

# Promotional Activities for Vaccine's Market Development in Bangladesh: Advances So Far and Prospects Ahead

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## Abstract

In this paper we have investigated how to take initiative to increase the awareness among the Bangladeshi people about the vaccine from both government and private sectors. For this purpose, we considered three companies (GlaxoSmithKline, Sanofi Bangladesh and Novartis Bangladesh). The research draws attention to the fact that Non EPI vaccines are being thought of as a segmented item instead of a generalized one. Non EPI vaccine intake is higher mostly among educated people belonging to a medium to high income bracket. Other factors that affect the sales of Non EPI vaccines include a negative general perception about Non EPI vaccines and insufficient level of awareness. Fear of injection was also seen as an important factor. The research concludes with some recommendations, Vaccines are being supplied to the people at the lowest possible prices. Unfortunately these low prices exceed the purchasing power of majority of the population. Awareness level of Non EPI vaccines is low. This is the key issue that companies should focus on. By raising the awareness level, it will be possible to positively change the mindset of possible customers. If the mindset can be positively changed, price sensitivity and fear of injections will automatically drop. Government can either choose to subsidize these vaccines or manufacture these vaccines locally by using the expertise of the multinational companies in the country and the country's skilled labor force. Provided that the quality is maintained, this initiative will significantly lower the prices of these vaccines.

**Keywords:** Non EPI vaccine, income elastic, price sensitivity

## 1. Introduction

### 1.1 Background of the Study

Theoretical and practical knowledge does not always move to the same direction. Theory differs in a great way through its operation and implementation. There is no doubt that to justify the theoretical knowledge in practical orientation has great importance. The Pharmaceutical industry is playing an important role in the economy of Bangladesh. It is known as the most developed hi-tech sectors within the country's economy. After the promulgation of Drug control ordinance in 1982, the local Pharmaceutical companies of country get rapid support for growth and development of this sector was accelerated. There are now about 245 companies in this sector and the total market size is about BDT. 76,500 million per year. This industry is now self-sufficient in meeting the local demand. In addition, it is the second highest contributor to the national economy after garments, and it is the largest white-collar intensive employment sector of the country.

GlaxoSmithKline plc (GSK), Sanofi and Novartis are some leading multinational; healthcare company operating in Bangladesh for years. They concentrate on the development, manufacturing and commercialization of Pharmaceutical and consumer health related products. The research focuses on the factors that contribute to plan of their future vaccine business activities and promotional strategies.

## 1.2 Literature Review

This study tries to find out the reasons behind of their lack of awareness about Vaccine. The majority of literature review focused here on either specifically on one area of motivational sector. Little relevant research was found that specifically tied with promotion. Past researchers showed a variety of different perspective.

Ahmad (2006) defines vaccines as preventive agents against diseases caused by infection with pathogenic organisms such as virus, bacteria, and parasites, which upon administration into a healthy host stimulates body's defense system and prepares it to repel any future attack by the pathogen against which the vaccine has been administered. This is a very formal and elaborated definition of vaccines. Simply put, vaccines are agents that provide our immune system training sessions with it to help our immune system grow stronger and ready to counter an actual attack.

Awareness is how well-known a company, brand, or product is. Companies will typically set a goal for awareness (say, 80% of their target audience will recognize the brand name), and then spend as smartly as they can towards that goal (Christiane, 1998). Business Dictionary defines awareness as the extent to which a brand is recognized by potential customers, and is correctly associated with a particular product. According to Wales (2011), awareness refers to the penetration of a product, concept or advertisement into the conscious mind. Awareness rising is often the aim of a campaign and is expressed as a percentage of the target audience.

According to McCurdle Guy (2011), a certain part of the population of his study had no sayover whether they should be vaccinated or not as they believed in some common myths such as vaccines are not necessary, children get too many shots, too early, the measles, mumps and rubella (MMR) vaccine causes autism and vaccines are not 100% safe and do not work etc. As per latest WHO/UNICEF estimates (Keim & Elizabeth, 2009), globally, at least 24 million infants are left unprotected against vaccine preventable diseases. In every country, there are groups who are not vaccinated and continue to be susceptible to disease. For instance, in the 2008-2009 measles outbreak in Europe, the vast majority of the cases occurred among persons who did not get vaccinated based on philosophical reasons.

There are some phobias that may be irrational, but are often not a significant imposition at day-to-day activities (Jeff, 2011). The fear of needles or Belonephobia is one fear that could potentially cause problems with lifesaving care and prevention. This phobia has less to do with needles in general and more to do with the fear that the needle will be used for injection purposes (Hamilton, 1995). Injection phobia can be a major impediment to the provision of important health care measures, e.g., vaccinations, blood donations, and preparation for intravenous infusions (Givens et al., 1993).

Under the concept of Integrated Marketing Communication marketers attempt to develop a unified promotional strategy involving the coordination of many different types of promotional techniques. The key idea for the marketer who employs several promotional options to reach objectives for the product is to employ a consistent message across all options. For instance, salespeople will discuss the same benefits of a product as mentioned in television advertisements. In this way no matter how customers are exposed to a marketer's promotional efforts they all receive the same information.

The 'Promotional mix' is a term used to describe the set of tools that a business can use to communicate effectively the benefits of its products or services to its customers. The promotional mix includes Advertising, Public relations, Sales promotion, Direct Marketing and Personal selling. The promotional mix is part of the wider marketing mix. A successful promotional mix uses a balance of its five tools in a planned and structured way. A single tool rarely works well in isolation. The challenge is to select the right mix of promotional activities to suit your particular business at a particular time. In this research at first government role is being discussed regarding EPI vaccine. After that three pharmaceutical companies have been selected for study purpose as they all have their own Non EPI vaccine, here how these companies promote their vaccine in market is discussed.

Finally a survey has been conducted and then identifies major research objectives, which are about awareness, promotion and effectiveness of vaccine.

## 1.3 Overview of Vaccine Market in Bangladesh

The pharmaceutical industry is worldwide reputed for its fastest growing industry. Currently, the Bangladesh pharmaceutical market is dominated by the ten local players. The local companies contribute 68% to the total market, while the top 20, just four of which are multinational, contribute 84%. Nearly 245 manufacturers are responsible for 8,000 branded generics now available to the local population and the total market size is about BDT. 76,500 million per year. This industry is now self-sufficient in meeting the local pharmaceutical manufacturers cater to about 97% of the internal demand. In addition, it is the second highest contributor to the

national economy after garments, and it is the second highest contributor to the National Ex-Checker and the largest white collar labor intensive employment sector of the country.

Vaccines are biological pharmaceuticals. Like other biologicals such as insulin, the active components of vaccines are extracted from living organisms and then isolated through separation technologies. What differentiates vaccines from other biologicals is their distinctive mechanism of action: they work by stimulating or restoring the immune system's ability to fight infections and disease.

Consumers are motivated to seek therapeutic treatment because they experience a current health problem, whereas preventive vaccination requires that consumers anticipate a future health problem. Marketers of preventive vaccines therefore must ensure consumer awareness of the risks of infectious disease and motivate them to take preventive action. This is particularly challenging when past vaccination campaigns have virtually eradicated a vaccine target. Beneficial outcomes from therapeutics are often easily observable because of resulting improvement in health status (e.g., pain reduction), whereas a successful preventive vaccination does not improve the health status of the vaccinated person and can even sometimes deteriorate it due to adverse events.

Governments and supranational organizations play an even more central role in the preventive vaccine market than for therapeutics. They often subsidize R&D and manufacturing investments in vaccines, may own vaccine manufacturers, are important buyers and payers of vaccines, issue vaccination recommendations, and mandate vaccinations. Moreover governments and supranational organizations may take responsibility for the distribution, administration and marketing of preventive vaccines through public health campaigns.

The first vaccination program that was implemented in the geographical region of Bangladesh took place in the 1960s when Bangladesh was still a part of Pakistan. Vaccination against cholera through injection of killed cholera bacteria used to be an elaborate anti cholera program in the 1960s. This vaccine, with the help of preventive measures such as hand washing and home water treatment system, may have helped decrease annual deaths from cholera but overall morbidity remains high. It is estimated that there are at least 300,000 severe cases and 1.2 million infections in people in Bangladesh each year (ICDDR,B 2011).

Apart from this, a program called Expanded Program on Immunization (EPI) was initiated in 1980. It is considered the most successful public health intervention in Bangladesh, and has contributed diseases. It is estimated that a total of 1.2 million deaths have been prevented from 1987-2000d significantly to reducing mortality and morbidity from vaccine-preventable through EPI services. More than 95% of infants receive BCG vaccine on first contact (UNICEF, 2012). After the launch of the EPI program in 1980, the program achieved commendable success within just a few years as by 1993, approximately 74% children were immunized. Today, according to Nielsen Bangladesh (2012), almost 80% of the population has been immunized with EPI vaccines.

## **2. Methods**

### *2.1 Research Objectives*

This study intends to cover the promotional strategies for vaccination marketing by GSK in Bangladesh, Sanofi Bangladesh and Novartis Bangladesh. Specific objectives of the study may be spelled out as follow-

- To gain idea of people's knowledge about Expanded Program on Immunization (EPI) and Non Expanded Program on Immunization ( Non EPI) vaccine in Bangladesh.
- To identifies what people think about effectiveness of Vaccine.
- To identify peoples opinion regarding public awareness of vaccine.

### *2.2 Research Questions*

In this study the key research question can be tricked as follows:

- Q1. Does a person know about Expanded Program on Immunization (EPI) and Non Expanded Program on Immunization (Non EPI) vaccine?
- Q2. What people think about effectiveness of vaccine?
- Q3. What is the opinion of mass people about vaccine promotion?

### *2.3 Research Design*

The research was identified as both descriptive and analytical since it described and analyzed the relationship between the study variables. A cross-sectional survey was used which means that data was collected from various segments of a population at a single point of time.

In light of the methodological stand points discussed above this study used a descriptive research design to know the promotional activities of vaccine market. Besides, the pragmatism philosophy is selected as the analysis use qualitative data and result changes with human perception and attitude. Moreover this research adopts a mixed methods approach to answer the research questions.

This data was collected in the form of questionnaires. These data will be analyzed on the basis of qualitative interpretation. Here promotional activities were being considered as independent variables, whereas vaccines were considered as dependent variables.

#### *2.4 Data Collection*

To conduct the research appropriately relevant information is important. There are two types of data collection one is primary data collection and another is secondary data collection. A survey questionnaire is applied for collecting primary sources of data. The study is completed and made report in descriptive nature.

##### *2.4.1 Primary Sources*

By interviewing managers, employees, experts and observing activities, methods, process related to promotion primary data has been collected.

##### *2.4.2 Secondary Data Source*

From the preservation of official data base on GSK and other pharmaceutical Company analysis secondary data has been collected. Some other sources are also used such as Desk report of related department, website of the pharmaceutical company (GSK, Novartis, Sanofi) and Annual report.

#### *2.5 Analysis Technique*

We conduct a univariate analysis to show the respondents perception about vaccine. For the purpose of analysis, the SPSS for Window (SPSS Inc., Chicago, IL, USA) is used.

### **3. Result from Qualitative Aspect**

#### *3.1 Awareness Campaign about Vaccination in Bangladesh*

Governments and supranational organizations play an even more central role in the preventive vaccine market than for therapeutics. They often subsidize R&D and manufacturing investments in vaccines, may own vaccine manufacturers, are important buyers and payers of vaccines, issue vaccination recommendations, and mandate vaccinations. Moreover, governments and supranational organizations may take responsibility for the distribution, administration and marketing of preventive vaccines through public health campaigns.

#### *3.2 Expanded Program on Immunization (EPI)*

Expanded Program on Immunization (EPI) in Bangladesh was launched on April 7, 1979 (World Health Day). As vaccination centers were few and were located mainly in health care facilities in urban areas, the EPI coverage remained less than 2% by 1984. In 1985, the Government of the People's Republic of Bangladesh committed to the Global Universal Child Immunization Initiative (UCI), and began a phase-wise process of EPI intensification from 1985-1990. During this time period, EPI was intensified throughout 476 Upazila, 92 major Municipalities and 6 City Corporations. EPI was made available to all target groups (infants and pregnant women) by 1990. EPI intensification consisted of establishing the cold chain system from EPI HQ to District and Upazila level and capacity to maintain cold chain down to the vaccination points in rural and urban areas, procuring and managing logistics needs for about 134,000 EPI outreach sites, and providing basic EPI training for thousands of mid-level managers, supervisors and field workers in the public and private sectors.

After the launch of the EPI program in 1980, the program achieved commendable success within just a few years as by 1993, approximately 74% children were immunized. Today, according to Nielsen Bangladesh (2012), almost 80% of the population has been immunized with EPI vaccines.

#### *3.3 Non Expanded Program on Immunization*

Other than the EPI program and the cholera vaccine launched by ICDDR,B before independence, the first vaccine that entered the Bangladesh market was a vaccine for Hepatitis B. This was launched by a joint venture between SKF, a concern of Transcom distributor, and SK Beecham. They later merged with Glaxo Wellcome in 2001 to form GlaxoSmithKline Bangladesh following the global merger between the two companies. This multinational company subsequently launched 12 vaccines over the period of 10 years. Today, they are the market leader in the vaccine industry controlling over 42% market share. They have a rich product portfolio which includes vaccines for Hepatitis A, Hepatitis B, Varicella, DTP, measles, mumps, rotavirus, influenza, pneumococcal pneumonia etc. In 2009, they launched a vaccine that could prevent cervical cancer. This vaccine

was the first of its kind. Apart from GSK, there are other multinational companies that are offering different vaccines. For example, Sanofi-Aventis offers a very few number of vaccines, which include vaccines for rabies and typhoid. ICDDR, B is also contributing to the sector with the only cholera vaccine available in the market.

### 3.4 Promotion of Vaccine by Private Pharmaceutical Companies

Vaccine markets are characterized as private or public markets, depending on who the buyers and payers are. In private markets, consumers and/or private insurers are the buyers and payers, whereas public players such as federal and regional governments buy and pay in public markets. Each specific vaccine generally competes in both private and public markets, with the sales mix depending on the characteristics of the vaccine target group (e.g., age and risk status), the country or region, and the disease threat.

Pharmaceutical companies are not allowed to do any direct promotion of their products since the regulatory policies prohibit it. The policy frame work for promotion of pharmaceutical products is guided by the Directorate of Drug Administration (DDA). DDA has detailed Code of Pharmaceutical Marketing Practices (CRMP) regulates the promotion of pharmaceutical products and this excludes any form of direct marketing through media tools. Pharmaceutical companies cannot promote their products or their company through the Television, Radio, Newspapers or any other form of printed media. The primary means of promotion for the pharmaceuticals is through personal selling and trade marketing.

### 3.5 GlaxoSmithKline (GSK) Organizational Overview

GlaxoSmithKline (GSK) is a world's leading research-based pharmaceutical company with a powerful combination of skills and resources that provides a platform for delivering strong growth in today's rapidly changing healthcare environment. GSK has leadership in four major therapeutic areas- anti infectives, Central Nervous System (CNS) and respiratory & gastro- intestinal/ metabolic. In addition, it is a leader in the important areas of vaccines and has growing portfolio of oncology products. GSK supplies products to 140 global markets and has over 100,000 employees worldwide. GSK has 180 manufacturing site in 41 countries.

#### 3.5.1 The GlaxoSmithKline Bangladesh Limited

GlaxoSmithKline Bangladesh Limited carries with it an enviable image and reputation for the past 6 decades. GSK Bangladesh as a subsidiary of GlaxoSmithKline plc- one of the world's leading research based pharmaceutical and healthcare companies continues to be committed to improve the quality of human life by enabling people do more, feel better and live longer. GSK started its operation in Bangladesh in 1949 and then it was known by its corporate entity "Glaxo". In Bangladesh, Glaxo then mainly used to work as an importer of Glaxo Group. Here it started operation in Chittagong. Gradually it became manufacturer from importer and in 1967 it settled its factory in Chittagong. This site is still measured as one of the Centers of brilliance in manufacturing and supply Chain network of GSK Ltd.

Table 1. Vaccine of GlaxoSmithKline

Trade name	Therapeutic Class	Price/ MRP	Difference of Our Brand from Competitors
Engerix B	Hepatitis B vaccine	Adult (PFS: 608, Vial: 531.22). Child (PFS: 608, Vial 298.81)	Have PFS form, Long Global experience, Proven safety & efficacy profile
Havrix	Hepatitis A vaccine	Adult 1190, Child 756	Most accepted Hepatitis A vaccine in world,
Fluarix	Inactivated influenza vaccine	364	Low Price with same value.
Varilrix	Chicken pox vaccine	1487	N/A
Priorix	Measles, Mumps Rubella (MMR) vaccine	529	
Mencevax-AC WY	Meningococcal Meningitis vaccine	600	
Rotarix	Live-attenuated human rotavirus vaccine	1548	Human Origin, Replicates more well in the gut, Only 2 dose.
Infanrix-Hexa	Hexavalent vaccine for infants	1936	10 valent (contains 10 <i>s.pneumoniae</i> serotypes),
Cervarix	Cervical cancer vaccine	1737	provides protection for polio and help B
Tritanrix HB	Diphtheria (D), Tetanus (T) toxoids, inactivated pertussis (Pw) bacteria and purified surface antigen of hepatitis B virus		
Typherix	Vi polysaccharide from Salmonella typhi Ty2 strain		
Synflorix	Pneumococcal polysaccharide		

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and Nontypeable *Haemophilus influenzae* (NHTi) protein D conjugate vaccine, absorbed

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### 3.5.2 Promotional Activities of GlaxoSmithKline Vaccines

Vaccine is an emergency product, and its demand is not akin to other products. Not only consumers' show inelastic demand, but also the demand is more driven by doctors' prescription and product availability compared to end customers demand. Sales promotion system is the main part of any companies marketing system. Without promotion marketing system is not a possible. GSK promotional activity is mainly three steps that are Promotional Activities for Doctor, Promotional activities for Chemist, Promotion activities for ultimate consumer (Disease awareness).

There are different forms of marketing and promotional activities done by pharmaceutical companies. They are:

#### 3.5.2.1 Branded Strategy

Branded strategy is mainly scientific promotion. There are mainly six types of branded promotion:

- Regular doctor visit: This kind of visit is checked by internal software. This information is collected through field medical representative.
- Group discussion (GD): Group Discussion is one kind of meeting organize by GSK with doctors. Here doctors numbers are few and it arrange mainly in rural place.
- Doctor's meeting (DM): Doctors meeting is also arranged by GSK in Several reputed hospitals to give them some brief idea about GSK product.
- Regular promotional material: Flash card is a card where GSK brand its vaccine, if it is more than one page than its detailed. For example: Rotarix flash card. PFS card is a card by which GSK promote disease to doctor. For example: Flu card is one kind of PFS card.
- Congress sponsorship: Worldwide congress sponsorship is inactive now. For example, Asian summit, European pediatric summit. For the purpose of cost saving. Now GSK just arrange local sponsorship. For example GSK sponsor Bangladesh paediatric association summit program in Bangabandhu International Convention Center. This type of program is called Engagement with society, GSK also sponsor program for OGSB, BPS, GSK decorate stall, it takes a time slot for giving speech. By this type of engagement GSK target so many doctor at a time in one place.
- Branded festoon is a promotion material by which doctor can brief to their patient. It helps to aware people. It is work like prevention. Booklet is another one for people awareness program.

According to GSK Standard Operating Procedure (SOP) it can provide several gift items to doctors like sanitizer, Pad, Pen, Hand wash, medical flash light, surgical instrument, and tissue box. These gift items must be given which is helpful towards their medical profession

#### 3.5.2.2 NON Branded Promotion

Non branded promotion is actually Disease awareness, it target general public, For Example poster, scroll poster, festoon, sticker, dangler. In visitor room, GSK couldn't promote its product brand to general public. This is a regulation by Bangladesh Government.

- Leaflet: Doctor's assistance helps to promote leaflet. Another important thing is that when it's about Pediatric vaccine, doctor is main there, but adult vaccine can be aware by promotion material like leaflet. For example GSK arrange school program, corporate awareness program
- Dangler GSK just design it to aware patient about disease. In hospital, poster festoon also use to promote disease awareness in waiting room.
- Sticker can be used in government hospital lobby, waiting room; it is another form of disease awareness.
- Talk show: GSK already arrange cervical cancer disease awareness talk show in television.
- Sms awareness campaign: GSK has already contact with telecommunication operator. They plan to aware people by giving them some sms using GSK masking.
- Campaign in radio: Promote disease awareness GSK already booked time slot to aware people about disease.

### 3.6 Sanofi Bangladesh Limited

Sanofi-Aventis Bangladesh Limited is the local affiliate of Sanofi. Sanofi is one of the world's leading pharmaceutical companies which is dedicated to the discovery, development, production and distribution of medicines and vaccines, for all people throughout the world. Sanofi-Aventis is the largest global pharmaceutical company in Bangladesh with a dedicated team of more than 1200 employees.

Sanofi is a global integrated healthcare leader focused on patients' needs engaged in the research, development, manufacturing and marketing of innovative therapeutic solutions. **Sanofi has core strengths in healthcare, with 7 growth platforms: diabetes solutions, human vaccines, innovative drugs, consumer healthcare, emerging markets, animal health and the new Genzyme.** Sanofi-Aventis Bangladesh Limited prescription medicines range across therapeutic areas such as anti-bacterial, respiratory, dermatology, oncology, gastro-intestinal, cardiovascular and other diseases. The company is the market leader in most of the therapeutic categories in which it operates. They offer a range of vaccines, for the prevention of hepatitis A, hepatitis B, invasive disease caused by influenza, chickenpox, diphtheria, pertussis, tetanus and others.

Table 2. Vaccine of Sanofi Bangladesh limited

Vaccine	Description
Typhim Vi	Typhim Vi, one shot protection against typhoid fever
Vaxigrip	Vaxigrip, at the forefront of influenza protection
Verorab	Verorab, the rabies vaccine you can trust
Pentaxim	Pentaxim, the right choice for a pentavalent combination vaccine
Avaxim	Avaxim, the effective protection against hepatitis A
Trimovax	Trimovax, for the effective protection of measles, mumps and rubella
Pneumo 23	Pneumo 23, the broad coverage against pneumococcal infections
Meningococcal A+C	Meningococcal A+C, the effective protection against meningococcal meningitis

#### 3.6.1 Promotional Activities for Vaccine of Sanofi Bangladesh Limited

Planning and developing promotional material is a very critical step in pharmaceutical marketing. In case of a launching product, the importance is further stretched since the launching promotional materials are supposed to create the buzz among the target customers, who are habituated to prescribe other brands. For the upcoming brand 'Comol', printed promotional materials have been developed for the launching month. Printed promotional materials include literature, drop card, slip pad, leaflet and scientific journal article.

Table 3. Promotion of Sanofi vaccine

Promotional material	Description
Product literature	Contains basic scientific information regarding the disease, scientific study demonstrating the drug's potential & safety profile, pack info, prescribing info. Contains brand logo
Product drop card	Contains all the info contained in a product literature in a concise form. Contains brand logo
Slip pad	Prescribing pad containing very brief information. Contains brand
Logo, Leaflet	Contains overview of and guideline to the disease management. May contain brand logo
Scientific journal article	Journal article concerning the disease

Each and every promotional material has to go through two different scrutiny processes. Internally the Medical and regulatory affairs department of Sanofi-Aventis accesses the rationale and appropriateness of the promotional material. Then each one has to be approved by the national regulatory body: The Drug Administration.

### 3.7 Novartis Bangladesh Limited

Novartis International AG is a multinational pharmaceutical company based in Basel, Switzerland, ranking number one in revenues, which accounted over \$53 billion in 2008, and number three in sales, which accounted 36.172 billion in 2008. Novartis is one of the largest healthcare companies in the world and a leading giant among pharmaceutical companies. Novartis produces medications for many diseases, cancer and cardiovascular medications that make up the bulk of sales

### 3.7.1 Novartis Vaccines

The Novartis Vaccines Division provides more than 20 products to fight vaccine-preventable viral and bacterial diseases. Not all products are available in all countries. Regulatory requirements in various countries limit the product information.

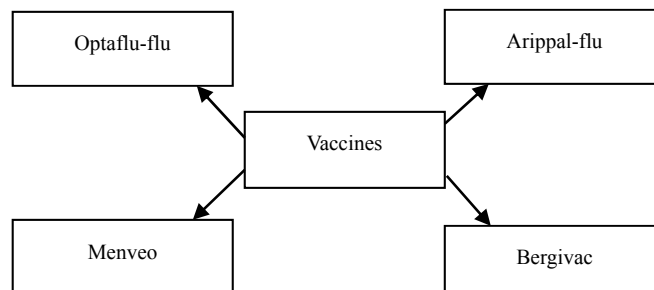


Figure 1. Vaccines of Novartis

### 3.7.2 Promotional Activities for Vaccine of Novartis

Promoting products gives them ethical responsibility to provide accurate information about products to healthcare professionals, patients and consumers. These fundamental principles guide marketing practices and interactions with healthcare professionals and customers:

- Promotional practices must accurately reflect the benefits and risks of a medicine. They must be ethical and be in good taste.
- Any information provides must consider the needs of customer. It must be based on product information as approved by local authorities.
- Sponsorships of medical or scientific events must be clearly disclosed, and the event's purpose must be sharing relevant medical or scientific information.
- Hospitality must be appropriate, modest, consistent with local practices and secondary to the main purpose of any meeting.
- Gifts may be given only when local standards permit it. Gifts must be inexpensive compared to local standards, relevant to the practice of medicine and may only

**Promotional Content** All promotional content produced/disseminated by Novartis Pharma (in printed/electronic form and communicated orally) must be accurate, scientifically sound, objective, reflect the current state of knowledge and must be consistent with the prescribing information as approved by local regulatory authorities (or the Core Data Sheet in case of global use). Novartis Pharmaceutical shall not promote a product until all necessary approvals have been received. Products must only be promoted for use in indications as approved by local regulatory authorities.

## 4. Result from Quantitative Aspect

Table 4. Socio economic and demographic characteristics of the respondents

Variable	Category	Percentage
Gender	Male	65%
	Female	35%
Age-Group	18-24	34%
	25-30	26%
	31-35	23%
	36-40	11%
	40+	6%
Education Level	No Education	2%
	Primary Education	5%
	Secondary Education	20%
Occupation	Higher Education	73%
	Service	30%
	Business	22%



	Student	26%
	Self-Employed	18%
	Unemployed	4%
	<5000	20%
	5001-15000	22%
Income Level	15001-25000	28%
	25001-50000	21%
	50000+	8%

Table 4 shows that, data was collected from 65% male and 35% female. Highest portion (34%) of the respondents laid in the age group 18 to 24. Age group 25-30 contains 26%. Only 6% is in the 40+ age group. In case of educational level, 73% respondents achieved higher education where only 27% was constituted by respectively no education, primary education and higher education. 30% people do service while 22% people have business. Also, 26% respondents are student. Table 4 also shows that, 20% people have income level less than 20%. 22% respondents' income level between 5001 and 15000. Highest proportion (28%) of respondent earn between 25000 and 50000. Only few of them earn 50000+.

Table 5. Result from liker scale data

SL No.	Question	Category	Percentage
1	Which of the vaccines are you familiar with?	EPI	70%
		Non-EPI	30%
		Strongly Disagree	16%
2	Do you think you have enough knowledge about vaccines?	Disagree	36%
		Neutral	18%
		Agree	25%
		Strongly Agree	5%
3	“Non EPI vaccines should be given similar priority as EPI vaccines” – what is your opinion about this statement?	Strongly Disagree	2%
		Disagree	6%
		Neutral	7%
		Agree	43%
		Strongly Agree	42%
4	Do you fear that there will be unusual side effects after vaccination?	Strongly Disagree	0%
		Disagree	28%
		Neutral	10%
		Agree	32%
		Strongly Agree	30%
5	“It is safe to let your child/loved one attend school/work without being vaccinated” – what is your opinion about this statement?	Strongly Disagree	27%
		Disagree	32%
		Neutral	14%
		Agree	27%
		Strongly Agree	0%
6	Do you believe in the effectiveness of vaccines?	Strongly Disagree	20%
		Disagree	22%
		Neutral	1%
		Agree	7%
7	Do you believe that vaccines are safe?	Strongly Agree	50%
		Strongly Disagree	14%
		Disagree	14%
		Neutral	10%
8	“Natural immunity is safer and stronger than vaccinated immunity” – what is your opinion about this statement?	Agree	32%
		Strongly Agree	30%
		Strongly Disagree	7%
		Disagree	27%
		Agree	50%
		Strongly Agree	16%

9	Do you know in BD many Pharmaceutical companies have their own vaccine product?	Yes	65%
		No	35%
10	Do you anything about Hepatitis B vaccine?	Yes	30%
		No	70%
		Strongly Disagree	22%
11	“I don’t trust the quality of these imported Non EPI Vaccines” – what is your opinion about this statement?	Disagree	17%
		Neutral	23%
		Agree	18%
		Strongly Agree	20%
		Purchasing Non-EPI Vaccine	46%
12	What would you rather spend money for? (If it costs the same)	Purchasing Commodity	54%
		Strongly Disagree	3%
		Disagree	2%
13	Will you take the Non EPI vaccines if they were somehow provided to you free of charge?	Neutral	0%
		Agree	28%
		Strongly Agree	67%
		Strongly Disagree	33%
		Disagree	32%
14	“I think the vaccines are overpriced” – what is your opinion about this statement?	Neutral	7%
		Agree	22%
		Strongly Agree	6%
		Strongly Disagree	17%
		Disagree	19%
15	Will you take the Non EPI Vaccines if they were cheaper?	Neutral	5%
		Agree	24%
		Strongly Agree	35%
		Strongly Disagree	18%
		Disagree	19%
16	“I avoid Non – EPI vaccines because I am scared of the route of administration (Injection)” – what is your opinion about this statement?	Neutral	6%
		Agree	23%
		Strongly Agree	34%
		Strongly Disagree	37%

## 5. Discussion & Findings

### 5.1 Discussion of the Result

From the report, we had a variety of respondents belonging to different segments in terms of gender, age, education level, occupation, and income. These demographic indicators helped the researcher to understand each respondent. It was seen that most of the respondents were male, belonging to age bracket of 18–35 and had an education of some sort while most were graduates. Majority of them belonged to the professional class as most of them had an employment of some sort or were self employed. The respondents belonging to the higher income bracket did not criticize much about the Non EPI vaccines.

#### 5.1.1 Research Objective 1: To Gain Idea about People’s Knowledge about Expanded Program on Immunization (EPI) and Non Expanded Program on Immunization (Non EPI) Vaccine in Bangladesh

**Public Awareness:** The research showed that the awareness level for the Non EPI vaccine is moderate. The respondents were familiar with much publicized vaccines such as Hepatitis, rotavirus and cervical cancer. They didn’t have much knowledge about the other vaccines. They admitted this and thought that Non EPI vaccines deserved equal attention. Most of them also said that they will vaccinate their loved ones. But in another question, they expressed their fear about unusual side effects of vaccines. This shows that although the respondents agreed that Non EPI vaccines deserve more attention, they have a fear of unusual side effect. These findings clearly portray that although most respondents had somewhat supported the Non EPI vaccines, their lack of knowledge and popular mythical beliefs make them stay away from these vaccines. This has resulted from an insufficient level of awareness.

#### 5.1.2 Research Objective 2: To Identifies What People Think about Effectiveness of Vaccine

**Customer Mindset:** According to the findings, more than one third of the respondent’s didn’t believe in the efficacy of vaccines but at the same time, majority of the respondents also thought that vaccines are safe. But in a

latter question, a similar number of respondents seemed unsure if the quality of vaccines is to be trusted or not. Most of them also thought that natural immunity is stronger and better than vaccinated immunity. This fluctuation in results shows that while some of the respondents had a favorable mindset towards Non EPI vaccines, most of them portrayed negativity for these vaccines. This mindset needs to change.

### 5.1.3 Research Objective 3: To Identify People's Opinion Regarding Public Awareness of Vaccine

**Promotional Activities:** Awareness level of Non EPI vaccines is low. This is the key issue that companies should focus on. By raising the awareness level, it will be possible to positively change the mindset of possible customers. They need to be educated about vaccines. If the mindset can be positively changed, price sensitivity and fear of injections will automatically drop.

**Price Sensitivity:** The result of this test showed that price sensitivity is pretty high for most of the respondents. More than half of the respondents indicated that they would rather buy a commodity or luxury good instead of buying an EPI vaccine. A similar percentage also said that the vaccines are overpriced. However, 95% said that they will take vaccines if they were provided free. The last question related to this variable asked the respondents if they will buy these vaccines if they were cheaper. While majority said that they will, a percentage similar to the prior ones said that they wouldn't. This shows that a certain part of the sample believes that the opportunity cost of buying Non EPI vaccines is too high. As a similar percentage of respondents were criticizing, the researcher checked their income level. It was seen that most of those respondents had an income below BDT. 15,000. This pretty much explains why they were so price sensitive. Their income barely meets their necessity. As a result, they consider vaccines as a luxury item.

## 6. Route of Administration

Vaccination through injection is the only way that any vaccines, except for polio and cholera, can be administered. Majority of the respondents feared this. The current research investigated based on the response of 100 respondents due to certain limitations. Future research should use a much larger sample size to get a clearer picture. The present study is cross-sectional, which measures the intention only at a single point in time. The future research may follow the longitudinal approach to predict beliefs and behavior over time.

## 7. Conclusion

When a company decides its destination and if it is able to know all the ways to reach there with full knowledge about the difficulties and blockage during the journey, it will be able to reach the destination in a specific time. Same the Promotion Research provides deep knowledge about the present market conditions, already used brand, consumer behavior, etc. it is easy for the company to get an idea about their new product condition in the market.

## 8. Recommendations

After analyzing the demographic profile of the survey, it can be concluded that mostly educated people belonging to a medium to high income bracket were more interested in the Non EPI vaccines compared to people with lower income level or education. Therefore, Non EPI vaccine manufacturers should target this specific segment as this segment is more health conscious and can afford to purchase vaccines.

- Vaccines are something that should not be segmented; everyone has the right to live, and the right to be vaccinated. The researcher does not refuse to admit that it is currently not possible to lower the prices of these vaccines as Bangladesh, being a least developed country, is already enjoying the benefits of tiered pricing. Vaccines are being supplied to the people at the lowest possible prices. Unfortunately, these low prices exceed the purchasing power of majority of the population. Companies belonging to this industry as well as philanthropists should acknowledge this and try to bring down the prices of these vaccines further.
- Awareness level of Non EPI vaccines is low. This is the key issue that companies should focus on. By raising the awareness level, it will be possible to positively change the mindset of possible customers. They need to be educated about vaccines. If the mindset can be positively changed, price sensitivity and fear of injections will automatically drop.
- Government can either choose to subsidize these vaccines or manufacture these vaccines locally by using the expertise of the multinational companies in the country and the country's skilled labor force. Provided that the quality is maintained, this initiative will significantly lower the prices of these vaccines. If a high coverage rate is achieved, we will be able to see a healthier population tomorrow.

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