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ORIGINAL ARTICLE

Evolution Of Marketing Techniques, Adoption In Pharmaceutical Industry And Related Issues: A Review

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ABSTRACT

The availability of life saving pharmaceutical products by their very nature plays a prominent role in the well being of a society. Within this context, the pharmaceutical industry plays a prominent role especially in the process of discovery and development of new pharmaceutical products, rapid and safe development of these products and finally the production and distribution of safe and efficient products. Over the years with the advancement in global marketing strategy and technologies, similar to other profit driven industry, pharmaceutical industry also had join the band wagon in the process of maximizing profits in the current era of challenging global market. The primary objective of this paper is to discuss the evolution of marketing techniques employed by pharmaceutical industries in order to remain competitive in this highly regulated commodity.

Key Words: Pharmaceutical, Pharmaceutical marketing, Pharmaceutical promotion, Pharmaceutical industry, Marketing strategies

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important to understand what the concept of “marketing” is? How its evolution took place passing through the process of development.

Marketing And Its Evolution

The question “what is marketing” could be answered as, “it is a process by which one identifies the needs and wants of the people, creates a product/service to meet the needs and wants, develops a way of taking the product/service to the market place, determines the way of communicating the product to the market place, determines the value for the product, targets the people (segmentation), who have needs/ wants and then creating a transaction for exchanging the product for a value and thus creating a satisfaction to the buyer's needs/wants” [1]. Evolution of marketing didn't take place overnight, international situations and scenarios made the business people to develop this way of retaining and increasing their business [2].

The evolution process can be in three eras; production, sales and marketing. The production concept prevailed from the

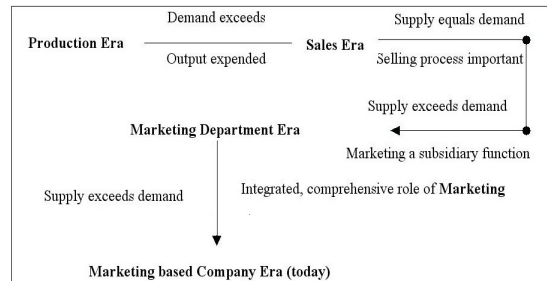
Background And Introduction

Marketing is the most commonly used tool to increase market share. Our aim to write this article is to highlight marketing from the industry perspective regarding pharmaceutical marketing, issues related to promotional practices and their impact on prescribing behavior of the physicians from the published and presented literature and research findings. Before starting discussion about pharmaceutical marketing and related issues, it is much

time of the industrial revolution until the early 1920's. It was early industrialization when output was limited, no competition and high demand. Companies had no interest in consumer preferences or demands [2]. They were only focused on 2 questions, can we produce the product? And can we produce it in enough quantity? Production concept worked fairly well because the goods that were produced were largely those of basic necessity and there was a relatively high level of unfulfilled demand. Virtually everything that could be produced was sold easily at the price determined by the producer. Production concept prevailed into the late 1920's [3]. By the early 1930's however, mass production had become commonplace, competition had increased, and their demand was decreasing. Now the firms began to practice the sales concept (or selling concept), which was focused to convince customers to buy their products through advertising and personal selling. Now the key questions were can we sell the product? And can we charge enough for it? The sales concept paid little attention to whether the product actually was needed; the goal simply was to beat the competition to the sale with little regard to customer satisfaction. Marketing was a function that was performed after the product was developed and produced, and many people came to associate marketing with hard selling. Even today, many people use the word "marketing" when they really mean sales [2],[3]. After II World War, the variety of products increased and hard selling no longer could be relied upon to generate sales. With increased discretionary income, customers could afford to be selective and buy only those products that precisely met their changing needs, and these needs were not immediately obvious. The key questions became; what do customers want, can we develop it while they still want it and how can we keep our customers satisfied?

In response to these discerning customers, firms began to adopt the marketing concept, which involves; focusing on customer needs before developing the product, aligning all functions of the company to focus on those needs and

realizing a profit by successfully satisfying customer needs over the long-term. A diagrammatic representation of marketing evolution is represented in [Table/Fig 1].



[Table/Fig 1] Flow of marketing evolution (the graphical presentation of marketing evolution, priorities and challenges at different evolutionary stages)

It was some background about marketing and its evolution but it is just about marketing of the products other than the controlled products and pharmaceuticals, which is not only largest but also the most profitable industry of the world.

Pharmaceutical Marketing

Pharmaceutical industries adopted marketing toll with some controlled practices initially. But with passage of time, pharmaceutical marketing became like fast moving consumer goods (FMCG) and all the concerns regarding patient safety and health were neglected.

The definition of pharmaceutical marketing is “activities focused on making physicians as well as the general public aware of new and existing pharmaceutical brands, pharmaceutical marketing can include giveaway samples, detailed product literature, disease management programs, and support material for patients, internet initiatives, and events/meetings for physicians” [4]. Pharmaceutical marketing can also be defined as a management process that serves to identify and meet patients’ needs in a profitable way [5]. Pharmaceutical business mainly adopts sales and promotion, the branches of marketing [6].

World Health Organization (WHO) defines promotion as “all informational and persuasive activities by manufacturers and distributors, the effect of which is to induce prescription, supply, purchase and/or use of medicinal drugs” [7].

International Federation of Pharmaceutical Manufacturers Association (IFPMA) defines promotion as “any activity undertaken, organized or sponsored by a member company (pharmaceutical company member of IFPMA) which is directed at healthcare professionals to promote the prescription, recommendation, supply, administration or consumption of its pharmaceutical product(s) through all media, including the internet” [8].

Industry uses various techniques for the promotion of their drugs.

Techniques And Tools For Pharmaceutical Marketing And Promotion

For ease of understanding, it can be divided in two sections:

1. Traditional pharmaceutical marketing and promotion: techniques and tools
2. Pharmaceutical marketing in 21st century: latest techniques and tools in global village.

1. Traditional Pharmaceutical Marketing And Promotion: Techniques And Tools

a. Advertisement

Advertisement of drugs is done mainly by 2 ways.

- Directed to consumers Advertisement (DTCA)
- Advertisement in mass media (legally allowed only in two countries USA and New Zealand)
 - Directed to prescribers Advertisement
 - Through advertisement in professional publications, books, journals, conferences electronic media and cyber space.

- Continuous Medical Education (CME). These days this tool of pharmaceutical promotion is very popular by which pharmaceutical companies use educational events for their marketing purpose by investing on physicians or opinion leaders paid as speakers, education events, lectures excursions i.e. national excursions for participation in conference/seminars and symposia, foreign excursions for participation in conference/seminars and symposia. Industry gets double benefit from CME programs. At one end they oblige their customers (prescribers) and as return get increased prescription. On the other end they promote their image as a responsible organization of the society to use corporate social responsibility (CSR) concept.

b. Sponsorships

Companies also try to make direct payments to the doctors by various indirect ways i.e. for clinical trails (entering patients in clinical trials against payment), national and international conferences and symposia sponsorships, free medical camps, and opinion leaders (to deliver lectures) for health care professionals [9].

c. Personal Selling

Personal selling is most important way of drug promotion. It adopts detailing in combination with many other tools. Detailing is most commonly used technique world wide and by definition detailing is “the personal sampling and other promotional work among doctors, dentists, and other professional persons done for pharmaceutical concerns; in order to secure goodwill and possible distribution or prescription of the product”. Sales representatives are the focal resource for applying most of the techniques of pharmaceutical marketing means relationship between prescribers and medical representatives is supported by various gifts and materials [10]. The adopted tools of promotion for this technique are drug information brochures, literatures, drug samples, giveaways, personalized gifts, sweepstakes in conferences and workshops and many other tools [9],[10].

2. Pharmaceutical Marketing In 21st Century: Latest Techniques And Tools In Global Village.

Pharmaceutical marketing have also adopted modern techniques according to developments in technology. Few of them are adopted independently and some are being used in combination or to support traditional techniques.

a. Internet Based Drug Promotion: Using Corporate Blogs, Social Network Webs And Many Other Online Methods

Pharmaceutical industry is focusing on the advantages of the internet and the development of new media forms to promote their products. Electronic detailing, interactive websites, email prompts and viral marketing campaigns using social networking sites such as YouTube, MySpace and Facebook are among the tools being used [11].

B. Electronic Detailing

With the technological development, many existing methods and practices has been either replaced or modified in combination with technologically developed methods. Electronic detailing (e-detailing) is one of the methods of drug promotion introduced few years back as technologically develop tool. In pharmaceutical industry it has been introduced as a new communication channel for the promotion of drugs among the physicians. For e-detailing digital technologies like internet, video conferencing, and interactive voice response are adopted to interact with physicians [12].

c. Direct To Consumer Advertisement Of Prescription Drugs

The pharmaceutical industry is one of the most advertising-intensive industries. Promotional expenditures often amount to 20–30 percent of sales, sometimes well exceeding expenditures on research and development (R&D) [13].

Direct-to-consumer advertising of prescription drugs (DTCA) is legal in 2 industrialized countries, the United States and New Zealand. No new legislation was introduced to allow this form of advertising; both countries’ laws were silent with respect to the target audience for prescription drug advertising. However, since the early 1990s when the US pharmaceutical industry spent less than \$100 million per year advertising prescription drugs to the public, DTCA has grown enormously, with spending reaching \$3.2 billion in 2003 and the proportion of advertising revenues devoted to DTCA growing from 9% in 1996 to 13% in 2003 [14].

Under the Federal Food, Drug, and Cosmetic Act, the Food and Drug Administration is responsible for ensuring that the labeling and advertising of prescription drugs is truthful and not misleading. Section 502 (n) of the act (21 U.S.C. 352 (n)) prohibits the advertising of drugs that is false or misleading or that fails to provide required information about

product's risks. Although in beginning, advertising of prescription drugs was primarily addressed to health professionals, but over the period of time, consumers have become a primary target audience. After the change target audience of advertisement, direct-to-consumer advertising (DTCA) has become the favorite channel of the pharmaceutical companies for marketing their products. Spending on DTCA for prescription drugs reached \$3.27 billion in 2003, almost 5 times the \$695 million level seen in 1996, and over 25 times the \$130 million level seen in 1993. Part of this growth resulted from the Food and Drug Administration's August 1997 Draft Guidance for Broadcast Advertising of Prescription Medicines, which effectively opened the door for pharmaceutical companies to advertise prescription drug products on television and radio [15].

Regulations And Codes Of Conduct To Control Pharmaceutical Promotion

The issue in pharmaceutical marketing is not only the misuse or abuse of the drug promotional techniques, but the absence and weak enforcement of the regulations and self regulatory codes could also be responsible for uncontrolled drug marketing.

Malaysia has a comprehensive (Malaysian Laws on Poison and Sales of Drugs) law to control pharmaceutical promotion and a well defined self regulatory code developed by the Pharmaceutical Association of Malaysia (PhAMA) which is an extension of IFPMA (International Federation of Pharmaceutical Manufacturers Association) Code but The effectiveness of the Pharmaceutical Association of Malaysia's (PhAMA) code of conducts for prescription (ethical) products in controlling pharmaceutical promotion is questionable as no research has been done to examine if it is implemented in practice [16]. Many developing countries have no appropriate law to control the pharmaceutical promotion. In Pakistan the drug act 1976 governs the Pharma industry, but no

appropriate control on promotion. In the chapter 4 of Drugs (Licensing, Registering And Advertising) Rules, Drug Act 1976 rule number 31 to 35 address the "advertisement" not promotion and even not enough to control advertisement [17]. Chapter III of Drug act "prohibitions" rule number 24 and 25 addressing prohibition of advertisement of drugs direct to consumers and control on sampling in very ambiguous way. It states that "no person shall distribute or cause to be distributed any drug as a sample except in accordance with such conditions as may be prescribed" [18] and no details of "may be prescribed" are available. Schedule "G" is added by an SRO (Solicitor's Remuneration Order) 1362(1)/96, dated 28-11-1996, specifically to control pharmaceutical promotion [19] but is in the same ambiguous statements form and actually is only addition of few more papers in the Drug Act. These legal provisions are much ambiguous and can easily be deceived/ violated.

Abuse Of Marketing Techniques In Pharmaceuticals

The pharmaceutical industry has contributed more to the well being of humanity than any other. Arguably among other achievements, it has helped to remove tuberculosis, gastroenteritis, and diphtheria from among the 10 leading causes of death in the western world and also achieved a mile stone by playing basic role in removal of small pox, plague and polio, the main causes of death and disability especially in the developing countries few decades back. But despite these achievements, yet the avoidable suffering caused by the pharmaceutical industry, particularly to the poor of the world, seems at times beyond comprehension [20].

Alliances between medical profession and pharmaceutical industry have become increasingly widespread in recent years. While there are clearly benefits for doctors and their patients derived from the medical profession working with the industry, concerns has been arisen that commercial imperative of industry may conflict with

physicians' independence and professional integrity [6]. It is fact that marketing and promotional activities may influence the physicians' decision regarding prescribing medication. Little information is available about means of the promotion of pharmaceuticals in all over the world especially in the developing countries there is no documentation of the promotional practices, means and tools influencing doctors prescribing behaviors. Even globally we can find few studies that addressed the issue but on in a very narrow and specific area of the scene.

Promotional Spending

Gifts given by the pharmaceutical industry to physicians are common and controversial [21]. Their expenditure on marketing is increasing day by day. Only in USA, pharmaceutical industry spends nearly twice as much on marketing as on R&D [22]. In 1998 pharmaceutical industry spent US\$12724 million in United States only on promoting its products. In 1998 expenditure were dominated by free drug samples provided to physicians (equivalent retail cost of US\$ 6602 million) and office promotion (US\$ 3537 million), followed by (DTCA) Direct to consumers advertisement (US\$ 1337 million) hospital promotion (US\$ 705 million) and advertising in medical journals (US\$ 540 million) [23]. It has been estimated that on average, more than US\$8000 is spent per physician annually [21] and this budget is increasing every year. According to IMS (International Medical Statistics) and CAM, spending for the promotion of prescription drugs in US during the year of 2004 was more than 57.5 Billion out of which 15.9 (27.7%) was spent on free samples, 20.4 (35.5%) on detailing 4 (7%) on Direct to Consumers Advertisement (DTCA), 2 (3.5%) on meetings, 0.3 (0.5%) on e-promotion, mailing etc, 0.5(0.9%) on journal advertisement and 14.4 (25%) were the unmonitored promotional expenditures (estimate) [24].

IMS have not included the spending on phase IV "seeding" trials, trials which are specifically designed for the promotion the

prescription of new drugs and have no interest in generation of scientific data. In 2004, 13.2% (US\$4.9 billion) of R&D expenditures by American pharmaceutical firms was spent on phase IV trials [24].

Out of these marketing budgets; focus of the companies shows increasing trend on the budget allocation for detailing mode and direct to consumer advertisement. In 1996 budget spent on detailing mode of promotion was 3 billion which reached 4.8 billion in 2000 (only in 5 years). Similarly spending on direct to consumer advertisement was 0.8 billion which in the 5 years reached 2.5 billion USD in United States [25].

Pharmaceutical industry has been the most profitable industry in the country for a decade. According to an analysis of 2001 data, it was five times as profitable as the average Fortune 500 companies. The industry deserves great credit for supplying miracle drugs, but no responsible industry would engage in the price gouging and advertising abuses that taint its reputation today [26].

The Game Of Patent And Branding

Since the early 1990s, the most drugs approved by FDA were "me too" and were as high as 92% of the approvals [22]. This sharp growth has produced many concerns regarding marketing tactics because when we compare this growth with the launching of new molecules, we will find no considerable addition in number of new molecules so easily. Hence it can be concluded that this growth is based upon generic drugs. Same drug is registered with different brand names, for example, diclofenac sodium is registered in Pakistan with more than 170 brand names for different companies [27]. This type of growth is increasing with no ending of competition in the market. Companies want to sale their products by any possible means either ethical or not.

The Food and Drug Administration (FDA) approved Neurontin in doses of 1800 mg per day as adjunctive therapy for partial complex seizures, in 1993 which was

patented in 1977. This drug became a surprise blockbuster for Parke–Davis, a division of Warner–Lambert, which was purchased by Pfizer in 2000. U.S. sales reached to nearly \$3 billion in 2004 which was \$98million only in 1995. Later Neurontin faced generic competition and lost most U.S. sales [28].

Drug Misinterpretation And Manipulation Information And

It is accepted and well documented fact that pharmaceutical companies are the biggest source of drug information for the prescribers. In Canada 66% doctors are dependent on medical representatives for drug information. Other sources include detail aids 41%, non-reviewed journals 44% company sponsored symposia 45%, association meetings 51%, product monographs 51%, journal ads 53%, CME 59% and peer reviewed journals 82% [29]. If pharmaceutical industry provide healthcare professionals with exact and accurate information to the doctors regarding medicine, it will be really a very big contribution for the healthcare system and in large for the society because doctors are very much dependent on the pharmaceutical companies for drug information especially in developing countries [9]. Using the fact of being main source of drug information, companies are not hesitant even to deceive the health care providers and regulatory authorities [30], [31]. Many studies have proved provision of drug information with the intentional manipulation and misinterpretation.

In 1997, for example, a study comparing the effects of brand-name and generic formulations of levothyroxine led to an uproar over the discovery that the manufacturer of the brand-name product suppressed publication of the result that the two formulations were equivalent. Recently, lawsuits alleging damages from illegal marketing of another old drug, gabapentin (Neurontin), have yielded remarkable discoveries about the structure and function of pharmaceutical marketing [28].

This is the picture of a developed country, where peer-reviewed journals are the biggest source of information for doctors regarding drugs followed by medical representatives as second biggest source for them [29], but in developing countries situation is different. There is poor or no mechanism of monitoring drug promotion, medical representatives are the main source of information [32] even we can say the only source of drug information for [33] the doctors regarding drugs and to transfer the drug information [32], brochures are the main tool. More than seventy-seven percent of the doctors rely on the medical representatives for drug information [32] in developing countries. A study conducted in 6 cities of NWFP and Punjab (Pakistan) finds that 87% of the doctors think that they can face problems with out industry representatives out of which 92%(of the 87%) think that they will be unable to get knowledge of new drugs [9], considering this fact, industry is increasing their sales force day by day. According to IMS health, the sales force of top 30 US based pharmaceutical companies was 52400 in 1998 which increased to more than 100000 only in 7 years (2005) [34].

The accuracy and usefulness of the industry provided information/advertisement has been a subject of debate since long time which generates the need to audit the mostly used information transfer means i.e. medicine literature, wall mountings.

In a recent study conducted in Pakistan, 18% claims made by pharmaceutical companies were adjudged to be misleading or unjustifiable out of which 32%(of 18%) were classified as “exaggerated”, 21% ambiguous, 26% false and 21% as controversial (percentage of the misleading or unjustifiable) [32].

It is not only in developing countries, if we observe the pharmaceutical industry is heavily involved in aggressive drug promotion and due to this aggressiveness many cases of unfair ways of drug promotion have been identified in developed countries and plead. For

example, three current and former executives of the company that produce the narcotic painkiller OxyContin pleaded guilty in federal court of ABINGDON, to criminal charges that they misled regulators, doctors and patients about the drug's risk of addiction and its potential to be abused [30].

To resolve criminal and civil charges related to the drug's "misbranding," the parent of Purdue Pharma, the company that markets OxyContin, agreed to pay some \$600 million in fines and other payments, one of the largest amounts ever paid by a drug company in such a case (30). Like wise Bayer healthcare pharmaceutical agreed to spend \$20m (£14m; €15.6m) for correction of its misleading direct to consumer advertisement of birth control pills [31].

Bribes

Any researcher, investigated the comparative evidence on bribery in international trade has concluded that pharmaceutical is one of the most corrupt among the industries. Dr. John Braithwaite in his article "The corrupt industry" says that his own research has found evidences of substantial bribery by 19 of the 20 largest American pharmaceutical companies. There is evidence of bribe being paid to every type of governmental official who could conceivably affect the interest of pharmaceutical companies: bribes to cabinet members to get drugs approval for marketing, bribes to social security bureaucrats who fix prices for subsidized drugs; to health inspectors who check pharmaceutical manufacturing plants; to customs officials, hospital administrators, tax assessors, political parties and others [20]. A practicing physician shared his experience saying that companies sponsored lectures by specialists for family doctors were interesting and informative bit with only a reference to a company product. Specialists are becoming little more than paid 'shill' for pharmaceutical companies'. Usually the slides they use for their lectures are provided by the host pharmaceutical company. Topics for these

lectures are just repetition. Their research figures are manipulated to turn a two percent improvement into a fifty percent improvement. Graphs are doctored by altering the scales to show substantial improvements where none exist [35].

If the drug company didn't expect the gift to influence the doctor's decision, why would it give the gift? According to a 1992 article published in The New England Journal of Medicine written by Douglas Waud, M.D., the term gift should read bribe: A gift implies that no strings are attached [36].

It is now beyond dispute that retiring Rep. Nick Smith, R-Mich, was offered a \$100,000 bribe to vote for the Medicare pharmaceutical bill [37].

Companies offer everything from free golf games to week-ends in resort hotels, from free tickets for theatre festivals to dinner cruises. The evening invitations to the most expensive local restaurants arrive once or twice a week, let alone the free lunches which are mine for the asking. The most a guest have is to do is to sit through a half hour presentation of a company's product [35].

Abuse of Sponsorships

Companies also try to make direct payments to the doctors by various indirect ways i.e. Enter patients in clinical trials against payment, National and International conferences and symposia sponsorships, free medical camps, and foreign trips. Sponsorships also involve "promotional research", use of opinion leaders by the way of calling them to present company provided presentations among the health care professionals [9],[10].

Abuse Of Internet Sources Of Marketing

Such campaigns are targeting both health professionals and the general public. The internet is helping to globalize and to change the nature of pharmaceutical marketing, and thus raises some new

challenges for regulators [11]. There are no restrictions for consumers to access the web based drug information or through the advertisement mails they get in their e-mail box from some unknown person offering to deliver at their doors. Now the question arises who will monitor them how it can be controlled and after the start of internet based pharma marketing, country regulation has become just a piece of paper because direct to consumers advertisement of prescription drugs is legally allowed in USA and New Zealand but by internet who will stop the companies to direct their advertisements towards consumers and who will stop consumers from accessing such advertisements and getting involved in self medication of prescription drugs.

Impact of marketing on prescribing behavior and behavioral changes towards offers

A number of authors have commented paucity or lack of objective data on impact of pharmaceutical marketing techniques on physician prescribing practices (38). The industry grew very fast during the last 2 decades. Simple example for observing this growth rate in a developing country is the trend in number of drugs registration in Pakistan. The number of total registered branded drugs in Pakistan was less than 20000 in early 1990s but it was more than 35000 in 2004 [39]. Ministry of health has registered more than 30000 branded drugs during last 30 years (40).

Here a question arises, "Are the pharmaceutical promotional activities really able to influence the behaviors of the physicians?" [38]

Many studies concluded that pharmaceutical marketing is not only influential to the doctors' attitude also their prescribing behaviors. Pharmaceutical companies give gifts to doctors as a part of promoting and marketing their products. Although many doctors deny the potential for gifts to influence their judgment, it has been found

that medical practitioners' attitudes to the pharmaceutical industry, their knowledge about pharmaceutical products, and prescribing behavior are influenced by industry promotion and gift-giving [10].

As for as attitude change is concerned, it has been changed for example "Now" they (prescribers) ask for or readily accept the offer for free travel and hotel accommodation, give green cards against donations for building funds and refuse to see the medical representatives if donation is not given. Group of doctors have formed companies and prescribing their products. They have an increasing liaison with chemists to prescribe a product which provides more discounts. They ask for money per prescription particularly for prescribing more tonics and vitamins. Request for renovation of clinics and hospitals [41].

Other studies also support the truth; that pharmaceutical promotion has clear impact on the doctors prescribing behavior. Here case is present for understanding the impact of drug promotional activities on the sale of a drug (intravenous antibiotic used for hospitalized patients) having 81 ± 44 units' consumption per month over the period of last 22. The consumption of the drug touches the peak at 476 units (maximum) per month after the pharmaceutical company invited specialists of that hospital with one guest each for an "all expense paid" trip to a luxurious place. [38].

Impact On Healthcare Spending

Spending on prescription drugs by different countries is increasing continuously by significant margin every year and one of the identified and most prominent cause of this increase is continuing switch to new drugs [42] which is an outcome of increasing promotional influence. Healthcare expenditures in USA reached \$1.6 trillion during the year 2002, which is 15 percent of that year's gross domestic product (GDP). Share of the pharmaceutical expenditures over the past decade, reached

10 percent of overall healthcare spending which is highest during last forty years. An other indicator for increase in pharmaceutical expenses is increasing sales of prescription USA which reached at \$228.8 billion in 2003 [12].

Conclusion

All the codes of conduct, self regulations and laws developed to control pharmaceutical promotion and marketing seem ineffective which is reflected by increasing marketing expenditure of the companies. According to a report by IMS-health, spending on marketing in USA shows continuous growth. In 1996, it was 9.164 billion, 10.990 in 1997, 12.473 in 1998, 13.867 in 1999 and in 2000 it reached 15.708 billion. Thus increasing the need of well define laws to be implemented by regulatory authorities only. There must not be any reliance from industry for their self regulation due to their clear and continuous reflection of pure business mentality i.e. spokesperson for the British industry quoted "I would just be talking rubbish if I were say that the multinational companies were operating in the less developed countries primarily for the welfare of those countries..... They are not bishops, they are businessmen" [43]. We must accept the fact that pharmaceutical industry in developing countries is driven by "quest of profit" and they can practice any thing to get their desired profit as medical director of Squibb quoted "The incidence of disease cannot be manipulated and so increased sales volume must depend at least in part on the use of drugs unrelated to their real utility or need" [43].

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