NEW PRODUCT DEVELOPMENT: STRATEGY & IMPLEMENTATION MECHANISM BASED ON PRIMARY & SECONDARY DATA RESEARCH IN PHARMACEUTICAL INDUSTRY

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ABSTRACT

This study examines that marketing is, as in other industries is the driving force in pharmaceutical industry. There is a clear need for developing literature, which can take into account the needs of pharmaceutical marketing, and become a basic guide to business graduates majoring in marketing to understand how things will be when they pursue a career in pharmaceutical marketing. Although, there is good quality international literature available, but it carries the perspective of developed countries, where things are very different from a developing country like Pakistan. The actual product in pharmaceutical marketing suggests five characteristics that a product can have; a quality level, features, dosage form, a brand name, and packaging. A company has to decide on having a certain number of products in one product line. The aim is to have a product line, which offers enough choices for the doctors while keeping the length of product line manageable and profitable. A company may increase the product line length either by stretching it upwards and/or downwards, or through product line filling. New product development in pharmaceutical industry is a much more complex process as compared

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to other industries. The cost of development, the R&D capability, registration with the ministry of health, sourcing of raw material, all make this a daunting task for any marketing team. The new product development process in Pakistan's pharmaceutical industry can be outlined as molecule identification, molecule screening, sourcing of raw material, pilot batch manufacturing, marketing strategy development, test marketing/Clinical trial/user trial, commercialization.

Price is one of the most interesting and controversial topics in pharmaceutical marketing. The responsibility of allowing a particular price lays with the regulatory bodies, as in case of Pakistan, The Ministry of Health. In view of the peculiar characteristics of pharmaceutical industry, the different approaches actually applicable and practiced in the industry as Cost-Plus Pricing, Break-Even Pricing, Value Based Pricing, Competition Based Pricing, & Economy Pricing. The distribution system in context of pharmaceutical marketing is a set of interdependent organizations involved in the process of handling the transportation of medicines from company's warehouse to the market, or to institutions' pharmacies, where it will be sold to the end user. The model for marketing mix is made up of two streams of activities achieving the two objectives as "The Product Chain", and "The Prescription Chain". The product chain starts with the selection of the molecule(s). The selected molecules are then passed through the screening process applying the different criteria, then the source of raw material is identified, pilot batch is manufactured, if needed the company arranges for test marketing or clinical/user trial, and finally the product is sent into the market, or commercialized. The pricing strategy is worked out as a parallel process, and decided before commercialization. The product goes to the distribution house, then either directly to the retailers, or to wholesale from where the product eventually reaches the retailer. Parallel to that, the distributor also supplies the product to the hospitals' pharmacies.

Key words: Promotional Mix; Product Chain; Prescription Chain; product development; Cost Plus Pricing, Break-Even Pricing, Value Based Pricing

1. INTRODUCTION

Pharmaceutical industry is one of the most organized industries in Pakistan, employing a large number of professionals in all areas of operations. The industry currently comprise of more than 800 companies, out of which around 500 or so can be termed as "Active Companies" involved in manufacturing & marketing of pharmaceutical products [1]. Marketing is, as in other industries is the driving force in pharmaceutical industry. Most of the people engaged in marketing activities in pharmaceutical industry are business graduates, with majors in marketing. However, the biggest problem they face, and which in turn becomes a challenge for human resource function of the company is the distinct character of pharmaceutical marketing. What these business graduates learn at schools do not encompass these unique characteristics and as a result, they find themselves inadequately equipped to handle the dynamics of pharmaceutical marketing. The restricted media use becomes a major obstacle as you as a marketer are not allowed to use the conventional and established media like newspapers, magazines, radio & television, and instead have to reply upon direct marketing, one-to-one sales calls, medical journals/newspapers, sponsorships, sampling and other tools. This makes the task not only more difficult, but also less glamorous [2].

Last but not the least, the controls maintained by regulatory bodies leaves very little room for maneuvering and even lesser for making an error. Whatever you communicate may ultimately affect the well being of a person and this makes pharmaceutical marketing a tough, responsible and challenging task. There is a clear need for developing literature, which can take into account the needs of pharmaceutical marketing, and become a basic guide to business graduates majoring in marketing to understand how things will be when they pursue a career in pharmaceutical marketing. Although, there is good quality international literature available, but it carries the perspective of developed countries, where things are very different from a developing country like Pakistan. It is also interesting to note that pharmaceutical marketing is treated as a separate & specialized discipline in almost all good international business school, yet in Pakistan no business school offers this area of study. There is a healthcare management degree being offered at CBM, but that is more focused on the operational side of healthcare institution, and the material being used for teaching is all international, with very little relevance to local environment [3].

2. MATERIAL AND METHODS

2.1 The Product

From the point of view of pharmaceutical marketing, we can redefine the product as the following:

A product is any tangible thing, which can be used to treat a medical ailment diagnosed in a human body.

Once we have defined the product, we can clearly see a difference. In general marketing terms, a product can even be for satisfying a psychological need with no tangible benefit whatsoever. However, in pharmaceutical terms, a product will only be termed as one if it helps in curing a disease or at least help in curing or improving the condition of a patient.

2.1.1 Levels of Product

As in general marketing terms, a pharmaceutical product can also be thought of at three levels:

a) Core product
b) Actual product
c) Augmented product

In general marketing, the core product is the basic benefit that the consumers seek when they buy a product. *In pharmaceutical scenario, this will be the disease treating characteristics of a product, which will be considered the core product.*

The actual product in general marketing terms suggest five characteristics that a product can have; a quality level, features, design, a brand name, and packaging [3]. We can attempt to develop a concept on similar lines for pharmaceutical products in the following manner:

i) A quality level:

The level to which a product conforms to the required standard not only in terms of its profile, but also in terms of its ability to cure a disease, and to remain effective for the stipulated period of time which is also called shelf-life of a product.

ii) Features:

For pharmaceutical product, this will mean the pharmacological profile of a product; what it does when it goes into a human body. This includes the rate of absorption of drug into the blood stream, when the action actually starts; its action against the disease cause, its side effects, and finally its elimination from the body. All drugs have their standard profile, which act as a standard when a product is evaluated in terms of its quality level. This effectively means that unlike general products, the quality levels in pharmaceutical products are very objective and are not dependent on individual perceptions [2].

iii) Dosage Form:

Dosage Form will replace design in case of pharmaceutical products. A product can be in the form of capsules, tablets, syrup, injection or ointment. This is a major determinant factor when a product is chosen for use for treating a patient. For example, a tablet might be preferred for an adult patient, syrup for children, an injection when quick action is required, and an ointment for skin diseases or localized pain.

iv) A brand name:

Unlike consumer products, where every product invariably carries a brand name, pharmaceutical may or may not be branded. Some companies may decide to market their products as under generic name, instead of giving it a brand name. This often happens when the company adopts a marketing strategy under which the product will not be promoted actively, and instead be sold to institutions, which purchase products by generics and not brands. For example, a hospital may

call for offers for supply of paracetamol tablets, which are available both under generic name and brand names like Panadol and Calpol [3].

Most of marketing oriented companies though prefer to market their products under brand names, which allows them only to position and promote their products effectively. It is interesting to note that over the period of time, products do become synonymous with their generic names like Brufen for Ibuprofen, Voltaren for Diclofenac Sodium, Panadol for Paracetamol and so on and so forth. Each of these generics has dozens of brands available, but not all become readily recognizable with their respective generics [4].

v) Packaging:

Perhaps in no other product category does the packaging play as significant a role as it does in pharmaceutical products. It goes beyond just acting as outer container, and it has to ensure the conditions required for stability of the medicine inside. A company cannot just select the packaging material arbitrarily, but it has to consider if the packaging selected conforms to the standards required for a particular product profile or not. For example, there are products, which can be kept stable inside simple aluminum foil, but some need specialized double-sided aluminum foil, or PVC, or PVDC, or even airtight bottle. The efficacy of a product is dependent on its stability inside the packaging. Any negligence can result in deterioration in product quality and efficacy [4].

The second most important function performed by packaging is to contain required information regarding the product profile as prescribed by the regulatory bodies. It does not only carry brief instruction on outer & inner containers, but also carries a leaflet, which contains detailed prescribing information for the products. Besides that, pharmaceutical products are required to carry dates of manufacturing & expiry and batch numbers for future reference, which are also mentioned on the outer carton as well as inner container like a strip, blister, bottle, ampoule or tube. There are also some special requirements for labeling like the brand name and generic name should be equally prominent, which has to be strictly adhered to. However, once a company conforms to all these requirements, they can use the packaging for product differentiation through color schemes and graphics if they want [5].

In a third world country like Pakistan, a patient seldom buys a full pack of a product. Retailers normally sell individual tablets, capsules, and ampoules due to affordability issue. Though, this is not applicable in case of liquids, injections and ointments where a patient obviously has to buy a full pack, companies pay less attention to beautifying there packaging and find it just enough to fulfill the regulatory and product stability requirements as there is nothing like off-the-shelve impulse buying in medicines [5].

2.2 Product Line Decisions

A product line in context of pharmaceutical marketing is a group of products, which deal with the same disease category, or is promoted to the same segment of the medical profession.

Merck Sharp and Dhome (MSD) have a range of antihypertensive drugs, with some differences in their profile, action and prices. They have brands called Renitec, Cozaar & Hizaar, all performing the same function, i.e. lowering the blood pressure through different modes of action and are priced at different levels. On the other hand, PharmEvo has a couple of antihypertensive drugs, a cholesterol lowering agent, an anti-platelet aggregant, all of which are being promoted to the same category of doctors, the cardiologists. In this manner, drugs performing different functions form a product line, as the target segment is the same.

As in general products categories, product line decisions are also critical in pharmaceutical marketing, and the most critical one is deciding upon the length of product line. A company has to decide on having a certain number of products in one product line. The aim is to have a product line, which offers enough choices for the doctors while keeping the length of product line manageable and profitable. A company may increase the product line length either by stretching it upwards and/or downwards, or through product line filling.

Suppose, a company has a drug indicated in hypertension, which is an old molecule and is priced at a low level. The company may decide to launch a newer version of the same drug category at a higher price, which will be termed as upward line stretching. On the other hand, a company might be having a high-end product and may decide to take the share of the low-end market as well by launching a basic low price molecule, which will be termed as downwards line stretching. A company may even go for a both-side stretching if it feels appropriate to have a

long product line. Putting products in between low and high-end products is termed as product line filling [5].

2.3 Product Mix Decisions

A product mix or product assortment consists of all the product lines and items that a company has to offer.

A company may have a range of antibiotics, a number of painkillers, a few cough syrups and some other medicines in different categories. All of these put together will be called a product mix. A company's product mix has four important dimensions: width, length, depth and consistency. Product mix *width* refers to the different product lines a company carries; e.g. SmithKline & Beecham has a wide product mix comprising antibiotics, painkillers, multivitamins, skin treatments, and antiulcerants. Product mix *length* refers to the number of items a company carries in its product lines. SKB has Fortum, Augmentin, Ampiclox & Ampicillin in its antibiotics category. Product mix *depth* refers to the number of versions each product offers. SKB's antibiotic brand Fortum comes in 250 mg, 500 mg and 1 gram, and similarly the other brands are also available in different strengths [5].

2.4 New-Product Development

New product development in pharmaceutical industry is a much more complex process as compared to other industries. The cost of development, the R&D capability, registration with the ministry of health, sourcing of raw material, all make this a daunting task for any marketing team.

One of the most widely used method of acquiring new products, acquisition, is not applicable for local pharmaceutical companies in developing countries. The reason is that all multinational companies of some stature already have their local offices in almost every developing country, and they prefer to market their products through them instead of joining hands with local partners. There are some examples of an arrangement between a local company and an international company, but they comprise a very minute portion of the total industry turnover. This leaves the companies with no other option but to develop branded generics for marketing. At present, there is no possibility of development of original products given the size and resources available to local industry [5].

The new product development process in Pakistan's pharmaceutical industry can be outlined as follows:

- Molecule identification.
- Molecule screening.
- Sourcing of raw material.
- Pilot batch manufacturing.
- Marketing strategy development.
- Test marketing/Clinical trial/user trial.
- Commercialization.

Now we will go through each step to develop a clear understanding of the new product development process.

2.4.1 Molecule Identification

Pharmaceutical products are basically a dosage form (tablet, capsule, syrup, injection or ointment) containing an active ingredient, which is responsible for the therapeutic effect, or the core benefit expected from the product.

The first and foremost step in new product development is the identification of molecule; i.e. the active ingredient that a company wishes to brand and launch. Keeping under consideration the marketing focus of the company, resources and profile, several molecules can be of interest, which are short-listed, and then the real game begins of screening the molecules to arrive at the final one or more [6].

2.4.2 Molecule Screening

This is the most important step a marketing team has to go through while deciding upon a new product. There are several factors to be taken into account while screening a molecule to find its merits and demerits. We will discuss some important ones here:

i) Company's Objectives

Lot depends on what a company needs and wants to achieve. Is it aiming for entering into a new product category? Is it aiming to strengthen an existing product line? Is it aiming for maximizing market share? Is it aiming to build volumes? Is it focusing on high profitability? Whatever a company decides, will affect directly on a new product decision. A company wishing to enter a new product category may wish to select a comparatively newer molecule in order to make a positive impact on the medical profession, which otherwise doesn't give much importance to the companies who come in with brands with a molecule which several other companies are marketing. However, in case a company wants to strengthen one of its existing portfolios, even an older molecule may very well compliment the existing range [7].

A company will also evaluate the segment with respect to its own profile. For example, a company, which has always been confined to marketing of analgesics, vitamins and cough syrups may not find it appropriate to enter into cardiovascular segment, unless it goes through a complete transformation to create a set of capabilities to be successful in such a technical and demanding territory.

ii) Patent Status

Pharmaceutical raw material, unlike other industries has to be procured very carefully. Whereas, in other industries the concerns might revolve around quality, price and availability, in pharmaceutical products, there are host of other factors to be analyzed. One of the top issues to address is the *"Patent Status"* of the molecule [8].

Patent is the protection granted to a company for a certain period of time, during which it can recover the heavy expenditure incurred in R&D. Patents are normally granted for a period of 16 years from the date of application.

Patent is one of the most crucial matters for a third world country like Pakistan. Multinational companies try to keep the price of the products in line with International markets, which make those products almost unaffordable for the local masses. However, on the other hand, the patent law prevents other local companies to brand that molecule. Until recently, the patent law was not being implemented in Pakistan in letter & spirit, but now with implementation of WTO & TRIPS approaching, the stance of regulatory bodies is becoming more & more firm in protecting the interest of patent holder [9].

A company has to careful while selecting a molecule. In case of a patent, not only they stand the risk of legal action against it, but also the availability of raw material will always be a question mark as Europeans & Americans abide by the patent laws and the sources left are China, India and Korea, which at times may not be reliable [10].

However, realistically speaking, a company in a country like Pakistan must not rule out patented products just because of their legal status. They should consider if the company holding the patent is actively represented in Pakistan? Has that company ever taken a legal action against any other company? What is the validity period left for the patent? This makes any gray areas identified and a company might still have the opportunity to launch a product and taking a calculated risk, which may pay big dividends if it can get away with it [11].

iii) Special Requirements

Once, the company is clear about the patent, it has look into manufacturing requirements, and if the facilities are available or not. Pharmaceutical ingredients may required special facilities like control humidity/temperature/moisture, storage conditions, manufacturing processes, packaging material etc. This might either not being currently used by the company, or may prove to be too costly if arranged for just one product.

iv) Market Size

Pharmaceutical marketers have one major advantage; and that is availability of authentic market data, compiled and distributed at cost by International Marketing Statistics (IMS), a Swiss company. This allows them to know accurately the market size, growth rates and product performances. This becomes the foundation stone for preparing a reliable market forecast, and to judge the attractiveness of target segment(s).

v) Competitive position:

The company then looks into the competitive environment, and chances of success in view of the strengths & weaknesses, which it possesses. The number of brands of the same molecule

in the market, number of players, acceptance of the molecule amongst the medical practitioners, the future prospects and so on.

2.4.3 Sourcing of raw material

One unique characteristic of pharmaceutical product is the need to conform to standard parameters all the time. Every drug has its standard characteristics like dissolution time, shelf life, physical appearance, and stability in form etc. In order to maintain all these, a company tends not to switch sources without performing a pilot batch study, for a certain period of time (usually 3-6 months) in order to make sure that the quality of product is up to the mark. This is an important matter, as a company needs to be extra careful to ensure that the company they are planning to buy the raw material will ensure consistency of quality, and meets their demand regularly. Besides conducting pilot batch testing, most of the companies also have an elaborate vendor evaluation program [12].

Most of the companies will decide to select more than one vendor for pilot batch testing so that they do not lose time if the pilot batch made with one vendor's raw material fails after completion of study. The selection of vendors at this stage is made on the basis of their profile, history and results of sample test in laboratory.

2.4.4 Pilot Batch Manufacturing

Pilot batch manufacturing or stability study is a sort of simulation exercise in which a trial batch is manufactured while maintaining the real life conditions. The raw material & packaging material, as well as the manufacturing equipment is the same, which will be then used in commercial production.

Once the batch is manufactured, it is kept under different conditions like room temperature, high temperature, high humidity, sun light etc. for 3-6 months, and a test is performed each months to see the stability of a product. If the outcome matches with what the standard profile suggests, the product is approved for manufacturing [13].

2.4.5 Marketing Strategy Development:

Parallel to trial batch testing, the company starts working on its marketing plan. A typical marketing plan covers the following areas with reference to pharmaceutical products [14]:

a) Market overview: Size of the segment, profile of the segment, growth rates, prospects.
b) SWOT Analysis: Company's strength & weaknesses, environmental threats & opportunities.
c) Competition analysis: Number of players, market shares, growth rates, SWOT.
d) Product profile: Classification, molecule structure, mode of action, advantages/disadvantages with respect to segment, dosage form, dosage regimen.
e) Clinical Profile: Indications, efficacy, side effects, precautions, other pharmacological aspects, clinical reports etc.
f) Product positioning: The basic stance of the product. Usually based on a USP.
g) Marketing/Sales Objectives: Qualitative & quantitative objectives.
h) Promotional Strategy: Message(s) to be communicated, material to be used, sampling to be done, other activities like clinical trials, user studies, seminars, symposia, advertisements etc.
i) Sales Strategy: Areas/segments to be covered, doctors to be visited, indications/diseases to be focused according to different target segments etc. Distribution strategy also comes under this head.

The above, coupled with financials become the basic control document for marketing team.

2.4.6 Test marketing/Clinical trial/User trial

Depending upon the nature of product, a company may decide to go for a clinical trial or user study to enhance confidence of the medical profession on the efficacy and/or safety of the product. It can be fully protocol-controlled trial, or just a user study where doctor can judge the results obtained through the product by using the free samples provided to him/her. The results,

if come out to be positive, become a very important promotional tool for the company. The trial can be either pre-launch or post-launch depending upon the situation and nature of product [15].

2.4.7 Commercialization

Commercialization starts with sending the stock to distributors. The sales team plans the promotional activities in view of the availability of the product, and start visiting the doctors, in whose vicinity the product has reached the chemist shelves.

3.1 The Price

Price is one of the most interesting and controversial topics in pharmaceutical marketing. The responsibility of allowing a particular price lays with the regulatory bodies, as in case of Pakistan, The Ministry of Health. The objective of regulatory bodies is two pronged; they have to on one hand ensure the protection of patients' rights and provision of quality healthcare of masses, and on the other hand to allow companies to make reasonable profit so that they keep manufacturing the medicines needed for the people. The process of pricing at the company level goes through the same steps as it goes in case of any other product, but the matter becomes totally different when an application is lodged with the regulatory bodies for allowing a price [16].

3.2 Cost Structure in Pharmaceutical Products

Cost of active ingredient:	Usually the highest cost component. In most of the cases, it ranges between 10-30% of total cost of product.
Cost of other ingredients:	A minor element, usually not higher than 3% of total cost.
Cost of packaging material:	Varies according to a material being used. In absolute

terms, cost of packaging material ranges between Rs. 5-10 per pack of 10 tablets/capsules, per 60 ml bottle of liquid, per 5 ml injection & per 50 grams tube of ointments.

Cost of manufacturing: Depends on volume being manufactured in a factory.

Besides that, a company may amortize its R&D cost over a period of time, which becomes an additional cost component. Generally, a 60% and above gross margin is considered to be reasonably good in pharmaceutical industry. However, in case of a new research molecule, the margin may be as high as 500-1000% [17].

3.3 Pricing Structure in Pharmaceutical Products

Assuming a retail price of Rs. 100/-, following will be the price structure:

Retail Price:		100.00
Less:	Retailer's margin@15%[1]	15.00
Trade Price:		85.00
Less:	Distributor's margin@10%[2]	8.50
Ex-Factory Price:		76.50

3.4 General Pricing Approaches

In view of the peculiar characteristics of pharmaceutical industry, we will try to discuss the different approaches actually applicable and practiced in the industry [18].

Although, the approaches are same as in case of any other product, but the reasons and implications are different.

[1] In case of imported products, the retailer's margin may be brought down to 10%.
[2] Distributor's margin varies from company to company, but industry average is around 10%.

3.4.1 Cost-Plus Pricing

The cost structure given in previous section forms the basis of this type of pricing. The required profit margin is added to the cost of the product to arrive at the Ex-factory price, and then Trade Price and Market Retail Price.

This type of pricing is usually done for old molecules where market is very crowded, and a higher price cannot fetch the required market share. The objective of company in such scenario is to either get some additional volume for their manufacturing facility, or to complement their existing product range [19].

3.4.2 Break-Even Pricing

Normally adopted for products being manufactured for government tenders and institutional business. The concern is not profit, but again either to get volumes, or to get into large hospital pharmacies so that the positive impact may come from out-of-hospital practice of the doctors who have to prescribe their brand in hospital because of inclusion in pharmacy [19].

Normally, this type of pricing policies are never adopted for research based high profile molecules, so that there may not be a negative impact on their high in-market price.

3.4.3 Value Based Pricing

This approach for pricing is most commonly used by Multinational companies, en-cashing their good rapport with the doctors, especially in case of new molecules. There are countless examples where the cost of product has no relevance whatsoever and company has priced a product as per the perceived value for the doctors in their opinion [20].

However, things are becoming difficult now, and companies must be very careful while adopting this approach. They have to not only be careful about the wrong judgment of perceived value that they may make, and also the possibility of launch of same molecule by a local company with good reputation and quality.

During the last few years, MNCs have for the first time starting to experience this onslaught by good local companies and now they realize that they cannot have their own way about pricing the product [20].

Since China & India have emerged as major producers of bulk drugs, the prices of raw material have came down drastically, and so the pressure has increased on MNCs due to launch of low-priced brands of same molecules by local companies [21].

3.4.4 Competition Based Pricing

This is what most marketing oriented companies attempt to do these days. They take into account not only the perceived value, but also the value being offered by competition, and then arrive at a reasonable price giving them good margin as well as keeping them competitive in the long run.

It is extremely important not only to take into account current competitors, but also expected competitors, which come with a much lower price and snatch the market share [22].

3.4.5 Special Topics in Pharmaceutical Pricing

There is another pricing strategy practiced in pharmaceutical market, which can be termed as Economy Pricing. The concept is close to cost plus pricing, but the perspective is different:

i) Economy Pricing

There are some companies, which focus only on offering brands of established molecules at the lowest possible price. They base their price on cost, and keep the margins to bare minimum. The reason this is being discussed separately is that the molecules selected have no impact whatsoever on the pricing strategy. They may even pick up a molecule where there is just one leading brand, and price theirs' at 75% lower price.

ii) Price Determination by Regulatory Authorities

It would be interesting to assess how the Ministry of Health decides upon the price. What they do is that they ask for the cost structure from the first applicant of any molecule, which is in 99% of cases a multinational company, which provides a highly inflated cost due to the element of transfer pricing[3]. On the basis of this cost structure, the price is determined. The next applicant gets approximately 25-40% lower price, and this then becomes the reference price for all following applicants. Since the price allowed to MNC was inflated, all local companies get sufficient margins even at 40% lower price than the leader [23].

[3] Appendix II – Transfer Pricing

It is just mind-boggling to see such approach, as it can be very simple for government officials to verify costing from neutral source and find out a reasonable price. However, as of today, this is status of pricing by regulatory authorities in Pakistan.

3.5 The Nature of Distribution Channels

3.5.1 Distribution Channel

A set of interdependent organizations involved in the process of making a product or service available for use or consumption by the consumer or business user.

3.5.2 Distribution Channel Functions

- *Information:* gathering and distributing marketing research and intelligence information about actors and forces in the marketing environment needed for planning and aiding exchange.
- *Promotion:* developing and spreading persuasive communications about an offer.
- *Contact:* finding and communicating with prospective buyers.
- *Matching:* shaping and fitting the offer to the buyer's needs, including activities such as manufacturing, grading, assembling, and packaging.
- *Negotiation:* reaching an agreement on price and other terms of the offer so that ownership or possession can be transferred.

3.5.3 Channel Design Decision

- Analyzing Consumer Service Needs
- Setting Channel Objectives and Constraints
- Identifying Major Alternatives

3.5.4 Types of Intermediaries

i)	*Company Sales Force:*	Expand the company's direct sales force.
ii)	*Manufacturer's Agency:*	Hire manufacturer's agents
iii)	*Industrial Distributors:*	Find distributors in the different regions or industries who will buy and carry the new line.

3.5.5 Number of Marketing Intermediaries

i) Intensive Distribution

Stocking the product in as many outlets as possible.

ii) Exclusive Distribution

Giving a limited number of dealers the exclusive right to distribute the company's products in their territories.

iii) Selective Distribution

The use of more than one, but fewer than all, of the intermediaries who are willing to carry the company's products.

3.5.6 Channel Management Decisions

- Selecting Channel Members
- Motivating Channel Members
- Evaluating Channel Members

3.5.7 Physical Distribution & Logistics Management

i) Physical Distribution (or marketing logistics)

The tasks involved in planning implementing, and controlling the physical flow of materials, final goods, and related information from points of origin to points of consumption to meet customer requirements at a profit [24].

ii) Goals of the Logistics System

The goal of the marketing logistics system should be to provide a targeted level of customer service at the least cost.

iii) Major Logistics Functions

The major logistics functions include order processing, warehousing, inventory management, and transportation.

3.5.8 Retailing

All activities involved in selling goods or services directly to final consumers for their personal, non-business use.

3.5.9 Wholesaling

All activities involved in selling goods and services to those buying for resale or business use.

3.6 The Marketing Communication Mix

The specific mix of advertising, personal selling, sales promotion, public relations and direct-marketing tools a company uses to pursue its advertising and marketing objectives [25].

3.6.1 Advertising

Any paid form of non-personal presentation and promotion of ideas, goods, or services by an identified sponsor.

3.6.2 Personal Selling

Personal presentation by the firm's sales force for the purpose of making sales and building customer relationships.

3.6.3 Sales Promotion

Short-term incentives to encourage the purchase or sale of a product or service.

3.6.4 Public Relations

Building good relations with the company's various publics by obtaining favorable publicity, building up a good corporate image, and handling or heading off unfavorable rumors, stories, and events.

3.6.5 Direct Marketing

Direct communications with carefully targeted individual consumers to obtain an immediate response, and cultivate lasting customer relationships.

3.6.6 Steps in Developing Effective Communication Mix

i) Identifying the Target Audience

A marketing communicator starts with a clear target audience in mind. The audience may be potential buyers or current users, those who make the buying decision or those who influence.

ii) Determining the Communication Objectives

Once the target audience has been defined, the marketing communicator must decide what response is sought. Of course, in many cases, the final response is purchase. But purchase is the result of a long process of consumer decision-making.

The target audience may be in any of six buyer readiness stages; the stages consumers normally pass through on their way to making a purchase. These stages include awareness, knowledge, liking, preference, conviction, and purchase.

iii) Designing a Message

Having defined the desired audience response, the communicator turns to developing an effective message. Ideally, the message should get Attention, hold interest, arouse Desire, and obtain Action (a framework known as the AIDA model).

iv) Choosing Media

The communicator now must select channels of communication. There are two broad types of communication channels – personal and non-personal.

a) Personal Communication Channels

Channels through which two or more people communicate directly with one another, whether face to face, by telephone, by mail, or via the internet.

- ***Word-of-mouth Influence***

Personal communication about a product between target buyers and neighbors, friends, family members, and associates.

b) Non-personal Communication Channels

Media that carry messages without personal contact or feedback, including major media, atmospheres, and events.

v) Selecting the Message Source

In either personal or non-personal communication, the message's impact on the target audience is also affected by how the audience views the communicator. Messages delivered by highly credible sources are more persuasive [26].

vi) Collecting Feedback

After sending the message, the communicator must research its effect on the target audience.

4. CONCLUSION

From the point of view of pharmaceutical marketing, we can redefine the product, as "A product is any tangible thing, which can be used to treat a medical ailment diagnosed in a human body". However, in pharmaceutical terms, a product will only be termed as one if it helps in curing a disease or at least help in curing or improving the condition of a patient. In general marketing, the core product is the basic benefit that the consumers seek when they buy a product. In pharmaceutical scenario, this will be the disease treating characteristics of a product, which will be considered the core product. The actual product in general marketing terms suggest five characteristics that a product can have; a quality level, features, design, a brand name, and packaging. New product development in pharmaceutical industry is a much more complex process as compared to other industries. The cost of development, the R&D capability, and registration with the ministry of health, sourcing of raw material, all make this a daunting task for any marketing team. The new product development process in Pakistan's pharmaceutical industry can be outlined as 1) Molecule identification, 2) Molecule screening, 3) Sourcing of raw material, 4) Pilot batch manufacturing, 5) Marketing strategy development, 6) Test marketing/Clinical trial/user trial, 7) Commercialization.

Price is one of the most interesting and controversial topics in pharmaceutical marketing. The responsibility of allowing a particular price lays with the regulatory bodies, as in case of Pakistan, The Ministry of Health. The process of pricing at the company level goes through the same steps as it goes in case of any other product, but the matter becomes totally different when an application is lodged with the regulatory bodies for allowing a price. The price of a product containing on 1) Cost of active ingredient, 2) Cost of other ingredients, 3) Cost of packaging material, 4) Cost of manufacturing.

A set of interdependent organizations involved in the process of making a product or service available for use or consumption by the consumer or business user through distribution channels. The distribution channels functions involved in 1) Information, 2) Promotion, 3) Contact, 4) Matching and 5) Negotiation.

Finally marketing communication Mix is also very important in order to launch a successful product into the market. The specific mix of advertising, personal selling, sales promotion, public relations and direct-marketing tools a company uses to pursue its advertising and marketing objectives.

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