward system is one or combination of the following kinds:

Job design

Use of work itself to influence employees so as they show interest and zest, particularly who seek challenging work one of the instrument for motivation. There are different ways for job designing which have greater probability of generating high employee motivation and job satisfaction. These include job rotation, job enrichment, participation, goal integration, etc.

Job rotation: Moving from one routine job to another and back again is the job rotation. It relieves boredom and monotony and simply adds a little variety and interest to the job. Since repetitiveness and routine lead to dullness and dissatisfaction, job rotation leads to improved employee response and increased productivity. Rotating employees to jobs requiring slightly new and different skills, they then become more valuable to the organization.

Job enrichment: Job enrichment is adding another job with increased worker's responsibility and making the job more challenging and meaningful. This provides skill variety, task identity and autonomy. This is different from job enlargement, which means adding more and similar or different task to specialized job without increasing worker's responsibility. It is not simply adding a dull job over another dull job.

With job enrichment, very favorable results in terms of such measures as quantity, quality, attendance, cost and morale can be obtained. A job may be enriched by following ways:

1. Autonomy: Giving workers more freedom in deciding about such things as work methods and sequence or the acceptance/rejection of materials. Developing drug analysis methods independently in quality

- control department is an example of autonomy.
2. Participation: Encouraging participation of subordinates and interaction between workers. In management term, participation means, the involvement of employees in decision-making. Although the decision-making is a management job, yet plenty of opportunities exist for subordinates to participate in decision-making. The areas of participation include production methods, material handling, cost reduction, safety and working environment.
 3. Task identification: Task identification is giving workers a feeling of their personal responsibilities for their tasks.
 4. Task significance: making sure that workers can see how their tasks contribute to finished product, and the welfare of an enterprise.
 5. Feedback: giving people feedback on their job performance preferably before their superior gets it.
 6. Work environment improvement: involving workers in analysis and change of physical aspects of the work environment, e.g., layout of office/plant, temperature, lightning and cleanliness.

There are some limitations in the application of job enrichment. With technology, specialized machinery and assembly line, it may not be possible to make all jobs very meaningful. Job enrichment is difficult for job requiring low-level skills. Furthermore, sometime workers do not demand it.

Goal integration: An idealized system of workers motivation is need-satisfaction through job itself. This motivation pattern develops commitment in employees to the objectives of the organization. A system of rewards is established for the employees working efficiently to meet the objectives of their jobs, department and or of organization. This causes high-levels of job satisfaction in employees and they will exercise self-direction and self-control in working for committed objectives. The workers will gain a real satisfaction on becoming committed to work for organizational goals. This style of management has referred to as 'management by integration and self-control'.

This system emphasizes openness and trust, supportive supervision and participation in decision-making. It activates all motives such as economic, social and egoistic. Under this system, the workers become dedicated to work and organization at that extent that they don't consider job as work to them. Goal integration may not work well for workers on low-level and repetitive jobs.

Merit system

The merit system is one whereby people get different pay raises as annual increments, depending upon their overall job performance during the year. Merit system motivates low performers to high performers. Merit pay is a good system for maintaining long-term performance. Execution of merit system effectively, needs careful quantitative or efficient qualitative evaluations and performance appraisals of the workers throughout the year.

Incentive system

The incentive system is reward system whereby people get different money at each pay period in proportions to what they do. Economists place money at high level of motivation. But behavior scientists place it at low level. An individual, as McClelland indicated with high achievement drive don't work harder for money alone. They need other motivators like love of accomplishment, interest in their work and success itself. On the other hand, individuals with low achievement drive often work for more money. Money is important for people who are raising a family than those having no urgent need. Money can't be over looked as one of the instrument among many for managing motivation. It is an urgent mean to achieve minimum standards of living. It is given by enterprise to attract and hold people as well. The money can be awarded by the following four increasingly popular incentive systems:

Profit sharing: Profit sharing provides varying annual bonuses to employees based on corporate profits. This system unites workers and management towards the same goal of higher profits.

Gain sharing: Gain sharing is a group-based incentive system in which all group members get bonuses when predetermined performance levels are exceeded. This system facilitates teamwork and trusts among the workers.

Lump-sum bonuses: This method gives each employee one time cash bonus in a year, rather than a base salary increase.

Pay-for knowledge: Pay-for-knowledge system focuses on paying the individual rather than the job. Under a traditional arrangement two workers doing the same job are paid at the same rate, regardless of their

skills. Under the new arrangements, people are advanced in pay grade for each new skills or set of skills they learn. This approach increases training costs but also results in a more highly skilled work force.

Indirect rewards

Training, sponsoring tours, or sponsoring employee's kids are some of the indirect reward system. Providing training opportunities to the employees is another instrument for the motivation. Training may be on-the-job, in some another institute or from abroad. Sponsoring tour of employees' kids indirectly motivate the employees for better performance.

LEADERSHIP

Leadership is the foundation of the management function known as leading and is the process of influencing other to achieve organizational goals. The people who influence the other people are called leaders. Leadership is one of the important features in managers since they have to lead their subordinates to achieve organization goals.

Means for influencing workers

Power is the capacity to affect the behavior of others. Managers need to use their power carefully in ways that encourage commitment and increase power rather than diminish it. Managers use six major types of powers to help affect the behavior of others. These six types of powers are also called the sources of leader power.

Legitimate power

Legitimate power is an authority of a manager that has been vested to him due to its position in hierarchy. Receiving directions from an immediate supervisor in hierarchy are accepted as legitimate because he holds position of authority.

Reward power

The reward power is the capacity to control and provide valued rewards to others. The organization offer rewards are usually under manager's control.

Punishment power

The punishment or corrective power is the ability to punish others on accounts of undesired behaviors. This power is needed to improve behavior of people at work.

Expert power

Expert power depends on having the expertise that is valued by others. The possession of knowledge, technical skills and experience, empowered the managers with expert power.

Information power

The information power of a manager is a consequence of the access to and control over the distribution of important information regarding organizational operations and future plans.

Referent power

The referent power results from being admired and liked by others. People are more willingly follow the direction of and exhibit loyalty towards the individuals to whom they admire, want to be liked or feel friendship.

ROLE OF LEADING

Fundamentally, leading plays the following four significant types of roles in an organization:

Directive role

The directive role involves letting the subordinates know what is expected of them, providing guidance about the job related aspects, identifying evaluation standards and indicating the basis for outcomes or rewards.

Supportive role

Supportive role entails demonstration of concern for needs of subordinates, making the work more pleasant and being friendly and approachable.

Participative role

A role of leadership that is characterized by consulting with subordinates, encouraging their suggestions, and carefully considering their ideas during decision-making.

Achievement role

Role involving setting challenging goals expecting subordinates to perform at their highest level, and conveying a high degree of confidence in subordinates for achievement.

CONTROLLING

Controlling is the regulation of organizational activities in such a way as to facilitate attainment of goals. The accomplishment of organizational goal is made possible by conforming the employees' performance to organizational standards. Controlling adjusts the employees' behavior in a way that channeled towards the pursuit of organizational objectives.

Two major pre-requisites must exist before devising or maintaining system of controls. These are planning and a clear organogram and have been explained earlier. In proceeding section, these have been presented briefly with reference to controlling.

Plans (Chapter 3)

Control requires and must build on plans. Controls and plans are the two sides of a coin. Factually, all meaningful control techniques are, in the first instance planning techniques. Further, it is fruitless to try to design control without first taking into account the plans. Plans specify objectives and way to accomplish them. Evaluating standards, measuring performance, the activities in controlling are based on effective planning. This truth can be exemplified in the case of budgeting. The budgets are identified as type of plan, i.e., numbered plans. To look on budgeting only as a form of control tends to make it meaningless and ineffective.

Clear organogram (Chapter 4)

An organogram (organizational structure) specifies roles, line of authority and who is responsible to whom. The purpose of control is to measure activities and take action to ensure that plans are being accomplished. Control of activities operates through people. Therefore, a major pre-requisite of control is the existence of organogram. Thus, if the organogram is clear, complete, and well integrated, the control action will be more effective.

ROLE OF CONTROL

Controls play important roles in the following various organizational

aspects in an organization.

Enable authority decentralization

The existence of controls enables decision making at lower levels in an organization but still maintaining a handle on progress. The managers in an organization afford more liberty to decentralize authority in the presence of adequate controls.

Ascertain performance

The presence of control system makes it possible for an organization to ascertain performance efficiency for achieving its goal. The purpose of control is to provide managers with an assessment of matching the performance of an organization with pre-set standards. For example, production department of a pharmaceutical industry has a performance goal of manufacturing 10,000 bottles of syrup per day. Falling of production to 8,500 bottles is an indicative of certain problem. On the other hand, the production of 10,000 bottles manifests production department is operating effectively.

Enhance coordination

Adequate controls make possible to keep track of various major elements of organization to ascertain their synchronization. Thus, existence of controls enhances coordination in an organization.

Detect irregularities

Controls help in detecting the wrongdoings and unwanted irregularities such as quality defects, cost overruns or excessive personnel turnover. Detection of irregularities in time could prevent the transformation of fairly controllable minor problems into unmanageable major ones.

Cope uncertainties

Organizational goals are set for future events though on the basis of best knowledge at the time yet usually uncertainty arises and the things do not always go according to the plan. Controlling enables managers to monitor specific activities and react promptly to significant uncertainties or changes in the environment.

Identify opportunities

The things could go better than the targeted or expected in various situations. With adequate controls, managers are able to detect these

situations and that can be alerted to possible future opportunities.

CONTROLLING PROCESS

Regardless of the type or number of control systems needed by an organization, there are the following general steps in any control process:

Determining areas to control

High cost coupled with the employees' resentments on control of their every move, makes it impossible to control every aspect of organization's activities. Thus, deciding the major areas to be controlled is necessary as first step in the control process. The decision of the areas to be controlled is based on the organizational goals and objectives predefined during the planning phase.

Establishing standards

A standard is a target or criterion against which subsequent performance is compared. Standards are selected points in a planning program where performance is measured as an indicative of how things are going without watching every step in the execution of plans. Standards may be of many kinds. Among the best are verifiable goals or objectives stated in quantitative or qualitative terms, regularly set in well-operated system of management by objectives (Chapter 1). The end results, for which the workers are responsible, are the best measures for achievement of plans and thus, they furnish excellent standards of control.

The standards of goal may be stated in physical terms, such as quantities of products, units of service, labor hours, speed, or volume of rejections. These may be expressed in monetary terms, such as volume of sales, costs, capital expenditure or profit. The standards may also be expressed in verifiable quantitative terms or in any other way that can give a clear indication of performance. Standards for pharmacy department, e.g., in a hospital may include the following:

- a) Minimum of 95% of patients will be served within 10 minutes of their arrival at pharmacy for getting their prescriptions
- b) The waiting time for a patient will not be more than 20 minutes
- c) Understanding of drug utilization will be ensured by the pharmacist to 100% of the patients

Measurement of performance

The measurement of performance is a constant and an on-going activity

for pharmaceutical organizations. An effective control has a valid means of measuring actual performance and an appropriate frequency of this measurement. When a manager is concerned with controlling sales, the daily, weekly, or monthly sales figures represent actual performance of sales force. For a production manager, performance may be expressed in terms of units produced quality of output or unit cost. For employees, performance may be measured in terms of quality or quantity of output as well.

It is not easy to measure quantitatively many aspects of performance for a number of jobs. For example, performance of a pharmacist, in research and development (R&D) may spend years working on a single project before any meaningful accomplishment or a major breakthrough. Nevertheless, some indicators can usually be developed to assess the performance in such cases. The scientist's progress can partially be assessed by a minute or close review of his performance.

Comparing performance against standards

In this step of control process the measured performance (in last step) is compared against the standards developed in step 2. Performance may be the same, higher, or lower than the standard. Assume that each of three sales managers of pharmaceutical concerns have a goal of increasing sales by 10 percent during the year. At the end of the year, one manager has increased sales by 9.9%, another by 9.3%, and the third by 8.7%. How one can decide whether each has met the standard? For the most part, this is a management decision that must be based on many relevant factors to reason this failure. Although none of the three sales managers attained the precise goal of 10%. One was very close while, another may have met with unexpected competition from a new company. The above mentioned and other relevant factors must be considered.

It is also important that comparisons be made as often as necessary. For long run and high-level standards, comparisons may be appropriate on annual basis. In other circumstances however, much more frequent comparisons are called for. For example, a business with a cash shortage may need to monitor its on-hand reserves on daily basis.

Evaluation and action

Evaluation and action accordingly are the final steps in the control process. The performance is evaluated by means of comparisons made in previous step and then appropriate action is taken. This evaluation draws

heavily on manager's analytical and diagnostic skills. After evaluation, any of the following actions is usually appropriate:

Maintenance of Status Quo

One response is maintaining the status quo or to do nothing. This action is generally appropriate when performance measures more or less up to the standard. Small deviations from standard do not require corrective action or modification of standards. If the standard for cost reduction in a year is 4 percent and a firm has achieved a reduction of 3.99 percent, it is undoubtedly on the right track. Maintenance of status quo is also indicated in the situations when other options are not available, not feasible or not cost effective.

Correction of Deviation

The control process is completed when an appropriate action is taken to correct a deviation from the standard. For a performance measured accurately with valid means, it is easier to correct deviations. Managers know exactly where, in the assignment of individual or group duties, the corrective measures must be applied. Correction of deviation is the point at which control can be seen as a part of the whole system of management and can be related to the other managerial functions.

Managers may correct deviations by redrawing plans, modifying goals or by exercising organizing function through reassignment or clarification of duties. The deviations may also be corrected by additional staffing, better selection and/or training of subordinates. Better leading, the explanation of job or more effective leadership techniques may be other techniques for correction of deviation from the standard.

Standard Modification

The final response to the outcome of evaluation is adjustment of the standards. The standards may have been too high or too low to begin with. This is apparent if large number of employees exceeds the standard by a wide margin or if no one ever meets the standard. In other situations, a standard that was perfectly good when it was set may need to be adjusted because circumstances have changed. Sometimes achieving a standard may consume too many resources. A sales increase standard of 10 percent may have to be modified when a new competitor comes on the scene. Given new market conditions, the old standard of 10 percent increase in sale may no longer be realistic.

The forth-going discussion points to that some standards are unrealistic themselves. Sometimes, the external conditions make perfectly good standards unrealistic. In both cases, the standards are to be re-adjusted.

CONTROL AS A FEEDBACK SYSTEM

Managerial control is essentially the same basic control process as that found in physical, biological and social systems. Many systems control themselves through information feedback, which shows deviations from standards and initiates changes. In other words, systems use some of their energy to feedback information that compares performance with a standard. Simple feedback is shown in Figure 1 below:

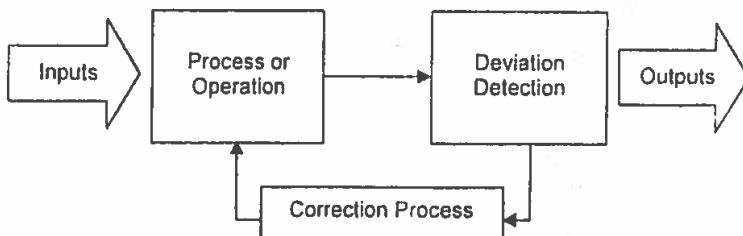


Figure 1: A simple feedback

FORMS OF OPERATIONS CONTROL

There are three levels of control practiced by most organizations. These are operational control, organizational control and strategic control systems.

Operational control system

Operational controls are primarily related to the regulation of the process. It can take one of three forms consisting of preliminary control, screening control and post-action control.

Preliminary Control

Preliminary control attempts to monitor quality or quantity of financial, physical, human, and information sources before they actually become part of the system. Thus, the preliminary control involves the regulations for inputs to ensure that these meet standards necessary for transformation process. These are also called as steering control, pre-control, or preventive control. A pharmaceutical firm that hires only

graduates pharmacists at supervisor level after several interviews and other selection criteria has been satisfied to control the quality of human resource entering the organization. Similarly, organizations often take steps to control material inputs, financial and information resources as they enter the system. For example, some pharmaceutical industries refuse to accept the raw materials of certain origin.

Screening Control

The screening control is also called yes-no control or concurrent control. Screening control involves the regulation of ongoing activity that is the part of transformational process to ensure that they conform to organizational standards. It relies on feedback processes during the transformation process. The decision regarding whether to continue progress, take corrective action or stoppage of action altogether is based on screening control. Thus, this inprocess control helps preventing the faulty outputs. For example number of checkpoints is established along aerosol assembly line for purpose of screening control. As the product moves along the line, it is periodically checked to ensure that all of the components assembled so far are working properly. The product is being controlled during the transformation process itself. Since, screening controls are widely applicable and useful in identifying the cause of problem, they tend to be used more often than other forms of control.

Nearly all processes in pharmaceutical industries require an effective screening control to produce product of high quality. Screening control in pharmaceutical sales is important because it gives the basis for modification of the course of action or necessary steps to be taken if there are some problems.

Post-action Control

Post-action control monitors outputs or results of a process after the completion of a transformation process. This final inspection is an evaluation of the finished drug product or output of a set of activities is one of the examples. In a pharmaceutical industry final inspection is extremely important and must go parallel with that of the screening control. Relying only on this control is useful in certain situations, such as when a product or service is fairly simple and of routine. If a product can be manufactured in only two or three steps, post-action control may be the most effective control. Post-action control is also known as feed back control or output control.

The post-action control in pharmaceutical industry can be effective in two important ways. It provides information for future planning. For example, an unacceptably high defective rate during a quality check of finished drug product will suggest searching out the causes and taking steps to correct them. Post-action control of an activity provides a basis for rewarding employees performance by recognizing the accomplishment of given targets.

Organizational Control Systems

Various organizations practice different kinds of control over their overall design and operating systems. Two dominant forms of organizational control are bureaucratic control and clan control (Table 1).

Bureaucratic Control

Bureaucratic control is characterized by formal and mechanistic structural arrangements. It is based on the regulation through rules, policies, supervision, budgets, schedules, and reward systems. The goal of bureaucratic control is to ensure that personnel exhibits appropriate behavior and meet performance standards.

Organizations that use bureaucratic control depend on strict rules, concentrate on ensuring that people meet minimally acceptable levels of performance and have a tall structure (Chapter 4). Moreover, they focus their rewards on individual performance and allow only limited and formal employee participation in management.

Various other features associated with bureaucratic control system have been presented in Table 1.

Clan Control

The clan control relies on the values, beliefs, traditions, organization culture, share, and group interactions to regulate employees' behavior to facilitate accomplishment of organizational goals. This is characterized by informal and organic structural arrangements. Its goal is employee commitment to job performance. Accordingly, it relies heavily on group standards, a strong corporate culture and self-control of behavior. Organizations using this approach are usually relatively flat (Chapter 4) and encourage shared influence. Rewards are often directed at group performance and participation is wide spread.

Other features associated with clan control system have been mentioned

in Table 1.

Characteristics	Bureaucratic Control	Clan Control
Means of control	Rules, policies, & hierarchy	Shared Goals, values & tradition
Source of control	Mainly extrinsic mechanisms	Mainly intrinsic motivation
Job design	Doing rather than thinking	Both, doing and thinking
Nature of duties	Fixed	Flexible
Organization structure	Tall, top-down control	Flat, mutual influence
Reward system	Extrinsic	Intrinsic
Innovation	Less likely	More likely

Table 1: Characteristics of Bureaucratic and Clan Controls

Strategic Control

Strategic control aimed at ensuring that the organization is maintaining an effective alignment with its environment and moving towards achieving its strategic goals. The implementation of strategy generally involves five basic areas like structure, leadership, technology, human resources & information, and control systems. Thus, it follows that strategic control focuses on these five areas in order to ensure that strategy has been and is being effectively implemented.

Strategic control should be focused on the extent to which the above five areas of strategy implementation are facilitating accomplishment of the organization's strategic goals. If they are not being accomplished, the organization should respond in the same way as with other forms of control, i.e., maintain the status quo. If, on the other hand, one or more of the methods of implementation are inhibiting the attainment of goals, it should be modified. Consequently, the firms might find it necessary to alter its structure, replace key leaders, adopt new technology, modify its human resources, or change its information and operational control systems.

AN ADEQUATE CONTROL

Adequate and effective controls are able to work efficiently and are needed to help managers making sure that events conform to plans. Adequate controls are specially tailored and require the following:

Tailored according to plans and positions

All control techniques and systems should reflect the plans they are designed to follow. Every plan, kind and phase of an operation has unique

characteristics. The information for assessing progress of marketing program is quite different from what are needed to check on a production plan.

In the same way, controls should be tailored to positions in an organization. Controls for the sales department differ from those for the finance department, and those for the purchasing department. A small business will need some controls different from those for a large business. Some control techniques, such as budgets, standard hours and costs and various financial ratios have general application in various situations. However, it should never be assumed that one of these widely used techniques is completely applicable in any given situation. Managers must always be aware of the critical factors in their plans and operations requiring control and they must use techniques and information suited to them.

Tailored to individual managers and their personalities

Controls must be tailored to the personalities of individual managers. Control systems and information are intended to help individual managers carryout their function of control. Some people, such as pharmacokineticists like presentation of their information in the forms of complex tables of data, mathematical model forms, or computer printouts. The important thing is that people get and understand the information they need. Thus, the control system must be tailored to meet such individual requirements and situations.

Point out exceptions at critical points

A general type control cannot effectively be implemented always to all situations. Thus, a control must be able to deal with exceptional situations occurring during a course of action. Such control plans allow the managers to detect those areas where their attention is required particularly.

It is however, not enough merely to look at exceptions, one must look for them at critical points also. Small deviations in certain areas may have great significance than larger exceptions in other areas. A manager, e.g., might be concerned if the cost of office labor deviate from 5 percent of the allocated budget, but be unworried if the cost of postage stamps deviated from budgets by 20 percent.

Consequently, the standard of exception should be accompanied in

practice by the principle of critical-point control. Certainly, more the managers concentrate their control efforts on exceptions, the more efficient their control will be. The effective control requires that managers pay primary attention to those things that are most important.

Objective-oriented

To the extent possible, information provided by control system should be objective. However, objectivity is not everything and managers need to look for a realistic target as well, when making decision. When a sales representative is marketing impressive sales every month, or when a production manager is cutting cost consistently, the managers should be pleased. However, this increase in sale may be due to an offer of unauthorized discounts, unrealistic guarantees about product performance, or promising an early delivery. Decreasing product quality or putting unreasonable pressure on employees can cut production costs.

For obvious reasons, the techniques followed by medical representative and the production manager may not be in the best interests of the organization for long run. The control system should, therefore, provide objective information to the manager for the evaluation and action. However, the manager must take appropriate precautions in interpreting it.

Objective standards can be qualitative, such as costs or labor, hours per unit or date of job completion. The standards can also be qualitative, as in case of training program having specific characteristics or tailored to accomplish a specific kind of upgrading of personnel quality.

Able to fit organizational climate

An effective control system must fit the organizational climate. Climate of different organizations varied largely. In an organization where people have been given considerable freedom and participation, a tight control system may not work and will sentence failure. On the other hand, if a superior who allows little participation in decision-making has managed subordinates, a generalized and soft control system will hardly succeed.

Flexible in nature

An effective control system itself must be flexible enough to accommodate change. Consider a pharmaceutical organization whose diverse drug product lines require certain number of different raw materials. The company's inventory control system must be able to

manage and monitor current levels of inventory for all materials. When a modification in product line alters the number of raw materials required or when there is any change in the requisite quantities of the existing materials, the control system should be able to accommodate this change. If the controls are unable to accommodate change, entirely new control system will be needed. Designing and implementing entirely a new control system would be an unnecessary expense.

In production scheduling, the production manager must be prepared for failures occurred by the breakdown of a machine, power failure or illness of a key worker. If the control system is too inflexible to account for such difficulties, slowdown, even though temporary, may impair control. Much flexibility in control can be provided by various probable situations. In fact, flexible control is normally best achieved through flexible plans.

Cost effective

Controls must be value their cost. Although this requirement is simple, it is often difficult to accomplish in practice. The expenses and benefits of a particular control vary with the importance of the activity and size of the operation. Thus, economy of the controls is assessed by their cost to benefit ratio.

A limiting factor of control systems is their cost, which in turn, depends on manager's selecting for control only critical factors in areas important to them. If tailored to the job and the size of enterprise, control will probably be economical. Control techniques and approaches are efficient when they bring to light actual or potential deviations from plans with the minimum expenditure of costs.

Able to lead to corrective action

An adequate system discloses where failures are occurring and who is responsible for them. It will ensure that some corrective action is to be taken. Control is justified only if deviations from plans are corrected through appropriate planning, organizing, staffing and leading.

CRITICAL CONTROL POINTS AND STANDARDS

The critical control point is a subtask of a complex operation that can be used to measure the success or failure of whole operation. The standards used to measure the success of whole operation based on the critical points are called critical control point standards. Standards are the yardsticks against which actual or expected performance is measured.

In a simple operation, control can be achieved through a careful personal observation of the work being done. However, complex operations and those requiring long completion times make the personal observation of the performance for a whole day unfeasible. In such cases, a manager chooses critical points for special attention and then watches them to be sure that the whole operation is proceeding as planned.

With such standards, managers can handle larger groups of subordinates and thereby increase their span of management, with resulting cost savings and improvement of communication. The various types of critical control point standards are of following types:

Physical Standards

Physical standards are non-monetary criteria measurable in quantitative or qualitative terms. They may reflect quantities such as labor hours per unit of output or units produced per machine-hour. Physical standards may also reflect quality, such as hardness of tablets, closeness of tolerance, stability of emulsion and its color, etc.

Cost Standards

Cost standards are monetary measurements and, like physical standards, are common at the operating level. They attach monetary values to specific aspects of operations. Illustrative of cost standards are such widely used measures as direct and indirect cost per unit produced, labor cost per unit or per hour, material cost per unit, machine-hour costs, selling costs per rupee or unit of sales.

Capital Standards

There are a variety of capital standards, all arising from application of monetary measurements to physical items. These differ from cost standards in the sense that they are related with the capital invested in firm rather than with operating costs. Some of the typical capital standards includes ratio of current assets to current liabilities, fixed investment to total investment, as well as the size and turnover of inventories.

Revenue Standards

The revenue arises from attaching monetary values to sales. They may include such standards as revenue per product line, average sale per customer, and sales per capita in a given market area.

Program Standards

The program standards are related to programs. The success of the program indicates the meeting of the program standards. Success is also evident when a program results into some meaningful ends according to the plans. A manager may be assigned to install a variable budget program, a program for formally following the development of new products, or a program for improving the quality of a sales force.

Intangible Standards

More difficult to set are standards which are not expressed in either physical or monetary measurements. These may include criteria for competence of a pharmacist, efficiency of an advertising program for meeting its short-and long-term objectives, success of public relations program and alertness or loyalty of staff.

For such intangible parameters, establishing standards for clear quantitative or qualitative measurements is difficult. Tests, surveys, and sampling techniques developed by psychologists and sociometrists have made it possible to probe and measure human attitudes and drives in terms of good, effective or efficient based on judgment, trial and error.

Goals as Standards

It is possible to define goals that can be used as performance standards. The quantitative goals represent an important development in the area of standards. For example, if the program of a regional sales officer is spelled out to include such elements as training sales people in accordance with a plan with specific characteristics, the plan and its characteristics themselves furnish standards that tend to become objective and, therefore, "tangible".

Quality control standards

Quality is the totality of features and characteristics of a pharmaceutical product or service that bears on its ability to satisfy stated or implied needs. A product must conform pre-established quality control standards. The quality is measured in terms of the degree of deviations from standards that is deemed allowable for products. These standards are available in pharmaceutical compendia, official books and pharmacopoeias. The quality assurance and quality control are currently receiving greater attention and pharmaceutical industries are adopting new approaches such as total quality management, and standard of

international organization standardization.

Total quality management

Total quality management (TQM) is a quality control approach that emphasizes organization wide commitment, integration of quality improvement efforts with organizational goals, and inclusion of quality as a factor in performance appraisals. In essence, this approach highlights collective responsibility for the product quality. It also encourages personnel in a department to work collectively to improve quality.

Unlike traditional quality control, the TQM is aimed at achieving zero defects and a quality mentality in which personnel strives to make a product conform exactly to desired standards. This is contrary to the traditional quality control, which is measured as allowable deviation from the standards for a product.

Standards of International Organization Standardization

International organization for standardization (ISO) is an international consortium of representative bodies. It has offered an internationally recognized quality management system for promotion of uniform international standards. Various ISO series are ISO 9000 – ISO 9004 and pertains to development, production, quality assurance (QA), Quality Control (QC), detection of defective products, Quality Management, (QM), and other issues as product safety.

The compliance with the ISO standards is advantageous for pharmaceutical firm because of its internationally acceptance but is voluntary. To become ISO-certified, a firm has to be evaluated rigorously through an accreditation process.

COORDINATION AND MANAGERIAL COMMUNICATION

Co-ordination, the essence of manager-ship, is for achieving harmony among individual efforts towards the accomplishment of group goals. Each of the managerial functions is an exercise contributing to coordination. Since, an organization is a collection of several people having different interests, their efforts toward mutual goals do not automatically mesh with the efforts of others. It thus becomes the central task of manager to reconcile differences in approach, timing, effort, or interest and to harmonize goals to contribute to organizational goals. Managerial communication is one of the major tools required for coordination is accomplished in an organization. In forthcoming text, detail of managerial communication has been given.

Transfer and sharing of information and idea from one person to another to make it understood by the receiver and to achieve a favorable action. Managerial communication is the exchange of messages between people for the purpose of achieving common meaning. Individual providing information is called sender and one, who receives, is called the receiver. In daily practice of an organization, various people act as sender while, other as receiver or both as sender and receiver. Effective communication, although is required at all functions of management yet is particularly critical for leading and coordination. Managers need effective communication to influence and coordinate others.

PURPOSE OF COMMUNICATION

The communication is so important in an organization that managers rarely work with things but rather with the information about the things. The purposes of communication are as follows:

Means of linking people in organization

In an organization, people are linked together with the help of communication to achieve a common purpose. The group activity is impossible without communication because coordination and change cannot be achieved.

Means of integrated managerial functions

The communication is essential for internal functioning of an enterprise because it integrates all the managerial functions like planning, organizing, staffing, leading and controlling. Although, communication applies to all phases of managing, it is particularly important in the function of leading.

Means of linking enterprise to external environment

Communication relates an enterprise to the customers, suppliers, stockholders, governments and community, etc. It is through information exchange by which the management of an organization becomes aware of the needs of its customers, the availability of suppliers, feedback from the middleman, the regulations of governments, and the concerns of a community. The communication makes any organization an open system interacting with its environment. In an organization, communication is also needed to:

1. Establish goal and their telling to the members of an organization
2. Develop plans for their achievement
3. Organize human and other resources in the most effective way
4. Select, develop, and apprise members of an organization
5. Lead, direct, motivate, and create a climate in which people want to contribute
6. Control the performance of all the members and groups in a department

PROCESS OF COMMUNICATION

The communication process involves the following elements:

Sender of message

Sender is also known as communicator of message is one who convey a message verbally, written or with gesture. The process of communication begins with the sender, who has a thought or an idea generated by some stimuli. The sender may be any person, a manager, a department, or an organization itself.

Encoding

Encoding is the translation of idea into a systematic set of symbols, understandable by both the sender and the receiver and expressing the sender's purpose. Language is the major form of encoding. The function of encoding is to provide a form in which ideas and purposes can be

expressed as a message.

Message

Encoding results into a message. The message may be verbal, nonverbal (facial expression, tone of voice and body movements, etc.), or written what an individual hope to communicate.

Media

Media is a channel or mean which links the sender with the receiver. It may be a memorandum, telephone, telegram, face-to-face communication, group meetings, and electronic mail through computer, policy statement, reward system, production schedules, and forecasts. At times, two or more channels can be used.

Receiver

The receiver is the target in a process of communication and anticipates the process of perception and decoding. Perception is receiving of message and converting (decoding) into thoughts. The receiver understands the message in light of his own previous experience and frames of reference.

Accurate communication can occur only when both, the sender and the receiver put together the same or at least similar meanings to the symbols that compose the message. Communication is not completed unless it is understood.

Feedback

Feedback is a response of the receiver on understanding of the message. The feedback enables the communicator to verify whether the message has been received, understood and has produced the intended response. One-way communication process does not allow receiver-to-communicator feedback, however the feedback can be indicated indirectly in this communication. For example, lack of communication in an organization is indicated by declines in productivity, poor quality of production, increased absenteeism or turnover, safety problems, and lack of coordination between units.

Two-way (face-to-face) communication processes, however, have the provision for such feedback. It is desirable to make provisions for feedback in communication process because it decreases the potential for distortion between the intended message and the received message.

Noise

Noise is a parameter, which hinders the communication and is not desirable because its presence can distort the intended message. It can be present in any of the above elements. A number of sources of noise have been identified which has been discussed under the heading of 'communication barriers'.

The entire component of communication process has been elaborated in the Figure 1.

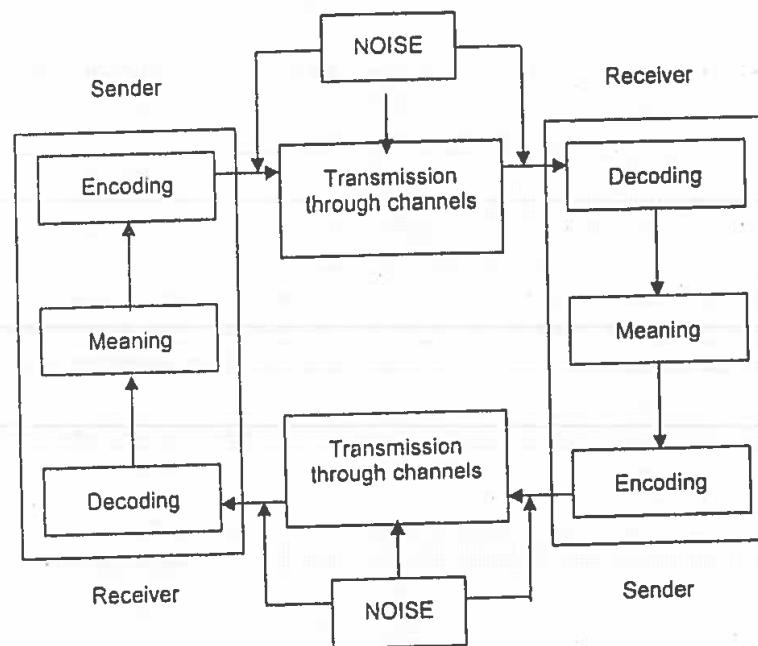


Figure 1: Elements of communication process

COMMUNICATION BARRIERS

Communication barriers are factors, which partially or completely impair clarity of meanings and understandings. These barriers indicate noise in communication and break it down. The communication barriers are related to the sender, media and receiver as mentioned below:

Barriers related to sender

The barriers related to sender include lack of planning, unqualified

assumptions, and poorly expressed message.

COMMUNICATION ELEMENTS	BARRIERS
Sender	Lack of planning Unqualified assumptions Poor expression
Media	Semantic distortions Loss by transmission
Receiver	Poor listening Premature evaluation Overloaded information Selective perception
Both sender and receiver	Differences in frame of references, difference in perceptions between sender and receiver Differences in position, status, power & knowledge

Table 1: Communication Barriers related to sender, media, and receiver.

Lack of planning

Lack of planning in communication causes misunderstandings of the message. Good communication requires thinking, planning, and stating the purpose of a message. Comprehensive planning, giving reasons for a directive, selecting the most appropriate channel, and choosing proper timing can greatly improve understanding and resistance to change.

Unqualified assumptions

The ex-communicated assumptions about the receiver may result in confusion and sometimes the loss of goodwill. A sender may assume that the receiver has the basic concepts and a background what is to be communicated but receiver has otherwise.

Poorly expressed message

A very clear idea in the mind of a sender may be marked by poorly chosen words, omissions, lack of coherence, and poor organization of ideas, awkward sentence structure, dullness, unnecessary wordings, and a failure to clarify the implication of the message. This lack of clarity and precision may be avoided through a greater care in encoding of the message.

Barriers pertaining to media

Barriers pertaining to media consist of semantic distortions and loss by transmission.

Semantic distortions

Semantic distortion is the impairment in understanding of a message due to a deliberately or accidentally realizing of entirely different meaning of some words or message stated ambiguously. Some words mean different things to different people and it is quite possible for a communicator to speak the same language as a receiver but still not transmit understandings. This may be very common when a sender uses abstract or technical terms and phrases in his message.

Loss by transmission

The loss by transmission is getting of a message less and less accurate in a series of transmissions from one person to the next.

Barriers related to receiver

The communication barriers as related to the receiver are poor listening, premature evaluation, overloaded information, and selective perception.

Poor listening

An individual speaks at the rate of 100 to 200 words a minute, reads at 2 to 3 times the speaking rate, and thinks several times faster than the reading rate. As a result, a listener can move through a discussion much faster than can a speaker. Because of this speed involved, as listeners the individuals develop poor listening habits. Effective listening demands full attention and self-discipline. The listening can be made effective by full attention and making understanding by asking questions.

Premature evaluation

Premature evaluation is a common tendency to judge, to approve or disapprove what is being said, rather than trying to understand the speaker's frame of reference. Listening without making any hasty judgment can improve the communication and understandings.

Overloaded information

The last decade has been described as the Information Era, or the Age of Information. Because of the advances in communication technology, difficulties may arise, not from the absence of information but from excessive information. Unrestricted flow may result in too much information and as a result, one cannot absorb or adequately respond to the entire message directed to that individual. People respond to overloaded information in various ways:

Screening out: screening out is the selection of message. In this, the majority of messages is disregarded and is screened out, thus is never decoded.

Filtering: It is decoding of all information and then categorization according to priorities of individuals. Filtering may be helpful when the most pressing and most important information is processed first and the less important messages receive lower priority. However, chances are that attention will be given first to matters that are easy to handle, while more difficult but perhaps critical messages are delayed or ignored.

Making errors: Individuals receiving too much information make errors in processing it. For example they may leave out the word 'not' from a message and it may reverse the meaning of a message.

Delaying in information processing: Due to overloaded information, people may delay processing information either permanently or with the intention of catching up the future.

Selective perception

Selective perception is tendency to perceive what is expected to be perceived by a receiver. In communication this means that an individual hears what he wants to hear and ignores other relevant information. This is sort of filtering and is a common occurrence in upward communication in an organization where the information is manipulated so that it is perceived as positive. Subordinates cover up unfavorable information in messages to their superiors or a superior may take out what one does not want the next level to know.

The shape of an organization determines the extent to which information can be filtered. A tall organization will experience more information filtration than one with flat organization design (Chapter 4).

Attitude: Closely related to perception is the influence of attitude, which is predisposition to act or not to act in a certain way. It is a mental position regarding a fact or state. Clearly, if one made up his mind he cannot objectively listen to what is said.

Source credibility: Source credibility refers to the trust, confidence, and faith that the receiver has in the words and actions of the sender. The level of credibility that the receiver assigns to the sender directly affects how the

receiver views and reacts to the words, ideas, and actions of communicator. The degree of credibility attached with an individual is based on the previous experiences of receiver with that individual. For example a manager may pay a little attention to an employee who always 'complains about something'.

Barriers concerning to both, the sender and the receiver

The barriers related concerned with both, the sender and the receiver consists of differing frames of references, and difference in status, power, and knowledge.

Differing frames of references

A same communication may be interpreted differently, depending on previous experience of receivers due to having distinctly different frames of references and perceptions. The people have different frames or levels due to inter-personal variation, different levels and positions in society and in an organization. Educational, sociological, legal-political, and economic differences also make the different frame of references.

Differing in status, knowledge and power

The difference in the status, knowledge and power between a sender and receiver is another communication barrier.

Miscellaneous other barriers for communication also retard communication these are geographical distance and time. The sender and receiver at geographical distance are unable to communicate face-to-face. In busy times the sender/receiver may not have sufficient time to send/receive information accurately. Sometimes, the organization structure, managerial processes, and technology (presence or lack of computer or automated systems) also impede communication and thus may be included in communication barriers.

EFFECTIVE COMMUNICATION

Effective communication is transfer and sharing of information so that the receiver completely understands it and reacts in a favorable way. Fundamentally a barrier-free communication leads to an effective communication. There are several approaches and techniques used to improve communication. Following text and Table 2 illustrates various approaches related to alone and both, the sender and receiver, utilized to improve communication effectiveness for sender.

Planning

Before sending a message, a sender must carefully plan for a message. One of the first steps in communication is to clarify the purpose of the message and make a plan to achieve the intended end point. A sender of information should consult and encourage participating to collect the facts, analyze the message, and select the appropriate media. The content of the message should fit the level of knowledge of the recipients of the message and the organizational climate.

COMMUNICATION ELEMENTS	TECHNIQUES
Sender	Planning for message Encourage two-way communication (follow-up) Beware of language and meanings Maintain credibility Be sensitive to receiver's perception
Receiver	Develop listening skill Be sensitive to sender's perspective
Both sender and receiver	Follow-up Regulate information flow Understand weakness of media

Table 2: The improvements for communication effectiveness

Follow-up and utilizing feedback

Communication is completed when the receiver understands the message. A sender knows whether communication is understood unless the sender attempts to determine the intended meaning actually received. This can be accomplished through feedback by asking questions, requesting a response to a message and encouraging receivers to give their reactions to the message. Feedback provides a channel for receiver's reaction, enabling the communicator to determine whether the message has been received and has produced the intended response.

In face-to-face communication direct feedback is possible. In downward communication, however, inaccuracies often occur because of insufficient opportunities for feedback from receivers. Thus, feedback in the form of upward communication would be encouraged. A healthy organization needs effective upward communication if its downward communication is to have any chance of being effective.

Employing empathy

Empathy is putting oneself in another's position or role and to assume the

viewpoints and emotions of that person. A sender must place himself in receiver's positions for the purpose of anticipating how the message is likely to be decoded. This will furnish a common ground of understanding on which there are overlapping fields of experience.

Simplifying message

Complexity of language is a major barrier to effective communication. Use of terminologies, wordy expressions and idioms in message may make it a complex puzzles and antagonize the understandings.

Considering needs of receiver's information

The overloading of information may lead to filtering, complete screening out, faulty understanding and delay in processing of information received. This can be improved by reducing the demands for information. This may be accomplished by insisting merely on essential data be processed, such as information showing critical deviations from plans. Communication of something of value to the people, in the short run as well as in the far-flung future will transmit the message well.

Effective listening

The effective communication is the responsibility not only of the sender but also of the receiver of the information. Listening is a skill that can be developed by adopting some guidelines: stop talking, put talker at ease, show speaker you want to listen, remove distractions, empathize with the talker, be tolerant, hold your temper, go easy on arguments & criticism and ask questions.

FORMS OF COMMUNICATION

In an organization, oral, written and nonverbal forms of communication are often used depending on the sender, audience and the situation. Usually, all communication forms are employed together so that favorable qualities of one can be synergic for others. Visual aids may also be used to supplement both oral and written communication. In the forthcoming text, the detail of the three forms of communication has been given.

Oral communication

The oral communication is transmission of a message by face-to-face conversation. It may be meeting of two people, addressing of a manager to a group of audience, group discussion, talking by wandering around, and telephone calls. In an organization, a great deal of information

ranging approximately from 70 – 75% is communicated by oral mode of transmission. Oral communication can be planned or accidental.

Merits of oral communication

Facilitates feedback: The oral communication promotes an immediate feedback from the receiver of a message. The sender can note the effect of his conversation and the receiver can ask questions to clarify points not understandable to him.

Speedy interchange: Oral communication provides a rapid interchange of meanings and the messages. The message in oral communication can be clearly understood by the receivers. This mode is used in emergency happening in an organization.

Feeling of importance: A meeting with the superior in the verbal communication may give the subordinate a feeling of importance. This in turn can lead to enhanced understandings of a message.

Demerits of oral communication

Inaccuracies: The face-to-face interchange may suffer from the inaccuracies.

Nonrecordable: Oral communication leaves no record for future references.

Time consuming: Group meeting with poor attendance, or a meeting without a favorable effect may waste the time and money.

Costly: As mentioned above, group meeting with poor attendance, or without favorable effect may be costly.

Written communication

The written communication is transmitting of a message by putting it in writing. Memos, notes, letters, and reports are the examples of written communication. Written communication can solve many of the problems inherent in oral communication. Nevertheless, and perhaps surprisingly, written communication is not as common as might be imagined and is a mode of communication much respected by managers.

Merits of written communication

Accuracy: Written communication is planned and checked and thus tends to be more accurate.

Documentation: Written communication provides records, reference and legal defenses when required.

Mass contact: A carefully prepared message can be directed to a large audience through mass mailings.

Mean for uniformity: Written communication promotes uniformity in policy and procedure and can thus, reduce costs in some cases.

Demerits of written communication

Inhibit feedback: Written communication may provide no immediate feedback and consequently, it may take a long time to know whether a message has been received and properly understood.

Difficult: Preparation of a written message requires selection of proper words. Written communication is difficult in preparation and as well as in understanding.

Time consuming: Preparation of written message requires more time as compared to that for oral communication.

Creates mountains of papers: The written message may create heap of papers.

The merits and demerits mentioned above for both forms of communication have been mentioned in Table 3.

Nonverbal communication

The nonverbal communication is reinforcement or contradiction of another mode of communication by use of facial expressions and body gestures. The nonverbal communication is expected to support the verbal communication.

The nonverbal communication without using verbal communication is also used to express the emotions such as pleasing, thanking, resentment,

regret or angeriness.

Forms	Merits	Demerits
Written	<ul style="list-style-type: none"> • Accurate • Provide record, reference • May be used for mass contact • Used for uniformity in policy/procedures 	<ul style="list-style-type: none"> • Inhibit feedback • Difficult in preparation and understandings • Time consuming • Can create mountains of papers
Oral	<ul style="list-style-type: none"> • Facilitates feedback • Speedy interchange of meaning • Feeling of importance 	<ul style="list-style-type: none"> • May be inaccurate • No record • Costly in terms of time and money

Table 3: Advantages and disadvantages of written and oral communication.

DIRECTION OF COMMUNICATION

Sometimes, forms communication is classified on the basis of its direction in an organization. An effective organization provides communication in different directions such as vertical (downward and upward), horizontal and diagonal (Figure 2). These directions establish the framework within which communication takes place in the organization. Understandings of each of them will enable the manager to better appreciate and overcome the barriers to effective organizational communication. Besides these major communication flows, many other can also and do exist.

Vertical Communication

The vertical communication can be categorized into downward and upward communication.

Downward communication

The downward communication flows from people at higher levels to those at lower level in the organizational hierarchy. The downward oral communication media may include instructions, speeches, meetings, the telephone, and loudspeaker. The examples of written downward communication are job instructions, letters, handbooks, pamphlet, organizational policy statements, procedures and practices, sketch of company's goals and news. Annual conference of management and labor could be used as an effective media for downward communication.

Some larger organizations arrange a periodic publication known as 'house organ' printed monthly, bi-monthly or quarterly. A trained staff of communication experts undertakes responsibility for publication of a house organ of a firm.

This is used to accomplish the following tasks:

1. Explanation of organizational plans and programs as they are implemented
2. Answering the complaints and criticisms
3. Presentation of the organization's side of issue
4. The motivation of the employees necessary to win their support

Upward communication

The upward communication is sharing of ideas by employees with the top management to express their complaints, suggestions, questions, compliments, or comments. This is primarily nondirective as compared to the downward communication and requires an environment in which subordinates feel free to communicate. It is found in participative and democratic organizational environment. The typical means for the upward communication are suggestion systems, appeal and grievance procedures, complaint systems, counseling sessions, joint setting of objectives, group meetings, the practice of open door policy, morale questionnaires, and the exit interviews.

A high-performing organization needs effective upward communication as much as it needs effective downward communication. In absence of these flows, employees find ways to adapt some non-existent upward communication channels like 'employees' underground publication' in some large organization. A system can be adapted to facilitate the upward communication where employees can simply dial a listed telephone number and state their views. These views should be reviewed by some authority and forwarded to appropriate department managers for reply/action. If the caller gives his name, he must receive a written answer and in case of anonymous call, the answer can be posted on bulletin board.

Crosswise communication

The crosswise communication can be grouped into horizontal and diagonal communication

Horizontal communication

The flow of information between the people on the similar organizational levels is the horizontal communication. This type of communication usually takes place among workers of the same or that of different departments in an organization.

Diagonal communication

Flow of information with the persons at different levels who have no direct reporting relationship. This channel is used comparatively to a lesser extent in an organization. It can minimize the time as the flow of information is not through the 'chain'.

The crosswise communication may create difficulties, but it is a necessity in many enterprises in order to respond to the need of the complex and dynamic organizational environment. It is employed for the coordination of diverse organizational functions.

Miscellaneous directions of communication

Communication network

A communication network is the pattern through which the number of group communicates with each other. Several typical networks in an organization have been identified and include wheel, grapevine, communication by wandering around and off-work communication.

Wheel: In the wheel pattern all communication flows through one control person who is probably the group's formal or informal leader. In a sense, wheel is the most centralized network, because one person receives and disseminates all information.

Grapevine: Grapevine is fast spreading of information by face-to-face communication to many individuals. An informal communication channel existing in all organizations because it satisfies many psychological needs. Grapevine can be used to spread rumors but over 75% of information in a grapevine is accurate.

In most cases, grapevine is fast, efficient, flexible, accurate, and fulfills people's need to communicate. For management, the grapevine may be an effective means of communication. It is likely to have a stronger impact on receiver because it is face-to-face and allows feedback.

Two types of grapevine have been identified in organization setups. 'Gossip chain grapevine' is spreading of a message to as many others as possible from a single person. Each of these people, in turn, may either keep the information confidential or pass it on to others as gossip chain or as cluster chain (discussed below). The gossip chain is likely to carry personal information.

The 'cluster chain grapevine' occurs when one person passes the information to a selected few individuals. Some of the receivers pass this information to a few others while rest of receivers keeps it to themselves. All this happens during tea breaks, lunch hours, or at off duty timings. Both forms of grapevine have been mentioned in Figure 2.

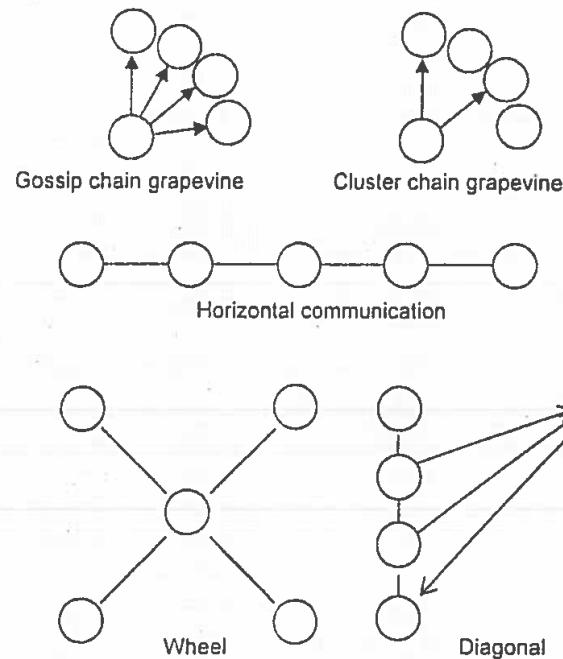


Figure 2: Various forms and directions of communication

The grapevine unfortunately, is usually negatively used and unavoidable in group dynamics. However, fortunately management of organization can seek to utilize it positively or at least attempt to assure its accuracy. One way to minimize the undesirable aspects of the grapevine is to improve other forms of communication.

Communication by wandering around: Communication by wandering around is the way of communication in which a manager keeps in touch with what is going on by wandering around and talking with people. In this way, the information can be communicated to immediate

subordinates, from down the organizational hierarchy, delivery people, customers, or anyone else who is involved with the firm in some way.

Off-work communication: Another form of communication in which the manager can communicate information regarding working at the occasion of a trip organized for entertainment. An evening party and off work lunch are another ways of such communication.

ADVANCED COMMUNICATION TECHNOLOGY

Since last decade, wonderful advances in communication have occurred and like management in other organizations, Pharmacy management has also been utilizing these new media and devices. The new communication technologies include:

Telecommunication

Telecommunication is interchange of information by using telephones or fax (facsimile) machines. The telephone may be conventional or a cellular telephone that works without a telephone cable line. Thus, it keeps a critical person linked with his office even when one is traveling or at home.

Fax machine is loaded with a paper role, linked with telephone cable and is able to convert a written page into current, which is again converted into a written page at destination. A fax can be used as telephone and as a device, which transmit documents from one place to another by simple dialing fax number of the destination. Graphical representations, figures, and drawings can be sending by this mode with very less time. The geographically dispersed departments can be linked in this way. Various marketing zonal offices of a firm are effectively be linked to marketing department by fax.

The modes mentioned above can be used to provide a rapid way of verbal transmission in case of telephone, and documents in case of fax across the country/abroad without expenditure of traveling, time and money.

Teleconferencing

Teleconference is interaction of a group of people using an audio and video media and has a great potential for use to hold meetings among managers. In this method, meeting people not only do hear each other but they can also see each other's expressions or discuss visual displays. This can be useful for conducting a technical discussion. Conferences may

be held when the need arises without making travel plans long in advance. It saves time and travel expenses and allows meetings to be held more frequently and improving communication between geographically scattered offices of an enterprise.

Computers

Computer is a device able to store, retrieve, and process information. The use of computer makes it possible to handle large amounts of data and to make information available to a large number of people. One can obtain, analyze, and organize timely data quite inexpensively and with no time. The computer graphics can be used to inform visually and important company's information can be displayed effectively.

Computer has got wide application in business including planning of material requirements and of manufacturing resource. Project costing, inventory control, budget preparation, financial analyses, word processing, simulation models, forecasting, and electronic mail are other computer applications.

At the supervisory level, the computer can help in scheduling, daily planning, and controlling of the operation. The top-level managers, responsible for the strategy and overall organizational policy can use computer to retrieve information from database to get help in decision models.

Computer networking

Computers can be linked with other computers and the workstations. This is called computer networking. Individuals at several workstations can communicate with each other as well as access other computers. The computer networking shares the advantage of face-to-face communication as feedback, etc. This system reduces paper works and save the time and cost. In a hospital, the physicians give prescription directly to a pharmacist via computer networking.

Electronic mail system

The computer networking provides communication link via telephone or intercom cables and is called electronic mail system. A medical supply company can gain a competitive edge by providing hospital-purchasing agents with the opportunity to enter supply orders directly at the computer terminal. It can also be used for gathering and dissemination of industry data, and the future trends.

Internet

Internet is another application of computer networking. However, this networking link is not amongst the computer within an organization. Rather this is a interlinking of computer globally. Lot of information can be gathered and made available to other in this way.

CREATIVITY AND INNOVATION

Creativity and innovation are related and used interchangeably but are different phenomena. Creativity is an individual's innate ability to generate new ideas or conceive new perspectives on existing ideas. The innovation is a managed effort to create new products or services or new uses for existing products or services. Innovation can be promoted by boosting up of creativity. Creativity thus, is an individual process that may or may not occur in an organizational setting.

Contrarily, the innovation is an organizational activity aimed at stimulating and managing the creativity of the employee.

IMPORTANCE OF CREATIVITY AND INNOVATION

Creativity and innovation, both are essential for organizational survival in today's complex environment. Organizations are constantly facing changing competitors, technologies, legal issues, government influences and expected or unexpected problems. All these situations and the managerial decisions require new ideas to cope with changing environment. Creativity and innovation may lead new ideas regarding the products, manufacturing process, decision-making and problem solving. Furthermore, creativity is one of the significant human traits that must be present in managers at all levels, for decision-making and problem solving. Besides implementation in other managerial aspects, creation and innovation are vital traits required in a product manager for the development of advertising message and medical literature.

Giving importance, value and an emphasis on innovation serves several functions. For one thing, it attracts bright people to the organization. For another, it injects a sense of excitement and fun into the workplace. People enjoy coming to work when they realize that they may get to participate in an existing breakthrough of some sort.

For an organization, creativity and innovation may help in the generation of the new products and for coping with the competition or to tackle any external/internal event affecting any aspect of organization.

PROCESS OF CREATIVITY

The creativity process involve four general phases i.e., preparation, incubation, insight and verification.

Preparation

Stage of creativity involves gathering of initial information, defining the task under consideration, searching all possible alternative and critically analyzing further data relating to the task or problem. It is also an active process of acquiring the skills and abilities necessary for accomplishing a task, solve a problem, or decision-making.

Incubation

A passive process of allowing those skills and abilities to mature and develop naturally is incubation. This is accomplished by thinking to explore unusual alternatives. At this stage the main focus is not the problem itself but its solution.

Insight

Insight, also called illumination is a spontaneous and sudden breakthrough in which an individual achieves a new level of insight for a matter under focus or performance.

Verification

Verification is the process of determining and testing the validity or usefulness of the idea that was achieved through insight stage. If the solution does not prove feasible, it may be necessary to cycle back through all or some of the stages.

PROMOTION OF CREATIVITY AND INNOVATION

As has been mentioned earlier, creativity and innovation are necessary for all successful organizations thus, management always in effort to promote them. The innovation and creativity can be promoted by employing traditional and modern techniques and approaches.

Traditional approach

The traditional approaches for promoting innovation and creativity are:

Reward System

Using the reward system to promote creativity and innovation is fairly mechanical but nevertheless an effective technique. Under this approach,

people and groups that develop innovative ideas are awarded with some incentives such as pay increase, cash prize, foreign trip, etc.

Brainstorming

Brainstorming is a group technique for stimulating as many novel and imaginative ideas and alternatives as possible on a given topic without evaluating them. Its purpose is to foster freethinking while sparing participants the inhibiting threat of criticism or mockery. Typically, six to twelve individuals from a variety of backgrounds are brought together to develop ideas or solutions to a problem, which is analyzed from a variety of perspectives.

There are six basic rules for a brainstorming session in a group setting such as mentioned below:

1. Participants should be encouraged to suggest wild and extreme ideas
2. They should be encouraged to build on suggestions made by others
3. They should be prohibited to criticize the idea of others
4. A record of the meeting should be maintained to aid in recalling of proposed ideas
5. Sufficient time must be given for such meetings to achieve maximum effectiveness
6. The problem under discussion must be manageable

Synectics

Synectics is considerably more complex than brainstorming and often requires the assistance of outside experts or consultants to accomplish a task, problem solution or decision-making. The starting point is the formation of a group of individuals having the skills needed to solve organizational problems. Whereas, brainstorming focuses on generating a large number of alternatives, synectics attempts to identify one radically different new idea or solution. Four mechanisms in synectics are used to view the problem from different angles using following techniques:

1. Personal analogy: Under personal analogy, the group members attempt to identify the problem typically.
2. Direct analogy: Direct analogy is the comparisons made with parallel and alternative concepts.
3. Symbolic analogy: Symbolic analogy is the use of impersonal images to describe the problem.

4. Fantasy analogy: Under fantasy analogy, the members suspend reality to develop an innovative solution.

Modern Approaches

The modern approaches for promoting innovation and creativity are:

Focused organizational Culture

A strong and appropriate focused organizational culture, which value innovation, can serve numerous innovative purposes. It can help everyone in the organization to recognize that innovation will be valued and rewarded. Organizational culture does not just happen, rather organizations decide to have strong thrust for innovation work to create and maintain it. A pharmaceutical firm must continuously learn how the innovations can be achieved. The innovation not only provides a base to cope with the environmental changes but also secures the future of firm and thus a firm must have to take great care for innovative culture.

Intrapreneur

Use of intrapreneurs is another increasingly popular way to promote innovation under which an entrepreneur develops an idea within the content of larger organization. An intrapreneur is different from the term entrepreneur (Chapter 1) in the sense that the later is an individual who develops an idea and then starts his or her own business.

There are three different forms of the intrapreneur's role in organization. An intrapreneur may be an inventor, champion or a sponsor.

- a) **As inventor:** An inventor is a person who actually has new idea or develops the new idea, product or service. Generally, this person may lack the expertise or motivation to get the product or service transformed into a marketable entity.
- b) **As champion:** The champion is usually a middle manager who learns about the project and becomes committed to it. He, therefore, helps in transformation of an idea into product or service after overcoming obstacles. He also gets others in the organization to take product or service seriously.
- c) **As sponsor:** A sponsor is a top-level manager who approves of and supports the project. This person may fight for the budget needed to

develop the idea.

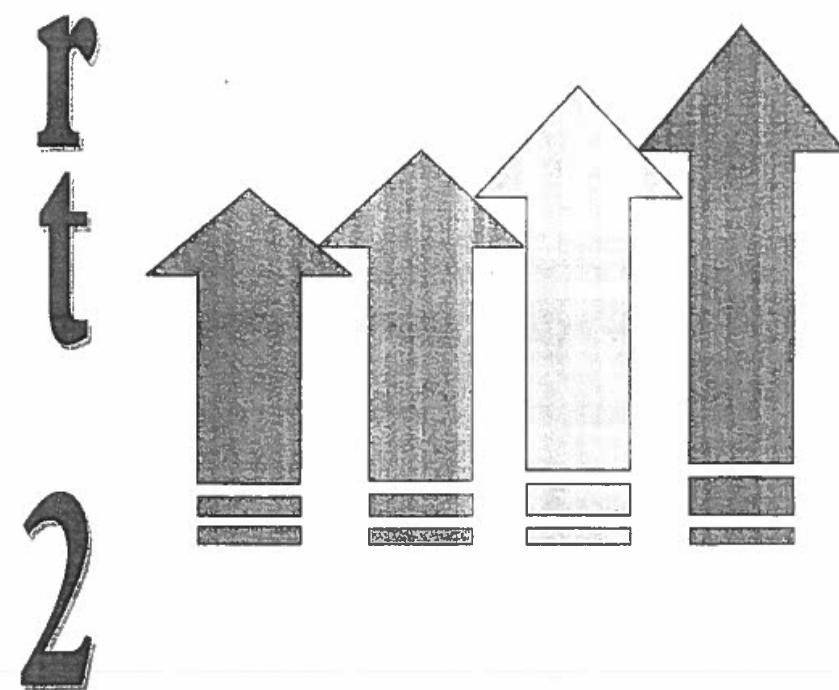
Normal group technique

The normal group technique (NGT) integrates both individual and group interaction within certain ground rules to synergy the creativity. The ground rules are the steps for NGT and factors for overcoming the tendency of group members to criticize. These include the following:

1. Preparation of a list of ideas by all participants individually
2. Presentation of ideas one by one from each member in turn without discussion so as each idea is recorded on a board in front of the participants. Usually a presented idea triggers a new idea for some one else who adds this new idea to his list for presentation on his turn
3. Discussion of the idea after the complete presentation and recording of the all ideas from the participants
4. Rank ordering of the ideas based on the members' opinions individually

The NGT is the means for developing large number of alternative ideas, thus, is more effective than brainstorming for idea generation.

P Production a Management



PRODUCTION MANAGEMENT

Production is a process necessary to transfer different inputs into a product or service. Production management is a term, confined earlier to the management of manufacturing activities for products or services. In recent years the area of production management has been expanded to include such activities as material management, cost control and operational management. The material management comprises of control over purchasing, warehousing, accounting and financing. Material management comes under input management which, besides material management, encompasses control of personal, methods, machines and money. The operational management refers to control on the activities necessary to produce and deliver a physical product or service to the customers.

The pharmaceutical production and operational management involves regulation of the transformation of inputs in accordance with highest standards into outputs (products/services). The output must meet all the official specifications, which is accomplished by carrying out production activities in compliance with the Good Manufacturing Practices (GMP) mentioned in the Drug Act 1976. The GMP consists of regulations regarding production, personnel, manufacturing facilities, space allocation, equipments and the environmental conditions for each section in a pharmaceutical firm. Manufacturing process is authenticated by continuous in-process QC assessments under the quality assurance (QA) program. Prior to initiation of production, under QA, all the starting materials are screened through quality control (QC) checks. To confirm quality of output and the validity of production process further, appropriate numbers of the finished products are, again subjected to QC testing. In short, a pharmaceutical firm follows the GMP control system and simultaneously, executes the input cost control and resource management under production management.

The production management will be discussed in proceeding sections with context to the input control and resources management. For more detail on the QA, QC, GMP and other technical information such as

facilities, space allocation, and instrumentation, the readers are referred to the textbooks on the subjects.

ELEMENTS OF PRODUCTION MANAGEMENT

Various components of production management include input management, cost control, and operational management.

Input management

The input management is control of materials, personnel, methods, machine and money. Input management is a multi-departmental task and the responsibility of control of all these input rests with the departments of material human resources department and that of production. Control of personnel has already been discussed in staffing (Chapter 5) and controlling (Chapter 7). Various inputs and resources required for the manufacturing of products have already been mentioned in Chapter 1. The material management will be elaborated in subsequent sections.

Material management

Material management encompasses control on purchasing, warehousing, transportation, accounting and financing and other operations until a product is available to the consumer. Material management requires maintenance of a sufficient inventory in a manufacturing firm. An adequate inventory of items must be required to ensure their continuous flow in manufacturing process to meet production and customer demands. The control on purchases, the first element in material management can be instituted by inventory control.

Inventory control

Inventory is a stock of materials which are used to facilitate production. Every type of business has inventories. Hospitals have inventories of medicine, surgical supplies, and all types of housekeeping items. A pharmaceutical industry has the inventories of raw materials, excipients, packaging materials, etc. as mentioned in Chapter 1 under inputs.

Inventory control implies securing and maintaining the optimal quantities and types of physical resources required to meet the organization's production goals. In attempting to control inventories, managers often are inclined toward keep inventory levels on the higher side. However, it involves greater investment that may bind money yields a lower return on the amount invested. This is one of the contradictory demands made

upon the manager with respect to keeping inventory. Fundamentally, inventory control is deciding how much to buy and when.

Inventory is important to an organization in various terms. It helps deal with uncertainties in supply and demand. It facilitates more economic purchases because materials are usually cost low when purchased in bulk at one time. Inventory may be a useful means of dealing with anticipated demand fluctuations. It is also important for an organization since it represents considerable costs.

Each item in inventory has its own cost. The expenses involved in placing an order for supply of items such as cost on time spent, paperwork and postage, etc. are called ordering cost. The expenses associated with keeping an item on hand, such as storage, pilferage, breakage, etc. are called carrying or holding cost of inventory. True costs of carrying inventory, include not only the direct costs spent on storage at suitable storage environment, space occupying but also the cost of money tied up in inventory.

Stockout cost of is the economic consequences of items running out of stock. This cost includes loss of customers' goodwill and possible sales because of the unavailability of item required by the customer. An inventory management system aimed to minimize all the aforesaid costs of inventory.

The inventory management is executed to:

- Meet customer demand at the lowest possible cost and with a minimum of investment
- Minimize the inventory investment
- Promote smooth production
- Balance of supply and demand
- Minimize procurement costs and carrying costs

Tools of inventory management

Various tools for inventory management are the ABC concept, money limitation on purchase order, inventory turnover based order, determination of economic order quantity, re-order quantity level, and just-in-time inventory control. The detail of all these tools has been given in the proceeding text.

ABC concept: ABC concept is a simple tool used for inventory management where the materials classified as highest-, medium- and low-value items, are regarded as A, B and C, respectively. The items with highest-value are few but cost more, the items having medium-value amount for more but cost bit less and the items with low-value represent highest number but lowest cost in an inventory. The combined value of items in A and B classification though, less in number than that of items on C but cost more comparatively. When there are substantial number of items to be controlled, emphasis should be given to the items present on A and B grouping since these items constitute the major portion of total inventory value (usually about 90% or even more). The inventory levels of C items should be given little attention and can even be kept at a high level since they contribute only a small percent of rising or lowering of inventories costs.

Money limitation on purchase order: Many managers exercise a power of control over the volume of purchases by placing a money limitation on the purchase order. But in this method issuance of multiple small orders for material purchase in the long run is more costly for the organization. This method for material management is not commonly employed in pharmaceutical industry.

Inventory turnover based order: A more modern and reliable means of inventory control is the computation of inventory turnover. Inventory turnover is a ratio of the cost of goods consumed or used during the fiscal period by the average of opening and closing inventories. This gives the number of times the inventory has been 'turned' during the fiscal period which may be low or high.

A low turnover indicates:

1. Duplication of stock – ordering of the items already present in surplus quantities
2. Large purchases of slow-moving items – purchasing of items having less turnover
3. Dead inventory – the items with no or very little turnover

A high turnover of inventory may be due to small volume purchasing. Large volume purchasing may take advantage of the maximum quantity discounts due to bulk purchase.

A turnover of 6 - 8 times a year is considered satisfactory for most institutions. However, institutions with limited budget may wish to increase their turnover rate. This is a policy decision and should be arrived at by discussion with the administration of the firm.

Economic order quantity: Economic order quantity (EOQ) is the determination of most economic size of purchase. It is another way to control inventory. Here the decision of inventory volume is based on the cost keeping in view that larger the purchase volume, lesser would be the cost. Determination of how much to order is the EOQ factor. In deciding the EOQ factor, ascertaining the ordering cost and the cost of carrying inventory are two important considerations. The following must be considered in arriving at the cost of ordering:

1. All labor in purchasing
2. Labor cost in supporting areas such as the stockroom, receiving and material control
3. Cost applicable to payment of invoices generated by purchasing section should apply to ordering cost
4. Cost of general operating supplies such as pencils, paper, forms, etc.
5. Freight and telephone costs

All of the above are applied to total cost, dividing this total cost by the total number of purchase orders gives ordering cost in rupees per order. To determine carrying charges, consideration must be given to the following:

1. Space occupancy for the storage area
2. Labor costs for storage operations
3. Cost of supplies for storage operations
4. Cost of the time spent for storage
5. Costs on provision of storage conditions (if applicable)
6. Material deterioration.
7. Material pilferage.

Dividing the value of average inventory by the total of above types of cost will give carrying or inventory holding cost for a particular inventory item. Thus, it may be advantageous to order expensive items on a monthly basis and inexpensive items annually. In general, carrying charges may range from 18 to 30%.

Thus, the formula for determining the Economic Order Quantity can be

given as:

$$EOQ = \sqrt{\frac{2 \times 12 \times \text{ordering cost}}{\text{Unit cost} \times \text{Inventory Carrying Cost}}}$$

The EOQ equation shows that the most economic lot size is a function square root of the monthly usage of items expressed in rupee.

The advantages of EOQ are multifarious. It minimizes ordering plus holding costs, while avoiding stockout cost. It gives a useful approximation for keeping some extra inventory on hand. The extra inventory kept on hand is the safety stock in case of unforeseen situations such as quality problems or reorder delays.

Reorder Quantity Level: The components of reorder point system are safety stock, order point, and order quantity. Safety stocking is to ensure stocking of some extra units of items necessary to compensate the errors in forecasting technique since all forecasting techniques have some inherent errors. Obviously, zero stock level must be avoided because it may cause serious problems. The zero stock level can be avoided by the implementing safety stocking as mentioned earlier. Ordering point is replenishment ordering for supply of items when the consumption (or remaining stock after consumption) of items reaches a predetermined number. The remaining number of items is determined depending on the lead time. The lead time is the time lapses between placement of an order and time it is received in the firm.

Ideally, the remaining inventory should be almost depleted before the arrival of the new shipment. Reorder (RO) is determined by:

$$RO = \frac{AU}{13} \times AVLT + SF$$

Where AU is the average usage rate of a material per month in units of issue, 13 are the number of months in a year plus 1, AVLT is the average vendor lead time and SF is the safety factor. The safety factors for vendor lead time have been cited in literature.

In the application of the above formula, following points must also be

considered:

1. Unanticipated large increases in usage
2. Shelf life of the items involved
3. Unusual delays in delivery caused by strikes or storms
4. Necessity for rechecking the reorder quantity level periodically to allow for a change in usage rate

Just-in-time inventory control: Just-in-time (JIT) inventory control is a technique for inventory control that emphasizes on having the required materials arrived just as they are needed in the production process. Under JIT inventory control, an organization has right material/item at the right place at exactly the right time and there is no need for holding backup material in inventory for a period of time. By this way, thus, holding costs is minimized, space is saved that can be taken up by inventory waiting for use in production. This system is however, workable only for the easily available materials. Its practice relies on a close relationship between supplies and customers.

The possible drawback of JIT is the halt of production process in case of delayed arrival of materials. Furthermore, in JIT there is not significant amount of inventory to cover mistakes in forecasting. Thus, for inventory management, following considerations are important:

1. Having an adequate inventory on hand: But one should not get caught with obsolete items
2. Obtaining lower prices by making volume purchases: But one should not end up with slow moving inventory
3. Increasing the inventory turnover: But one should not sacrifice service level
4. Keeping stock low: But one should not sacrifice service or performance

Cost control

The cost control involves the management of various elements of cost such as materials, labor and direct & indirect costs. The cost control of material and the material management supplement each other.

The basic consideration in inventory management is having the right amount of stock on hand, neither too much nor too little. Fundamentally, inventory control is deciding how much to buy and when. The economic order quantity (EOQ) deals with both how much to purchase and the

appropriate reorder point, or when to buy. Also EOQ is the amount to buy that will keep total costs at a minimum.

The cost control uses the different approaches for cost control. These approaches are based on figuring out and minimizing cost on total production. The critical components of cost control are materials, labor and burden.

Materials

The materials represent the largest part of goods cost. Materials are purchased according to the needs expressed in the production forecast. Small savings on purchases of materials, arranging purchase contracts and price arrangement are various ways for control of material cost. Material cost management employs a batch sheet to workout bulk yields so as it can be compared with theoretical yields. The theoretical yield adjusted according to the normal losses during manufacturing is called standard yield. The normal losses for such comparisons are derived on the basis of statistical analysis. Similarly, comparing theoretical and standard yield of packaging materials and loss of the packaging materials on packing line is also determined.

The production department should decide which product is to be studied for identification of losses problem and correction subsequently. Costs on material will be less if number of the units produced corresponds to the standard yield which is indicative of a negligible deviation between the theoretical and standard yields and therefore, less material losses.

There are two sets of costs involved in purchasing, procurement costs and carrying costs. The material procurement costs vary with the number of orders and may be reduced for any given item by placing fewer and larger orders. However, it results in an increase in inventory and consequently in the other set of costs, the carrying costs. Procurement costs vary directly with the number of orders and inversely with the amount of investment. On the other hand, the carrying costs may be reduced for a given item if smaller purchase orders are placed. However, the result will be an increase in the number of orders and consequently an increase in the first set of costs, the procurement costs. Carrying costs vary directly with inventory investment and inversely with the number of orders.

Labor

Personal services are needed for manufacturing operations. An effective

management and careful use of labors are important for cost control. The production is expressed as the number of direct labor hours needed to produce specified number of units for every product made. The number of hours required for the production of items can roughly be estimated by past information or by time study. Time study is more practical and reliable for establishing the number of labor hours needed for a given product. The cost of labor hours estimated can be calculated.

Calculation of the true cost on production is not as simple as it looks. It is because of the involvement of some indirect labor hours also for completion of a production process. The indirect labor hours are difficult to measure and in some cases, even not possible to identify. Indirect labor hour is the time spent by individuals not directly involved in the production. For example, bringing of packaging items to packing lines by a serviceman reflects the indirect labor hour. Analysis and control of available hours of work and use of the labor force efficiently is difficult without incorporating the indirect labor hours.

The involvements of the indirect labors must be identified as repair hours, equipment cleaning hours, line changeover, time spent by quality control inspectors, etc. Sometimes the direct labors hours are used for indirect jobs for controlling labor hour. Such jobs however, must be minimized because the wages of direct labors are far higher than that of the indirect labors contributing in raising the labor cost for specified process. For good cost control, every effort should be made to lower the percentage of indirect labor to total labor hour.

Burden

Burden is the expenditure on intangible elements and is categorized as direct and fixed burden. The direct burden refers to the expenditures on supervision, lost time, clerical help, and employee benefits as compensation of over time, sick pay and employee hospitalization. Operating expenses included in direct burden are laundry of uniforms, seminars and traveling. Repairs and maintenances are also consisted in direct burden.

The fixed burden includes the expenditure on electricity, land, sales tax and depreciation of the instruments and facilities used in the quality control department. Some companies allocate as much cost as possible directly into production department to get as close as possible to true cost. Controlling such costs demands a careful analysis and ways to

minimize them.

Operational management

The operational management refers to regulating the process of or activities necessary for transforming inputs into goods (and services) and delivering a product or service to its customers. The operational management function can be illustrated as in Figure 1.

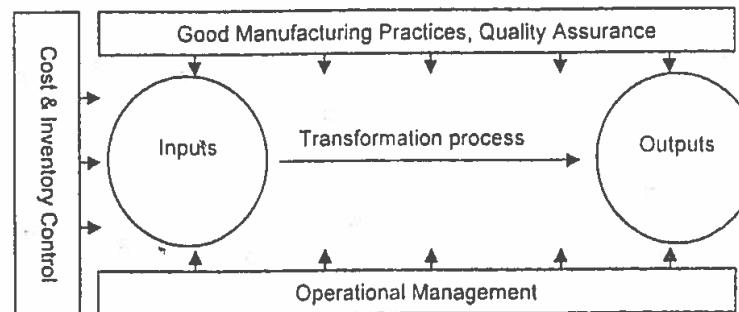


Figure 1: Operation management function.

The primary elements used in operational management are forecasting, capacity planning, aggregate production planning, scheduling, material requirements planning and purchasing.

Forecasting

Forecasting is the process of making predictions about future events that may affect the organization. In operational management, forecasting is the prediction primarily for the demand of products or services for short- to long-term. This prediction is based on the sales forecast done by marketing department. The forecast can be accomplished by carefully prediction or using statistical and mathematical methods. The information available as a result of forecasting is used for the capacity planning and aggregate production planning mentioned in following text. The production planning, in turn determines the number of batches of each product needed to meet the sales forecast.

Capacity planning

Capacity implies the maximum output capability of a productive unit within a given period of time. Capacity planning is determination of the

major resources, such as personnel, equipments, finance, and buildings required to achieve the production objectives of the organization. This is usually carried out during planning process. The ultimate aim of capacity planning is to utilize the productive capacity and resources effectively. A batch size of a product is determined after ascertaining its expected demand and the utility of production capacity efficiently.

Aggregate production planning

Aggregate planning is process of predicting how to match supply with product demand over some specified time horizon. This planning is usually for one year but is updated monthly. Its basic aim is to achieve an approximate balance between the production capacity and product demand. Aggregate planning depends on two facts; first, the maximum capacity of major facilities such as plants, and equipments is fixed with the time frame. Second, product demand is subjected to fluctuations due to uncertainties, seasonal influences or other market-related factors. The demand can be more or less than the expected prediction. The operational management needs to plan how to meet the fluctuating demand.

Resource allocation

After aggregate planning, the next step is allocation of inputs, i.e., materials, employees, financial source and various equipments. The basic resource allocation decision is the choosing between the options of manufacturing by itself or manufacturing from a third party (toll manufacturing). This decision is made on the basis of such factors as production cost, transportation cost, quality control, equipment needed, etc. If the decision is to manufacture the product within the organization, then the next step is executed.

Scheduling master production

Aggregate planning approximates groundwork for the master production schedule (MPS). The MPS that translates the aggregate plan into a formalized production plan encompassing specific products to be produced and specific capacity requirements over a designated time period. The MPS can begin with a tentative schedule that is refined through several revisions.

Material requirements planning

The material requirement planning (MRP) is the determination of the

requirement of materials for product(s) specified in master schedule and initiates the action necessary to acquire the material when needed. In MRP, raw material, packaging components and other items used in the production of an end product are determined for all products on a batch sheet. A batch sheet depicts complete formula for a product and thus reflects quantity of all the raw materials needed for different products.

The MRP is necessary to carry out the scheduled production. After MRP, the requirement is sent to the material department of the organization for the supply of materials. Thus, the purchasing needs of an organization are identified through MRP.

Quality Control

An additional controls needed in pharmaceutical operations are the implementation of quality control that has been discussed under Controlling in Chapter 7. The quality control department controls all starting materials, monitor the quality aspects of manufacturing operations and ensure the quality and stability of drugs. Thus, quality control testing is one of the important components of material management, operational management and cost control.

MARKETING MANAGEMENT

A product, though manufactured employing an efficient organizational management, skilled personnel efforts and complying all standards, yet it cannot sell on its own. The selling of a product is accomplished by an effective pharmaceutical marketing program. The pharmaceutical marketing is a subspecialty of marketing and is the system of business activity designed to plan, price, promote, and distribute pharmaceutical products to the target markets in order to achieve organizational objectives. A pharmaceutical product may be a drug product, health accessory, diagnostic kit, cosmetic, nutritional supplement or any product related to health.

Marketing and selling, the two sides of a coin are interrelated with each other. However, both are different in meanings. The marketing is wider in its scope than selling. It starts with the product idea and ends with customer's satisfaction. As defined earlier, marketing is the total system of interacting business activities designed to plan, price, promote and distribute want satisfying products and services to present and potential future customers.

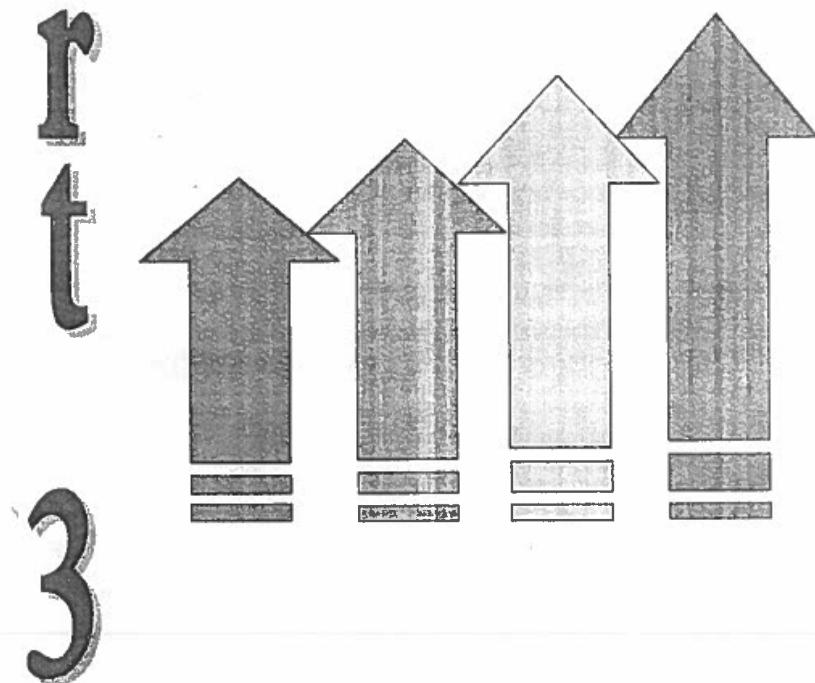
Selling, one of the important functions of marketing is concerned with the transfer of goods and services to the consumers for the exchange of money. The other differences of marketing and selling have been mentioned in Table 1.

The process of pharmaceutical marketing is quite similar to that of general marketing and both of them use the same marketing principles. However, the pharmaceutical marketing differs from general consumer marketing in the following ways:

Involvement of third party

A patient has no role in the selection of a product that will best fit his needs for regaining of health or reducing discomfort. Rather, a physician influences the selection of drugs and their utilization. The physician who prescribes drugs to the patients is regarded as the third party. The

P Market &
a Sales
r Management



consumer pays for the physician's decision regarding drug. Contrary to this, in case of general articles, a consumer can buy any product of his own choice without involvement of a third party.

Features	Marketing	Selling
Scope	Much wider and includes all activities starting with an idea of producing a product to satisfy customers' needs and ending with customer satisfaction	Limited in scope and includes the activities undertaken to secure the sale or distribution of products already manufactured
Objectives	Profit earning through satisfaction of customers	Concentration on sale volume and profit earning by selling more quantity of products
Main concern	Customer's satisfaction	Physical transfer of goods
Orientation	Consumer oriented	Production oriented

Table 1: Differences between marketing and selling

Coexistence of beneficial and side effects in the same product

The ordinary consumer product seldom has side effects. But a pharmaceutical product usually, has multiple side effects along with its beneficial effects. Ethically, all the side effects of a drug product are disclosed to the prescriber. Furthermore, a drug differs from general items in respect that the use of a right drug may cure a disease and save a life but the use of a wrong drug or right drug with wrong way may lead to severe complications and unexpected events. Therefore, selling of pharmaceuticals is critical and required to be selected carefully by or used under the supervision of a qualified and technical person.

A field dominant in detailing

The pharmaceutical market is highly technical so it is a detail-dominated field. Detailing is a drug promotion achieved by a personal contact with medical professional using face-to-face two-way communication. It is a compulsory component of pharmaceutical marketing since convincing of a physician for prescription of pharmaceuticals is a technical matter.

Critically-controlled marketing activities

All the pharmaceutical marketing activities such as manufacturing, distribution, wholesaling and retailing of drug products are regulated and require licenses. Self-regulation and compliance with strict internal as well as external standards and specifications are the basic requirements in all of the above activities.

Restrictions on direct advertisement

Misuse and self-medication of drugs may prove harmful. Therefore, direct advertisements of drugs to the ultimate consumers are prohibited in the pharmaceutical marketing. Contrarily, in general consumer market, sales of products is as a result of extensive advertisement directly to the ultimate consumers.

Technical marketing

The pharmaceutical product is highly technical in nature since, manufacturing and marketing required to be done by technical and skilled personnel. As has been mentioned before, a pharmaceutical product along with beneficial effects has side effects as well. The prescription of pharmaceutical products is based highly on convincing of a prescriber, which accepts and prescribes a product on technical/rational basis.

BASIC FUNCTIONS OF MARKETING

The pharmaceuticals manufactured by a firm have to pass through different operations and hands (channels) till it reaches to the ultimate consumers. The various marketing activities can be best described within the framework of basic marketing functions, which are outlined below:

Exchange Function

Among the exchange functions included are buying and selling.

Buying

Buying is one of the fundamental functions of marketing. All the business organizations i.e., manufacturers, wholesalers and retailers buy the goods in one form or the other. The manufacturers buy machinery, equipment and raw materials whereas wholesalers and retailers generally buy finished products and goods. Success of an organization depends on effective buying.

The word buying involves not only purchasing of goods but it also comprises of a complete procedure for purchases, which involve following steps:

1. Assessing total materials requirement
2. Deciding the maximum quantity to be purchased under one order
3. Finding out the best source of supplier and at a minimum possible cost with a good quality
4. Calling for quotations and tenders

5. Placing the order for purchase of the required quantity of materials
6. Receiving the goods and inspection thereof, both in terms of quantity and quality
7. Sending the goods to store for storage
8. Checking the bill and making the payments

Selling

Selling is the ultimate aim of a firm and a vital part of any business and marketing. It brings buyers and sellers together. Sales are the only source of income for all business enterprises. If there is no sale, there will be no profit and hence, a business cannot survive. Selling is very important for future planning and provide basis for future production strategies. The purpose of all marketing activities is to sell the goods or services. It is a process of finding the customers, creating demand by various promotional activities and finally transferring the goods for value to the ultimate consumers.

The demand generation is the main stage of selling and is possible only through customers' awareness mainly, by advertisements, publicity and other sales promotion techniques discussed later (Chapter 15 to 18). In pharmaceutical marketing, though, the direct advertisement is prohibited yet, it is targeted to the medical profession to motivate them to prescribe and thereby to enhance sales. However, over-the-counter drug products can be advertised directly to the consumers.

Both the buying and selling functions has been mentioned in Figure 1.

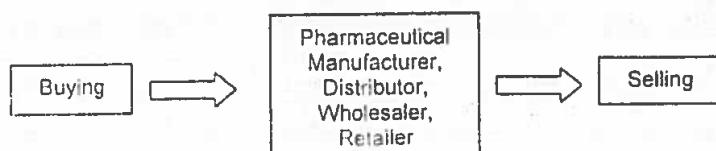


Figure 1: Buying and selling functions of marketing

Physical Supply Function

The physical supply function in marketing consists of storage, and transportation.

Storage

Storage is the process of keeping, holding and preserving the goods or

materials temporarily. When storage is accomplished at a large scale, it is known as warehousing. The basic idea of storage is to keep the goods available as and when required. Storage furthermore, ensures a continuous and unrestricted supply of raw materials/packing materials to the production department and finished goods in market for the ultimate consumers. Storage is necessary for manufacturers, distributors, wholesalers as well as retailers for regular supply to the consumers when they require.

Transportation

Transportation is concerned with carrying the goods from places of production to places of their consumption. Like other industries, pharmaceutical firms are situated at selective places depending on the availability of raw materials, labor, easy transportation and other favorable conditions. After the process of production, packaging and finishing, the drugs must reach to consumer in shortest possible time. This is of particular importance for certain drugs having very short shelf life. Thus, suitable transport facilities are essential for distribution of drugs.

Ancillary Functions

The ancillary marketing functions consist standardization and branding, financing, risk bearing and feedback information.

Standardization

Standardization means that the products are identical in terms of quality and description and conform to the predetermined standards. The standards of drugs convey the idea of uniformity with regards to their chemical contents, size, color, flavor, appearance and amount of trace elements, etc. All types of pharmaceutical products e.g., tablets are standardized for their shape, size, diameter, weight, hardness, percentage of active ingredients, rate of disintegration & dissolution, etc., before sending them to market. Similarly, parenterals are standardized for sterility, pyrogens, clarity, leakage and percentage of active ingredients.

Grading

Grading means the classification of goods into well-defined units possessing similar characteristics of size, color, shape, etc. Drugs and pharmaceuticals are manufactured according to compendial standards such as British Pharmacopoeia, United States Pharmacopoeia, and Pakistan Pharmacopoeia, etc. The drug products are being marketed by

mentioning the names of the official compendia on the drug pack according to which they have been manufactured. The crude drugs of vegetative origin are graded according to the percentage of active constituents, size, color, flavor, etc. Chemicals are graded as commercial, laboratory, or analytical grade, etc.

Branding

Branding may be defined as an act of giving a proprietary name, term, symbol, or a design to a product in order to distinguish it from the products of other sellers or competitors. Advertisement, promotion and large scale selling are not possible without giving brand name to a product. The detail of brand name has been mentioned in Chapter 12.

Financing

Finance or capital is the backbone of any business. Every business enterprise must have a clear strategy for financing its operations. It is required for the purchase of machinery, raw materials, and carrying production operations. Finance is also required for transportation, storage and for other operational purposes. The distributors, wholesalers and retailers also need finance for purchasing, storing, and giving credit to their customers and for meeting day-to-day expenses. Therefore, financing is a significant market function.

Risk bearing

A more common decision-making condition is a state of risk. Marketing provides opportunity for risk bearing. In marketing process, many kinds of risks are involved at every stage. Materials, from time of procurement for production and the finished products, till the time of dispatch for actual consumption are exposed to risks on account of unavoidable circumstances. Accidental fire, theft, flood, price reduction, change in demand and supply, non-recovery of credit, dishonesty of employees and partners, and strikes are few risks to list.

Feedback information

Feedback information is one of the basic market functions. It is collecting of the vital information regarding type of goods needed by customers, site of their need, quantity needed, market trends and the level of competition. After collection of the relevant information from market, information feedback involves conveying it to the top management. The feedback information is periodical in nature i.e., daily, weekly, fortnightly, monthly,

quarterly or yearly which are important for reacting demand changes, decision making and future planning.

MARKET MANAGEMENT

An effective management of all marketing activities is required for the success of a pharmaceutical firm. Marketing management is concerned with the direction of all activities targeted to attain market objectives. All management functions such as planning, organizing, staffing, leading and coordination (described in Part I) are also applied to the field of pharmaceutical marketing. The management process, as applied to marketing fundamentally, consists of planning of marketing program, its implementation and evaluation of its performance.

The planning stage includes setting of goals and selecting the marketing strategies to reach these goals. Basic market objectives include satisfaction of customers' needs, increase in sales volume, and maximization of organization's profit. The implementation stage includes organizing, staffing and directing the actual operation of an organization according to the plan. The performance is compared with goals in evaluation stage of management. This performance analysis is used in setting of future goals and plans.

In the forthcoming sections, the strategies for achieving market objectives will be discussed. The implementation phase includes organizing, staffing and coordination. In the evaluation phase, performance evaluation is carried out as mentioned in earlier parts of this book.

MARKET STRATEGIES

The market strategies for achieving market goals are selected under market strategic planning. Strategic planning is matching of a firm's resources with its market opportunities over the long run. The essential components of strategic planning are market segmentations and targeting and designing of the marketing mix.

Market segmentation and targeting

Market segmentation is dividing the total marketing into small segments, what is known as the target markets. Each segment is considered to have different needs and wants. The pharmaceutical market is a broad market that can be segmented by various ways. Under geographical segmentation, the market is divided in different regions. Compartmentalization on the basis of physician specialties is another segmentation approach. In this

approach, pharmaceutical market is considered as it consists of various sub-markets having varied wants and needs. These sub-markets (physician specialties) may include several specialties. Some of these include general practitioners, gynecologists, orthopedics, child specialists, surgeons, cardiologists, eye specialists, nephrologists, ENT (ear, nose, and throat) specialists, skin specialists, dentists, etc.

Along with these aforesaid segmentation variables, there are other characteristics on the basis of which the pharmaceutical market can be further segmented. These are:

- Physicians with innovative behavior
- Trend setting nature of physician
- Easily convincible physician

Each of these sub-markets within the larger market, in fact represents special subgroups of customers with special needs. The effective marketing demands proper targeting and positioning of pharmaceutical products. A target consumer may be located in one or more sub-markets. For example, a newly launched antidepressant may be targeted to a broad market i.e., to general practitioners and nearly all of the specialists while for an antihypertensive drug, cardiologists represent the big market and general practitioners are next to the cardiologist.

Similarly, an antibiotic has the possibility of targeting to all sub-groups. For the new product intended to satisfy more than one segment, the product manager develop detailing literature/advertisements message satisfying each particular segments what is known as artificial or psychological product differentiation.

Market mix

Set of four elements such as product, price, place (distribution) and promotion is called market mix of a firm. As all of these elements in market mix start with alphabet P, and thus, sometimes market mix is referred as 4Ps. These four elements are also known as controllable factors owing to the fact that a pharmaceutical firm has full control over them. However, the firms have no control over the external factors like competition, advances in technology, patent laws, political situation, rules and regulations, etc.

Achieving of marketing goals requires controlling effectively of the internal factors. A firm can respond to the uncontrollable external factors

with an efficient designing of the elements of market mix. The external forces markedly influence the marketer to think about the marketing mix in the context of their overall business environment. A detail on the elements of marketing mix has been presented in next Chapters from 12 to 18.

PHARMACEUTICAL MARKETING AS CAREER

The pharmaceutical marketing is a broad field with a variety of tasks. There is a place in market for every one regardless of one's personal abilities and training. However, this dynamic field demands technical knowledge. Like other marketing fields, this is a route to top because of easily measurable sales performances and productivity of the employee and firm's intention to promote some of the newly recruited pharmacist for higher management jobs.

The market position in an organization starts with low-level entry job like medical representative (Chapter 17). There is lack of job structure and the pharmacists especially girls consider it unfit for them. The other darker side of view is a low regard for drug detailers because of the presence of non-technical detailers and managers. Managers are not usually positive to pharmacists since, they consider them as professional threats to their positions.

The current trend for joining the field of pharmaceutical marketing has been fairly increased. Lack of production and other jobs and better compensation offered to the employees involved in marketing than production jobs has shifted the interest of fresh pharmacists to adopt marketing jobs. This trend has also motivated pharmacists to pursue Masters in Business Administration (MBA). On the other hand, the pharmaceutical industry has recognized that pharmacists are well-versed with drug manufacturing, pharmaceutical research, biopharmaceutics, and quality control, thus less time is required for their training as pharmaceutical representatives and have better position to explain queries of medical professionals about drug actions, side effects, interactions, contraindications and toxicity. They also think it prestigious for a company to be represented by pharmacists who are professionally qualified persons. These pharmaceutical firms now prefer to employ pharmacists in their marketing department.

Marketing is the way to top where progress and promotion depends on the willingness to work, individual abilities, satisfying the employer on

adding of value to the organization and the results, individually as well as through other people. Before entering in field, a pharmacist must carefully match his interests and skills with the available marketing jobs so as, he can perform his duties effectively. The selection for marketing job means that the firm has recognized the capabilities of representing the company to customers and has decided to rely on to successfully meet its objectives.

Pharmacists getting jobs in marketing must adopt a professional approach and encourage the fresh pharmacists to adopt this field. This will enable the employment of large number of pharmacists in market positions. On the part of Educational Institutes, the pharmaceutical marketing curriculum must be revised with more emphasis on the current pharmaceutical marketing trends.

PHARMACEUTICAL MARKETING OPENINGS

The pharmaceutical marketing has a lot of potential for employing the fresh pharmacists. The possible hierarchy of job positions is mentioned below:

Medical Representative

Medical representative is an entry-level job in pharmaceutical marketing and is a good starting opportunity. Sometimes it is also called territory sales representative, detailman or sales promotion officer. Whatever the title given, a medical detail man is responsible for promotion, distribution and detailing of drugs to medical professional including physician, dentist, veterinarian, and a hospital pharmacist.

Product Specialist

Product specialist is the next level job where a medical representative can be promoted. A product specialist is responsible for promotion of single drug or product line such as drugs of one pharmacological group for example, antiulcerative to the medical professionals.

Field/Regional Manager

Field manager is a supervisory position responsible for supervision of a team of detailers for the promotion, distribution and detailing of drugs. Currently, a few pharmacists are working at this position but the situation will be improved shortly because of the greater number of pharmacists working as medical representatives and product specialists who have the

potential for promotion to this position in near future.

Product Manager

The product manager assists detailers, supervises and prepares strategies for drug promotion. A product manager plans for and manages the development of the assigned, existing, and the new products. The other duties include assessing marketing needs and opportunities, developing market strategies, preparation of promotional materials for detailers and application of marketing resources in an optimal manner. For this job, additional degree of MBA is given preference but the senior and experienced medical representatives can also be considered eligible for this position.

Country/National Sales Manager

Country/National sales manager is a higher-level job in pharmaceutical marketing and its duties are to supervise the team of product managers. The other duties include planning, market research, and development of market strategies, advertising, promotion and forecasting of the products at National level.

Depot Manager

Depot manager, a new opening has been created after the compulsion in the Provincial Drug Rules 1988 according to which, the distribution of drugs will be under the supervision of a graduate pharmacist. Distribution specialist is the other title given to this position. Various distribution setups such as the United Distributor Limited (UDL), Muller & Phipps (M&P), Spencer, Vikor, etc. have pharmacist working as depot managers.

Retail Manager

Retail manager is a new concept, which is at its initial stage and with limited job opportunities. The concept of chain stores is getting recognition in Pakistan that has generated various job opportunities for the pharmacists as retail officer and retail managers. A pharmacist can run his own pharmacy or chain of pharmacies on self-employed basis and act as a retail manager of his own retail setting. The responsibilities of a retail manager include layout design, product display, promotion, selling and management of inventory.

Other possible potential market opportunities where a pharmacist can utilize his capabilities may be advertising, new product planning, market

research, industrial marketing and medical writing.

Pharmaceutical Advertising

Advertising is a field in which areas of responsibilities are creation and production of individual advertising for a single product or entire promotional campaigns for a pharmaceutical firm. A pharmacist with pharmaceutical knowledge and creative potentials will be fit for this job.

New Product Planning or Sales Planning

The new product planning or sales planning is a marketing field in which the responsibilities include market research and sales forecast. This could be an attractive position for a pharmacist having inclination for this. A degree in business administration would be considered an additional qualification for this position.

Market Research

Market research is a field, where the duties may include defining of problems, information collection to resolve problems, designing of the product, data analyzing and report preparation.

Industrial Marketing

The industrial marketing is the marketing of basic raw materials and other industrial necessities for pharmaceutical industry sector.

Medical Writing

Medical writing for pharmaceutical/medical media can accommodate pharmacists with the inclination of journalism and creation.

THE PRODUCT

A product, one of the four elements of market mix is an output for use by the ultimate consumer. The a product is a set of tangible and intangible attributes, including packaging, color, price, quality and brand name, plus the services and reputation of the sellers. It may be good or a service, or an idea. A good is a set of tangible physical attributes assembled in an identifiable form. Any drug offered by a pharmaceutical firm is a product. The service or idea provides benefits but not a tangible article at all. Counseling provided to a patient from a hospital pharmacy is an example of pharmaceutical service. Some differences between a product and services have been mentioned in Table 1.

Features	Product	Service
Tangibility	A physical thing that can be seen, touched, bought and owned	A nonphysical thing and is a deed performed by one party for another that a customer can't keep, rather it is experienced or used
Selling	Produced in factory and waited for a customer before its selling Usually produced far away from the customers	Produced and consumed in the same time frame Usually produced in the presence of the customers
Storage	Produced and stored before selling	Cannot be stored

Table 1: Comparative features of product and service

A product carries various other features as well. These features include an understandable descriptive name known as generic name. The generic name is a nonproprietary identification of one or more active ingredients in a drug product. The brand name of a product on the other hand is owned by particular firm and cannot be used by others. Each brand is taken as different product though having only intangible difference of the brand names owing to possessing of product quality, price, packaging design, and seller's reputation.

A pharmaceutical product is used obviously for some defined purpose and meets consumer's expectations. It may be used mainly for diagnosis,

treatment, and management of certain ailments. The successful pharmaceutical firm offers appropriate and effective products. A product helps pharmaceutical firms to satisfy the market demands. This product maintains and builds the company's sale and image.

Usually a single product is not enough to meet the needs of target customers thus, assortment of different products is usually required. The product assortment, also called product mix is a set or list of all products a firm offers for sale. It may include the product lines and/or individual products. Antihypertensives, tranquilizers, antibiotics, etc. are the product assortments.

The product line is a set of individual products closely related and intended for similar uses. These products are produced in a similar way or come under the single therapeutic class and thus are targeted to same target market. Calcium channel blockers, beta-blockers, angiotensin convertase enzyme (ACE) inhibitors can be included in the antihypertensive product line since all are used to normalize blood pressure.

PRODUCT CLASSIFICATION

A pharmaceutical product may be prescription or non-prescription product as mentioned below.

Prescription product

The life saving drug products that is sold only under the prescription of a registered medical practitioner is called a prescription product. This product cannot be advertised directly to the ultimate consumer (the patient). However, it can be advertised to the medical professional through a specialized media. The other features of prescription drugs have been mentioned as below:

1. Used for the conditions difficult to diagnose
2. Require professional treatment decisions and monitoring
3. Requiring more in-depth level of information regarding proper use
4. May have limited amount of usage experience
5. With still under developing safety and/or efficacy profile
6. May have potential to be abused

Non-prescription product

A non-prescription drug can be sold to the patients without prescription of a registered medical practitioner. The non-prescription drug products

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are also known as over-the-counter (OTC) drugs. The OTC ethical drug can be advertised directly to the ultimate consumer. The other features of OTC drugs are as follows:

1. Used for the easily self-diagnosed condition
2. Used for the reasonably self-treatable conditions
3. Usually time tested and there is a substantial usage experience
4. Requiring modest or reasonable level of information for proper use
5. With general recognition of safety and effectiveness

PACKAGING DESIGN AND PRODUCT NAMING

Product packaging design and the product naming are two vital aspects for product development and marketing. Both of these areas required strategic decision and management.

Product Packaging design

Package is the container in which a pharmaceutical product is placed, basically to protect it during transportation and storage. It also guards the product against contamination, spillage, pilferage, and environmental conditions. Rather than just a protective device, the firms are interested to use package as a marketing tool too.

A product packages is an important part of consumer acceptance, a device for establishing consumer preferences and is vital to marketing success. The image of the product, which comes to the consumer's mind, is of its package. In a real sense, the package for the product is the same as the "good clothes build the personality of man". Apparently, the products are judged by their packages. That is why many advertisers boldly feature the products in their packages. More details of the topic have been given under the Promotion (Chapter 15).

Naming a product - branding

As mentioned earlier, a pharmaceutical product may be identified by its generic name or by brand name. The generic name may be a chemical name or scientific name. A chemical name is given according to defined rules according to chemical nomenclature. However, the scientific name of a product is an abbreviated or simple identification not in possession of any commercial party. The brand name is an exclusive title given to a product by its manufacturer. Usually brand name and trade name are used interchangeably. However, sometimes the trade names refer to the proprietary names of business firms.

Once a good product is developed, and appropriately packaged, its appropriate name is needed. An analogy can be drawn to the birth and naming of a child for identification and communication purposes. The manufacturers want that prescribers be able to pick their products over that made by competitors, hoping to build brand loyalty for their output over a period of time.

The manufacturers use names to expedite the communication about their product. Advertising would be point-less unless attention to the product could be called by a name, which is capable of being remembered. Thus, a brand name acts as handy purchasing aid for the consumer and as a promotional vehicle for the manufacturers. On the other hand, a brand name makes the manufacturer accountable for the product quality as well.

How words affect people, is an essential knowledge needed when struggling with successful brand names of the products. Many technical rules surround the choice of a brand name. The brand names must be:

1. Unique and distinctive
2. Legally available for use
3. Short and simple
4. Easy to spell and read
5. Easy to remember
6. Easily pronounceable
7. Pronounceable only in one way
8. Without complex foreign words
9. Not adverse backward reading
10. Compatible with packaging or labeling needs

Selection of brand name

Important consideration in choosing brand names of drug product is their 'appropriateness'. The manufacturer must first determine what kind of image it desires to create for its brand in the customer's mind. Along with the above-cited features, a brand name should also have graphic possibilities. The graphic possibilities means how the brand name will look on the package and how it can give something about to built the promotional campaign.

Selection of a suitable brand name for an infant product is one of the initial jobs in the marketing process. This simple task can be most important to its success. There are several ways in which a brand name can be selected and assigned. Some of these ways have been mentioned as

under:

Related to generic name

A generic name, as mentioned earlier, is one used to describe a drug category and cannot be used exclusively by a manufacturer. However, this is a usual practice that the products names are related to the generic names, e.g., Amoxil for amoxicillin or Amikin for amikacin.

Related to therapeutic activity

The brand names of product may provide an indication of their therapeutic activity of the product. For example, Diuril and Coregard indicate diuretic and guarding the heart, respectively.

Related to company name

Some brand names of products are related to the company producing them. These may combine the generic names or some other combination with company names. For example, Eplazyme, a product aiding in digestion from Epla pharmaceuticals and Shazoovit, a vitamin product from Shazoo Laboratories, etc.

Related to active ingredients

Several brands reflect the active ingredients they have, e.g., Capozide, a combination of captopril and thiazide diuretic. Triaminic contains three amines such as mepyramine maleate, pheniramine maleate, and phenylpropanolamine.

Related to sales message and promotion

In some brand names it is attempted to incorporate a hint for a sales message in the brand names themselves. For example, Ultraproct for ultraprotection, or Ultran the ultimate tranquilizer.

Building a running theme

A few brand names have attempt to build a running theme through the names of product in line by repeated use of some prefixes or suffixes, e.g., Theragran M, Theragran H, Theragran HV; Surbex, Surbex T and Surbex Z.

Reflecting site of action

Some brand names combine the notations to reflect site of action. Optadex reflects a dexamethosone for optical site.

Reflecting the route of administration

Some brand names can be recognized as to give some indications about the route of administration. The brand name Cymoral can be cited here as an example that reflects that this brand is to be taken orally.

Reflecting the dosage regimen

A brand name incorporates frequency of dose administration with other combinations mentioned above. Dolobid and Enoxabid (enoxacin + BID) both, bearing suffix, BID.

Related to literary sense

A brand name may have literary meaning e.g., Modecate which contains fluphenazine, a decanoate ester used for mode elevation. This brand combines the mode and Decanoate. Augmentin, the name of a combination of two antibiotics has been derived from word 'augment' meaning 'to enhance'.

Besides the above listing various brands are available which are independent and not related any way to medical use.

LIFE CYCLE OF A PRODUCT

Each pharmaceutical product has a life cycle span as all individuals have. The life cycle of a pharmaceutical product starts from its introduction stage wherein product first appears in market. Following introduction is the growth and maturity stages. Ultimately in decline stage, the product becomes outdated, and obsoletes from the market. All of these phases in life cycle require different blends of marketing activities. The phases a product have been depicted in figure 1.

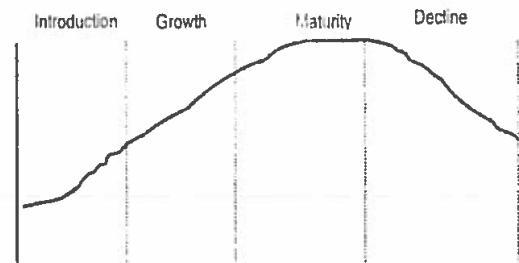


Figure 1: Various phases for product life cycle

It is note worthy that the life cycle concept is applicable to the product categories rather than to individual products. Some products never get off the ground, some turn around in the growth stage and decline rapidly and still some decline and then come back to life again. Technical advances have shortened the life cycle of the drugs. In coming years, the product of biotechnological origin will replace most of the conventional drugs.

Various phases in life cycle of a pharmaceutical product can be mentioned as follows:

Introduction

In introduction phase, the product appears in market. During this phase, a firm tries to stimulate demand through heavy promotion. Due to expenditures on heavy promotional campaign, profits are often insignificant at this stage. For some companies introduction phase is a major financial challenge as they try to come up with enough money to launch the product efficiently. Occasionally, however, a new product in its introductory phase may have no competition especially if the product is a truly innovative in nature. The biopharmaceuticals (products obtained by biotechnology) are the examples of innovative products that have very less competition at this level.

Growth

Sale of the product increases rapidly during growth stage because a larger number of customers adopt the new product. However, aggressive competitors begin to appear on the scene as well. Sometimes the competition help stimulate demand, yet it usually forces to make a greater investments on promotion of the product in growth stage. Various efforts are needed to enhance the growth of product stay ahead of the competition. The increased competition can also force prices down particularly if the product is offered for over-the-counter (OTC) sale. At an early growth phase, the profit usually raises because manufacturing costs go down but due to greater competition and expense on further promotion lead to a fall of profit.

Maturity

The sale level at the maturity point often turns down. Competition during this stage is tougher due to the entrance of many aggressive competitors in race for profit. Companies control their costs by cutting back their marketing expenses and continue to serve the dedicated customers. Some

companies re-energize their mature products giving them a boost of marketing support. The maturity stage can be extended by product modification. Some pharmaceutical products enjoy maturity stage for a long period of time. These products are usually long established and sold without much promotion or advertising, continue to yield profits. Such products are called cash-cow products. Cotrimoxazole is one of the examples.

In pharmaceutical industry, product modification is not easy or permissible within the legal framework contrary to the ordinary consumer market. In consumer market, products are usually modified and made different from competitors' products to cope with competition. This technique is termed as 'product differentiation'. After product differentiation, such products are introduced in market as 'new', 'enhanced', 'advanced', or improved products.

In pharmaceutical market, instead of really modifying the drug product, attempts are made to change to product position or to emphasize on the symptoms best fit the new season. This 'artificial or psychological product differentiation' is achieved through changing only the promotional material for a product rather than modifying the product itself. For example, amoxicillin is an antibiotic promoted at all level for mild to moderate infections. During winter season when the respiratory tract infections are quite common, its promotional brochure can be designed specifically for patients with such infections. In summer season the modification in promotional material of the same product for treatment of enteric fever will differentiate it from the amoxicillin used during the winter season. The same product can be promoted in otitis media as well obviously with other promotional message.

Decline

The product decline phase is characterized by dropping off sales. The new technology, products or changing trends in marketplace can cause a product to decline. At product decline stage, the manufacturers can react in various ways. Some firms cut the promotional budget of the product in decline stage and simply phase it out. Other tries to revive their product. However, only a product having the potentials of generating positive memories among customers can be revived.

Sometimes a product shows expanded usage and it can receive a new boost in market. Example of aspirin can be cited here, the usage of which

has been expanded from analgesic to antithrombotic. This new usage of the drug has revived the aspirin in the market place.

It seldom happens that a product has a very long life span. Some drugs, known as grandfather drugs are still in use and have been the source of many descendants or generations of drugs. For example, penicillin is still in use along with its descendant, amoxicillin.

The length of each stage mentioned above and that of life cycle of a product varies depending upon the products. The pharmaceutical firms try to expand the life cycle of a drug to milk it as long as possible. If this extension in life cycle of the product is not possible the firm tries to produce a new product.

DEVELOPING AND MANAGING A NEW PRODUCT

Pharmaceutical market needs are dynamic because of ever demand for new pharmaceutical product with more efficacy and safety. In response to these new market needs, a successful pharmaceutical firm offers appropriate and effective product solutions. For this purpose, nearly pharmaceutical organizations maintain their research and development (R & D) department.

A new product may be truly unique and novel or significantly different from the existing product. An imitative product is considered new to a particular company but not new for the market. Sometimes an existing product can become new product in a new market.

New product development helps the firm to satisfy new market demands and to replace the existing products, which are in, or will shortly enter the decline stage. This product replacement maintains and builds the company's sale and image. In fact, new product development is a growth strategy and vital for the future of a firm. The new product may be a prescription or over-the-counter product.

The idea for a new product may be obtained from within an organization, customers or from the marketing department. The International Market Survey (IMS) is also one of the sources of new product idea. IMS ranks the product based on their sale in the preceding year. The best selling product is usually imitated by other pharmaceutical firms to snatch the market share.

Each idea for new products is screened and evaluated in terms of its demand, manufacturing feasibility, financial implication and compatibility

with company's structure and with the environmental and social standards.

Planning a new product

This has been mentioned earlier that manufacturing a quality drug does not mean that it will attain a satisfactory sales level without efforts and planning. All the products in the market, in fact compete for the consumer's needs so must be planned carefully. Planning is the duty of marketing department of the firm. A typical marketing department is composed of a pyramid of Marketing Director, National or Country Manager, Product Manager, Regional Managers and a team of medical representatives (detail men).

Marketing Director, National Manager and Product Manager are the key personnel who develop the market policy, plan to achieve maximum profit by spending the minimum cost. The product manager is responsible for planning related to new products as well as to established ones. A larger firm may have a number of product managers. They are responsible for developing advertising and detailing messages, detailing literature and training material of the assigned products to be used by detail men. The regional sales managers through their detail men implement the marketing policies and programs.

In the launching stage, the profits are lower, sometimes negative because of low sales and heavy promotional expenditure demands a careful marketing strategies and policies.

Market strategy for a new product

Marketing strategy for the launch of a new drug product consists of the following facets.

Setting the level of market mix:

Level of market mix variable depends upon the category of the pharmaceutical product, size of company and company's resources. In launching a new drug product, marketing management can set a high or low level for each marketing variable (price, promotion, distribution and product quality). As far as the quality of the drug is concerned there is no compromise on the quality, which is legally required, and no firm can violate this requirement. For price of the product, the pharmaceutical firm has to get permission from Ministry of Health through Drug Registration Board at the time of its registration. Thus, the price permitted once

cannot be changed until granted any alteration by the regulatory authority. Various price-promotion combinations can be used for launch of a drug product. These include rapid and slow skimming strategies and rapid and slow penetrating strategies.

Rapid skimming strategy: Rapid skimming strategy is launching of the drug at a high price and a high promotional level. High price covers as much as gross profit per unit as possible while high promotion is actuated to gear up the market penetration. By adopting this strategy, the firm may enjoy a brand leader within short time. Life saving and emergency drug products may be launched by this strategy.

Slow skimming strategy: Slow skimming strategy is a high price and low promotion strategy. Low promotion level keeps marketing expenses down. This strategy is effective when there is limited sized market and potential competition is less. Specialized class of pharmaceutical products can be launched by this technique. For example, skin preparations can be promoted only to the skin specialists and which are limited in number (small market) than the general practitioners (a large market).

Rapid penetration strategy: Rapid penetration strategy is launching the drug at a low price and at a high promotional level. The products launched by this way assert fastest market penetration and the largest market share. This strategy is effective when the market is large, and the product is intended for common use i.e., the product is OTC in nature or there is lot of competition.

Slow penetration strategy: Slow penetration strategy demands the launch of product at low price with low promotion level. The low price favors the rapid product acceptability while with low promotion cost leads to more net profit. This strategy makes sense in the large market with more primary demand (demand for the type of product) and potential competitors.

Market segmentation and targeting

Physician is the decision-making authority in the pharmaceutical marketing and thus the sale of the pharmaceutical product is achieved by motivating the physician. The physician then prescribes or motivates the patient to purchase the pharmaceutical preparation.

On the basis of physician specialties, pharmaceutical market is considered to be consisting of various sub-markets having different wants and needs. These sub-markets (physician specialties) have been mentioned previously (Chapter 11).

The effective marketing demands proper targeting and positioning of new pharmaceutical product in the sub-markets mentioned. The target consumer may be located in one or more sub-markets.

Promotional Mix (Chapter 15)

Promotional mix is the specific combination of promotional methods used by marketing management in effort to hit the target with a particular product. Detailed elaboration of the promotion mix has been presented in next Chapters (15 – 18) but brief description is the demand of this Chapter as well.

The following ingredients are usually intended in the promotional mix:

Advertising (Chapter 16)

Advertising is the communication transmitted to target customer through a mass media. Advertising produces awareness that favorably motivate the targeted subjects to utilize (or prescribe) the advertiser's drug product.

Advertising of the new drug demands certain media - a means or vehicle by which advertiser reach its prospective customers with advertisement messages. The advertisement media that can be utilized by the advertiser may be classified as print media, electronic media, direct mail and specialized media.

The print media make use of newspaper, magazines and professional journals. New OTC drugs can be advertised on daily newspapers while advertisement of ethical and prescription drug products is prohibited to consumers. Thus, such new pharmaceutical product can be advertised in professional journals, i.e., Medical Tribune, Family Practice News, The Doctor, Medical News and Medical Digest, etc.

Direct mail is specialized print medium and can be directed to a specific individual rather than group of individuals. It can be used for both, the OTC as well as prescription products. Direct mail has the advantage of both selectivity in choosing specific group of customer and flexibility in format, size and color. Marketing management can utilize this media for informing the new product not only to doctors but also to the chemists.

Electronic media is a broad casting media and can be used to advertise the OTC drug product true for the television media.

The special media including video/film show can be arranged for a group of prominent prescribers and trendsetters to advertise any new product.

Personal Selling (Chapter 17)

Personal selling is face-to-face communication with the target individual and thus has more impact on them. The physical presence of detail man allows the physician an opportunity for 'give and take'. The detail man may be able to anticipate or react to the physician questions about his and/or the competitors' product(s). It is possible for him to offer demonstrations, visual presentations and sample of drugs to try on to the patients. The detail man can also present the physician, various novelties that can be a constant reminder to the physician. These may be calendars, pencil, pens, key-chains, and prescription pads on which the name of product has been printed for reminding purpose.

Sale promotion (Chapter 18)

Sale promotion is an activity and or material that act as a direct incentive to purchase by offering cash discount, markup adjustment, credit or other financial consideration and bonuses schemes. The sales promotion enhances the availability of new drug product that is favorable for launch. New OTC drugs can be promoted effectively by this way.

Publicity (Chapter 18)

Publicity is a non-personal communication in the form of news items or news stories regarding an organization and its products and that can be transmitted through news media.

PRICE

Price is what is charged for some features present in an item or service. The term price is used to describe the monetary value of a product. It is the amount of money needed to acquire a pharmaceutical product. Production of a drug product or generation of a service requires expenditures of money on required inputs and on converting the inputs into outputs, etc. After successful planning of product thus, its price is another critical consideration for success of a firm. Usually the price of a product or service incorporates some reasonable gain (markup) or profit added to the actual cost spent on their production.

Price is an integral part of the market strategy for a product. The pharmaceutical industry is originator and provider of the life saving products and services that is possible only by earning appropriate profit. A fair profit is needed for survival of a firm. Even charitable pharmacy organizations need profit to run their services. Price determination for a product demands adoption of proper pricing strategies mentioned in next section.

IMPORTANCE OF PRICE

Pricing is a critical part of marketing mix. It is important not only for a firm producing product, product itself but also for overall economy of a country.

Economic system

Price influences the allocation of production factors such as labor, land, capital, etc., and thus it is a basic regulator of economic system. A product price affects wages of the workers and profit of the firm. It also determines what will be produced and who will get the product.

Individual firm

Price is among the major factors that dictate the product demand, market share and profit for a firm. The net profit earned by a firm is only by the price of the products it produces. Usually the price is used as a

competitive tool to gain an advantage over the competitors.

Product image

The price is also used to help establish a product's image, because consumers associate the product's price with its quality and image. In daily life, consumers perceive a better quality for a high-priced product.

PRICE FORMULATION

Price of a single unit of the product at its point of production or resale is called its list or base price. Different types of establishments have different pricing structures. A simple and general formula for pricing cannot be used since the factors contributing to cost vary from product to product. These factors include price of competitor products, developmental costs, production and material costs, and the future production costs. To reach a decision for price of product, various costs as mentioned below, are added up. In setting price, a pharmaceutical manufacturer tends to use a variable markup (gain) added to cost spent on basic production.

The direct cost is the money spent on raw materials of the product, container components and on its package. All other expenditures that do not visibly change the drug product form are called unproductive use of resources. These include the utility of time, place, possession, and labor. Though these utilities add nothing to the drug form yet they add significantly to the value of product from purchaser's viewpoint.

The true price of a product is the combination of all expenditures including costs on basic production, direct selling, indirect and research plus some markup. This has been presented as a formula, mentioned below:

$$\begin{aligned} \text{Price} = & \quad \text{basic production cost} + \text{direct selling cost} + \text{indirect cost} \\ & + \text{research cost} + \text{markup} \end{aligned}$$

Thus, for a product in the medium prescription price range, roughly 3-4 times of the cost of manufacturing is taken as the starting point in the calculation of the listed price. A firm considers all the features in a product in determining the price of its product. These features are: dependability, service, production complexity, market opportunity, quality, market risks, productivity and sophistications involved, competition value, product demand, and value to the consumers.

FACTORS INFLUENCING PRICE DETERMINATION

The key factors, which influence the list price, are policies for individual products, cost on production, product demand, competitive reactions, and co-ingredients in market mix. All these factors have been mentioned as follows:

Policies for individual products

Pharmaceutical products are launched at high or low price. The pricing strategy for a particular product depends on the policy of the firm for a particular drug product. Pricing policies varies from firm to firm and from product to product within the same firm. The policies other than pricing policies also affect the price determination for a specific product and include product distribution policies and product return policies, etc.

Cost on production

The cost on production incorporates direct and indirect costs mentioned above. Production complexities for a product make its price higher. Some products need sophisticated technologies and special manufacturing specialties making cost of the product higher.

The expenditure spent on materials for a product varies from product to product because of varied prices of raw materials. The price of a product is also dependent on the dosage and quantity size of the drug provided to the consumers.

Pharmaceutical firm spending cost on their products also calculates research cost for individual unit. The local pharmaceutical industry is not involved in drug research so usually this cost is not included in their products.

Product attributes

The features present in a product influence its price. These attributes include product quality, dependability, service, and acceptability contribute in product price.

Value to the consumer

A product may have low or high price but the pharmaceutical firms never set it lower than what the consumer expects. The expected price of a product is the price at which customers consciously or unconsciously value it. Consumers relate quality with the price of the product particularly if prepared by a sophisticated technology. Thus, the expected price value

is taken into account for product price determination.

Demand for the product

Nature of the product demand influences the price of a product. For price determination, a firm must estimate the effect of unit price change on the number of units sold. This estimation is easier for the established products than that of the new products. Price modification may affect elastic, inelastic or inverse demands.

Elastic demand means more demand of a product on a reduced price so as the total revenue of the product is increased. Thus, reducing the unit price causes an increase in units sold and profit maximization. When the product price cut causes the total revenue to decline, even though the demand is fairly increased is inelastic demand.

As mentioned before, the price of a product must not be lower than what the consumer expects consciously or unconsciously. Thus, setting price lower than expected price of a drug particularly prepared by a sophisticated technology, causes decline in the product sales and profit. This situation is called inverse demand wherein price cut leads to less demand. Stated in other way, higher the price within a given range, greater the product sales. Transdermal products, aerosols, inhalers and products of biotechnological origin are the example of such products, which may have inverse demand.

Competitive reactions

Base price is sensitive to the types of current and potential competitions for a product. There are two competition sources; firstly the generic substitutes and secondly the unrelated products but having same clinical endpoint. Generic substitutes are directly similar products such as two antihypertensive brands based on the angiotensin convertase enzyme (ACE) inhibition. The example of unrelated products having similar clinical endpoint the brands of beta- and calcium channel-blockers as antihypertensive. Though for price setting, both of the competitions mentioned above, are considered yet the generic substitution is considered more critical.

Co-ingredients in market mix

The other ingredients in market mix including product, place and promotion influence the base price of pharmaceutical remarkably. Types of products (over-the-counter or prescription only) and new or

established products all have varying prices. The importance of the product in its end use is also considered as an important factor for its price.

The price of a product depends on the channel of distribution and type of middlemen. The price, for example, of a product delivered through a cold chain will be more. Promotional methods used and the extent to which a product is promoted also dictates the price of the product.

PRICE STRATEGIES

Various strategies are considered before the pricing of a product. These include the following:

Market skimming pricing

Market skimming pricing strategy involves setting a price higher than the expected price. This may be slow or rapid skimming strategy. The detail of this strategy has been mentioned in Chapter 12 under 'Marketing strategy for a new product'.

Market penetration pricing

Market penetration pricing strategy involves setting a price lower than the expected price. This may be slow or rapid penetration strategy. The market penetration pricing strategy has been described in Chapter 12 under "Marketing strategy for a new product".

One-price strategy

Under one-price strategy, the same price is charged from all customers buying similar product quantities. This strategy is common in pharmaceutical marketing. One-price strategy is more favorable as compared to the flexible-price strategy mentioned in next section. The firms with one-price strategy earn same level of profit from all customers. However, a pharmaceutical firm can implement both, one- and flexible-price strategies for different products it is producing.

Flexible- price strategy

In flexi-price strategy, different customers pay different prices when buying similar quantities of a product. Different prices are set as a result of buyer-seller bargaining or mutual contract but the end users buy the product at the one-price. This variable price strategy is used to meet a competitor's price, increase market share, or to enter a new market.

Offering of drug products at a more reduced price to a chain store, to a physician or to a hospital than to an independent drug store is an example of flexi-price strategy. The end users, however, purchase these items at the same price.

The flexible-price strategy is not uncommon practice in pharmaceutical marketing. However, it is less desirable than one-price strategy due to reduced profits and creation of a bad image when a buyer knows that other buyers acquired the same product at a lower price.

PRICE REGULATION

It is worth mentioning that a pharmaceutical firm is not independent in setting price of its products. The authority for fixing of price and percentage of profit rests with the Ministry of Health (MoH) under section 12 of the Drugs Act 1976. The control of price of drugs by MoH is known as price regulation. Under price regulation, drug price is fixed at the time of its registration. Any increase in drug price is awarded (or refused) by MoH after receiving a formal request from the company giving the justifications of the price increment.

Price regulation was remained in place until 1993 after which drug price was deregulated considering that in a free market, the competition, would control prices of drugs. However, this step was unable to help in the price decline. Thus, MoH had to step in and prices were frozen. This freeze on prices exists even today though prices are still on increase. Under this approach, there are two lists of drugs. One list, termed as 'controlled list' composes the drugs with a few brands and thus, with limited market competition. Second list is 'decontrolled list' with more market competition. The price for drugs on controlled list is not allowed to increase without prior permission from MoH. The price of drugs on decontrolled list was assumed to be self controlled due to market competition. But as mentioned earlier, this step was not successful reduction of drug price.

PRICE AND NON-PRICE COMPETITION

Availability of lot of customers, consumer, products and firms create market with intense competition. Several pharmaceutical organizations offer variety of the products that compete for prescribers' attention and consumers' rupee. To cope with competition, a firm can emphasize price or non-price competition. Both of these ways for competition have been as mentioned:

Price competition

Price competition is modifying product price to cope with the external factors. To accomplish this, a firm may sustain, increase or decrease the price of its product(s) in competition. As the cost of raw materials increase, a firm may increase the price of the products incorporating these raw materials. The other response to compete may be increased promotion to raise sale and still maintaining the previous price. Offering product at a price as low as possible to handle the competition of product of other firm(s) is another possibility. Reduced price may be favorable strategy for a launch of a new product.

An extremely intense price competition sometimes leads to price war that is seldom encouraged in pharmaceutical marketing. The parties involved in this competition may try to reduce product price to a level leading to a quality-compromised product. Thus, price competition in pharmaceutical market may leads to a product with deteriorated quality. Price cut is an unsound strategy and the best alternative is to improve the marketing program rather than to depend on the price cuts. Selective price cut for specific larger buyers is another available option to respond competition. The price competition enjoys a little customer loyalty, since the price is the only feature that distinguishes the sellers. The customers will stay only as long as the seller offers the lowest prices, who after price increase, may switch to another brand with less price.

Non-price competition

Under non-price competition, a firm maintains stable price of its products. It attempts to improve its market position by emphasizing other aspects of marketing programs to cope with the competition in market. Product differentiations, launch of a new product, addition of a product in existing product line, or modification in the promotional activities are some of the illustrations for non price competition. The non-price competition is a sound competition strategy than the price competition. It is more favorable for the improvement in products and their packages.

PLACE – CHANNELS OF DRUG DISTRIBUTION

Place in marketing mix stands for the channels of drug distribution. Distribution is transferring a drug from a producer to the ultimate consumers needing it. Thus, distribution is reaching the product to its target market successfully. A channel is a medium or route that carries the product from the producer to the final consumer. The channel of distribution is a mean that closes the gap between producers and consumers and thus, also referred to as middleman. A middleman is a setup that renders services directly related to the purchase and/or sales of a product as it flows from producer to the consumers. The middleman usually takes physical possession of product and facilitates actively in transferring of ownership of the product.

MEMBERS OF DISTRIBUTION CHANNEL

A distribution channels consists of the set of intermediaries involved in the flow of drug from producer to the final consumer. A distribution channel typically includes the producer, wholesaler, retailers and the consumer. All these members are essentially involved in the purchase or sale.

Producer

A producer produces and then distributes its products with varying distribution intensities. Intensive distribution is delivering of products through every reasonable outlet in the market. Selective distribution is supplying of products through multiple, but not all available outlets in the market. The exclusive distribution is supply of drugs through a single wholesaler and/or retailer in the market. Some pharmaceutical manufacturers use multiple wholesaling parties.

Wholesaler

Wholesaler is an intermediary party involved in buying of products for the purpose of resale. In wholesaling, a firm may sale in bulk to any customer except to an ultimate consumer who buys products for personal and non-

business use. A wholesaler is involved in the distribution of drugs on the behalf of some producers or even its own. Therefore, a wholesaler sometimes also called distributor.

Wholesalers can be categorized as independent full-service, limited function and manufacturer-owned wholesalers. Independent full-service wholesaler is an establishment that acts as an intermediary for numerous pharmaceutical firms. Limited function wholesaler is narrow in scope and works for a few of producers only. The manufacturer-owned wholesaler is managed and operated by a single producer and is dedicated for the sale of only a specific producer's products. Some producers, instead of owning a wholesaler, enter into a contractual agreement with party for dedicated distribution. This is termed as contractual distribution.

Another classification of the distributors is local or national wide wholesalers. Muller and Philips (M&P), united distribution limited (UDL), Spenser, Vikor, and few others are the distributor having national wide coverage in Pakistan.

Retailer

A retailer links the producer to the final consumer. Contrary to a wholesaler, the retailer sales drugs to a final consumer for ones personal use only. The wholesale and of retail sale thus, can be distinguished by the intention of the purchase. Obviously this sale would be in small quantities and not for resale. In this perspective, purchase of bulk quantities for personal use by a final consumer will not be wholesaling. Due to the importance of retailing, it has been elaborated in Chapter 19.

Consumer

The consumer is the last member in a distribution chain who buys the products for personal and non-business use. In pharmaceutical market, the final consumer is the patient. A patient, as has been mentioned before (Chapter 11) has no will in selection of prescription drugs. Someone else such as a physician or a pharmacist does it for the patient.

IMPORTANCE OF MARKETING CHANNELS

Direct transfer of a product from a producer to the consumer would be the shortest and simplest distribution channel. But, it is not always possible practically for a manufacturer and final consumer to deal directly with each other. Usually, multiple drugs are prescribed to a patient. The drugs of only a single producer have not been prescribed to a patient.

Coupled with it, large number of producer and patient has been at hundreds of miles away from each other. Thus, making it impossible for a patient to deal with produces for purchase of drugs. However, a market channel makes it possible for patients to get drugs of multiple sources from one site.

A channel serves as purchasing agent for its consumers and sales specialist for its suppliers. As illustrated in Table 1, the market channel provides financial services for both the producers and customers. Other activities, beneficial for both, the producers and the consumers include storage services, division of large supplies into smaller ones for resale, and sharing of market knowledge, etc. The functions performed by a market channel are appropriately parallel to the functions of entire marketing system.

Functions	Description
Exchange	<ul style="list-style-type: none">• Buying from the producers• Selling to the consumers
Physical supply	<ul style="list-style-type: none">• Transportation from the producer• Storage temporarily till a retailer purchases
Facilitating	<ul style="list-style-type: none">• Financing• Risk taking and sharing• Marketing information and feed back• Standardization and grading• Bulk breaking
Managerial	<ul style="list-style-type: none">• Market negotiations/explanation and information• Purchase motivation for retailers/consumers• Product adjustment (replacement for expired drugs)• Physical distribution by transportation to the retailers• Communication on both ends; to producers and to retailers• Transaction (coveys money from retailers to the producers)• Post transaction services

Table 1: Traditional functions of market channels

VARIOUS CHANNELS OF DISTRIBUTION

Prescription drugs are 'directed goods' and their sales result from the derived demand. This means that the sale of a prescription drug is not based on the choice of a consumer but on that of a third party, a physician. A pharmacist may also act as third party but only for over-the-counter drugs. Keeping this in mind, some marketing authorities consider drug distribution through physician channel, physician-pharmacist

channel, whole seller-pharmacist channel and retailer-pharmacist channel.

As mentioned earlier, a middleman essentially owns drugs physically for resale purpose. Furthermore, intermediaries facilitating drug distribution without involving in sale or purchase of products cannot be regarded as the channel members. This is further supported by the fact that other intermediaries facilitating drug distribution such as banks, and transportation companies are not included in the channel members. Similarly, a physician and pharmacist only influence or facilitate product purchase by the ultimate consumer but not involved in purchase or sale of the drug products or physically owning of the drugs. Thus a physician and a pharmacist should not be regarded as the channel members.

The possible channels for delivery of drugs to the final consumer are as follows:

Producer→ consumer

This is a direct route for reaching a consumer. This is the simplest and shortest distribution channel but not practicable as mentioned before. When considering this channel at industrial level, it is non-existent. However, highly perishable pharmaceuticals prepared in hospital settings are directly dispensed to the patients (consumers). The total parenteral nutrition (TPN) prepared in the clinics (producers) assumes this way to reach to the patients' hands. Similarly, the delivery of a dispensing item prepared by a dispensing pharmacy to a patient does not involve the intermediary party. In Figure 1, digit 1 represents this channel.

Producer→ retailer→consumer

Some larger retailers buy directly from the manufacturers and sale the products to the ultimate consumers. This is not a very common channel of distribution in pharmaceutical market. However, the chain drug stores are usually involved in this practice. The numeral 2 in Figure 1 depicts this channel.

Producer→ clinical setting→consumer

A clinical setting like a hospital is sometimes the intermediary for the distribution of specialized items to the ultimate consumers. Wholesalers or the retailers are avoided in this channel because of associated health hazards, special precautions even during transportation and the time constraints and associated health hazards. This channel is used for

delivery of radiopharmaceuticals and highly perishable drugs directly to the clinical setting for consumers due to possible radiation hazards and very short shelf life, respectively. The number 3 in Figure 1 illustrates this channel.

Producer → wholesaler → retailer → consumer

This channel is a traditional and common distribution system for supply of drugs to the ultimate consumers. Most of the pharmaceutical producers follow this route of drug transfer to the consumers. In Figure 1, number 4 reflects this channel. Some wholesalers also offer retail service for consumers. The digit 5 points this channel in Figure 1.

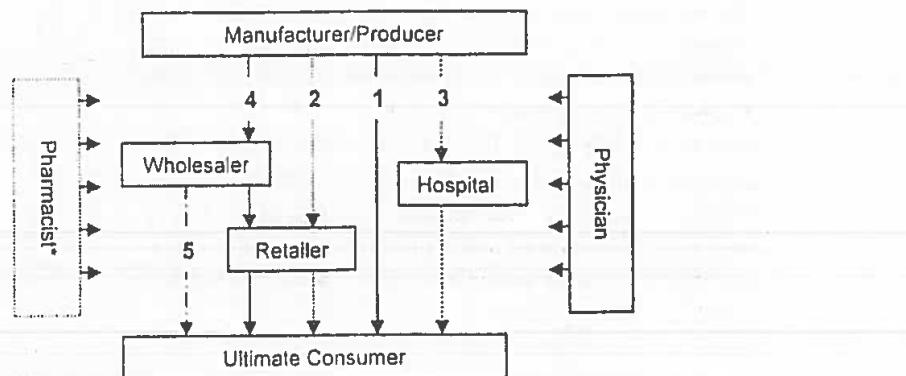


Figure 1: Distribution channels along with influencing role of third parties, Physician and Pharmacist. The digits represent type of channel and for description see the text. (*influences only for over-the-counter drugs)

Dual distribution channel

Dual distribution is use of multiple channels of distributions for reaching a product to the consumer. Distribution may require the use of several different trade channels by one producer to increase the distribution efficiency or to meet the competition.

SELECTION OF A CHANNEL

A fairly large range of distribution alternatives is available to a producer complicating a correct choice. An appropriate decision of a route and wholesaler for drug distribution is critical for success of a firm. Some combinations of intermediates are much more effective in reaching the

market than that of individual or other channels.

The selection of a channel generally, depends upon nature of the product, area of sale and financial resources of the enterprise. Following are the specific parameters usually, considered for selection of a distribution channel.

Product characteristics

The product characteristics taken into account in the selection of distribution channel include the product nature, unit value, product perishability, and product technicality.

Product nature

The placing of prescription drugs is pre-decided since, these are 'directed goods' and their sales result from the derived demand. A traditional distribution channel such as 'producer→ wholesaler→ retailer→ consumer' is appropriate for such drugs.

Product unit value

A channel with least intermediaries is sought for the products with higher unit value. Sometimes it is through a direct channel (i.e., without a single channel intermediaries). This is because of the availability of more funds for the products.

Products perishability

The highly perishable drug products sought a more direct channel such as 'producer→ consumer'. This is not usually practicable and thus an intermediary is needed for delivery of product to the patient. For this, e.g., the route adopted is; 'producer→ clinical setting→ consumer'.

The total parenteral nutrition requires a more direct channel, i.e., from 'producer (hospital pharmacy department) → consumer'. Similarly a medicament prepared by a dispensing pharmacy is delivered directly to the consumer.

Product technicality

When special instructions for any reason after sale or administration of a product are required, the tendency of a firm is towards the direct selling. Use of a distribution channel for the supply of radiopharmaceuticals can be cited as an example. The administration of a radiopharmaceutical needs

instructions to the patients for the purpose of radiation protection and for this, 'producer→ clinical setting→ consumer' route is adopted.

Degree of market acceptance

If there is less degree of market demand for some products when the company or its products are not well known, the use of middleman is indicated. Channel of 'producer→ wholesaler→ retailer→ consumer' is a suitable choice for such products.

Market characteristics

The market characteristics that influence the decision of distribution channel selection include product user, market size, and geographic distribution.

Product user

A channel is selected on the basis of the product users. For example, if the product is useful only in the hospitals, it may be feasible to sell directly to the hospitals.

Market size

The smaller the market size, the less feasible it becomes to sell with a direct channel. In this situation, a traditional distribution channel mentioned above is an appropriate choice.

Geographic distribution

A more direct channel is used if the market for the product is geographically concentrated. On the other hand, market dispersion requires the help of an intermediary for an efficient distribution.

Manufacturer's characteristics

The characteristics of manufacturer affecting selection of distribution channel include manufacturer's financial capabilities, reputation, and policies.

Financial capabilities

The financial capability is one of the major determinants for decision of a distribution channel. Direct selling for example, is costly so much that even though a producer may desire to do so, it may find it impossible because of high financial involvement.

Reputation

The ability to obtain effective distribution directly/indirectly depends on the producer's reputation for integrity and fair dealing.

Manufacturer's policies

Clear-cut policies are needed by the firms as they relate to channels of distribution. In some cases, these policies are so strong that they become dominated considerations regarding channel decisions.

Channel characteristics

The product characteristics considered for the selection of distribution channel include the services provided, availability, and channel policies.

Services provided

Sometimes product is preferably sold through an intermediary providing the special services. A producer, for example will select a channel offering cold chain transportation for distribution of its biologicals. Offering cold-chain facility during transportation is the example of special service by a middleman.

Availability

A middleman preferred by a firm may not be available because of some reasons. It may be carrying competitive products and do not want to add another product line. Else the best middleman is in a contractual agreement with some other producer and due to its contractual agreement, is not available.

Compatibility of policies

Sometimes the firm's choice for channel is limited because of incompatibility of their marketing policies.

PROMOTION

Promotion is the fourth ingredient in the total market mix. The promotion is every form of communication used to inform, persuade and remind the target customers about the products or the organization. It is a group of activities consisting of advertising, detailing, sales promotion, publicity and public relations. Promotional activities are vital as the firms directly communicate to their customers and consumers. All of these promotional activities have been discussed briefly in the forthcoming sections and in detail in next Chapters from 16 through 18.

The intention of promotion is to involve the community or to impact on the society in an attempt to influence the recipient's feelings, beliefs or behavior favorable for the organization. The ultimate objective of promotion is to motivate the customer to build the firm's image and thereby, to increase the sale of its products. Promotion is one of the effective components of non-price competition as well. Companies usually, reserve some special promotional programs ready in case of unexpected competition as well. Promotion is thus, vital ingredient in a market strategy, market mix, product differentiation, and market segmentation.

OBJECTIVES OF PROMOTION

The fundamental functions of promotion are informing, persuasion and reminding the customers about an organization, its products or services.

Information

The information is communication to the prospective customers or to let the customers know about a product or a firm. Information is vital for a success of a pharmaceutical product. A highly useful product may meet failure if no one knows its availability or features. Information is a major function of promotion.

Persuasion

Persuasion is another function of promotion. It is convincing the

customers to select a particular brand from available choices. The demand for a product will depend upon the ability of a producer to convince the customers. A strong persuasive promotion is required when there is an intense competition or availability of a large variety of similar brands.

Reminding

Reminding is repeating communication to the prospect customers in an attempt to retain a place in their minds. The customers are bombarded massively with lot of messages every day by the competitors to attract new customers and to establish markets for new products. To cope with it, the firms try to keep their product in front of the market by continuously reminding about the availability and attributes of the product.

PROMOTION MIX

Promotion mix is special combinations of promotional activities used by an organization to achieve its marketing objectives. The ingredients that can be blended in varying proportions in a promotional mix are advertising, detailing, direct mail, sales promotion and publicity & public relations.

Advertising (Chapter 16)

Advertising is the paid form of impersonal mass communication in which the advertiser's name is clearly identified. Advertisements are used for the promotion of products or a firm itself. It employs some vehicle to reach the prospective customers, the most common of which are broadcast and print media. The broadcast form of advertisement uses television and radio whereas the print form employs newspapers and magazines.

Detailing (Chapter 17)

Detailing, also known as personal selling is the presentation of a product to prospective customers by a representative of a firm. This is more expensive form of promotion but widely used in pharmaceutical industry due to its high efficiency.

Direct mail (Chapter 18)

Direct mail is a method of promotion whereby a printed advertisement, message or information is delivered to the prospective customers by mailing. This media is quite expensive and can effectively be used for the advertisement of ethical products.

Sales promotion (Chapter 18)

The sales promotion encompasses a variety of promotional activities and events other than advertising and personal selling. However, it supports these both and coordinates them to make each more effective. Displays, medical exhibits, sampling and giveaways are examples of sales promotion. The sales promotion is quite common in pharmaceutical marketing for the promotion of drugs.

Publicity and public relations (Chapter 18)

Publicity, like advertising is a mass communication that consists of a favorable news presentation, press conference, or a photograph. This can be accomplished with an aim for image-building for firm or product demand stimulation indirectly. In contrast to advertisement, it is non-paid. The public relation is more targeted than publicity and is involved with 'image creation'. It is a planned effort to influence the opinion of a special interest group.

Some products of a firm employ all of the above-mentioned ingredients in their promotional mix while in other products, only one or two promotional tools are used. This depends on the company budget, product life cycle, and nature of the product. The use of promotional mix supplements each other. With an appropriate use of ingredients in varying blends of promotion, the message of a company about a product can reach to maximum market segments effectively.

DESIGNING PROMOTIONAL MIX

Effective promotion requires determination of an appropriate promotional mix strategy whereby more than one or all ingredients are integrated on annual basis. Formulation of an appropriate blend of the activities of promotional mix is significant for broader coverage. Designing a promotional mix is based on market nature, product nature, stage of the product life cycle and funds available.

Market nature

The variables related to the market nature that affect the design of promotion mix is the geographical distribution of market, type of customer, and the concentration of market.

Geographical distribution of market

Pharmaceutical firms put greater emphasis on advertising for reaching a

geographically scattered market. The personal selling would not be cost effective in this case. However, for a limited market however, simply the personal selling may be adequate.

Type of customers

Promotional strategy depends in parts on the type of customers. The customers in pharmaceutical market are general practitioners and various specialists. For each group, the firms tailor different combinations in promotional mix.

Concentration of the market

Concentration of market refers to the total number of customers in a market. Fewer customers in the market demand a blend of detailing, direct mailing and sales promotion so as detailing is more dominated. For example, a drug used in renal transplant specialty can effectively be promoted by combining detailing with direct mailing and some ways of sales promotion such as medical exhibits, etc.

Product nature

Various features of a product influence promotional mix. The more important include unit price, degree of customization, demand nature, and differentiated products.

Unit price

A product with high unit price is suggestive of detailing. In contrast, advertising is the appropriate promotional tool for low-priced products since mass selling is needed for survival of a firm and can be accomplished by advertisement.

Degree of customization

A product meeting a specific specialty essentially requires personal selling and to supplement it, direct mailing.

Product with favorable primary demand

When a favorable primary demand exists, as for cotrimoxazole, advertising is an appropriate promotional method.

Differentiated product

For a well-differentiated product a firm has something to say about the product. In this case, advertisement can be dominated in promotional

mix.

Stages in product life-cycle

The promotional strategies are affected by the life-cycle stage of a product. A product in an introductory stage demands more information and thus, advertising is dominated in an advertisement-detailing blend. If a product is a novelty, there exists excellent opportunities for publicity as well.

Fund available

The amount of money available for promotion is the ultimate determinant for designing promotional mix. A firm with ample budget allocation for promotion can mobilize all promotional ways and can easily accomplish its market objectives. Firms with less promotional budget may use less promotional activities.

PROMOTIONAL CAMPAIGN

A campaign is the coordinated series of promotional efforts built around a single theme and designed to reach a predetermined goal. Theme is the promotional appeals dressed up in a distinctive, attention-getting form that takes usually a form of slogan. A total promotional campaign is subdivided into sub-campaigns and applied to advertising, detailing, and sales promotion. A campaign can be targeted at the levels of wholesaler, retailer, customer, and consumer with same or different themes.

A promotional campaign for capozide of Bristol Myers Squibb, (BMS) Karachi can be cited here as an example. This brand is a combination of captopril, an angiotensin convertase enzyme inhibitor and a thiazide diuretic. The BMS used a campaign with a slogan of 'winning combination' presented by two intermingled hearts. In this campaign it was highlighted that the combination in the brand is very beneficial with various respects. This slogan was placed in each advertisement of the product and was coordinated with detailing as well.

The campaigns are usually used during the introductory stage of a product. It is very effectively conveyed for information and for convincing of the targeted recipients.

PROMOTION AT RETAIL LEVEL

The pharmaceutical industry is involved in promotion of drugs at various levels including the prescribers, retailers and in some cases consumers.

The retail is an outlet for selling of products not for business purpose and usually in individual units (Chapter 19). A retailer can motivate the consumers to purchase a specific over-the-counter (OTC) drug and may unethically, substitute the prescribed product with other generic.

Promotion at retail level thus, is a very important aspect for an increased market share of a firm by increasing the sale of OTC drugs. At retail level, it also tries to sustain the market share of a firm as it is also used to counter unethical substitution. The various promotional techniques used by companies at retail level may include one or the combinations of the following:

Advertising

The purpose of advertising at retail level is to promote the sale of products or development of good image for a company. However, at retail level a message is advertised only when it is for the large population of retailers. Advertisements at retail level usually, are confined to inform availability of a product or price change. The media specifically targeting to the retailer is the professional media and is commonly used. The Chemist and Druggist is a periodical suitable for such advertisement.

Direct mail

The direct mail is a communication to specific individuals or individuals in specific regions to give some positive information regarding a product, highlighting additional benefits of the product or to communicate the incentive schemes to the retailers. The direct mail is an expensive medium and usually the companies inform on this media about the new product or the new features of a product. A list of the chemists and retailers is maintained and updated by the field force of a firm.

Sales promotion

Sales promotion includes the activities that supplement, both the personnel selling and advertising to make each more effective. Sales promotion is usually, achieved by the salesman or detailer's presentations at retailer outlet. Effective sales promotion requires specially designed selling aids (giveaway, gifts, etc.) for retailers. Medical representatives besides detailing to the doctors also visit the medical stores and promote the assigned product or furnish any information to retailers.

Incentive schemes

Use of the incentive schemes at retail level is another promotional activity

whereby firms offer tangible or intangible benefits to the retailers on purchase of predefined quantity of drug. This way of promotion facilitates flow of stocks from company's warehouse to retailers and supposed to reach to the consumers rapidly. The incentive schemes for retailers are as:

Bonus scheme

Bonus means giving some additional unit of product on the purchase of a specific number of product units. For example, a free product unit on the purchase of 12 units is called 12+1 bonus scheme.

Cash discounts

The provision of cash discounts in some percentage after an investment of particular amount for any product is another incentive. Provision of a 2% discount on the purchase of any product of cost Rs. 5,000 is an example of this scheme. These cash discounts vary from time to time and from company to company.

Combined Bonus-cash discount scheme

This combines the bonus and cash discount for a specific product. Example is providing of a 3% discount and one unit free on the purchase of 12 units of a product.

Credit

Under this scheme, a credit for some specified duration is given to the retailer on purchase of specified number of product units. The duration for credit may range from 1 week to month or sometimes more.

Combined bonus-cash discount-credit

Some times the promotion combines bonus-cash discount-credit schemes in one scheme depending on their marketing campaign, product demand and competitor's activities.

Mystery buyer scheme

This is an interesting scheme in which a company informs group of retailers that within a specified period, an individual will come to them as patient. He will discuss his medical problem and will ask for a drug product for this medical problem. The medical problems cited by the buyer are usually according to the indications of one of a company's OTC product. For example, one can discuss lassitude, debility, and convalesce.

Pharmaceutical firms usually promote vitamin products for these indications. If the retailer advises the company's intended product to the buyer, a gift is presented to the retailer on the same instance or declared as entitled for a lucky draw and/or for a gift on latter occasion.

However, if the retailer does not advise for the company's product the buyer tells that I was a 'mystery buyer' and since, you have not advised my company's product for the symptoms mentioned so you have missed a gift. The false buyer then, indicates about extension of the scheme for another 2 months and asks not to forget to advise the intended product to the next buyer.

By this scheme the retailers recommend the company's product to all customers complaining specified problems assuming as a 'mystery buyer'. After the declared period, the retailers become much familiar and offer the same product to all of their customers. This scheme has some limitation. A retailer may be offended on losing gift and will not recommend the firm's products to any customer in future. Some authorities consider mystery buyer scheme as unethical even if it is for the OTC products.

PACKAGE AS A PROMOTIONAL TOOL

As has been mentioned earlier (Chapter 12), the companies creatively use a package as a marketing tool, rather than just a protective device during transportation and storage. A product packages builds image in consumers, mind and is an important part of consumer acceptance. It helps establishing consumer preferences and is vital to marketing success. Many firms feature their products, particularly OTC products in their packages. The following logics can be cited to support that packages can be used as effective promotional tools:

'Vehicle for identification'

The packages serve as vehicle for identification by carrying the manufacturers' names, trademark, and brand names. Awareness of a product is basis of its trial and repeated use. It also provides information about the ingredients and instructions for product preparation (if any), its use and storage.

Mean of product differentiation

In pharmaceutical practice, frequent product differentiation as has been mentioned before, is not possible. In pharmaceutical market, however,

instead of really modifying the drug product it self, a psychological product differentiation is possible. A psychological product differentiation is achievable by modification of the product packages only. The package superiority in the areas of convenience as in case of opening is employed to gain preference of a brand over competitors. Ease in pouring and storability are additional examples of packages use, as 'sale-generators'.

Competing for space on retailer's shelf

Another marketing dimension of packaging is the powerful competition for space on the retailer's shelf. If a product is designed to give the retailer an advantage in stocking the item, the retailer is more inclined to make a decision favorable to the manufacturer.

Medium for advertising

Some times the package bears a campaign theme and thus can be used as vehicle for conveying information to the consumer.

All the above discussion reflects that packaging is the biggest promotional medium. That is why such dimensions as color, shape, and size of packages are critically planned and designed and reviewed and changed according to the customers' response.

In short, the package should be designed to fit into its retail environment. Since, in addition to the brand awareness and self-positioning of the product, the attractiveness of a package, itself may influence the purchaser.

REGULATION OF PROMOTION

As has mentioned earlier, promotion is used to attract customers so it is prone to have some abuses such as misleading messages, false claims or false comparisons with competitor's products. Pushing the prescribers for irrational drug use is another potential misuse of the promotion. Thus, the promotion undertaken by pharmaceutical industry must be regulated. Many individual pharmaceutical firms have established voluntary guidelines for their promotional activities and thus, are self-regulated. The Federal Government of Pakistan has also established regulations dealing with promotion of drugs and related items.

The regulations of Federal Government pertain particularly to the advertisement and sampling – the two important activities in promotion. The section 24 of the Drug Act 1976 (XXXI of 1976) deals with the

control of advertisement. According to this section, the drugs cannot be advertised directly to the ultimate consumers. However, drug advertisement can be exposed in the professional media. Even in this case, a copy of advertisement is to be forwarded to the ministry of health.

In sales promotion, firms provide samples of drugs to the medical profession for their promotion. In Drug Act, 1976, the provision of drug samples is also restricted. The samples must clearly bear the notation "physician's sample" and "not for sale". Additionally, only a restricted number of samples can be given to the medical profession for which a record must be maintained.

ADVERTISEMENT

Advertising is a paid form of non-personal presentation of ideas, goods or services to produce an awareness to favorably motivate the target subjects for a desired action. In viewpoints of advertising, the target customer may be a physician, a medical personnel or consumer. Advertisement is used to motivate the medical professional (prescribers) and ultimate consumers to prescribe and to utilize, respectively the advertised products.

The prescriber is targeted for prescription as well as for over-the-counter (OTC) drugs. In contrast, firm advertises only the OTC drugs to the final consumers. The advertising firm is known as the sponsor and the subjects receiving advertisement are referred to as the recipient, or target. A prospective or potential customer is able to and willing to prescribe or utilize the advertised product.

Advertising is different from publicity with two respects. Firstly, in advertisement, a sponsor has to pay to the media, carrying message. Secondly, the recipients of an advertisement know the sponsor as it is clearly identified in each advertisement.

PURPOSES OF ADVERTISING

The fundamental purpose of advertising is to sell a product or service. This goal can be accomplished by informing, persuading and reminding the potential customers about products/services. Information may lead to persuasion of the customer for trying of a product. Reminding keep repeated selection of the same product for the next time.

The general objective of an advertisement is to move major customers to next stage in hierarchy that is from product awareness to interest for its trial. Specific advertising objectives will be determined by the firm's overall marketing strategy. Typical purpose of advertising is to:

Support detailing

Advertisement can be used to let the potential customers know the seller's firm and the product. If the customers already know the producer and the

product, the personal selling would be easy. Thus, advertisement is also employed to support the personnel selling.

Access prospective customers, inaccessible to sales force

It is not always possible for sales force to reach each and every target customers due to their busy practice, schedules or geographical distances. In such cases, the advertisement message can reach to such very busy and geographically scattered physicians.

Facilitate sales from channel

Advertising enhances the sales from wholesalers and retailers. As a consequence, the relationship of a producer with its channel members is improved by advertising.

Enter new geographic market

Advertisement has a broader coverage and the customers are reached simultaneously. Thus, advertisement makes it possible to enter into a new geographical market segment even where the inaccessibility or cost effectiveness of sales force is prohibitive limitations.

Hold previous customers

The reminding advertisements are used in order to retain a place in the mind of customer and to hold the previous product prescribers or users. To achieve this, the product attributes are continuously highlighted in the advertisement messages.

Attract new market segments

The advertisement messages are designed with the hope of attracting new consumers and establishing markets for the new products. Advertisement is also used to target and attract the new market segments and customers.

Introduce a new product

With advertisement, customer's masses can be reached for provision of information. As mentioned before awareness of a product is the first step for making a decision for the selection of a brand.

Expand product usage

Advertisements are used to inform the customer for expansion of the product usage. Expansion in product usage lengthens the life cycle span of a product and thus, also extends the product profitability as well.

Counterattacks brand switchibility

Lot of consumer and availability of a variety of manufacturers has created an intense competition. The firms in competition continuously bombard thousands of messages to attract new customers. This can immediately responded and counterattacked by advertisement at the prescriber level.

Counterattacks substitution at retail level

Advertisement makes it possible to defend the substitution at retail level for prescription drugs. The consumers can also be educated by advertisement to avoid brand substitution for OTC product.

Build goodwill for company

Advertisement builds credibility and goodwill of the advertising firm in the minds of customers.

TYPES OF ADVERTISEMENTS

A pharmaceutical firm may use variety of advertisements depending upon its objectives. Based on the action desired from the recipients, advertisements may be categorized as product and institutional advertisements. With respects to the demand generated by message, the advertisement can be divided into primary demand and secondary demand advertising. Some advertisements are categorized as cooperative advertisements. In the forthcoming text all these classes of advertisements have been discussed.

Product advertisement

In product advertisement, advertisers inform about their products and try to stimulate the market for product trial. The product advertisement may be informative persuasive or reminding. Most of the advertisements exposed to the prospective customers are product advertisements. Examples of product advertisements include the commercials of toothpastes, cosmetics and pharmaceuticals.

The product advertisement further divided into informative, persuasive and reminding advertisement.

Informative

Informative advertisement is used to build the primary demand and is used heavily at the introduction stage of the new products. The product awareness is considered as the first step in developing interest in its use.

The purpose of informative advertisement is to:

1. Let the market know about a new product/service
2. Suggest new uses for a product
3. Inform the price change
4. Explain how the product works

Persuasive

A persuasive advertisement is for convincing the recipients of advertisement by enriching the advertisement message with evidences and scientific data. This sort of advertisement is used to:

1. Build the selective demand of advertised product
2. Create brand preferences
3. Change customer's perception of product quality
4. Encourage shifting of customers to advertiser's brand

Reminding

Reminding advertisement or reminder is letting the market know again and again of a product. Reminder is important for successful sale of the mature product. Reminder advertisement tells again the consumers that the product may be needed in near future and about where to buy it. The purpose of reminder is to:

1. Keep advertised product in front of the market
2. Keep the consumers thinking about the product
3. Cope the advertisement of the products competitors
4. Attempt to stop the switchability of customers to other brands

Institutional advertisement

Institutional advertisement presents information about the advertiser's business or tries to build goodwill towards the organization among the potential customers. This type of advertising is not intended to sell a specific product. However, the good image of a firm influence positively in the acceptance of its products. Customer service advertisement and the public service advertising are the two types of institutional advertisements.

Customer service advertisement

The customer service advertisement presents the information about some of the advertiser's operations. This advertisement may highlight some exclusive operations undertaken in a firm. Such advertisement creates

goodwill and good image of the firm in the minds of customers. Thus, the products produced by the firm indirectly gain favor of the prospective customers.

Public service advertisement

Public service advertisement is designed to improve the quality of life of the community. Such advertisement reflects that the advertiser is responsible member of the community. These advertisements promote the moral values and to convey some advises for the public such as 'avoid drugs', 'make your country clean' or 'say no to narcotics'. Sometimes such advertisements are to support campaigns or derives of national interest such as antipollution, antismoking or literacy campaigns.

Though the message in such advertisement urges the improvement of the quality of life in terms of community moral values, yet indirectly, build image of the sponsor's products. The readers can recall some of the advertisements given by Hamdard (Waqaf), Karachi.

Primary demand advertisement

The primary demand advertisement is intended to stimulate the demand for a generic category of a product. Usually the primary demand advertisement is used in the introductory stage of product's life cycle and then throughout its life cycle but without mentioning the product brand name. Primary demand advertisement is usually done by trade associations in an attempt to stimulate demand of their industry's products.

The Diabetics Association of Pakistan, with collaboration of the firms producing antidiabetic drugs advertises for awareness of diabetic patients. Similarly, the readers can recall the advertisement from Dairy Association of Pakistan broadcasted on television to stimulate usage of tetra pack milk products. However, individual firms supplement simultaneously, the primary demand advertisements with that of the secondary demand advertisements to increase their brand sales.

Primary demand generating advertisement enlists specific symptoms of certain ailment and subsequently indicates 'if you have these symptoms then consult your doctor'. The advertisement concluded with the firms' name. Such advertisements boost up the patients information regarding disease and inform about the availability of treatment. Thus, by these advertisements pharmaceutical industry indirectly, motivates sale of its products.

Secondary demand advertisement

The secondary or selective demand advertisement is designed to stimulate demand for individual brands. The selective demand advertising essentially is competitive advertising and places one product or brand against another. However, the rival brand name is not mentioned in any comparison. Rather, the advertiser indirectly, through inference, pinpoints difference between brands. This sort of advertisement is employed when a product successfully complete phase of its introductory life cycle. The objective of this advertisement is to increase the demand for a specific brand.

Cooperative advertisement

Cooperative advertisement is a joined advertisement used to promote products of two or more firms that share the cost of advertisement. This sort of advertisement is seldom used in pharmaceutical products. Firms however, may use the cooperative advertisement to stimulate a primary demand of their products as mentioned before.

ADVERTISEMENT MEDIA

An advertising media is the instrument or vehicle by which advertisers reach their prospective customers with their messages. This media, therefore, aids in closing the gap between manufacturer, prescribers and the consumers. The advertising and the advertising media for OTC drugs are much similar to that of any ordinary consumer product but for prescription or ethical pharmaceuticals there are restrictions laid down by the Federal Government of Pakistan as mentioned previously (Chapter 15). The fundamental media competing for advertisers' rupee are as follows:

Print or space media

This media makes use of newspapers, magazines, and professional journals to deliver advertising message to targets. Print media is also known as publication media since it is in the published form. The notation of space media has been given to print media because it covers some space.

As advertisement media, print media offers an advertisement message in combination with news, editorial contents, and entertainment. The ordinary publication media can be utilized for OTC drug products while the specialized publication media known as professional media is used for

ethical drug advertising. The professional media is restricted specifically for the delivery of advertisement message to medical profession only.

The print media may consist of newspapers, periodicals, professional journals, medical literature, and direct advertisement.

Newspapers

The importance of newspapers as advertising media is indicated by the amount of money invested in the newspaper advertising. Newspapers have mass coverage, i.e., they have ability to reach large number of readers in a given area. Thus, a newspaper can be effective media for OTC drug advertisements because the publication contents provide a background of readers' interest or acceptance for advertisement message. These newspapers include various Urdu and English dailies from various important cities of Pakistan. Some leading Urdu daily newspapers include Jang, Nawa-i-Waqat, Khabrain, Din, etc. While the Dawn, the Nation, the News and the Muslim are among the English dailies. Newspapers are used to reach to large population and thus, also regarded as the mass media.

Professional newspapers are also available which give coverage in special professional groups. The ethical products are advertised in these medical newspapers. Currently no professional newspaper is available which is published daily. However, professional newspapers are usually published on weekly or fortnightly basis. These include the Doctor, Medical News, Medical Tribune, the Dentist, the Specialist, Medical Herald, Family Practice News, Drug Topics, etc.

Periodicals

The periodicals are magazines and are usually viewed as a media with national-wide coverage. Most of the leading magazines are for entertainment of all family members. Some of periodicals however, are dedicated for politics or economics other fashions and still other contains several and varying contents of social aspects of life. This is a non-technical or non-professional advertising media. Hence, OTC drugs, nutrition supplements and cosmetic products can be advertised in this media. Currently, various weekly and monthly Urdu and English magazines are available in the market including Akhbar-i-Jehan, Family, Women Own, Herald, News Online, etc.

Professional journals

These professional journals are the scientific periodicals that publish

original research and/or review articles. These journals are published after a specified time interval ranging from weekly, monthly, bi-monthly, or quarterly. They are different from medical periodicals with respect to the technical information on individual professional practices, they provide. Such publications include the Journal of Physicians, Journal of Pakistan Medical Association, Journal of College of Physicians and Surgeon Pakistan (JCPSP), Journal of Armed Forces Medical Institutes, etc. This media is an appropriate option for the prescription drugs.

Medical literature

The medical literature is in the form of a brochure carrying printed matter for a single product and is presented to the medical profession during detailing. The medical literature bears very attractive printed material, scientific data and sometimes comparison with a very near competitor in an indirect way. This is left in the physician office. As it is restrictedly given to the medical profession, so is the professional media. This media is very commonly used in pharmaceutical marketing during detailing.

Direct advertising

The direct advertising includes all forms of printed advertising delivered directly to the prospective customers, instead of indirectly as part of a newspaper/magazine. This sort of advertisement limited in coverage in contrast to the mass communication but, because it is in printed form and covers space thus, included under print media. This consists of direct mail, advertisement specialties and point of purchase advertising. The readers can find more details in Chapter 18.

Direct mail: Direct mail is a printed advertisement delivered by mailing to the prospective customers. This media is effectively used for the advertising ethical products whereby direct mail is sent to the specific potential customers. The addresses of the customers are taken from mailing list prepared by the sales force or obtained from medical association. This professional media is used to deliver message to the selective group of customers. It is flexible in format, size, color and may be a letter, leaflet, catalog, booklet, brochures, or house organs (company publications). The detail on direct mailing as sales promotional activity is given in Chapter 18.

Advertising specialties: the advertising specialties are also called remembrance advertising. It consists of special gifts bearing name of

product, address or slogans of the manufacturer. These are gifted by advertisers to the potential customers to create a feeling of goodwill. Advertising specialties usually, include calendars and novelties.

Calendars may be wall hanging type or desktop type to be placed on physician's table. It is assumed that the calendar will be remained in front of physician for whole of the year. The products mentioned on different leafs of calendars remind the prescribers about the products. This media is used to advertise seasonal products on the season-corresponding months' leaf of the calendar. Novelties are pencils, key rings, bottle openers, memo pads, torn kit, etc. with embossed or printed message on them.

Point of purchase advertising

Printed advertising intended for display at retail stores are sometimes also included in print media. Only non-prescription drug items are advertised by using this media at point of purchase. In collective terms, the point of purchase includes variety of advertising devices and may also be called dealer displays. These include: signs, window displays, etc. Detail of point of purchase advertising has been given in Chapter 18.

Broad casting media

Radio and television is the broadcast media for advertisement. It also includes specialized electronic media. The broadcast media including radio and television are included in the mass media, since these are used to reach to large population.

Radio

Radio as an advertising media is effective for advertising non-prescription pharmaceuticals. It is a cultural, entertainment, news and as well as advertising media. Recently, the radio has enjoyed rebirth after FM channels have gone on air. Almost every home in Pakistan has radio set thus, these are attractive for advertisers as vehicle to reach prospective customers with their commercial announcements.

Use of radio makes it possible to reach local or national wide network at different times. Radio covers the towns and places where newspapers cannot reach. Radio program can attract various segments of total radio audiences by developing particular format.

On the other side, radio makes only an audio impression and is usually as

background for working, studying, ploughing so audience attention is low. Thus, the advertisement message relies entirely on the listening ability of the listener.

Television

Television (TV) has two-fold stimulation by provoking of audio-visual sense of viewers. Inciting simultaneously audio and visual senses has a long-lasting impact on recipient's minds. This media also offers an advantage of both, describing and demonstrating performance of the product advertised. This media is expensive and the advertising message lacks permanence. The OTC product can effectively be advertised on this media. Despite having some problems, TV is still an effective media. Radio and TV are also included in mass media.

Availability of cable has made TV as more specialized broadcasting and fragmented markets, making it difficult to reach a mass market. The remote control devices have created new problems of zapping and zipping. Zapping is changing channels when a commercial appears and zipping is the fast-forwarding through commercials when watching previously recorded programs. However, this can be tackled by developing comprehensive, shorter and more entertaining commercials.

Specialized electronic media

Recently an attempt has made to use of other broadcast media as well. These include medical films, close circuit TV, Compact disks, etc.

Medical Films

The pre-recorded medial films have been used for the sales promotion. Films on medical procedures or medical innovation are provided the trendsetters in any medical specialty. Very specialized advertisement message can be incorporated in such films. This sort of media can effectively be used for the prescription as well as OTC products. The film can be provided on video cassette recorders (VCRs) or compact disks (CDs).

Close circuit TV

Close circuit TV is a very special media used to telecast special information, medical procedures, or new modality from an operation theater to the group of recipients. The activities of a convention or symposia can also be transmitted via a close circuit in the office of very

busy doctor. It enables them to view the convention while not leaving their office. The commercials for prescription drugs are telecasted periodically in a manner similar to commercial TV. The prescription drugs can be advertised very effectively by using this way. This facility can also be used for learning of special techniques for house officers with displays of certain commercials.

Compact disks

The compact disks (CDs) can hold large data in presentable displays, and movies that can be retrieved and shown at physician's office by a computer or by CD players. Various films and exhibits can be loaded onto a CD. This new technique is currently at its boost as one of the advertisement media.

Various advertising media along with their usage for drug categories and targets have been mentioned in Table 1.

Media	Usage for drug category	Target to
Print Media		
Newspapers	OTC	Consumers, Prescribers, Retailers
Periodical	OTC	Consumers, Prescribers, Retailers
Professional journals	Prescription, OTC	Prescribers
Medical literature	Prescription, OTC	Prescribers
Direct advertising		
Direct mail	Prescription, OTC	Prescribers, Retailers
Ad. specialties	Prescription, OTC	Prescribers, Retailers
Point of purchase	OTC	Consumers
Broadcast		
Radio	OTC	Consumers
TV		Consumers
Specialized media		
Medical films	Prescription, OTC	Prescribers
Close circuit TV	Prescription, OTC	Prescribers
Compact disks	Prescription, OTC	Prescribers

Table 1: Advertising media, usage for drug categories and targets

MEDIA MIX

Media mix is the technique involving advertising in multimedia (more than one media) with a specific annual schedule. By media mix technique an advertiser may reach to the different segments of market at the same time. Under this technique, a company plans an advertising schedule in

multimedia for quarterly basis or for whole a year.

SELECTION OF ADVERTISING MEDIA

The decision for selection of media depends on objectives of advertisement, audience coverage, message requirements and cost of media.

Objectives of advertisement

Media choice is influenced by the purpose of a particular advertisement or by the goal of any entire campaign. For example, the advertisement for a dental product is done in a specialized dental magazine whereas for advertisement of an over-the-counter drug, a non-technical advertising media is used.

Audience coverage

Audience coverage of a media is number of target customers that can be reached with a message. The audience coverage determines the selection of media. The media is selected to reach the desired types of potential customers with maximum coverage. The national, local and special media can be employed to target advertisement message to the larger and smaller specialized market segments, respectively.

Message requirements

The media is also selected on the basis whether the message fits to it. For example, a nutritional product requiring demonstration can excellently be presented on TV.

Cost of media

Some media are more expensive while others are economical. The cost of advertising media is to be considered in relation to the budget specified for the product.

RESPONSIBILITY OF ADVERTISEMENT

The basic responsibility for the development of an advertisement rests on the product management in an organization. Some pharmaceutical firms have employed a single product manager for all products and individual product line. In others a product manager is responsible for a single product. Product manager must be a creative person who can suggest for text, illustrative material and can suggest for design the layouts of the advertising messages.

Usually a product manager uses an outside advertising agency for message development. An advertising agency is an independent company that offers specialized services in advertising. Advertising agency can propose appropriate media to be employed for a particular product. It can also manage the scheduled appearance of the advertisements and for TV commercials, arrange for models as well.

DIRECT TO CONSUMER ADVERTISING

The direct-to-consumer (DTC) advertising is reaching the ultimate consumers to produce an awareness that will favorably motivate them to utilize the advertised product. DTC has been used for OTC products. Use of DTC advertising for prescription drugs was prohibited by drug authorities in various countries. However, this was introduced somewhere in 1980's by Boots pharmaceuticals in USA. This firm advertised its anti-arthritis directly to the consumers mentioning its cost/benefits.

The Food and Drug Authority (FDA) of USA intervened the matter. Despite extensive physicians' opposition, the Boots' advertisement presenting the cost/benefit, product information, physician information and specially designed information for arthritic patients, FDA approved this advertisement in USA. In this way, the marketing system was transformed for the first time to a new dimension, where the consumer possesses the critical role. Now many firms have come close to a direct-to-consumer advertising approved by designing consumer relation campaigns, publicity, etc. Though none of pharmaceutical firm has taken a quantum jump in Pakistan, yet the multinational pharmaceutical firms can employ this technique to attract their consumers. DTC has some merits and demerits.

Merits of DTC

1. Increases the patient compliance due to expanded information
2. Increased information about ailments can help identifying the circumstances and times when an expert guidance can be beneficial
3. Use of information by patients in their advantages
4. Informed patient is a healthier consumer
5. Development of increased knowledge of treatment alternatives

Demerits of DTC

In Pakistani environment where the literacy rate is poor, lack of retail control and socio-economic conditions, the DTC advertising may lead to

disadvantages like:

1. Promotion of self-medication and gross misuse of drugs
2. Increased investment in advertisement and less interest in research
3. Compromised physician role
4. Insufficient precautionary information for patients
5. Deterioration of the doctor-patient relationship

Effective use of DTC

For effective use of DTC advertising, the drug should be distinguished from groceries and candies realizing that these may be injurious to health or threat for patient's life, if misused. In Pakistan, DTC advertising seems to make sense only when the following conditions exist:

1. Consumer can be taught to identify the conditions of medication
2. Consumer can be motivated to get professional advice
3. Limited number of brands is there
4. DTC only generates primary demand
5. DTC not bypass the physician's role
6. Must be targeted to clearly defined patients
7. Used only for the products applied for long-term chronic use
8. Accompanied by sufficient precautionary information for patients
9. Advertising claim should be true

DETAILING

Detailing or personal selling is the most expensive form of drug promotion. It is accomplished by means of personal contact with physician, dentist, pharmacist or veterinarian to influence favorably the sale of drug products. The additional function of detailing is to aid in securing and maintaining adequate distribution of pharmaceutical products. Pharmaceutical firms employ an efficient sales force or detail men to contact the potential customers. The success of entire marketing program depends on the management of sales force.

The physical presence of a detailman allows the physician an opportunity for 'give-and-take'. The detailman may be able to explain the product benefits and anticipate or react to physician's questions about company's and competitor's products. Demonstrating the operation of products is another possibility in detailing that is not possible with the use of other promotional media. Detailman also delivers the samples to the medical professionals.

DETAILING PROCESS

The process of detailing follows sequence of four steps for dealing with and persuading customers for selection of particular brand. These include identifying prospects, qualifying them, presenting message/samples and then follow up.

Identifying prospective customer

Identifying the potential customers is the first step in detailing process. The prospects with greatest potentials are ranked first and so on. The potential of the customers to utilize or to prescribe detailer's product can be judged through the visit of nearby retail store. To be cost effective, usually, a detailer pays more visits to the customers with greater potential.

Qualifying customer

Qualifying the customer is the determination whether he is willing or capable to direct the sales of drugs. Qualifying prospective customer is

accomplished by gathering information from the nearby retailer, competitors, suppliers, etc. in terms of product preferences, attitude, etc. The customer's needs are matched with the products features. For example a second generation anti tuberculosis will not fit the need of a General Practitioner (GP). It must also be assessed that how much time a prospect will take to switch from competitor's products to the detailer's product.

In a hospital pharmacy, qualifying the prospective customer mean to identify who is likely to influence the choice of product in hospital formulary and who will make the ultimate purchase decision. This allows the sales person to target the right people.

Presenting sales message

The first two steps help to know the complete profile of the potential customers in terms of their nature, product preferences and prescription habits. With such background information, a detailer can design an effective message and discussion that attracts the prospect's attention. During the detailing, an efficient detailer hold interest throughout his discussion and able to arouse desire for the product. During discussion the communication must not be one-way and the prospective prescriber must also be involved in discussion to measure his willingness for product selection.

At end of discussion, a successful detailer must get the commitment of product prescription. However, a detailer should not beg for the prescription of his product. The drug detailer can also present to the prescribers the drug samples or documented scientific evidences to support his message.

Follow up

The detailer's job continues even after getting prescriber's commitment for the trial of his company's product(s). Follow up visits are required to assess whether the customer really prescribed his product as committed and if so, what was the feedback. Follow up visit also elaborates the prescriber's satisfaction regarding the product or otherwise.

In a follow up visit, if the physician found satisfied regarding product, he is reassured that a correct choice has been made and a commitment for repeated prescription of detailer's product is obtained also. The detailer may again summaries his product's benefits and repeats its features that

give edge over other alternatives.

With follow up visits, a detailer may find that the physician has not prescribed his product, contrary to his commitment, or has a product trial but not satisfied. In this case, a detailer should carefully plan for the next course of actions to achieve prescription of his product. He may give more documented scientific evidences concerning his product to convince his target.

DETAILMAN

A detailman is also called detailer, pharmaceutical sales representative or a medical representative. As has been mentioned previously (Chapter 11), the pharmaceutical marketing is a detail-dominated field. Thus, a detailman is an integral part of the pharmaceutical marketing process. The detailer goes to see physicians, dentist, hospital pharmacists or any other medical professional with the purpose of influencing them to prescribe, recommend, or buy his company's product(s). The basic duty of a detailman is to furnish the technical information to the technical persons. Thus, a detailman must be a qualified person who can discuss about drug usage, mode of action, side effects, drug interactions, toxicity, dosage schedules, pharmacokinetics, etc.

Qualification of detailman

A pharmacist is well placed for the job of detailman as having the relevant knowledge of the drug and drug products. However, persons with qualifications like Bachelor or Master of Science (B.Sc. or M.Sc.) having certain marketing experience are also working in this field. Recently medical graduates having M.B.B.S. degrees are also employed as detail men.

Training

The technical training to a detailman is critical for the success a pharmaceutical firm, since, newly hired detail men have the variety of backgrounds. A formal training provided to new detailers comprised of the understandings of firm's policies, products, and about selling techniques and competitors' products. Medical representative is particularly trained for the effective use of short time in physician's office so as he can comprehensively convey his message. Training is also provided for tackling and responding the physician's queries.

Firms have separate training department managed by a training manager

for training the newly hired detail men. Sometime product managers are responsible for the same. After training, the firms continually reinforce the product knowledge through mail, telephone, and supplementary training sessions at regional sales meetings and at head quarters.

Duties of detailman

Most of pharmacy graduates are inducted in pharmaceutical firms as detailman and thus it is worth to mention the duties of a detailman. These duties can be categorized into basic, allied and special duties.

Basic duties

The basic duties of a detailman are towards the medical profession and include:

1. Offering a formal contact between a physician and the manufacturer in office and in medical meetings, conferences, symposia and conventions
2. Presenting information to physician and medical professionals on new and existing products
3. Stimulation of the interest of physician for the product that has already been advertised in some other media
4. Refreshing the physician's memory on older products
5. Distribution of drug samples to physicians and other medical professionals
6. Passing along the experiences of other physicians about drug product and the information about handling of special problems by other physicians
7. Maintain and control the mailing list for the purpose of direct mailing or other promotional activities

Allied duties

The allied duties of a detailman are towards the retailers and/or wholesalers and may include:

1. Acquainting the retailer/wholesaler with the relative merits of his products
2. Visiting the retailer and wholesaler to ensure company's sale status
3. Helping the retailer in monitoring and planning inventory requirements of the products of his company
4. Explaining the new schemes and return goods policies of the firm that may be misunderstood and require interpretation

5. Involving in direct sale by taking orders from retailers

Special duties

The special duties that can be assigned to a detailman include the following:

1. Market research, general or problem oriented
2. Talking on various health-related subjects to both professional and lay groups
3. Functioning in other spheres of professional relations such as calls on professional institution's faculties, association executives, etc.
4. Any duty specially assigned to a detailman

INSTITUTIONAL DETAILMAN

The institutional setting in a hospital is complex and various authorities are responsible for drug purchase decision, making detailing difficult task. A detailer has to see and convince all the people involved in the purchase decision chain. Some pharmaceutical firms have special personnel, known as hospital or institutional detailman to undertake this job effectively.

Pharmacy and therapeutics committee of a hospital lays down policies regarding the purchase and visits of the detail men. Usually a detailman is not allowed to visit the prescribers in the institute rather, he has to visit to the hospital pharmacist. Depending on the hospital policies, the pharmacist arranges the meeting of a detailer with group of physicians. Alternatively, the detailer is asked to exhibit his product in specified place in hospital for a group of prescribers. In a hospital, a detailman may require following appointments:

Hospital pharmacist

The hospital pharmacist may directly involve in purchasing in hospital pharmacy or has influence on it. He may also a role in decisions regarding drug inclusion or exclusion in hospital formulary. A detailer thus, must visit to a hospital pharmacist depending on his role in drug purchase decision and hospital polices. A product is presented to the pharmacist based on facts and working knowledge of the drug.

Pharmacy and Therapeutics Committee

The Pharmacy and Therapeutics Committee in a hospital has a great influence on hospital formulary development and drug purchase decision. If this committee is convinced, a favorable purchase decision can be

achieved.

House officers

The medical house officers are medical personnel on house job. After having ascertained on what service they are, how much autonomy they have, how their heads feel about drugs, and what results they are obtaining from the new products, a detailman may visit them to achieve his targets.

Nursing Supervisor and Students

Nursing supervisor, as a member of Pharmacy and Therapeutics Committee, can also suggest for the inclusion or exclusion of drugs from hospital formulary. A detailman may visit nursing supervisor and may explain nursing-related aspects such as preparation and administration of a product. He may also provide information about expected patient reactions with the use of detailer's drug product.

MERITS AND DEMERITS OF DETAILING

The detailing is customer-focused, flexible and two-way communication. The major drawback of personal selling is its high cost because of excessive expenses required for operating a sales force. However, it is extensively used in pharmaceutical marketing due to its cost effectiveness.

Customer-focused

The detailing is focused onto the real prospective customers, thus minimizing the wastage of efforts that could be better spent on something productive. The most other forms of advertisements, target the customers may not the potential or not capable to direct the sale. Additionally, being customer-focused, detailing activity can be tailored specifically to convince the particular customer.

Flexibility

The detailers can tailor the message, discussion and presentations to fit the need and behaviors of the individual customers. The reaction of customers can also be flexibly interacted.

Two-way communication

Detailing is the face-to-face communication resulting in two-way exchange of ideas. Furthermore, the quirks of a target customer can instantly be responded, while the customer's immediate reaction is also

observable.

DETAILING VERSUS OTHER JOBS

The detailing has following features that discriminate it from other pharmaceutical jobs:

Firm's representative

Detailers represent their firms to the prospective customers and impressions left by them is a basis for judgment of the products of a firm.

Not directly supervised jobs

Detailing job is usually with little or without direct supervision. Therefore, a detailer shows more motivation and initiative.

Authorized to spend firm's funds

A detailer is authorized to spend firm's funds for transportation, food, housing and other expenses. The only restriction is that the funds must be spent profitably.

Demands considerable traveling

Detailing jobs requires considerable amount of travel. A detailer has to remain frequently away from home to manage their sales territories.

Having profit responsibility

The detailers have been assigned the profit responsibility. They are given a specific target of sale to achieve within specific time period. A successful detailer is motivated to achieve the target.

Definite job structure and promotion

The detailing job has a definite job and promotion structures. After getting experience, a detailer can be promoted to the next position in the job structure.

More compensation

The detailers are considered to run the whole firm so they are compensated with more salary and fringe benefits.

QUALITIES OF A GOOD DETAILMAN

Representing a pharmaceutical company is different from any other sales

career. It offers a unique combination of intellectual challenge, sense of purpose and financial reward. Some characteristics if present make detailman successful. These include the following:

Knowledge

The technical knowledge is understandings of various pharmaceutical fields including pharmacology, biopharmaceutics, quality control, drug manufacturing and of marketing. Knowledge also includes information about the company represented by detailer, its marketing goals, plans, policies, product knowledge and competitor's products.

Technical skills

The skills that reflect understanding of and proficiency in a specialized field are called technical skills. The examples of technical skills required in a detailman are selling skills or communication skill. These both skills are vital to the success of a detailman

Derive

Derive includes initiative, persistence, vigor, and willingness to accept responsibility. A reasonable level of all these traits must be present in a detailer to be successful.

Intelligence

The intelligence is an important human skill needed in a successful detailer. It helps in understanding of various aspects of organizations and to deal with difficult customers, and combination of technical, economic, financial and legal elements in order to explain them to others efficiently and in best possible way.

Convincing ability

A detailer interacts with medical professionals, retailer and wholesaler. The sales of detailer's products will depends on how much a prescriber has been convinced by a detailman. Thus, he must be able to convince the people. Knowledge and communication skill is needed for convincing.

Decision making ability

A detailer should be quick in decision-making. It is needed in the determination of how the work could be done, resolution of conflicts, selection of the one of the best course of action among various alternatives.

Management skills

The successful detailer is well organized, plans his visits and message to be delivered before calling a physician. He should also be able to manage his route and tours very effectively.

Communication skills

A successful detailer is competent enough to express himself, particularly in verbal and written forms of communication. Ability to communicate helps in convincing the customers, a basic step in the product trial.

Business insight

An efficient detailer has sufficient business insights. He must be business result-oriented. A detailman has to take commitments from the target customers for trial of his product.

Appetite for success

A successful medical representative must have appetite for success. This is the most important trait that must be present in a detailer who wants to grow and succeed.

Self-confidence

Self-confidence enables a detailman to take initiative, accept challenge and to convince his customers. Detailer's effective communication and presentation in front of an individual or group of medical professional also requires self-confidence. The successful detailer does not underestimate his capabilities and is confident to achieve what he wants to.

Sense of responsibility

A good detailer performs his job with full sense of responsibility under self-control. He feels responsible to his job, with other colleagues and achieving targets.

Interpersonal skills

A detailer does not work in isolation. Rather, he works with other people as colleague, junior, and supervisor. The interpersonal skill is associated with detailer's ability to work well with others as group or team member.

Presentation

Detailing requires face-to-face communication thus, he must be able to

organize the message well and then effectively present this message to the prospective customers. A well-presented message facilitates the trial of the detailer's product.

Energetic

Nature of selling job demands extensive traveling. Therefore, a successful detailer must be energetic so as he is must be energetic enough for a great deal of traveling.

MANAGEMENT OF SALES FORCE

Sales management is planning, organizing, directing and controlling the medical field force to increase the profit through customer's satisfaction and sales of products. The ultimate desire of consumers for proprietary products determines their sale. Pharmaceutical sales management, frequently but erroneously viewed as marketing management. The discrimination between marketing and selling has been mentioned earlier (Chapter 11). The sales management may be accomplished by a manager at regional level through its detailers or sales force.

Structure of sales management

A typical drug sales organization consists of a territory manager with some number of detail men reporting to him. The territory manager may be appointed at District level. A single division manager might then be responsible for certain number of territory managers. The divisional managers are in turn, required to report to the company's marketing manager who may then report to a marketing director of the firms. The sales management staff may include specialist in sale communication, a sales training manager and a sales promotion manager.

Elements of sales management

Effective sales management includes the following elements of control and supervision, performance evaluation, compensation and maintaining the full staff.

Control and supervision

Controlling and supervision of detailers is an essential for the optimum results in sales management. However, it is difficult because the sales force often operates independently and cannot be continuously observed for supervision. However, the job description is the basic component of the control and supervision of detail force. The completeness and

accuracy of the job description may influence considerably the effectiveness of managing the sale force. Few sales managers rely on detailman's self control as a means of managing a sale program. The control function includes assigning territory and execution of control and supervision.

Assigning territory

Assigning territory to detail men is restricting his efforts to a given geographical area. Sometimes it means, assigning certain group of physicians to be visited. The territory is closely related to the sales quota since the sales potential of a given territory is a function of a combination of physicians, drug stores and population in the territory and ability of a detailman.

Routing and scheduling

The routing and scheduling of a detailman is determination of the visit sequence to prescribers and the timings of these calls. Much of this planning is normally left to a detailer for visit the physician. However, it must be in the knowledge of the manager which may be used for a surprise check by the supervisor.

Controlling and supervision

The control and supervision result from weekly or even daily reports submitted by the detailman.

Performance analysis

The performance of a detailman is on one hand, the ultimate basis for sales of assigned drug products and on the other hand, compensation and promotion. The performance evaluation assesses the efforts of detailers and helps to make constructive proposals for improvements. Observing detailers' performance and matching performance standards, management can assess their success or failure and develop new training programs for upgrading the sales force's efforts.

Success in personal selling is the responsibility of management because it is involved in the decision related to detailman. These decisions include the type of detailman needed, contents of job descriptions, staff size, level and means of compensation, and assigning the territories. All above managerial decisions also affect significantly the performance of an individual detailman.

The performance can be evaluated directly or indirectly and in quantitative or qualitative terms. Sudden checks or surprise visits by supervisor during physician calls are direct evaluation of the performance of a detailer. Major indirect evaluation component is observing the territorial sales volumes. Detail men's self report can be an indirect basis for performance judgment. The performance evaluation cannot be allowed to rely simply on the materials in detailman's reports.

The sales volume or orders received by a detailer is the quantitative measure used for his performance evaluation. Whereas the examples of qualitative measures used in performance evaluation are number of calls per day or week, knowledge of product, and customer relations. The ideal performance appraisal of the detailers' performance is undertaken on as many different bases as possible.

Compensation and expenses

Sales management evaluates the performance of sales force not only to assess what sale people are doing but also to reward them. Performance evaluation thus, is the basis for decisions regarding annual increments, incentives and other rewards. The sales management compensation plans may consist of financial and non-financial rewards.

Financial rewards: The financial reward may take the form of direct or indirect monetary payments. The direct monetary payments may include straight-salary plan, straight commission and combination of these two. Variable promotion-bonus and/or commission are also included in the direct monetary payment. An indirect monetary payment may be exemplified as paid vacations, sponsored tours, etc.

Non-financial rewards: The non-financial rewards are non-monetary compensations. These may include the promotions, or fringe benefits, etc.

Maintenance of full staff

Staff with the relevant combination of scientific background is required for sale management but it is difficult to maintain full staff. The usual frustrations and difficulties in the personal selling situations and offers from other companies may lead to a considerable job switching. The job switching may lead to loss of trained personnel, expenditure of cost in advertisement for vacancy announcement, training of a new staff and wastage of time. Thus, the sales management attempts to maintain its full

staff by minimizing the job switching. The job switching can be reduced by various measures including:

1. Compensations, particularly of the fringe benefit types
2. Offering advancement to loyal detailers
3. Promotion form within the own detail force
4. Promotion based on the longevity with firm

SALES AND OTHER FORMS OF PROMOTION

Besides advertising and detailing, other promotional tools include sales promotion, direct mail, publicity and public relations. All of these are distinct promotional forms but are interrelated and supplement each other. These promotional forms will be discussed under this Chapter.

SALES PROMOTION

Sales promotion is an umbrella term and encompasses a variety of promotional activities other than advertising, personal selling, publicity and public relations. However, it supports advertising and detailing and coordinates them to make each more effective. Sales promotion is widely used in pharmaceutical marketing and is intended to stimulate demand. The sales promotion may be targeted to the prescribers, retailers and to the ultimate consumers in case of over-the-counter (OTC) drugs. Sales promotion includes free sampling, sponsored medical shows, contests, point or purchase displays, etc. Since, most of the sales promotion activities are usually not ordinary, it has the potential to catch the customers' attention effectively.

MERITS AND DEMERITS OF SALES PROMOTION

Sales promotion has the ability to generate lot of interest and excitement in prospect's mind regarding product. Since, it has the potential to catch the customers' attention the sales promotion builds awareness and interest faster than other promotional elements. Usually, pharmaceutical companies reserve some special promotional programs ready in case of unexpected competition. Furthermore, the sales promotions can be very effective way to reach the target customer when other promotional forms are not possible. Some common goals of sales promotion are to:

1. Convince customers so as to gain a trial for the firm's products
 2. Attract new customers
 3. Interrupt existing prescription habit and to motivate and switch the prescriber to the firm's products
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4. Encourage current customers to use a given product more frequently
5. Counteract the competitor's promotional activity
6. Moving potential buyers from interest to action
7. Motivate the impulse buying due to display of product on retail

When the sales promotion is used extensively, it is a problem. The other limitation is its short image or its temporary nature as compared to the advertising that has long-term program to keep product place in the customers' minds.

FORMS OF SALES PROMOTION

Sales promotion has various forms. Some are targeting to customer (prescriber) while other to the ultimate consumer. The various forms of sales promotion are as:

Free Sampling

Sampling is a presentation of free drug products to the prescribers for clinical experience by using in selected patients. Sampling motivates the prescribers favorably to prescribe the given products to the patients. There is no better way for demonstration of clinical efficacy and safety of a drug other than by its actual use in patients. Sampling thus, is an ideal mean of promoting drug products though, controversial and criticized.

Samples are provided as reduced packs containing less drug quantity or quality than that available in their commercial packs. Such samples clearly bear the notation 'physician samples' and 'not for sale'. The samples can be delivered by a detailman for which, each detailman is supplied with sufficient samples according to the needs of the prescribers in his territory. By means of detailers, a daily report of distribution of these samples to doctors with their names is pointed toward the head office.

Giveaways

The giveaways are the visual aids to be left in the prescriber's office to serve as continuous products reminders. The giveaways range from books to elaborated desk sets mentioning the drug names. These giveaways act as the publicity devices that attract the attention of physicians. Some pharmaceutical firms effectively design the giveaways as large variety of devices. These devices may be employed to help drug administration to patients, monitoring of some patient's condition, etc. A physician may use a device given as giveaway in explaining the disease or drug to the patients. The biggest limitation of giveaways is their cost. However, these

are very effective as promotional tools.

Novelties

Novelties are like the giveaways but are of common and personal use such as key rings, ball pens, sunscreens used for cars, etc. Novelties have printed or embossed names of products or companies and thus, are continuous and effective reminders.

Patient aids

The patient's aids are specially designed items carrying information helpful for patients. These aids range usually, from attractively prepared booklets, brochures, and leaflets to charts. Varying information can be placed on patient aids. Some patient aids describe the nature of conditions being treated, diet in special diseases, procedure of the drug administration, etc.

The patient aids have been designed for information of patients with chronic diseases. Physicians effectively use patient aids for explaining facts regarding drugs to their patients so saving the prescribers' time. These are used widely in chronic conditions like diabetes, ulcer, cardiovascular disease and obesity, etc.

Medical exhibitions

Medical exhibitions are medical shows exposed before a group of medical professionals. These are special and effective sale promotional tool since these provide an opportunity to meet and talk with larger number of physicians in a short time period. The location and degree of attraction the exhibit are the critical aspects in the efficiency of medical exhibit.

It includes an exhibit booth, collapsible or portable displays usually, managed by detailer. An effective exhibit has an eye-catching stopping point displaying medical literature and/or pickup-samples. At a medical exhibit, a physician can also discuss drug attributes with the detailer.

Medical films and closed circuit TV

The medical films and closed circuit TV can be used as a very specialized promotional media for product promotion. Special films can be designed to show certain surgical procedures and disease treatment modalities along with firm's commercials. Educative films with product commercials can also be tailored for medical profession on house jobs.

TV is the most influential media but the prescription drugs cannot be

advertised on it. A TV can be placed in a prescriber's office and relevant medical information as films can be telecasted. At the time of a medical conference, convention, meetings, this procedure can be performed for the participants. The Advertisements for various products can be broadcasted in a manner similar to commercial TV on this media. The medical films can be presented on videocassette or compact disk (CD). The CD is played on computer or CD player.

Use of Videocassette Recorders and Compact Disk players

Use of videocassette recorders (VCRs) provides another effective tool in sales promotion. The compact disks (CDs) are getting more usage than VCRs due to their favorable attributes. The CDs can be played on a CD player or on computer as has been mentioned before.

A distinct advantage of a videotape and CD is that these can easily be played and replayed frequently to smaller number of audiences at different times. A detailer can use this instrument for demonstrating some informative documentary to medical personnel through particularly made movies, which also contain advertisements.

Point-of-purchase displays

The point-of-purchase (POP) displays are fixtures or displays that provide information to the consumers, add to store atmosphere, and serve a substantial promotional role. These may be floor stands, posters, or product holder. POP motivates the consumer and generates extra sales of OTC products and other non-prescription items by impulse buying. A good display has the following features:

1. Unique and distinctive
2. Attractive and pleasing
3. Presenting simple and understandable message
4. Able to arouse the attention and interest of customers

DIRECT MAIL

The direct mail is a printed advertisement directed to a specific individual by mail rather than a group of individuals. Usually, the targets of direct mail may be prescribers or retailers. Direct mail is a customer-focused promotional form that is effectively used for the advertisement particularly of prescription drugs. It may be in the form of one-page letter, a leaflet, postal card, catalog, folder, booklet, brochures, or house organs (company's publications).

MAILING LIST FOR DIRECT MAIL

A mailing list carries the addresses of medical practitioners capable of influencing sale of a product. Efficiency of circulated direct mail depends on the accuracy of mailing list. There are two sources of a mailing list. It is prepared by a pharmaceutical firm through its medical sales force or can be obtained from the medical association. The mailing list obtained by a former method is more updated and reliable for a pharmaceutical firm. This list may be prepared in various manners. However, a list of address differentiated by specialty or marketing traits is more helpful.

An ideal mailing list has various features. It is accurate in spellings of name titles and addresses, and free from duplication. Furthermore, it must be revised and updated, otherwise it can give rise to undelivered mail adding the cost of the media.

MERITS OF DIRECT MAIL

Selectivity, flexibility, and customer focusing are the merits of direct mail. These merits of direct mailing have been mentioned as below:

Selectivity

Possibility of directing specific message to selected group of prospects with specific message is its distinct advantage over other advertising media. In direct mail, selection is possible for message, target and as well as for the geographical locations. No other medium can offer both, geographical and quantitative selectivity possible with direct mail.

Flexibility

The direct mail is flexible in format, in size, in color and consequently in cost. It may be simple and comprehensive to complex. As mentioned before, the direct mail may be a letter, booklet, and brochure or company publication.

Customer-focused

Direct mail is a personalized and customer-focused promotional activity. It effectively establishes a relationship between manufacturer and a specific physician.

DEMERITS OF DIRECT MAIL

Although the direct mail is desirable medium, it has various major disadvantages such as cost and hard to attain attention.

Cost

The direct mail, as advertising media is relatively expensive per contact. It is often difficult to secure and maintain an appropriate mailing list leading to wastage and more cost.

Hard to attain attention

A busy recipient usually keeps the direct mail sideways so the direct mail in this case is hard to attain attention.

PUBLICITY

Publicity is non-paid placing of information in news media, including mass, professional or a specialized media to call attention at special events, activities, or any news making situations surrounding a promotion. The mass media includes newspapers and television while the professional media includes medical journals, periodicals, and the media used for the promotion of prescription products is the firm's newsletter, house organs, etc.

COMPARISONS WITH OTHER PROMOTIONAL FORMS

Advertisement is the nearest counterpart of publicity so only these both promotional activities will be compared. Some similarities as well as differences between advertising and publicity exist. Like advertising, publicity is a promotional tool and requires a media for targeting to the prospective customers. As mentioned before, publicity differs from advertising in two respects. Firstly, the publicity is a non-paid form of promotion though it indirectly incurs some costs. Advertisement, in contrast is done by paying price in any media. Secondly, a sponsor may or may not be identified in publicity. Contrarily, in advertising, the sponsor is essentially identified.

APPLICATIONS OF PUBLICITY

The publicity is not widely used by pharmaceutical firms as that of the advertising, detailing or sales promotion. This is perhaps due to the fact of non-existence of a separate department in pharmaceutical firms. Furthermore, benefits of publicity are still unrecognized in pharmaceutical industry. The newspapers are published from various centers on national level. The appearance of a news item as publicity however, is confined only to the edition of newspaper publishing in the region of manufacturer. It is seldom published in all editions of a newspaper thus, making the publicity further limited in its scope.

FORMS OF PUBLICITY

Publicity may acquire several forms including news release, news-like advertisements, public communication with group, speeches, news conference, meet the press and face the nation.

News release

Publicity can acquired a form of news release from the firm's office. Any information can be released as news that is viewed by the media and public as newsworthy, interesting or useful. News release, as the publicity may be the any form of news items mentioned below:

1. Launch of a new product
2. Establishment of a new section in a firm
3. International Standard Organization's (ISO) certification
4. Recognition of an employee
5. Describing a research breakthrough
6. Reporting of a financial performance
7. Any success of the firm
8. New market venture

The news items may be with or without photograph or illustration. However, news items along with photograph or illustration have fewer acceptances in the mass media.

News look-like advertisement

News look-like advertisements are passed for publicity release. Although, it can clearly mark as advertising, it resembles a publicity release. They frequently appear in publications and feature the products and services offered by a firm. These stories of course, are really advertisements, and the space is paid for either directly or indirectly.

Public communication with group

The public communication with group of people may be speeches or news conferences. Some publicity programs include meet the press and face the nation program where the high up of a pharmaceutical firm or a representative comments positively regarding firm or its products in front of a group of people.

Speeches

Most organizations reprint major addresses in brochure format and mail them to their special community or to the media. These speeches can be

circulated internally in an organization because some of the employees are also at the public relation's front line.

News conference

The news conference is an individual-to-group communication where the firm's head speaks with a group of invited journalists. It is used to expose some newsworthy items to the public or to clarify some facts related to the firm's business.

Meet the press

Meet the press is an individual-to-group communication and resembles to the press conference. But in meet the press program, the firm's head or his representative is invited and interviewed by a group of newsmen. Obviously, the representative will speak on some events or activity of his firm in a positive way.

Face the Nation

Face the nation is a program where a representative of managing director appears in front of public from different sectors for questions usually at television. Again a representative will speak in a positive manner about his firm.

MERITS OF PUBLICITY

Publicity has the following merits over other promotional tools:

Economical

The publicity has lower cost as compared to the advertising and detailing since, there is no media space cost or time cost for print or broadcast media, respectively.

Greater credibility

The message source in publicity is a third party that has no interests in firm's marketing so it receives greater credibility and believability than advertising.

More readerships

The readership refers to the number of newspaper readers. Usually the readers are uninterested to read an advertisement. However, they read news with more interest. Since, publicity is presented as news, thus gets greater readerships.

Promptly placed

Publicity can be placed quickly when to react competitor's activity or unexpected events. The advertising message requires a careful planning and development with or without the involvement of an advertising agency.

DEMERITS OF PUBLICITY

The demerits of publicity include loss of control over message when released to media and its limited exposure.

Loss of control over message

After the news release, the management of publicity media controls how much or what portion of the news release will be printed or broadcasted. Thus, a firm loses its control over message after its release to media.

Limited exposure

The publicity has limited exposure since, it can be published once whereas the advertisement can be published as frequently as the firm desires.

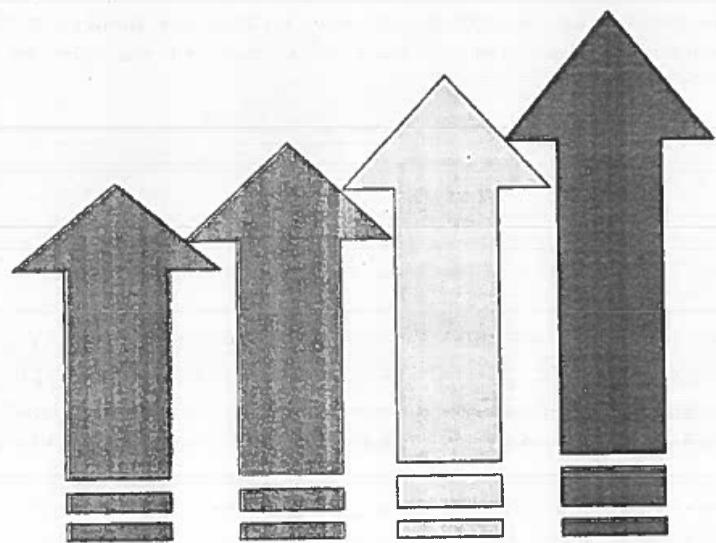
PUBLIC RELATIONS

Public relations refer to be the keeping and staying in touch with organization's publics by groups of activities. The publics of pharmaceutical firms are usually, prescribers and rarely its ultimate consumers. The public relations are group of activities and much involved with 'image creation'. Plant tour is one of the public relation activities where the industry has opportunity to 'show off' its laboratories, plant, execution of quality control, and sophisticated operations.

In public relations, although the individual products may not receive a particular attention or boost, yet the visitors exposed to such well-planned efforts that cannot be unsuccessful to come away with a favorable overall impression. Like publicity it is not a common practice because of not having the public relation departments in pharmaceutical industries as in consumer markets. The firms however, rely on its sales force to arrange such tours and other public relation activities.

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Retail Management



MANAGING RETAIL PHARMACY

Retail is an establishment for selling of the product (or service) in individual unit to the final consumer for consumption. Retailers provide service to the consumer on one hand, and on the other, serve producers and wholesalers. Former is known as the primary retail role while the latter is referred to as secondary retail role.

Large number of pharmacists is adopting careers in retailing either as employees or as self-employed. Currently, professional activities of retail pharmacist are confined to the traditional role such as dispensing prescription, recommending and selling of over-the-counter (OTC) drugs and health aids. To come at par to the international retail roles, the retail pharmacist must also include clinical services and the managerial functions along with the roles just mentioned.

The clinical services comprised of counseling patients, consulting with physicians, developing patient medication profiles and calling the prescriber for refills. Screening for drug interactions and checking for allergic reactions are other important areas of pharmaceutical retailing. However, perhaps a pharmacist has to wait for a long to play these clinical roles.

The patient counseling may consist of necessary information and answering the routine questions regarding drugs, their preparation (reconstitution), use and ailments. The prescriber consultation areas include intervention, ways to lower the cost of drugs, alternative choices, and patient complaints concerning side effects of a given drug. The above services can only be provided by the pharmacist and not by the non-technical retailers.

The management activities of a retail outlet may include purchasing, inventory control, stocking shelves and supervising the technicians.

PLANNING FOR A RETAIL PHARMACY

Before mentioning basic planning determinants, it is worth mentioning that sometimes a decision has to be made whether to establish a new or to

buy an established retail pharmacy. There are several reasons for selling a pharmacy. An owner wants to sell a pharmacy due to his immigration, better opportunity elsewhere or relocation of location due to any reason. The pharmacy on sale may be having difficulty being competitive or unsettled rental problem between the leaseholder and the owner. Else a pharmacist may want to get out of business. There may be other hidden reasons as well, that an owner may hide from the buyer. A pharmacist planning to buy an established pharmacy must analyze carefully all the possible reasons before a buying decision.

Buying an established pharmacy is one of the options for a pharmacist who wants to initiate a retail business. If this option is critically evaluated this could be a successful experience. The merits of buying an established pharmacy include:

1. May have favorable price
2. Already has demonstrated the value of its location and thus, saves time and efforts of finding a right place
3. Pharmacy's ability to attract customer can be evaluated/predicted and compared with other existing pharmacies
4. Reduced uncertainties, since various risks are exposed

The disadvantages associated with buying an established pharmacy may be as mentioned below:

1. Price may be too high due to erroneous appraisal by a buyer
2. The inventory may be near to expire
3. Reputation or image of the present owner may be poor and will take time to establish a good repute
4. Physical facilities and fixtures may not be according to the specifications, or outdated, need repairs or replacement

It is evident from the foregoing discussion, that the options for buying an established pharmacy must be critically evaluated.

Launch of a retail pharmacy requires a comprehensive plan for a successful business. The planning is needed in various areas including selection of retail category, financial sources, location decision, physical facilities, type of license, staffing, and spectrum of activities to be offered.

Selection of retail category

Before transforming the idea of retail pharmacy to a real business, the owner must consider the forms of retail to be adopted. The major forms

of retail pharmacy may be individual pharmacy store, chain store, and superstore, with sole proprietorship or partnership.

Financial source

A prospective retail pharmacy owner not has always the finances to launch a new business. Therefore, the finance must be secured from other sources. Decision regarding financial sources is a critical factor. The possible sources may include family members, friends, and loans from financial institutions, etc.

Location decision

The location decision depends on the available consumers, competitive retailers, and vicinity of the hospitals and medical practitioners. The two options for location may be freestanding or shopping centers. Both of these locations have their own merits and demerits.

Freestanding location

The freestanding or solo location is a site, other than a trading area but heavily traveled. Lack of a close competition, low rent and flexible operating time are the characteristics of solo location.

Shopping centers

Shopping centers or trading areas are a geographic cluster of retail stores. Provision of more convenient location, greater attraction and customer traffic due to the availability of variety of goods are merits of shopping centers. Limitations of shopping area are more rents, and uniform operating hours. Commonly there are three types of shopping centers.

The neighborhood shopping center is the cluster of 5-10 stores to serve a part of a community. In such centers, one drug store is sufficient. Community shopping center has more than 15 stores to serve the whole community. This center may have two drugs stores. The regional shopping center may consist of up to 60 stores and is designed to serve much more customers from various communities. Such centers may have more drugs stores.

Physical facilities

Physical facility refers to the design and the layout of the drug store. Design comprised of the interior and exterior appearance of the drug store. The layout consists of space allocated to various products, location

of product and the floor plan of display of racks in a store.

Acquiring license

After the provision of physical facilities, the application is tendered for grant of license. It may be the one of the license for the selling drugs, for retail sale, wholesale pharmacy, and for selling narcotic and other controlled drugs.

Staffing

The hiring of appropriate technical and non-technical employees is the next step in the planning a new retail pharmacy.

Spectrum of services

Decision of the spectrum of services is planned according to the objectives of an establishment. This will depends on the professional expertise available with the organization.

Promotional activities

The promotional mix is selected to inform and to attract the consumers. Information and motivation of the consumer is vital for the new retail outlet. Planning regarding the promotional activities is indispensable for the success of new pharmacy.

RETAIL CATEGORIES

Pharmaceutical retailing diversity runs form physically small drug stores to complex chain drug stores. There are various ways of classifying the pharmaceutical retail stores. Based on services, retail outlets can be categorized as small independent and larger chain pharmacies. With respect to ownership, the retailer may take any form including sole proprietorship or partnership. However, the professional practice of pharmacy is virtually identical in all pharmaceutical retail categories. The detail discussion of the forms of retail has been given in forthcoming text.

Independent pharmacy

An independent retail pharmacy is a setup with a single retail store without branches or any contractual agreement with others. Independent pharmacy exists at a single location. However, it may be selling all drug categories including or excluding narcotics and other controlled drugs.

The independent pharmacy stores have the following advantages:

1. Requires less investment
2. No profit sharing
3. Freedom in control and from restrictions

The disadvantages of independent pharmacy are as follows:

1. The employee will remain an employee leading to less interest
2. Unable to attract or retain a qualified person

Superstore

Drug superstore is one carrying drugs along with a wider variety of commodities. Obviously, the pharmacy has allocated a separate area within this unit. Superstore attracts more consumer traffic due to wide variety of commodity lines available. Additionally, impulse buying is much more in a superstore. The impulse buying in superstore results into more sales and thereby more profit as compared to the independent pharmacy stores. Other merits and demerits are same as that of the independent pharmacy store.

Chain pharmacy

Chain pharmacy stores are branched stores existing at various locations but operating under a common ownership. Chain pharmacy concept was first initiated a decade ago by Farmacia, a subsidiary of Ferozesons, Nowshehra. This concept is gaining success and there is an increasing trend, particularly in big cities such Karachi, Lahore and Rawalpindi-Islamabad.

Currently there are various chain stores at city level including Fazal Din's PharmaPlus, Shazoo's Zaka Pharmacy, Pharmax, Clinixplus, etc. Hopefully other investors will also invest in more pharmacy chain stores. The chain drug stores have the following advantages:

1. More credibility
2. Wide geographical coverage through many chains
3. Economical buying due to bulk purchase making more profit
4. Able to attract qualified persons because of having a job structure
5. Efficient as can afford use of more employees, better service, sales training, use of computer, etc.
6. Promotional activities can be initiated even with more investment

Sole proprietorship

Sole proprietorship is the simplest form of setup and is owned and

operated by one person. Most community pharmacies and drug stores come under this category. The profit and loss in sole proprietorship business is only of the owner. The owner in case of sole proprietorship has absolute autonomy in decision, management and operational strategies, ways, and controls. The retailer is highly motivated and dedicated for his own business. A sole proprietorship can acquire form of partnership if the owner desires to do so.

Merits of sole proprietorship

1. Involve low start-up costs
2. Profits are for the owner
3. Control is by the owner himself
4. Freedom from shareholder's restrictions
5. Freedom to expand, modify and even terminate the business

Demerits of sole proprietorship

1. Losses has to be stomached singly by the owner
2. Difficulty in raising business capital
3. Have limited management and innovation base
4. Limited opportunity for the employees
5. May be dissolved on death of the owner

Partnership

Partnership is an intended association of two or more individuals to carry on a retail business together and to share in its profits or losses. This agreement predefines contributions and roles of partners to the business, contributor's interests.

Some of the characteristics of partnership are co-ownership of business assets, sharing of management, and sharing of profit and loss. The partnership can be terminated, again with agreement of the business partners.

Based on the responsibilities and liability of partners, the partnership can have various types. An agreement indicates the limited and regular partners, and span of the agreement.

General partnership

The general partnership is characterized by an unlimited liability in the partnership for sum unpaid. A general partner provides capital in addition to his initial investment in the business. This partner takes an active part

in any business contract. There may be one or more general partners in an organization.

Limited partnership

The liability of limited partners is confined to their investments of capital in business, and they cannot have a part in the management of business. Like general partners, there may be one or more limited partners in a setup.

Inactive Partner

Inactive partner is the individual who invests the part of the required capital but does not take an active part in the management of the business. An inactive partner who is not disclosed to the public is known as the silent partner.

The advantages of partnership include:

1. Broader management base since, several partners possess greater knowledge and competence, and more diversified interests
2. Multiple sources of capital and ideas
3. Division of labor is possible that allows delegation of responsibilities to each partner according to their professional specialization and interests

The disadvantages of general partnership include:

1. Divided authority among various partners
2. Frozen investment due to the difficulty for a partner to withdraw investment
3. Each partner is at risk through intentional or unintentional acts or bad judgment of another

PHYSICAL FACILITIES OF RETAIL PHARMACY

As mentioned before the design and layout are the components of the physical facilities of a retail pharmacy. Design is the internal and external appearance of retail outlet. Layout is the space allocation and arrangement of drugs in drug store. These are the major factors contributing to a pharmacy's success. The exterior appearance of a pharmacy draws consumer's attention. The purpose of interior design is to enhance the general appearance of pharmacy and to project a professional image.

The space allocation and drug arrangement is undertaken to maximize the

utilization of space and encourage consumer traffic and convenience. By appropriate layout, the consumers' traffic can be dispersed and its pattern can be controlled within the pharmacy. An ideal layout also makes monitoring possible and eliminates chances of pilferage.

TYPES OF LAYOUT DESIGNS

Historically, the three basic types of layouts are clerk or personal service, self-selection, self-service and combination of any of the above two designs.

Clerk or Personal Service

In clerk service pharmacy layout, only a small part of the products are exposed to customers to handle. This is one of the compulsions for prescription products where there is no selection of the consumer at retail level. Thus, in this setup there is no provision of self-service or self-selection. The pharmacy personnel dominantly provide services for supply of drugs to the consumers. This design facilitates maximum interaction between consumer and the pharmacy personnel. It is an old traditional design and is available in most of the small pharmacy stores. This type of layout design exists for prescription and selected non-prescription drugs, surgical and orthopedic appliances and supplies.

Self-selection

Designs whereby the products are displayed in a manner that the consumer may see, handle, and select item themselves. As mentioned before, that prescription item has no possibility of self-selection. But it could be for the nutritional supplements, cosmetics, contraceptives, and other OTC health related items. A retail setup cannot run totally on self-selection bases on account of the availability of prescription drugs.

Self-service

The term self-service is restricted for layouts utilizing a minimum of clerk service and exposes the maximum of products for customers to handle. It is not possible to have 100 percent of self-service in pharmacy because of the prescription drugs and item. This type of layout is most often used in super drugstores but for the non-drug items and commodities such as cosmetics and nutritional supplements.

STYLES OF LAYOUT DESIGNS

The store layout involves internal arrangement of fittings and racks.

Various arrangements are available with the same fundamental purposes such as:

1. Creation of pleasant environment and image of the interior
2. Shopping with enjoyment
3. Encouraging customer traffic
4. Motivating impulse buying by browsing and exploring store merchandizing and spending more money than originally planned

There are basically two choices available for layout designs of pharmacies.

Grid layout

In the grid layout design, all fittings and counters are installed at the right angle to one another. The products are displayed in straight and parallel lines. A grid layout is with or without cross-aisles. This arrangement makes customer movement past a wide assortment of products displayed. Space utility is productive with this layout design. The customers' movement is in a structured way, i.e., with specific patterns. This in turn, leads to a maximum travel time in the store and thus, maximum product exposure. This product exposure is known as front-end-merchandising. Front-end-merchandising promotes impulse buying.

The advantages of grid layout are:

1. More product exposure
2. Possibility of self-service
3. Familiarity with products that can be needed in future
4. Simplified security and minimum pilferage
5. Maximum utilization of available space
6. Ease in cleaning

Free-flow layout

In free-flow plan, fixtures are irregularly shaped, such as circles, arches and triangles. This layout design allows an unstructured flow of customer traffic. Free wandering of a customer encourages browsing and impulse purchasing is more as compared to that possible in pharmacy store with grid layout. This layout design has greater visual appeal. However, such designs are costly and use space non-productively. The free flowing can be accomplished with the various layout arrangements.

ARRANGEMENT OF INDIVIDUAL PRODUCTS

The products can be arranged by package size, color, brands, customer's

interest, or any combination of these. Arrangement of individual products

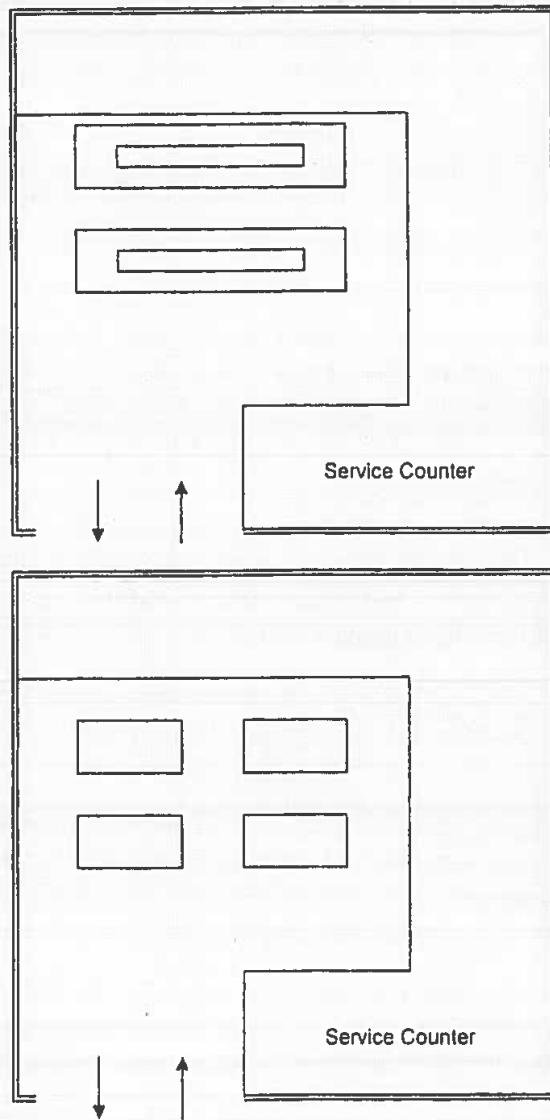


Figure 1: Grid layout without cross-aisles (above) and with cross-aisles (bottom)

in open displays help impulse buying. Thus, the products with more demand and more profits are displayed at prominent place. The eye-level positions are more attractive as compared to the position at bottom shelf.

RETAIL COMPETITION

The retail competition is gaining of differential advantages over the competitors with the intention of increase in sale and thereby, profit. The ways by which a retail pharmacy can get edges over competitors are appropriate location, price and effective promotion, buying decision, and differential personnel and services.

Location

Location is a critical factor for the future and survival of a retail business, thus need special consideration and careful planning. Various success parameters depend on the appropriate selection of the location of a retail business. Before opening a drug store, ~~following considerations must be~~ taken into account:

Population

Majority of the consumers are drawn from within a relatively short distance from the retail outlet. The population indwelling in the surrounding area of a proposed area must be considered before opening a retail business. The other population characteristics to be taken in account consist of growth trends, age distribution, income distribution, prescription buying behavior and occupational trends.

Population demography

Demography includes the community parameters such as age, sex, family life-cycle stage, income distribution, education, or occupation. Effective planning for a successful retail pharmacy takes study of surrounding demography into account. Pharmaceutical product sale will depends on all of the above demographic variables. In a community, the children, teenager, couples with children, females, people with more income are potential consumers.

Socioeconomy

Socioeconomic characteristics of population in the immediate area of the proposed location must be evaluated. The socioeconomic characteristics include the market potential, family income and purchasing power, population density, etc. Social class, such as the upper class, middle class

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(white collar) and working class (blue-collar) has a considerable influence on the product demand and buying behaviors.

Population psychography

Population psycholgrapy is the psychological characteristics influencing the buying motives and include the learning experience, personality, and beliefs. The community trend towards the medical treatment and demand for a specific healthcare service is influenced by beliefs, cultural traditions, trends and the population inclinations. For example, establishing an allopathic retail pharmacy in a community, which likes alternative ways of treatments, would not be successful. Thus, the psychography of the surrounding population is one of the major parameter for acceptance of a retail pharmacy.

Consumer's accessibility

The consumers always prefer conveniently accessible locations of the retail pharmacies. The traffic flow, parking facilities, and availability of public transport determine the customer's accessibility. In big cities, retail store located on one-way roads, roads with impeded traffic flow and muddy or damaged roads are not considered convenient locations.

Expected flow of customers

Traffic flow of potential customers influence sales and must be evaluated prior to select a location. The consumers' traffic flow can be evaluated directly or indirectly. A close proximity to physician/medical centers and hospitals will obviously help in predicting the patient traffic to a retail outlet.

Nature and location of competition

The nature and location of competition must be understood to cope and to compete with it. Presence of an established chain store or a store with more investment can pose difficulty for a new business. For understanding the nature of competition, the number of competitors, size distribution of the competitors and the growth trends of competition must be predicted.

Pricing

Usually the consumers are price conscious thus, price seems to be an effective and easiest tool to promote sale. However, some consumers relates price with quality of products. In spites, the low price tactics is the

quickest way to move product. At the retail level, using price as primary attraction in selling of a product has many drawbacks. The problems related with low price strategy are:

1. Not effective in directed goods, as a third party is involved
2. Boost sale only temporarily
3. Products cannot gain prestige in consumer's mind
4. Brings profit margin below healthy levels
5. May force one retailer out of the business who is unable to cope with the price war initiated by big competitors
6. Returning to former higher price, customer resistance can be encountered
7. Price lowering without advertising will take too long to create a desired impression in the buyer's mind
8. Low-price strategy sometimes may create bad image of retail store

A retailer must avoid low pricing on the prescription drugs. However, some measures and techniques can be adopted to establish a reputation of low price, discount or fair pricing. This can be accomplished by placing over-the-counter products, sundries (cosmetics, hygienic products, and contraceptives), or nutritional supplements in price competition, which help retail outlet to establish a status of reasonable price.

Promotion

Promotion is also a critical factor for the success of any business. The promotion is done to familiarize the service area with name and location of retail outlet. This information and familiarization is the first step in buying motives. This leads to increase the customers' traffic coming into pharmacy and persuade buying of drug products. A chain store can initiate the promotional activities at the National-wide level. Where as a small independent store can use the local advertising media. Various possible promotional ways include the following:

1. Placing some advertisement in local newspapers
2. Advertising from local radio stations in case of chain stores
3. Direct mail to the local prescribers so that they direct patients to the sponsor retailer
4. Door to door circulation of advertising message
5. Working with a local program connected to or coincide with National-wide promotional efforts
6. Coupons for reduction from the regular price of new prescription

7. 'Free with a prescription' offer
8. Give-away such as poison antidotes charts, and health related literature
9. Arranging some weekly/monthly free Medicare programs for diagnosis of commonly prevailing diseases
10. Printing prescription pads for the near-by doctors
11. Use of printed envelopes in which drugs are given to the patients
12. Effective use of point-of-purchase displays

Buying decision

A retailer involved in selling of drugs to the consumer has first to buy them from theirs manufacturers or wholesalers. Selection of appropriate source and buying decision for drugs is one of the important tools for competition and for existence of retail pharmacy. Buying decisions include the price of purchase, economic quantity purchase, purchase negotiation, purchase contracts and quantity of the product purchased. The selection of products or brands having more demand and with more turnovers is some of appropriate decisions in buying

Personnel

No drug store can succeed without properly trained personnel. Personnel provide services to the consumers. The behavior, professional attitudes, their efficiency, and ways personnel deal with consumers' complaints dictate repeat-purchase and attraction of new consumers. The selection of right personnel to provide services is thus, a significant competitive edge.

Service

Service is another competitive tool for a retail pharmacy. It establishes reputation and functions as the promotion for pharmacy itself. Services help in retaining the old and attracting the new consumers. A wide spectrum of services can be offered to the consumers. Some of these services are as mentioned below:

Round-the-clock service

A pharmacy retail functioning for twenty-four hours is another service that offers a remarkable competitive edge. However, maintaining round-a-clock retail pharmacy cannot always be cost justified particularly by the small independent drug stores run by sole proprietorship. For such small stores, a long-hours service cannot be justified. However, small independent stores in close surrounding area of large hospitals offer this

service. Many chain stores are running this service successfully.

Free drug delivery

A free drug delivery service can be a very strong competitive tool. Under this service, drugs are delivered without delivery charge on demand at the door of the patients regularly using specific drugs for chronic diseases. A computerized record of such patients can be maintained and they can be contacted for delivery of the next drug supply.

Family's health record

Maintenance of record of a family's health could be another attractive service. This record may consist of the medication taken by individuals in family, their outcomes, interactions and other complications. This record can be offered to the consumer or their physician on their next ailments. This competitive tool cannot be attacked by price competition since an additional service is provided to the consumers.

Multiple services under one-roof

Provision of multiple services from under one-roof is very attractive for the customers. Offering of a broad assortment of drugs, health and beauty-aid products, optical shop, medical equipments, etc. under one roof is one of the examples of this service. The attraction of such services for customers is obvious.

Medical information

Medical information provided to a consumer from the retail pharmacy may offer a new tool of competition. This information may include answering the queries about the product, its preparation, side effects and disease.

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the first time in the history of the world, the
whole of the human race has been gathered
together in one place, and that is the
present meeting of the World's Fair.
The United States is the host of the
world, and we are here to welcome
all the nations of the earth.

We are here to show the world
what we have done, what we are doing,
and what we shall do in the future.
We are here to demonstrate our
ability to produce, to manufacture,
and to export goods of all kinds.

We are here to show the world
that we are a great nation,
and that we are worthy of the name.

PHARMACEUTICAL MANAGEMENT AND MARKETING

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The mission of the authors is to provide high quality opportunities for the professionals in the field of Pharmaceutical Management and Marketing.

The detailed account on the subject develops marketable technical, conceptual and interpersonal skills vital to success in the dynamic, global workplace. Skills development is enhanced by a variety of pharmaceutical organizational concepts. The book provides a variety of avenues for professional growth and development in the production, marketing, sales and retail pharmaceutical management. The collaborative research projects with government, pharmaceutical industry and the faculty may be undertaken. The small business consulting may also be encouraged.

Readership: Professionals in the pharmaceutical industry, in the field of pharmaceutical management and marketing; undergraduates in pharmacy, graduates in pharmaceutics, and Drug control authorities in drug control administration.

Name: _____