"A CONSUMER STUDY ON FACTORS AFFECTING "CHOICE" AND BUYING BEHAVIOUR FOR MEDICLAIM POLICIES IN THE STATE OF GUJARAT"

CHAPTER NUMBER ONE
REVIEWING HEALTH SECTOR AND HEALTHCARE SECTOR OF INDIA
CHAPTER ONE AT A GLANCE

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EXECUTIVE CHAPTER SUMMARY:

An attempt has been made in Chapter Number One to provide an overview of the health and the health care sector at the Global level, National level and at the Gujarat State level respectively. Under the health sector, the researcher has attempted to offer a brief sketch of the health care sector at the World level, National level and State level along with reviewing of the regulatory and promotional role of the Central Government of India, State Government of Gujarat, and budgetary allocations made for it. Similarly, under the health care sector, the researcher has covered topics such as viz., introductory conceptual framework of the health care sector and its performance at the Global, National, and the State level has been covered in it. The researcher has also reviewed the performance of the health care sector considering diverse health care specific areas as well as patterns of the health care spending, and foreign collaborations have been covered in it. A brief review of the health care infrastructure from the context of India as well as the State of Gujarat, too have been carried out supported with the concluding remarks given at the end of this chapter.

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REVIEWING HEALTH SECTOR AND HEALTHCARE SECTOR OF INDIA

1.0: HEALTH: AN INTRODUCTION:

The English word health is derived from the Old English word hale, which means wholeness, a being whole, sound or well. The word Hale is derived from the Proto-Indo-European root kailo, which means whole, uninjured, of good omen, having its Proto-Germanic root in the word, khalbas, which means something divided. The term health is determined as, the healthy state of well-being, free from disease (http: //en.wikipedia.org; Accessed 15/07/10)[1].

The World Health Organization (WHO) has defined the term health as the state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. The evolution of definition of health which has been not amended since 1948 was specifically focused by the handful of publications, highlighting inadequacy of operational value in it. While some critics questioned the use of word complete in the WHO definition announced in the year 1948 as well as the unrevised characteristic of this definition until the year 1986. Also, the content, suitability and application of the definition, quoted by WHO had been questioned in an article in The Lancet from the context of the new era characterized by the new understandings of disease at molecular, individual, and societal levels. Thereby, during the Ottawa Charter for Health Promotion in the year 1986, the term health was defined by WHO as a resource for everyday life and not as the objective of living. It is a positive concept emphasizing social and personal resources as well as physical capacities (ibid).

Emerging notions of health and health status in the modern industrialized world have been the revivals of ancient Greek and Chinese concepts. The ancient Greek and Chinese concepts were based on the Hippocratic thought which regarded health as consisting of an internal equilibrium, Viz., blood; phlegm; black bile, and yellow bile in correspondence to the four environmental elements, Viz., air; water; fire, and earth. Disturbance of equilibrium among these Dysksasia meant that the individual became sick. Thus, the idea that the environmental factors and ways of living in that environment profoundly affect health has formed the series of the interacting system, a generic concept. The definition of health offered by Capra (1983)[2] as an experience of well-being resulting from a dynamic balance that involves the physical, and the psychological aspects of the organism as well as its interaction with its natural and social environment had brought the subjective aspect of health which has been clearly reminiscent of the ancient Greek view health. It consists of equilibrium and stability.

Thus, broadly speaking, the word 'health' has been described from various contexts of which physical health and mental health are major views, while, emotional, social, spiritual and environmental health are the other related views.

Generally, the term health is described with reference to the physical health. Physical health refers to a good body health, resulting from consistent physical activity or exercise, good nourishment, and sufficient repose, that is, as the people of the country or region experiences the enhancement in the nourishment, health care, standards of living and quality of life results into the improvement in the health aspects of the people of any country. It is also described in terms of physical wellbeing which refers to something a person can achieve by developing all health-related components of his/her lifestyle. According to WHO, mental health is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community (Lester Breslow, 1989)[3].

Thus, health is a state of being hale, sound, or whole, in body, mind, or soul, that is, the state of being free from physical disease or pain. In other words, 'health' is the general condition of a person in all aspects. It is the level of functional and/or metabolic efficiency of an organism often implicitly human. Thus, the combination of physical, mental, and social well-being is commonly referred to as the health triangle forms overall health of an individual (http: //en.wikipedia.org; Accessed on 15/07/10)[1].

It is a pre-requisite for human development, and is essentially concerned with the well-being of the common man. The United Nations Development Programme (UNDP) Human Development Index (HDI) comprises of three components that is, health, education and income which generates human capacity. Health is a function not only of medical care, but also of the overall integrated development of cultural, economic, educational, social and political. The health status of a society is intimately related to its value system, philosophical and cultural traditions, as well as, social, economic and political organization. Each of these aspects has deep influence on health which in turn influences all these aspects. Hence, it is not possible to raise the health status and quality of life of people unless such efforts are integrated with the wider effort to bring about overall transformation of a society. Health development can be integrated with the larger programme of overall development in such a manner that the two become mutually self-supporting (Amit Banerji and Vishnu Ramdeo, 2007)[4].

According to WHO, people's good or bad health is determined by their environment and situations. It is all about what is happening and what had happened to them. The chief health determinants comprises of, viz., the social and economic environment, the physical environment and the person's individual characteristics and behavior. Social and economic environment refers to an individual's economy and society; physical environment refers to, where an individual lives, and what is his or her physical surrounding (http://www.medicalnewstoday.com; Accessed on 15/07/10)[5].

The four general determinants of health are human biology, environment, life-style, and healthcare services. Generally, the context in which an individual lives is also of great importance to his life quality and health status, along with the components of the socio-economic environments and physical environment which are the key factors in determining and classifying the health status of individuals (http://en.wikipedia.org; Accessed on 15/07/10)[1].

1.1: THE HEALTH SECTOR:

The health sector is multifaceted with numerous goals, several products, and diverse recipients as the part of the economy that deals with the health-related issues in the society (Razib Ahmed, 2007)[6]. In other words, it is the part of the economy which is involved in activities intended to improve health, often used with the term health systems which includes both health services and health-related activities (Archana R. Dholakia and Ravindra H. Dholakia, 2001)[7].The trends of the health sector of any country can be identified by the changes in the health indicators of the respective country, Viz., the life expectancy at birth, the infant mortality rate and the under 5 years mortality rate, etc., An attempt has been therefore made hereby to review some of the global health indicators that determines the overall status of the global health sector.

1.1.1: A Brief Review of the Health Sector of World:

The global life expectancy at birth in the year 2012 was 68.1 years for Men and 72.7 years for Women. Moreover, between the period 1990 and 2012, the global life expectancy at age 60 increased from 16.6 years to 18.5 years and 19.7 to 21.5 years for Men and Women respectively. The life-expectancy of the selected countries, Viz., China; Sri-Lanka; Canada; Denmark; Brazil; Germany; France; United Kingdom; United States of America; Saudi Arabia; Iraq; Israel and Japan was estimated to be more than 70 years in the year 2012 which has improved as compared to that of the year 2009 and 2000. The rate of under-five mortality and infant-mortality was found less than 10, except in the countries like China, Brazil, Iraq and Sri Lanka. The rate of under-five mortality in Afghanistan, Nigeria and Guinea Bissau was found to be nearly 150, while in Pakistan and Kenya, it was around 100 in the year 2012. The life-expectancy in India; Nepal; Pakistan; Bangladesh; Bhutan, Iraq and Kenya was about 60 to 65 years approximately in the year 2009 respectively (World Health Statistics 2008, 2012, and 2014)[8, 9, 10].

During the period, September, 2000, of about 189 heads of State endorsed the framework for development by adopting the UN Millennium Declaration, which expected the countries and development partners to work together to reduce poverty and hunger, deal with ill-health, gender inequality, lack of education, lack of access to clean water and environmental degradation.

Thus, eight Millennium Development Goals (MDGs) with the targets set to be accomplished by the year 2015 were established which were accompanied by number of indicators to monitor progress, several of which were related directly to health. All the goals and their targets were to be measured in terms of progress since the year 1990. While some countries have made extraordinary achievements in the health-related targets, others have lagged behind in this race. Amongst the countries, the countries that were expected to make least progress were the countries affected by the high levels of HIV/AIDS, economic hardship or conflict (Fact sheet No. 290, 2010)[11].

The review of the achievements of the MDGs has been summarized as follows.

The countries of the world have reported considerable improvement in the accomplishment of the MDGs with the pendency of one year to be fulfilled by the targeted year 2015. It was reported that about less than one-third of all countries have already achieved or were on path to achieve the MDG target by the targeted year 2015. Of the total under 5 deaths among children, about 45 per cent of all under five deaths were caused due to childhood malnutrition. During the period 1990 and 2012, there has been decline to 15 per cent in the under-five mortality rate, that is, from an estimated 160 Million deaths in the year 1990 to 99 Million in the year 2012, which states speedy accomplishment of the MDGs (World Health Statistics, 2014)[10].

The coverage of the Global Measles immunization in the year 2010 and 2012 was 85 and 84 per cent respectively among the children aged 12 to 23 months. Also, 66 per cent of all the world countries had maintained at least 90 per cent of coverage in the year 2012. This had led to decrease in estimated number of measles deaths by 78 per cent during the period 2000-2012 (World Health Statistics 2012, 2014)[9, 10].

In terms of the risk of disease, about half of the world's population has been recorded to be at risk of Malaria, viz., of the 216 Million Malaria cases in the year 2010, that led to approximately 6,55,000 deaths, of which about 86 per cent were children under age of five years. In the year 2012, about 3.4 Billion people of the world's population were estimated to be at the risk of malaria. However, during the period 2000 to 2012, the incidence rates of Malaria among the population at risk globally were estimated to have declined by 25 per cent, while the estimated Malaria mortality rates globally have declined by 42 per cent. The scaling-up of the Malaria interventions have saved estimated 3.3 Million lives during the same period (World Health Statistics, 2012)[9].

Moreover, the malaria mortality rates are estimated to decrease globally by 52 per cent in case the annual rate of decline is maintained. The number of newly HIV infected in the year 2012, that is, 2.3 Million people, had been 33 per cent less than that in the year 2001, that is, 3.1 Million (ibid).

The MDG target in relation to the access to safe drinking water seems to be met, as in the year 2010 about 89 per cent of the population had access to improved and safe sources of drinking water in comparison to 76 per cent of the year 1990 (World Health Statistics, 2012)[9].

However, wide imbalances exist between the different regions, urban and rural areas, and among various socio-economic groups that is, rich and the poor (World Health Statistics, 2014)[10].

Moreover, the increasing non-communicable diseases are also expected to affect globally as the total number of projected annual number of deaths due to cardiovascular disease is expected to rise from 17 Million to 25 Million from the year 2008 to 2030 respectively. While, the number of annual Cancer deaths is expected to increase from 7.6 Million to 13 Million during 2008 and 2030 respectively. Consequently, the aggregate annual deaths occurring from Non-Communicable diseases are expected to reach to 55 Million by the year 2030. However, the projected death annually due to Infectious Diseases globally is expected to reduce during the period from 2012 to 2032 (World Health Statistics, 2012)[9].

On the other side, in terms of the publishing of the essential medicines list by majority of the countries of the world, the availability of the medicines at the public health facilities has often been found very poor. While, in the context of the availability and accessibility of the affordable essential medicines, it had been reported that in spite of nearly all the countries who had been publishing an essential medicines' list, its availability at public-health facilities had been found to be very poor. Moreover, according to the surveys conducted in more than 70 countries, especially among low and middle-income countries, the average availability of selected generic medicines at health facilities was only 42 per cent in the public sector, and 64 per cent in the private sector. Also, the availability of medicines for Non-Communicable diseases treatment remained very poor, in comparison to the availability of medicines for acute conditions (World Health Statistics 2008, and 2012)[8, 9].

The availability of such medicines in number of the countries has been determined by the factors, such as, viz., poor medicine supply and distribution systems, insufficient health facilities and staff, low investment in health and the high cost of medicines. According to the surveys conducted for the period from the year 2007 to the year 2012, the selected generic medicines were available only in 56 per cent of the public outlets in low-income countries as well as in middle-income countries (World Health Statistics, 2014)[10].

A brief review of literature on the various health indicators as the determinants of the health status has been presented as follows.

Musgrave (1993)[12] had regarded the fall in mortality rate among the chief element of the development in the health and had viewed the emphasis on medical care as the prime attention for further health advancements.

Koop, Barend, J. C. Middel, Hein W. A. Struben, Irene Burger and Johanna M. Vroom (2001)[13] had conducted the quantitative estimate of the contribution of the individual causes of death on the socio-economic differences in mortality, on the basis of the gender, and had concluded that the diseases that are the main contributors to urban socio-economic mortality differences can be influenced by public health policy. The health sector reforms, including structural and process changes such as the incorporation of feasible information and communication technologies has been a priority in many least developed countries. However, the reasons of ineffectiveness of such reforms had been explored by the author in the paper, with the special focus on integrating the information systems in HIV/AIDS program in Mozambique (Bruno Piotti, Baltazar Chilundo and Sundeep Sahay, 2006)[14].

Smoking, violence, alcohol addiction, risky driving in traffic and sports adventures were the major causes of the poor health outcomes and were considered as the parameters of the socio-economic class which influenced the male mortality and morbidity in the higher-income countries (Gita Sen, Asha George and Piroska Ostlin, 2002)[15].

1.1.2: Review of the Health Sector of India:

Currently, the health system of India is at the crossroads of renovation backed by the advancements in demographic, epidemiological as well as social sectors among diversed group of people and regions accompanied by the attractive composition of accomplishments and paradoxes in the contemporary public health scenario (M. Guruswamy, Sumit Mujumdar and Papiya Mujumdar, 2008)[16].

The improvements in the health sector over the 50 years of time period were observable, that is, decline in the infant mortality rate from as high as 110 in the year 1981 to 68 in the year 2000 were unacceptable when viewed in comparison to the developmental levels in the other countries (Ajit K. Dalal, 2005)[17].

The trends in major health indicators of India which influences the growth of the health as well as healthcare sector of India has also been reviewed as follows.

According to the inter-state comparison of the trends in major health indicators of some of the States of India, viz., Birth-Rate, Death-Rate, Infant Mortality Rate and Life-Expectancy Rate, which influences the growth of the health as well as Healthcare sector of India, Kerala stands first in terms of the life expectancy followed by Jammu & Kashmir, Himachal Pradesh, Maharashtra, Punjab and West Bengal. The life expectancy rate of Gujarat of 66.8 years is similar to the life expectancy rate of India. However, the Infant Mortality Rate (IMR) has been found to be lowest in the State of Kerala followed by Tamil Nadu, Maharashtra and Punjab which is less than 30 deaths per 1000 live births in the year 2012. The birth rate was found to be highest in the State of Bihar and lowest in the State of Tamil Nadu, while the death rate was found to be highest in the State of Odisha and the lowest in the State of Jammu & Kashmir (The Economic Survey, 2013-2014)[18].

Undoubtedly, as reflected from the health indicators of the country as well as state-comparison, the progress in the health sector seems to be remarkable, but with negligible share of 1.4 per cent in the India's GDP, many more such striking achievements in the health sector needs to be won by providing quality and affordable healthcare for the large Indian population. These issues when viewed from the fronts of public health system of India, heightens the public health challenges with all possibilities of demand outstripping supply, further seems to be intensified with the estimation of the India's population to reach to about 1.5 Billion by the year 2025 with about more than 175 Million of the population above 60 years of age, ranking India as the second-largest country with gray-haired population (Arvind Singhal, 2007)[19]. Considering the total population of India, about 32.8 per cent is expected to be of more than 50 years of age by the year 2050 indicating an exponential rise in the percentage of the individuals suffering from prolonged diseases like Hypertension, Diabetes, etc. By the year 2020, the chronic diseases in India will account for about 66.7 per cent of all deaths, apart from that caused by the infectious diseases like Tuberculosis (TB), Malaria, AIDS, SAARS, etc.,(Prabha Jagannathan, 2007)[20].

The incidence of communicable disease has been expected to reduce while the prevalence of non-communicable diseases has been expected to grow. Accordingly, the total percentage of the hospitalization cases due to the various communicable and non-communicable diseases in the year 2008 has been 13.8 per cent which accounted for hospitalization due to Cardiac, Oncology and Diabetes, aggregating to 39 per cent of the in-patient revenues in the year 2008. These ailments were accounted for 17.4 and 20.0 per cent of the hospitalization cases in the year 2013 (Healthcare, 2009)[21].

Moreover, the rising communicable diseases are expected to impose further challenges on the health sector of the India, to be dealt carefully as they are likely to increase quite sharply in the event of the current status quo of inaction towards their prevention which may even hinder the achievements of the Millennium Development Goals (MDGs) by India that is to be achieved by the year 2015. India's disease burden is expected to increase significantly due to non-communicable diseases with Cardiovascular Diseases and Diabetes to increase by more than double; various types of Cancers by about 25 per cent; adverse effect to psychological health by approximately 6.5 per cent of the population of India due to stress caused from repeated commotion in incomes, unemployment, and shortage of social support systems.

The disease burden estimates are presented in terms of the both the communicable diseases as well as non-communicable diseases, followed by the projection of the same in specification to various communicable as well as non-communicable diseases (Report of the National Commission on Macro Economics and Health, 2005)[22].

A brief review of literature on various health indicators and the health problems has been offered as follows.

The various health indicators are affected by the health problems in terms of the illness or disease experienced by an individual. The two main parameters that assess the health problems are namely, viz., mortality and morbidity historically.

In the advanced countries, the mortality rate is based on the reason and location of death, in comparison to the developing countries, where it is determined on the basis of scarce health care systems, socio- economic cultural factors, and the lack of medical attention to the issues of the mortality (Indrani Gupta and Deepa Sankar, 2004)[23].

Awasthi and Pande (1998)[24] had studied the reasons of child mortality in the slums areas of Lucknow city in India. Bhatia (1993)[25] had studied the maternal mortality in Anantapur in the State of Andhra Pradesh and found that timely antenatal care treatment of earlier complains and timely medical treatment could have controlled about 80 per cent of maternal deaths.

Greenspan (1994)[26] had attempted to identify the effect of demographic behavior on culture in India. The findings stated that the child mortality across sex differs in the States of Tamil Nadu and Uttar Pradesh, which has been attributed to the underlining reason of avoidance or delay of 'outside medical attention until too late' as being influenced by the cultural factors of those regions by the author.

Wadley (1993)[27] had studied the child mortality among the poor people in Karimpur in the State of Uttar Pradesh, and found that negligence and lack of medical attention as the major reasons for the rapid rise in the female child mortality in comparison to the male child mortality.

Similarly, Viegas et al. (1992)[28] in their study of maternal mortality in the East Asian countries of Thailand, Philippines and Indonesia, accredited the reasons to the hindrance in medical attention due to lack of availability and accessibility of the transport to medical facilities.

Similarly, Miller (1981)[29] had attributed the problem to the negligence of female children and discrimination in delivery of medical attention in the north India.

Murthy (1982)[30] had studied India's higher mortality rates among the females of 50 years of age and had indicated that the women in rural areas were disinclined to avail medical attention and hence were deprived of health care.

Raj Kishor Meher (2007)[31] had attempted to analyze the living patterns and settings of the tribals as well as the related morbidity and healthcare conditions in the tribal regions in the State of Orissa. They critically examined the usefulness of the healthcare policy of Orissa, its importance in formulating the economic reforms and status of the removal of the subsidized health care services.

Moreover, it is hardly possible or practicable to attempt to separate the interrelated determinants of the individual health status, viz., the Biology and Environment, thus, the health status of the people is determined not only by inherent capacity but also by the influence of the cultural milieu.

The use of the terms 'socio-economic status', 'socio-economic position', and 'social class' in the health research, reflected the widespread albeit often implicit recognition of the importance of socio-economic factors for diverse health outcomes**.** Undoubtedly, different socio-economic factors could affect health at different times in the life-course of an individual at different levels (Charles Johnson, 1949)[32]. Thus, there has been the growing acceptance of the health and its social distribution, which is needed to be studied over whole of the life-course.

Himanshu Sekhar Raut (2010)[33] had examined the effect of the income and education on household health expenditure in the State of Orissa in India and found that it had positive and noteworthy effect on health. Moreover, an individual's health can also be influenced by the socio-economic characteristics of the neighborhood in which one lives, above and beyond one's own individual socio-economic status (Robert, 1999)[34].

Shelly Saha and T.K. Sundari Ravindran (2002)[35] had attempted to observe the relationship of gender and social factors with the cost, convenience, suitability and effectiveness of health services in the context of reproductive health concerns of women and men, with the support of the review of literature from Indian context.

Premilla D' Cruz and Shalini Bharat (2001)[36] had an overview of the health care system of India in the post-independence period. They had highlighted the underlining causes of low improvement in the health status. According to the authors, the political system in India plays a significant an important role in determining the health status and health care system which is influenced by the profession of medical, global and State political systems too.

1.1.3: An Overview of the Health Sector of Gujarat:

Gujarat probably is the only State of India, to record double-digit growth rate, continuously from the period 2001-2002 to 2011-2012 and it has been characterized as the growth engine of India with the balanced growth of 10 to 11 per cent across the three major sectors. The growth rate of State Domestic Product (SDP) was recorded as 10.1 per cent in the State of Gujarat during the period 2005 to 2013.

It is one of the India's most prosperous State with per capita GDP which is significantly above the average GDP of India, that contributed about 7.5 per cent to India's GDP (Socio Economic Review, Gujarat, 2012-2013 and 2013-2014)[37, 38]. The Gujarat State stands at the 10th position in terms of the population among the other States of India with about 6.03 Crores of its total population as on 1st March 2011 to be provided with an assurance of the proper health care in priority, which is undoubtedly inevitable in building and maintaining the vigorously fruitful healthcare personnel.

This would also facilitate the attainment of the objective of population stabilization, as it involves steps on various issues, viz., Child Survival, Safe Motherhood, and Contraception. However, there is only marginal growth difference in the health status of the people in Gujarat State as reflected in the vital health statistics, that is, decline in the Birth Rate from 24.9 in the year 2001 to 21.1 in the year 2012; the Death Rate has reduced from 7.8 in the year 2001 to 6.6 in the year 2012. The IMR has also reduced from 60 in the year 2001 to 38 in the year 2012 (Socio Economic Review, Gujarat, 2012-2013, and 2013-2014)[37, 38]; (The Economic Survey, 2013-2014)[18].

1.2: ROLE OF THE GOVERNMENT OF INDIA IN THE PLANNING OF HEALTH SERVICES:

The administration occurs at all levels of an organization and includes wide diversity of tasks that emphasizes the optimum application of the limited resources to accomplish the tasks to improve the health of the population. The health has been recognized as the important component in the process of economic and social development, thus, has all the time been a preferred area in any nation (http://business.gov.in; Accessed on12/07/10)[39].Thus, the Government relating to health sector performs two important roles, first, framing of the rules, procedures and policies, and regulating the services in the health sector, that is, regulatory role, and, second, ensuring provision of health services by investing resources in the health sector that is promotional role which may also co-exist with private service providers in India.

1.2.1: Regulatory Role of the Government of India:

The public sector, private sector and the households are the three major sectors sharing the responsibility of providing healthcare services in India. The public sector comprises of the Central and State Government, municipal and local bodies, while, the private sector consists of private physicians and the range of other practitioners including those practicing non-allopathic systems of medicine, health facilities and corporate hospitals operating for profit, corporate bodies providing medical care to their employee and Non-Governmental organizations operating as not-for-profit enterprises and providing services free of cost or at subsidized rates (Shelly Saha and T.K. Sundari Ravindran, 2002)[35].

On the other side, the households provide a large proportion of first-level care in many settings, especially in India, where the formal health services are unavailable or unaffordable to the significant section of the population. In India's federal structure of Governance the States are responsible for 'health'. The Central Government shall plan and fund the health care services, but the responsibility for implementation of those plans is that of the State Governments. The rapidly growing unorganized private sector mainly provides curative services to those who can pay regulated to the minimum extent by the statutory bodies like the Indian Medical Association and the Medical Council of India (ibid).

Moreover, the Government finances the health services by spending on the health care by Central, State and Union Territory Governments by the means of revenues collected by the local bodies, public sector enterprises, and independent and semi-independent institutions for health care financing.

However, at the State level, these revenues are collected for financing expenditures that are undertaken by the Ministry of Health and Family Welfare and other Ministries like Social Welfare and Development, Human Resource Development, and Agriculture and Rural Development. While, Ministries of Railways, Defense, Post and Communications are separate part of the financial intermediaries as State-owned enterprises, and their earnings flows from the Central Government. Moreover, the Government health expenditure can be categorized as revenue and capital expenditure with the key sections, viz., Medical and Public Health, and, Family Welfare, within each of the category. Further, the medical and public health includes the sub-heads, viz., urban health services viz., allopathic; urban health services; rural health services, allopathic; rural health services, other systems of medicines; medical education, training and research; public health, and, general, with the minor heads within all the sub-heads category not only of the major head of medical and public health, but also under family welfare respectively (Charu C. Garg, 2001)[40].

Besides, various National programmes and programmes sponsored by Central Government supported State Governments includes, 15.2 per cent contribution of the State Governments, 5.2 per cent of the Central Government, 3.3 per cent of third-party insurance and employers, and, 1.3 per cent from the Municipal Government and Foreign Donors. Of these contributions, the primary health care receives 58.7 per cent support, comprises curative, preventive, and promotive health care, and 38.8 percent is allocated to take care of secondary and tertiary inpatients, and the remaining contribution is spent for the cost of non-service aspects. Public health administration involves assessing population health needs, formulating policies, designing interventions, and assuring that the programs and services necessary to achieve pre-determined targets are provided by acquiring applicable knowledge related variety of areas of public health administration, in general and specific, viz., human resources; financing; marketing; media relations; quality control, and, program planning and evaluation. The public health administrators are appointed by the various organizations that deals in whole or in part with diverse population health issues including health departments at the local, State and Central Government levels as well as health care providers such as hospitals and industry, insurance companies, voluntary health association and professional organizations respectively ((http://www.icm.tn.gov.in; Accessed on 15/07/10)[41]).

1.2.1.1: Health Sector Legislations in India:

The health is a priority goal in its own right and a central input to the economic development of and poverty reduction in India.

It is the state subject in India and therefore the State Government legislations are applicable in many areas. As the fundamental right to health care has been incorporated in the constitutions, some legislations have been enacted in order to protect the life as well as personal liberty of the individuals of India (S. P. Agarwal, 2006)[42]. These legislations can be categorized into the various broad areas, has been adapted from the WHO classification which are as, viz., Health Facilities and Services; Disease Control and Medical Care; Human Resources; Ethics and Patients' Rights; Pharmaceuticals and Medical Devices; Radiation Protection; Hazardous Substances; Occupational Health and Accident Prevention; Elderly, Disabled, Rehabilitation and Mental Health; Family, Women and Children; Smoking, Alcoholism and Drug Abuse; Social Security and Health Insurance; Environmental Protection; Nutrition and Food Safety; Health Information and Statistics; Intellectual Property Rights; Custody, Civil and Human Rights and Others (http://business.gov.in; Accessed on 12/07/10)[39].

1.2.2: Promotional Role of the Government of India:

In order to promote the health of its citizens, the Central Government has focused on the varied promotional aspects in this direction. The Government of India have sponsored various national health programs and emphasized on the implementation of five-year plans in coordination with the State Government for improving public health status at large (Ramesh Bhatt and Nishant Jain, 2004)[43].

In the first two Five Year Plans, which followed the independence of India in the year 1947 appeared to be a commitment to address the health needs of the populations comprehensively providing preventive promotive as well as curative care through a wide network of community-based health centers in tune with the Bhore Committee's recommendations. But, in the years followed then after, the provision of health was reduced simply to the provisions of medical care, by ignoring the broader determinants of health, as well as the investments in providing basic amenities for improving nutrition and living conditions, and in better education and quality of life for the people. Thus, gradually, health sector appeared to be driven by technological forces and became physician centered. While, at present in the liberalized economy of India the dynamics of the forces are demanding even greater market orientation of health care (Charu C. Garg, 2001)[40].

The role of health information exchange has become inevitable at various public health administration centres as it enables the transmission of the healthcare-related data among facilities, health information organizations and Government agencies according to national standards in the various countries of the world, thereby, improving healthcare delivery and information gathering (http://searchhealthit.techtarget.com; Accessed on 15/07/10)[44].

In the year 1982 when the Government reformulated National Health Policy and officially adopted the WHO declaration of 'Health for All' by the year 2000, it made many significant changes at the policy level**,** Viz., role of community and social sciences in promoting public health care.

In the year 2001 the Government announced a new health policy with the main objective of achieving an acceptable standard of good health of the general population. It aimed to strengthen infrastructure, decentralize health care delivery through panchayati raj, set up national accounting services, and regulate private practice. The new policy ignored the earlier health objectives of providing primary 'health care for all' especially to the underprivileged. The Government opened up the health sector for the private enterprises with a hope that with better monitoring and regulations the private sector would ease resource crunch in the health sector (Ajit K. Dalal, 2005)[17].

The National Health Policies [1983 & 2002]; National Rural Health Mission, National Family Health Survey, National Family Mission 2012-2017 has been explained as follows.

The first National Health Policy was formulated in the year 1982-1983 in order to make architectural modifications in the healthcare system of India, by providing a general exposition of those policies in which the recommendations were required during the period in the health sector. Under the prominent initiatives of the National Health Policy, the broad network of comprehensive primary health services in the phased and time-bound manner linked with education of health and its extension which enables the people to resolve their basic health problems was introduced. The policy has also introduced the need for 'Health Volunteers' possessing required knowledge and skills related to current technologies. Moreover, in order to lessen the burden of the patient at the higher levels which can be treated at the decentralized level too, the systematic referral system was introduced under the policy. The policy has also encouraged the establishing of the integrated network of uniformly dispersed specialty and super-specialty services as through private investments. This enables the utilization of the public health facilities by the poor and under-privileged people, those who cannot afford private health facilities. Hence, the first National Health Policy aimed at the goal of 'Health for All' targeted to be achieved by 2000 A.D. by providing the all-inclusive primary healthcare services unanimously. But, the policy from this context proved to be over-ambitious and highly holistic goal (http://mohfw.nic.in; Accessed on 12/07/10)[45].

Hence, the first National Health Policy, 1983 was the outcome of the presence of India in the Alma Ata declaration. The policy stated the common trend of comparatively declining public health investment as a percentage of GDP of about 1.3 to 0.9 per cent from the year 1990 to 1999. While, the expenditure in the health sector of India was found to be at 5.2 per cent of the GDP, of which the public health expenditure comprises of about 17 percent and the remaining as the out-of-pocket expenditure. On the other side, even the central budgetary allocation for health during the period of policy remained stagnant at 1.3 per cent of the total Central Budget while its decline from 7.0 to 5.5 percent in the States indicated the inelastic financial resources for the State Governments. While, the annual per capita public health expenditure in the year 1999 in India was not more than Rs. 200 (ICMR Bulletin, 2004)[46].

Thus, a necessity for the new policy aimed at the achievable realistic targets in the context of the available financial reservoirs and the administrative strengths of the public health resulted into the formulation of the National Health Policy 2002 (http://mohfw.nic.in; Accessed on 12/07/10)[45].

The objective of framing the National Health Policy, 2002 were to improve the decentralized public health services in India by induction of ample resources from the Central Government Budget; to lessen the gap between the various States as well as the rural and urban areas by evolving a policy structure that allows a fairer access to public health services by the disadvantaged segments of society; to specify the role of the Central and the State Governments in designing of the national health programmes in the public health sector of India; to entrust specific public health responsibilities to the health care personnel at the primary level from the extended health sector after providing necessary training; to enhance the network of the basic healthcare in India through the well-integrated complex of the healthcare practitioners in the area of medicine and homoeopathy in the implementation of State/Central Government public health programmes; decentralization of the health sector programmes and funds through varied levels of the Panchayats in India through wider adoption of the policy of organization structure for the delivery of health services in rural as well as urban areas; improvement in the distribution and quality of education of the various medical institutions; to ensure adequate availability of personnel with specialization in the 'public health' and 'family medicine' disciplines to discharge the public health responsibilities; to ensure the health security of the country in future against the anticipation of the increased costs of drugs leading to the rising trends in overall health cost (ibid).

Moreover, the National Health Policy has also recommended the establishment of regulatory mechanism to ensure the maintenance of the adequate standards by Diagnostic Centres/Medical Institutions as well as the proper conduct of clinical practice and delivery of medical services in addition to the setting up of private insurance instruments for increasing the scope of the coverage of the secondary and tertiary sector under private health insurance packages, and a social health insurance scheme funded by the Government for the large number of poor with service delivery through the private sector. The national health policy has also emphasized on setting up of the system of health statistic data base and national health accounts considering modern and scientific systems; professional medical ethics in the health sector; the working conditions and ambient environmental conditions; development of paid-packages for providing desired treatments to the patients of other countries; alternative systems of medicines; application of information technology in the health sector; primacy to preventive and first-line curative initiatives at the primary health level through increased sectoral share of allocation; use of drugs within the allopathic system rationally. Thus, the National Health Policy, 2002 aimed at achieving the time-bound goals (http://mohfw.nic.in; Accessed on 12/07/10)[45].

S. P. Agarwal (2005)[47] had attempted to highlight the progress towards attaining the MDGs as well as the challenges ahead by comparing certain target set under the National Population Policy, 2000; National Health Policy 2002; National AIDS Prevention and Control Policy, 2004, and the Tenth Five Year Plan.

An exclusive set of reforms in the health sector of India has been appreciated by K. V. Ramani and Dileep Mavalankar (2005)[48] that enables the Indian health system in achieving the growing expectations of the beneficiaries and the health care service providers. However, it had been imposing varied managerial challenge in terms of ensuring availability, access, affordability, and equity in delivering health services to meet the community needs efficiently and effectively.

Apart from the Five year plans, the National Health Policies, and the health sector reforms, the Central Government of India has also launched the National Rural Health Mission programme, in order to make substantial improvements in the basic health care delivery system within India, as well as the National Family Health Surveys for the implementation of the national programmes and the sponsored schemes on health care and technical assistance (K. V. Ramani and Dileep Mavalankar, 2007)[49].

The National Rural Health Mission, 2005-2012 was a major undertaking by United Progressive Alliance (UPA) Government under common minimal programme with the objective to offer accessible, affordable, effective and reliable primary health care facilities, particularly to the poor and vulnerable people (http://business.gov.in; Accessed on 12/07/10)[39].

It was aimed at meeting the shortages in the rural health care services by forming a cadre of Accredited Social Health Activists, that is, ASHA; raising the level of the public health expenditure; bridging the regional imbalance in health infrastructure; decentralization of programme to the district level to develop intra and inter-sectoral convergence and encourage effective utilization of scare resources; selection of managerial and financial personnel into health system at district level; and, functional execution of the CHCs into functional hospitals with the objective to achieve the standards of Indian public health (ibid).

Over and above this, the system developed in India for medicines is also being enriched through the active contribution as well as incorporation in national health care delivery through an allocation of Rs. 1069 Crores in the year 2013-2014. However, only 4.7 per cent of the patients could take the benefit of the medicines from government hospitals/dispensaries, with the pending rate of about 95.3 per cent of the population using private and other sources (The Economic Survey 2013-2014)[18].

1.2.2.1.1: National Health Mission-2012-2017:

The National Health Mission (NHM) determines the broad principles and strategic directions of the two sub-missions, viz., National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), which assist the States of India for the accomplishment of the universal access to health care through strengthening of health systems, institutions and capabilities.

The vision that underlines NHM is "Attainment of Universal Access to Equitable, Affordable and Quality health care services, accountable and responsive to people's needs, with effective inter-sectoral convergent action to address the wider social determinants of health" (National Health Mission 2012-2017)[50]. The total plan outlay under the NHM for the year 2013-2014 was Rs.18,775.35 Crores (The Economic Survey 2013-2014)[18].The vision of the achievement of the goals for the states as underlined under the plan which includes, viz., reducing the Maternal Mortality Rate to 1/1000 live births; reducing of the Infant Mortality Rate to 25/1000 live births; reducing Total Fertility Rate to 2.1; prevention and reduction of anemia in women aged 15 to 49 years; prevent and reduce mortality and morbidity from communicable, non- communicable; injuries and emerging diseases; reduce household out-of-pocket expenditure on total health care expenditure; reduce annual incidence and mortality from Tuberculosis by half; reducing the prevalence of Leprosy, and such incidence to zero in all districts. Annual Malaria Incidence to be less than1 per 1000; prevalence of Microfilaria prevalence in all districts to less than 1, and elimination of Kala-azar by the year 2015 to less than one per 10000 population in all the state blocks (http://nrhm.gujarat.gov.in; Accessed on 30/09/14)[51].

The Union Ministry of Health and Family Welfare (MoHFW) is responsible for the implementation of national programmes and sponsored schemes on healthcare as well as technical assistance (Healthcare, 2009)[21]. In order to assess the impact and outcomes of the various health and welfare programmes, the Ministry of Health and Family Welfare Programmes, have conducted various periodic surveys.

The first National Health and Family Survey (NFHS) was undertaken in the year 1992-1993, NHFS-2 in the year 1998-1999 and NFHS-3 during the year 2005-2006 had created a comprehensive database on demographic and health statistics in India. Each following phase of the survey was directed by the objectives in order to provide crucial statistics on health and family welfare as required by the Ministry and other agencies for framing various policies, programme and schemes.

However, NFHS-3 also provided the information on numerous up-coming issues such as perinatal mortality, male involvement in family welfare, adolescent reproductive health, high-risk sexual behaviour, family life education, safe injections, tuberculosis and malaria; family welfare and health conditions among slum and non-slum residents in the 08 selected cities of Chennai, Delhi, Hyderabad, Indore, Kolkata, Meerut, Mumbai and Nagpur, and, HIV prevalence for adult women and men at the national level and for each of the six high HIV prevalence States, viz., Andhra Pradesh, Karnataka, Maharashtra, Manipur, Nagaland and Tamil Nadu, respectively. The survey was undertaken in 29 States of India and chief indicators of survey were estimated at the national and State level, as well as for the major metropolitan regions, and slum and non-slum areas of the selected cities (http://business.gov.in; Accessed on 12/07/10)[39].

1.2.3: The Promotional Role of the Government of Gujarat:

The State of Gujarat is amongst the pioneers in establishing and maintaining the good health infrastructure at various levels. The healthcare services delivery has been categorized on the basis of national common structure and the societal need, viz., Primary, Secondary and Tertiary healthcare services. The health system of Gujarat State is organized on the principle of a dynamic concentration of medical facilities around the teaching hospitals with all the medical specialties and facilities for treating serious patients referred from lower tier hospitals and the radical downward flow of active services from the teaching hospitals to peripheral levels through mobile teams of specialists, are the essence of a well-organized regionalization (http://nrhm.gujarat.gov.in;Accessed on 30/09/14)[51]. The review of the promotional role of the Government of Gujarat in health sector is given as below.

1.2.3.1: Rashtriya Swasthya Bima Yojana:

It is one of the social health insurance schemes which had been introduced in August 2008 in the phased manner by the Gujarat Government in collaboration with the Government of India. Under this, health insurance to the people below poverty line (BPL) is provided.

This also shields the covered population against cost of illness and relieves them from the ferocious trap of debt due to heavy health care expenditure. The scheme offers family floater coverage upto Rs. 30,000 per annum to the maximum 5 family members of BPL family, viz., head of the family, spouse and 3 dependents members. During the year 2013-2014, a total 18.38 lakhs families were issued smart cards (Socio-Economic Review, Gujarat, 2013-2014)[38].

The programme has empanelled 1432 hospitals, and has covered about 41,971 buildings and other construction workers, 4.17 lakhs Mahatma Gandhi National Rural Employment Generation Scheme (MGNREGS) workers and 406 Railway Porter. During the year 2013-2014, more than 1,25,365 claims amounting to Rs. 64.02 Crores were claimed up to November 2013 in 26 districts in the Gujarat State (ibid).

1.2.3.2: E-Mamta (Mother and Child Tracking System):

The E-Mamta is the initiative of Gujarat State, it is the 'Mother and Child' name-based information management system, developed in January 2010 with an objective to provide the benefits of ICT to improve effective and efficient delivery of health care services which have also been recognized and appreciated by the Indian Government, and thereby has made the announcement for the National replication of the software. This innovative programme has been designed to cover the entire State of Gujarat with the special emphasis to the rural and urban slum commodities. E-Mamta contains the database of 113 lakhs families which covers about 5.3 Crores individuals, that is about 84.5 per cent of the total population of the Gujarat State (ibid).

During the year 2012-2013, 12.69 lakhs mothers (88.7 per cent), had been tracked against the expected target of 14.66 lakhs pregnant women in State, and, 10.47 lakhs infant (78.6 per cent), were registered against the expected target of 13.32 lakhs of expected births in the State. During the year 2013-2014, out of 14.16 lakhs expected pregnant women, 12.32 lakhs expected mothers (86.9 per cent) of expected pregnant women and 10.31 lakhs infant (80.1 per cent), were registered against the expected target of 12.87 lakh Births in the State (ibid).

1.2.3.3: Chiranjivi Yojana:

Chiranjivi Yojana has been launched by the Department of the Health and Family Welfare which emphasizes on the role of the private sector health specialists for offering the safe delivery specifically for the BPL sections of the economy of Gujarat State. During the year 2012-2013, this scheme paid gross amount of Rs.3,80,000 to the obstetricians for 100 deliveries, including normal, complicated as well as cesarean cases. The beneficiaries are not required to pay any charges pertaining to delivery, medicine, anesthesia, laboratory investigations or operation. The registered Private Gynecologist who provided their services to the public sector hospitals were paid Rs. 2,500 per delivery (ibid).

During the year 2012-2013 and 2013-2014, 89762and 78,510 deliveries were registered under the scheme and 433 Gynecologists are at present enrolled for offering these services under this scheme (ibid).

1.2.3.4: Janani Suraksha Yojana (JSY):

This Yojana aimed at reducing the maternal and neo-natal mortality by encouraging institutional delivery of the poor pregnant women (ibid).

This scheme has been sponsored exclusively by the Central Government of India which integrates aid in cash on delivery as well as post-delivery care, wherein the ASHA, that is, Accredited Social Health Activist, were identified as the intermediary between the Government and poor pregnant women. During the year 2013-2014, about 3, 36,995 pregnant women were covered under the scheme as compared to 3,08,880 pregnant women in the year 2012- 2013 (ibid).

1.2.4: The Budget Allocation to the Health Sector of India:

The budgetary allocation to the health sector by the Government of India is about 4 to 5 per cent of India's GDP (http://www.thaindian.com; Accessed on 24/04/09)[52]. While, the Government of India is keen on advertising its dutiful intentions of creating AIIMS like centres of excellence across the India, expenditure budgets shows that the capital expenditure in the health budgets of the Central Government had actually declined from Rs. 45.09 Crores in the year 1996-1997 to only Rs. 7.3 Crores in the year 2001-2002 (Indrani Mukherjee, 2004)[53].The Government had increased the aggregate health plan by 13.9 per cent that is 30,477 Crores in the year 2012-2013. The centre outlay for health in the 12th five year plan was increased by 200 per cent to Rs. 3, 00,018 Crores in comparison to the actual total outlay of Rs. 99,491 Crores of the Eleventh Five Year Plan Period (The Economic Survey, 2012-2013)[54].

But, the total health expenditure as the percentage of GDP has been found to be near to the ground in spite of the hard efforts of the Government of India in offering reasonable access to the dispersed public health system (ibid).

The Report by UNICEF entitled as "State of the Asia Pacific's Children Report 2008", India and the countries alike, must increase its public health expenditure by two or more per cent of the GDP to boost healthcare facilities for the poor and underprivileged (http://www.thaindian.com; Accessed on 24/04/09)[52].

In this, context, undoubtedly the Government has provided considerable support to the health care industry through the 2009-2010 budget, wherein all Below Poverty Line, (BPL) families have been covered under the Rashtriya Swasthya Yojana (RSY) which increased by 40 per cent in comparison to the allocation provided in the year 2009-2010, and thus reached to US$ 74 Million in the year 2009-2010. Moreover, the Government had also announced several other measures which were expected to have the positive impact on the various sectors especially the reduction in Research and Development (R&D) outsourcing expenditure of about 150 per cent not only encouraging higher research spending. But, also enable improving competitiveness of outsourcing players. The allocation under NRHM too was proposed to increase from US $ 431 Million over and above US $2.53 Billion in the interim budget (Healthcare, 2009)[21]. Moreover, the World Bank had also increased its lending to the health sector of India to US $ 662 Million, for the projects, viz., Reproductive and Child Health-II Project, and National Tuberculosis Control Project-II at the Central level and the Karnataka Health Systems Development and Reform Projects (http://www.economywatch.com; Accessed on 12/07/10)[55].

Thus, in spite of the periodic initiatives undertaken by the Government of India aimed at controlling the adverse effects of varied diseases and illness, conquer over the root causes of such diseases as well as implementation of various infrastructural developmental projects and notable complex of health facilities, the accomplishment of the health objectives seems to be not noteworthy (Ramesh Bhatt and Sunil Kumar Maheswari, 2004)[56].

Hence, the accomplishment of the health care needs, its performance and reform process is not only limited to mere budget allocations but also demands organization of the programme and dedication of the health care personnel in India (Lee, 2001)[57].

Further, the budgetary allocation for the health sector of Gujarat too has been reviewed as follows.

1.2.5: The Budget Allocation to the Health Sector of Gujarat:

The healthcare being the State subject, the State Governments need to provide healthcare facilities to the population and decide upon the policies in the health sector (Archana R. Dholakia and Ravindra H. Dholakia, 2001)[7].

The Gujarat State Government had allocated 40 per cent in the 11th Five Year Plan 2007-2012 and 42.09 per cent in the year 2013-2014 during the 12th Five Year Plan (2012-2017) of the total outlay to social sectors to the development of high priority sector that is social sector having direct impact on Human Development (Socio-Economic Review, Gujarat, 2013-2014)[38].

The share of the health and family welfare sector is 7.6 per cent the total developmental expenditure for the year 2014-2015 that is 7.6 per cent. While, the share of the health and family welfare sector to the total expenditure on revenue account and capital in the budget of the Gujarat State have been increasing over the period from 2010-2011 to 2014-2015. Noticeably, the share of the health and family welfare sector to the total expenditure on revenue account and capital account in the budget of the Gujarat State for the year 2014-2015 is Rs. 5033.75 Crores and Rs. 2084.74 Crores, respectively (Gujarat Budget in Brief, 2014-2015)[58].

Liberalization of the Indian economy has dragged hereinto the unequal, uncontrolled global market, and consequently has been facing various threats, Viz., deterioration in the living and water conditions for the majority; increased cost of medicines; corporatization of medical care, and medicalization of women's life, and bodily functions (Charu C. Garg, 2001)[40].

The introduction of the payment for the services has been viewed as the hindrance in accessibility of the health services. It has been also found that in a way there has been steady withdrawal of State support for the health services (ibid).

K.V. Ramani and Dileep V. Mavalankar (2007)[49] had drawn the attention on the weak implementation of the planned activities due to the absence of systematic planning of resource allocation, shortage of field supervisors, and ineffective supervision resulting in the weak implementation of planned activities in the Gujarat State.

Another problem being found is the absence of the field level authentication of the data as submitted by the health care personnel in the field. Moreover, the mechanism of gathering the data on the maternal and infant mortality too has been found as weak apart from improper integration of Management Information System. It calls for hiring of the additional consultant or medical college staff to ensure the effective and efficient data registration, investigation and analysis and follow-up actions.

Hence, the timely, affordable, qualitative health care has remained the matter of concern at the national and State level, which demands rejuvenating policies, plans, programme and mechanisms in the health care sector.

1.3: THE HEALTH CARE SECTOR:

The health care is the treatment and prevention of illness delivered by professionals in medicine, dentistry, nursing, pharmacy and allied health. It is concerned with the maintenance or restoration of the health of the body or mind and includes any of the procedures or methods employed in this field (http://en.wikipedia.org; Accessed on 06/10/10)[59]. It includes the prevention, treatment, and management of illness and the preservation of mental and physical well-being through the services, or relating to the healthcare, offered by the medical and allied health professions (http://medical-dictionary.thefreedictionary.com; Accessed on 06/10/10)[60].The health care industry incorporates several sectors that are committed to the providing of health care services and products, viz., health care equipments and services as well as pharmaceuticals, bio-technology and life-sciences. According to Government Industry Classifications, generally based on the United Nations system, the International Standard Industrial Classification, the healthcare mainly consists of hospital activities, medical and dental practice activities, and other human health activities wherein the human and health activities consists of all activities for human health which are not performed by hospitals, physicians or dentists. It involves activities of or under the supervision of nurses, midwives, physiotherapists, scientific or diagnostic laboratories, pathology clinics, home, or other para-medical practitioners in the field of optometry, hydrotherapy, medical massage, music therapy, occupational therapy, speech therapy, chiropody, homeopathy, chiropractics, acupuncture, respectively (http://en.wikipedia.org; Accessed on 06/10/10)[59].

The health care field has been evolved from a cottage industry of small entrepreneurs and some larger typically nonprofit entities to the one dominated by aggressive profit-oriented companies. In other words, with the health services to their present magnitude, the number of interest groups has also been multiplied having large stage in marketing their products and services, often been treating the research access and data in a proprietary way (David Mechanic, 2001)[61].

Moreover, the changes in health care and health care organization has further made the study complex, accompanied by the uncertainties resulting from the Mergers and Acquisitions, rapidly changing patterns of practice, the churning of patient populations among health care plans, and rapidly changing technologies (http://en.wikipedia.org; Accessed on 06/10/10)[59].

Thus, the health care systems are comprised of the individuals and organizations that aim to meet the health care needs of target populations. The world health care sector comprises of wide variety of health care systems of the different countries around the world. The health care system planning is distributed among market participants in some countries whereas in others it is made centralized among Governments, trade unions, charities, religious, or other coordinated bodies to deliver planned health care services targeted to the populations (ibid).

Moreover, health care planning has been evolutionary rather than revolutionary, and thus the delivery of modern health care depends on an expanding group of upcoming trained professionals as an interdisciplinary team. The health care delivery services can be segmented into Primary Health Care, Secondary Health Care and Tertiary Health Care. The primary health care includes treatment outpatient basis, whereas secondary healthcare includes hospitalization treatment for non-critical illness and the tertiary healthcare includes hospitalization treatment for critical ailments requiring high-tech expensive facilities and equipments (ibid).

1.3.1: The World Health Care Sector:

The healthcare industry is among the largest and speedily growing industries globally, with the global revenue of about Rs. 2.75 Trillion in the year 2008-2009, constituting it as the largest industry in the world (http://www.karvy.com; Accessed on 08/08/09)[62].The global pharmaceutical market sales were expected to rise at 4 to7 per cent of CAGR by the year 2013. Global pharmaceutical market value is expected to expand to US$ 975 billion by the year 2013(http://www.indiainfoline.com; Accessed on 24/12/10)[63].

Russia, Mexico and South Korea may experience the slow-down in their pharmaceutical market affected by the high out-of-pocket spending on pharmaceuticals and steep decline in macroeconomic activity. While, it will affect negligibly in Germany, Japan and Spain as drugs are largely funded publicly. China's pharmaceutical market was expected to continue to grow at 20 per cent annually contributing of about 21 per cent of overall global growth by the year 2013 (ibid).

Similarly, Indian pharmaceutical market is expected to be positioned among top 10 by the year 2015 leaving behind Brazil, Mexico, South Korea and Turkey, which is presently at 14th position in the world. Besides, India, Japan, Canada and U.K. are expected to add US $13to14 Billion by the year 2025. Amongst, the attractive healthcare destination, South Arabia is expected to outpace the growth rate of other countries in the Middle East Region (http://trak.in/india; Accessed on 25/12/09)[64].

In order to finance the Health System Performance Project (HSPP) in the Republic of Benin, the World Bank has approved an International Development Association (IDA) the grant of US$ 22.8 Million (http://www.un-foodsecurity.org; Accessed on 15/07/10)[65].

Mary L. Fennell and Jeffrey A. Alexander (1993)[66] had reviewed the macro-level organizational change in medical care organizations in the United States in the decade of 1980s with a focus on the major perspectives in organizational theory which either have been used or could be used to study these changes considering the determinants and consequences of change in the medical care sector. The State of medical care organizations has changed remarkably that it is no longer clear to state that foreground and that background in the medical care sector, or in other words, what is cause and what is consequence.

1.3.2: Review of the Health Care Sector of India:

The health and socio-economic development are closely inter-related and interdependent. With the economic development of India, the developments in the health system have been gradually crossing the nascent stage in the country. The Indian health system has been ranked 118 among the 191 WHO member countries on the overall health performance (K. V. Ramani and Dileep Mavalankar, 2005)[48].

The healthcare sector of India mainly comprises of health care providers Viz., physicians, specialized treatment centres; nursing; diagnostic and pathology labs; health care equipments and pharmaceuticals manufacturers; research organizations, and third party service providers. The healthcare sector of India before independence was in a dreary condition with high morbidity and mortality rates and prevalence of infectious diseases. Moreover, several efforts have been made by emphasizing primary health care since independence, for improving the healthcare system of India and even considerable progress has been made in expanding the public system and reducing the burden of disease (http://www.ficci.com; Accessed on 12/07/10)[67].

But, the inadequacy of the Government funded facilities restricting the meeting of the rising demand of the population of India for the healthcare, irrespective of its nature whether, primary, secondary or tertiary care necessitated the need for alternate source of funding in the healthcare sector. However, in the post liberalization period in the 1980's, the entry barriers for the private players in the health services industry were relaxed by the Government of India. Thus, the private healthcare facilities owned and run by for-profit companies, non-profit or charitable organizations started offering the arrays of opportunities and setting the innovative trends instead of the traditional trends of the healthcare industry of India, in the form of Medical Equipments; Information Technology application in health services; Business Process Outsourcing; Telemedicine and Medical and Health Tourism. Despite the high level of overall private and public expenditure on health, the deficiencies in the healthcare sector persists with respect to the access, affordability, efficiency, quality and effectiveness (ibid).

The healthcare sector of India is among the largest services sector in India having the projected revenue of US $ 35 Billion (http://www.oifc.in; Accessed on 02/04/12)[68] which has offered potentials even at the times of global meltdown, thus has been known as being performing the role as the cure pill for the global economy. The Indian healthcare sector worth US $ 65 Billion in the year 2012 had the potential to grow at a much faster rate of 20 per cent in the foreseeable future to reach US $ 100 Billion by the year 2015 (The Indian Health Care Industry, 2012)[69] and US $ 160 Billion by the year 2017 according to Frost & Sullivan (Healthcare Industry in India, 2013)[70].

The five major segments of the healthcare sector, viz., Hospitals, Pharmaceuticals, Diagnostics, Medical Equipment and Supplies, and Medical Insurance also contributes to about 17 per cent, 13 per cent, 9 per cent, 4 per cent and 3 per cent, respectively to the revenue of the health care sector of India(http://www.oifc.in; Accessed on 02/04/12)[68]. As per the RNCOS Report, the hospital services market in India is expected to reach to the value of US$ 81.2 Billion by the year 2015 (www.ibef.org; Accessed on 02/04/13)[71], which is further expected to be worth US$ 81.2 Billion by the year 2015, while, the revenue from the Indian hospital services sector is estimated to rise at a CAGR of 20 per cent during the period 2012–2017. According to the Indian Medical Device Market Outlook to 2017 Report, the Indian medical device and equipment market is expected to grow at CAGR of 15.5 per cent and shall reach US$ 7.8 Billion by the year 2016. According to a report by Grant Thornton India, and according to the database of India Semiconductor Association the medical device market of India is Asia's fourth largest market and amongst the top 20 in the world's medical device makers' market, with 700 medical device makers (Healthcare Industry in India, 2013)[70].

Amongst the driving forces of the healthcare industry of India, the contribution of the irreversible trends in the major drivers are discussed further that has the potentiality to maintain and sustain the pace of growth during the period from 2010 to 2020. Due to the demographic transition that is taking place in India during the period 2010 and 2020, the number of middle class households earning between INR 200,000 and INR 1,000,000 per annum was expected to increase from 24 Million in the year 2010 to 93 Million in the year 2020, primarily due to a rise in incomes. During the period from 2010 to 2020, India is also expected to undergo an urban transformation at a speed and scale as similar to that of China. According to the projections of McKinsey Global Institute the population of Indian cities is expected to become 40 per cent of total population of India, viz., from 340 Million to 590 Million from the year 2008 to 2030. The five Indian States, viz., Tamil Nadu, Gujarat, Maharashtra, Karnataka and Punjab are likely to be more than 50 per cent urbanized by the year 2030. However, this urban India is estimated to contribute about 70 per cent of India's GDP by the year 2030. Of the total urban population, the shift in the consumption of the urban middle class is expected, that is from the basic necessities, Viz., food and apparel, to more discretionary items including health and healthcare. Thus, the healthcare spending is likely to rise substantially from 8 per cent of average household presently to 13 per cent in the year 2025 which is much higher than the countries, namely, Brazil, China and South Korea, respectively. The prevalence of chronic diseases, Viz., Coronary Heart Disease and Diabetes is also expected to steadily rise in India by about 25 to 45 per cent of the patient pool (Health Care - Gearing Up for Health Care, 2010)[72] . According to Price Waterhouse Coopers Report 189 Million people in India will fall in the age group category of more than 60 years of age by the year 2025 which will further impose pressure on the healthcare spending of India (http://www.oifc.in/; Accessed as on 02/04/12)[68].

Hence, the US$ 36 Billion health care industry during 2011-2012 with the cumulative aggregate growth rate (CAGR) of 15 per cent is heading forward to reach to US $ 280 Billion in the year 2022 (http://www.indianhealthcare.in; Accessed on 02/04/12)[73]. But, in spite of the improving performance of the health sector, certain deficiencies still does exist yet to be dealt completely with respect to access, affordability, efficiency, quality and effectiveness (K. J. Blois, 1983)[74]. Moreover, in the rural areas specifically as well as in the urban areas, the State Governments also announces the land and financing options enabling the healthcare service providers to meet some portion of their unprecedented quantum of investment in the healthcare delivery in addition to the fiscal and infrastructural incentives announced for setting up such facilities in the non-metro or non-capital cities, semi-urban areas or in the rural areas of India (Arvind Singhal, 2007)[19].

But, the facilities of health care in rural regions still faces the challenge of structuring with adequate personnel that assures the accessibility to these services due to the underlining weaknesses of scarce trained healthcare personnel and limited quality of care, respectively (Ramesh Bhatt and Sunil Kumar Maheswari, 2004)[56].

It was found that majority of deaths in the rural areas of India occurs due to the irregularity in providing the timely medical treatment which has stressed on the urgent requirement of the accessible and adequate qualitative medical care accompanied by the useful intervention of health care information, education and communication, respectively (Indrani Gupta and Deepa Sankar, 2004)[23].

The Rural Health Survey Report, 2009, published by the Ministry of Health had shown that from the period 2004 to 2009, around 15,000 health Sub-Centres and 28,000 Nurses and Midwives were aggregated to the rural health sector. However, the total number of Primary Health Centres have increased by 84 per cent to reach figure 20,107 respectively (Healthcare, 2010)[75].

1.3.3: Investments and Foreign Collaboration in the Health Care Sector of India:

The shinning health care sector of India has even stunned, impressed and attracted the non-resident Indians and the corporate giants to compete for the varied health care sectoral investments. For this, several initiatives even have been taken by the Government of India to encourage the investments made by the Non-resident Indians (NRIs) in healthcare and thereby to accelerate the healthcare infrastructure development in India. According to Ernst & Young, in India the requirement of the hospital beds will rise to 1.75 Million by the end of the year 2025 amounting to US $ 86 Billion investment, of which only about 15 to 20 per cent of the required investment will be contributed by the public sector (http://www.ibef.org;Accessed on 02/04/13)[71].

The underlining improvement initiatives undertaken by the Government of India in the healthcare sector involves, viz., 100 per cent Foreign Direct Investment (FDI) approval for health and medical services through automatic route; proposed extension of the concessional basic customs duty of 5 per cent with full exemption from excise duty/CVD to six specified lifesaving drugs/vaccines; proposed Exemption from Excise Duty/ Countervailing duty ('CVD') on specified lifesaving drugs, and, expansion of Pradhan Mantri Swasthya Suraksha Yojana in order to meet up-gradation of additional 07 Government medical colleges, and (http://www.oifc.in; Accessed on 02/04/12)[68].

In addition, the capacity of the private healthcare capacity in India is significant and moreover considering the anticipated incentives to be offered by the Government of India including the use of user fee financed provisions and the opportunities for Public Private Partnership, it is believed that the private sector market will attract further foreign investment. Thus, healthcare sector of India shall be enriched by the FDI (Global Infrastructure: Trend Monitor Indian Healthcare Edition: Outlook, 2009-2013)[76].

The inflow in the health care industry of India through Private Equity (PE) and Venture Capital (VC) investments have also found to be increasing rapidly that showed figure of US $ 1.2 Billion in the year 2012 (www.ibef.com; Accessed on 02/04/13)[71]. According to Department of Industrial Policy and Promotion (DIPP) the Hospital and Diagnostics Centre in India has received FDI worth US$ 2,057.29 Million, while Drugs & Pharmaceutical had received FDI worth US$ 11,391.03 Million and medical & surgical appliances sector registered FDI worth US$ 720.41 Million during the period April 2000 to September, 2013 (Healthcare Industry in India, 2013)[70].

The Indian healthcare market has been dominated by the unorganized players. However, Apollo Hospital started the trend of corporate hospital, and the same trend was followed by the other players after a large gap. But, the trend of health care corporatization now has been rising, resultant into the rapid shift of the unorganized healthcare sector towards the organized sector. The corporate India is therefore, leveraging on this business potential and various health care brands have started aggressive expansion in India (Healthcare, 2010)[75].

The major health care players have been geared up with various investment plans for the healthcare sector of the India. To illustrate, Apollo Hospitals and Medtronic Inc. have their plans to collaborate to bring an innovative, affordable and portable hemodialysis system in India to improve access to care for End Stage Renal Disease (ESRD) patients who need renal replacement therapy. It also intends to develop and manufacture key components of this hemodialysis system in India which will be ready for commercial launch by the year 2016 (Healthcare Industry in India, 2013)[70].

Sahara Group has planned with the giant investment project comprising of a 200-bed multi-specialty tertiary care hospital at Gorakhpur in Uttar Pradesh; a 1,500-bed multi super-specialty; tertiary care hospital at Aamby Valley City, and a 30 bed multi-specialty secondary care hospitals across all the 217 Sahara City homes townships has started its efforts to have big share of the health care market of India. Artemis Health Sciences, health care venture of the Apollo Tyres Group for meeting its aspirations of reaching the heights of the positive future streams from the health care sector of India had planned to set up to 4-8 multi-specialty hospitals in the various States of India, viz., Punjab; Uttar Pradesh; Madhya Pradesh; Rajasthan and Haryana by the year 2013 (Healthcare, 2010)[75].

The health care major Fortis Hospitals had also planned to expand its facilities in the health care sector by investing US $ 53.7 Million. Columbia Asia Group had to set up additional eight multi-specialty community hospitals with a total capacity of 800 beds by the period of mid-2012, aggregating its total investments for the 14 hospitals to US $ 177.1 Million. Narayana Hrudayalaya had also joined the investment race by inaugurating the phase-I of 5,000 bed at Hyderabad with the plans to aggregate total number of hospitals to 14 by expanding its presence in seven more cities by the year 2012-2013. In order to make its presence felt in providing better patient and product support, Cochlear Ltd, an Australian medical devices company, had planned to invest of about US $ 15 Million for setting up its wholly-owned subsidiary in India by the year 2015. US-based venture capital firms GTI Group and New Enterprises Associates have jointly invested US$ 21.13 Million in Bengaluru-based Day-Care Surgery Centre Nova Medical Centers' expansion plans (ibid).

An attempt has been made to review the status of Medical Tourism in India as follows.

1.3.3.1: Medical Tourism:

The Indian Medical Tourism industry is also booming due to the advance medical systems and foreign patients availing medical treatment in India. According to the Report on “Booming Medical Tourism in India", the share of Indian medical tourism industry has reached to 3 per cent in the Global Medical Tourism Industry by the end of the year 2013. It was estimated to earn revenue around US$ 3 Billion in the year 2013, at a CAGR of around 26 per cent from the period 2011 to 2013. The estimated number of medical tourists increased at a CAGR of more than 19 per cent at the time of the forecast period and reached to 1.3 Million by the year 2013 (http://www.oifc.in; Accessed on 02/04/12)[68].

India has been acknowledged as the premier destination for medical tourism owing to cheaper costs and treatments. The market size of medical tourism in India is growing at over 25 per cent annually to reach figure of US $ 2.5 Billion. This has motivated the business giants such as, The ITC Group to set up the 58-room Fortune Park Lake City business hotel at the Jupiter LifeLine Hospitals complex in Thane, near Mumbai, to serve medical tourists.

Majority of international patients generally come from Africa, SAARC countries and West Asia. Also, patients requiring higher-end tertiary care are also choosing India for the various treatments viz., Cardiology, Orthopedics, Neurology, Oncology and Organ transplants. Affordability of treatment is a big attraction factor medical treatment in India costs just 10 per cent to 20 per cent of what it costs abroad (http://www.investindia.gov.in; Accessed on 05/10/10)[77].

Apart from this, even the domestic hospitals have a long-standing reputation in the healthcare sector; some of the prominent private Indian hospital chains that offer world-class medical treatments, includes, viz., Max Healthcare, Fortis, Escorts Healthcare, Moolchand Hospital, Manipal Group of Hospitals, Woodlands Multispecialty Hospital, Anandlok Hospital, Jitendra Narayan Ray SishuSevaBhavan and General Hospital, Apollo Group of Hospitals, Sarvodaya Hospital, SugunaRamaiah Hospital, Chinmaya Mission Hospital, Manipal Hospitals, NarayanaHrudayalaya, CSI Kalyani General Hospital, KHM Hospitals, Kumaran Hospitals, P. D. Hinduja National Hospital, Joy Hospital, Sir H. N. Hospital and Research Centre, and Sowmya Hospital, respectively (ibid).

Moreover, medical tourism has come of age in India with its signing of the Memorandum of Understanding (MOUs) with the various foreign countries. India with the application of nearly 90 per cent of indigenous equipments in the hospitals, and only 10 per cent of the requirements of the imported equipments has thus become the destination of the extremely cheap cost of the major surgical procedures as compared to the International rates along with the positive and optimistic outlook of India to provide the services of its medical specialists to the needy countries of the world on the tenure basis. On this front, India has signed MOUs with Saudi Arabia for the cooperation in the various fields of, viz., the hospital consultancy and management of hospitals; recruitment of Indian doctors and paramedical staff for Saudi Hospitals; import of Indian pharmaceuticals into Saudi Arabia; treatment of Saudi national in super-specialty hospitals in India and training of Saudi Arabian nurses in India (http://www.siliconindia.com; Accessed on 22/04/09)[78]. India has also entered into collaboration with the other countries of the world, viz., with Brazil and South Africa called as IBSA on wide range of health related issues viz., Tobacco Control and Alcohol Control; Counterfeit medical products in addition to the strengthening of the public health laboratories and co-operation of Research and Development between the institutes in the India, South Africa and Brazil under the auspices of global strategy and plan of action on public health innovations and intellectual property (Ed Roberts,2008)[79].

Similarly, India and France have also identified various areas of cooperation in the health sector, viz., Medical Research; Biotechnology; development of Vaccine, and promotion of traditional systems of medicines, as well as, the specific areas such as, Transnational Research; Chikungunya; Cancer and Immunogenetics (India, France in health sector, 2008)[80].

1.3.4: The Health Care Sector of Gujarat:

The health care service delivery in Gujarat has also been divided into three parts Viz., Primary Care, Secondary Care, and Tertiary Care respectively. The primary health care provides basic minimum care with more focus on preventive aspects and public contact, including primary health centers, sub-centers, dispensaries, and village level workers, with the negligible offering of the curative services. While, secondary care is mix of both curative as well as preventive which is provided through civil hospitals, sub-district hospitals, cottage hospitals, referral hospitals, and community health centers. Tertiary care involves critical curative care and research studies, through medical college hospitals and super specialty hospitals respectively (Socio-Economic Review, Gujarat, 2010-2011)[81].

1.3.5: World Wide Healthcare Spending:

The healthcare sector of the world also depends on the population demographics in respect of the age, and pattern of chronic diseases too. The percentage of GDP as spent on the health sector by the entire South Asia, including India is only 1.1 per cent while it is 1.9 percent in the rest of Asia-Pacific region (UNICEF, 2009)[82].

In the year 2000, 10 per cent of the global population was aged +60 years which is expected to reach figure of 21 per cent by the year 2015. The number is expected to grow to about 1187 Million and 1196 Million worldwide by the year 2025 and 2050 respectively. Moreover, it is believed that people in this age category utilize 3 to 5 times more health care services than younger people as almost all people aged 60+ have one chronic condition while 50 per cent of them suffer from two or more chronic conditions which will amount to about more than 60 per cent of all health spending (Smruti Munshi, www.hhmglobal.com; Accessed on 10/05/09)[83].

Thus, the aging population has made it imperative for the healthcare systems around the world to expand and optimize in order to meet the rising demand from this bulging aging demographic group. Consequently, it has raised the healthcare services costlier and has also compounded the shortage of the geriatric specialists and healthcare workers worldwide, followed by the widening of the supply-demand gap of the workforce, rise in the salaries, and rising costs in the healthcare sector (Issues Monitor, 2010)[84].

The health care spending of global population is shooting up considerably from the after-effects of changing demography, shift in the disease pattern, increase in number of the people affected by the various diseases and illnesses as well as introduction and adoption of the innovations at the various gate-ways of health care industry (Lesley Wroughton and Andrea Ricci, 2009)[85].

The global health care spending is expected to get doubled by the year 2050 which is about 20 to 30 per cent of GDP for some economies (Smruti Munshi; www.hhmglobal.com; Accessed on 10/05/09)[83].

The biggest driver for spending in the patient monitoring market will be precautionary tests and the diagnosis of diabetes. India, a country with 1 Billion of population and spends 5.2 per cent of her GDP on healthcare comprising 4.3 per cent spent by healthcare sector, and 0.9 per cent by Government on public health pointing the dipping of the wellness index in India (S. Saroj Kumar, 2009)[86]. China spends 6 per cent of its GDP and is ranked among the leading developing countries in public health spending (World Health Statistics 2008, 2012, and 2014)[8, 9, 10].

As per the estimates of McKinsey, real GDP grew at a CAGR of 7.3 per cent and per capita disposable income rose from US $ 463 in the year 2005 to US$ 765 in the year 2015. As a result of up-swing of 27 Million households from the low-income category, middle-income category will witness the steepest rise, with the addition of 59 Million households. A considerable cake of global population income will be spend for availing health care services directly or indirectly also increasing the number of people going for health insurance as a means and ends for their health care spending. The study has predicted that by the year 2015, about 220 Million people would opt for health insurance (McKinsey, 2007)[87].

The healthcare spending of the United States in the year 2009 reached to about 17.3 per cent of its GDP and is further expected to reach figure of U.S. $ 4.5 Trillion by the year 2020, aggregating for about one-fifth of the total spending in U.S. It is estimated to rise to about 7.8 per cent by the year 2050, as compared to 6.3 per cent in the year 2005 (Issues Monitor, 2010)[84].

The healthcare spending in Canada increased by US$ 8.4 billion to US$ 161.2 Billion in the year 2008-2009, comprising of about 11.9 percent of its GDP. The health care expenditure as the percentage of GDP in Canada is estimated to rise to about 8.1 per cent in the year 2050 as compared to about 5.6 per cent in the year 2005. By the year 2050 the pending of the Australian Government on healthcare for older people was estimated to increase 7 times of its spending during January, 2010.

The ever-spiraling healthcare expenditure in Hong Kong is expected to grow at a CAGR of 5.4 per cent to reach to about US$ 315.2 Billion in the year 2033 as compared to US$ 67.8 Billion in the year 2004. Although, Singapore has maintained its healthcare cost at less than 4 percent of its GDP, it is experiencing increasing pressure due to rush in demand from a rapidly aging population. The healthcare expenditure as the percentage of GDP in Germany is estimated to rise to 9 per cent in the year 2050 as compared to that of about 8 per cent in the year 2005 (ibid).

In U.K, the age-related Government healthcare expenditure is expected to rise from about 7.5 to 8.7 per cent of GDP from the year 2007 to 2035. The healthcare expenditure as the percentage of GDP in U.K. is expected to rise to about 7.6 per cent in the year 2050 as compared to 6.3 per cent in the year 2005. While, healthcare spending in France was expected to reach from 11.4 percent of the year 2009 to 11.6 percent in the year 2014 (ibid).

Thus, maintaining its position as the highest healthcare spender relative to GDP. The healthcare expenditure as the percentage of GDP in France is expected to reach figure of about 8.2 per cent in the year 2050 as compared to that of about 7.2 per cent in the year 2005 (ibid).

The scenario of the trends in terms of the potentials in the health care sector in competition with the ever accelerating healthcare costs and private spending is not very different even in India.

1.3.6: The Health Care Spending in India:

The healthcare sector of India has been facing the challenge of developing the scalable and sustainable healthcare delivery models which deals conducively with India's diverse and changing socio-economic population profile, and thus developing the healthcare delivery models that emphasize on developing and delivering low cost basic healthcare services (Global Infrastructure: Trend Monitor Indian Healthcare Edition: Outlook, 2009-2013)[76].

The health expenditures worldwide are defined as those expenditures or outlays incurred for prevention, encouraging rehabilitation and care, population activities, and medical relief programmes with the aim to improve health of the population or the individuals of the country. The health expenditures exclude the activities with the numerous objectives, viz., nourishment, food subsidy programmes, water supply and sanitation, which circuitously assist in improving the health, and therefore are addressed separately.

The functional classification of medical care according to Organization for Economic Cooperation and Development (OECD) differentiates the core functions' and health-related functions' expenditure. The core functions expenditures forms the total current health expenditure, which involves the core activities, viz., personal medical services and goods and its distribution; group health services and health programmes, and administration constitute total current health expenditure. Hence, the total health expenditure is the aggregate of the total current health expenditure and investment in medical services.

While, the expenditure incurred for educating and training the health personnel, conducting research in the health related areas, environmental health, provision and administration of health-related cash benefits are categorized as the health-related functions, which are to be reported separately in the accounts. The health expenditures can also be further be categorized as Gross Domestic Expenditures on health defined as aggregate expenditure and export of medical goods and services, and Gross Notional Expenditures on health defined as the aggregate expenditure and imports of medical services and goods (Charu C. Garg, 2001)[40].

Every country needs to consider the healthcare expenditure as the essential social expenditure, irrespective of being the developed country or developing country, and requires significant contribution from the Government for the performance of its critical and most important role of establishing the superior health infrastructure, consequently assuring superior health to the citizens of the country (Ramesh Bhatt and Nishant Jain, 2004)[88].

India is the fifth largest country in terms of Purchasing Power Parity (PPP) and is considered among the fastest promising global countries. Undoubtedly, its health status is the major concern. As compared to the health care expenditure to its Gross Domestic Product (GDP) of UK with 8.4 per cent, Japan 7. 9 per cent and Brazil with 7.5 per cent, the health care expenditure of India to its GDP is only 5.1 per cent (Ramesh Bhatt and Nishant Jain, 2006)[89].

In India, as healthcare constitutes as the part of the State List and thus abides the State by the constitutional responsibilitie. Therefore, it is the accountability of the State to execute the centrally-sponsored schemes framed by the Union Government. Of the total contribution to the public health spending, the about 3/4th of the share is from the State and remaining from the Centre (Peters et al., 2002)[90].

The health care expenditure by the Central and State Governments can be categorized as the revenue and capital expenditure. Revenue expenditure includes, recurring salary expenditure, supply of equipment and drugs, public health programmes, medical education and training, and general operating expenses. Capital expenditure comprises viz., non-recurring expenditure on physical assets and infrastructure, and one-time capital investment in disease control and public health programmes (M. Guruswamy, Sumit Mujumdar and Papiya Mujumdar, 2008)[16].

Many charity agencies including Non-Governmental Organizations and other bilateral or multilateral aid agencies have assumed their necessity in terms of monetary contribution as loans and advances for various health programmes and activities. Such expenditures are considered as capital expenditure (ibid).

Ramesh Bhatt and Nishant Jain (2004)[43] had provided the preliminary analysis of the public expenditures on health by reviewing the state of spending in India which is the base of the target proportionate health spending by the State, and the elementary relationship between level of income and public expenditure by using the State level public health expenditure data.

Roger Jefferey (1988)[91] had presented his views on the health expenditure by the State from the viewpoint of planning and administration of the allocation as well as the changes in the policy. Tulasidhar and Sarma (1993)[92] had conducted a comparative study of the States of India in respect of the public expenditure, health care at birth and infant mortality, and found that real per capita public spending grew rapidly in comparison to the real per capita State domestic production of all the States.

Thus, the growth in the health expenditure of India has been witnessed due to various factors, viz., system of the health care financing; demographical pattern and epidemiological shifts; private health services delivery system, and deterioration in the availability of the financial support to the public health system, which has imposed serious challenges to the policy makers in the health sector (Ramesh Bhatt and Nishant Jain, 2004)[88].

According to an ICRA Industry Report on Healthcare, India spends 5.1 percent of its GDP on health. The healthcare spending in India is expected to rise by 12 per cent per annum which will lead domestic pharmaceutical market to get treble by the year 2015. The healthcare spending grew from 7 per cent of average household income in the year 2005 and is expected to grow to 13 per cent by the year 2025. Out of the 32 States of India as considered by the report, the States Viz., Maharashtra, Rajasthan, West Bengal, Uttar Pradesh, Tamil Nadu and Andhra Pradesh were expected to represent of about 50 per cent of the expenditure during the period 2009 to 2013 (McKinsey, 2007)[87].

The healthcare sector driven by the various healthcare drivers has managed to attract US $ 83 Billion for the healthcare spending from the Planning Commission under the 12th Five Year Plan which is about US$ 60 Billion more in comparison to the allotment made in the 11th Plan to the healthcare sector. Consequently, the share of healthcare in total plan allocation had been raised to 2.5 per cent of 12th Plan GDP in comparison to the 0.9 per cent in the11th Plan (http://www.oifc.in; Accessed on 02/04/12)[68]. Although the healthcare delivery market in India is at the embryonic stage, it is estimated to contribute about 6 per cent of India' GDP owing to the rising demand and potentialities of growth (http://www.ideabrahma.com; Accessed on 02/04/13)[93].

Another alternative open to the people is the voluntary sector. Its success in providing health care and improving the health situation through the operationalization of the primary health care approach has provided assistance in the health sector to the Government. This has led to a proliferation of NGOs funded either by the Government, foreign aid or private sources, Government support has come through tax deductions, handing over Government programmes to NGOs as well as incorporating NGO representatives on Government bodies, and has been specified in the plans and NHP (Bhatia, 1993)[25]. Sakthivel Selvaraj and Anup K. Karan (2009)[94] had explored the scale and magnitude of unjust and unfair dependence of the ailing population in India on private providers and changes therein focused to examine the nature and significance of the growing burden of health expenditure on households on account of the increased dependence on private provider. It was found that the outpatient and hospitalization care in India since 1990 has declined drastically leading to the emergence of private care players in a predominant way.

One of the major limitations of analyzing public expenditure in India is with availability of quality data, as the data provided by different agencies of the Government are mostly not standardized, and hence lead to a number of conceptual problems (M. Guruswamy, Sumit Mujumdar and Papiya Mujumdar, 2008)[16]. Thus, the health care expenditure incurred by the Central Government, State Government and the local bodies is referred as the public expenditure on health care and it signifies the supply side of the health care (Ramesh Bhatt and Nishant Jain, 2004)[43].

While, the out-of-pocket health care expenditures borne by the private household and the private non-household institutional sector is referred as the private health care spending which forms the demand side (ibid).

The private sector in healthcare has gained a dominant presence in all the submarkets, medical education and training, medical technology and diagnostics, manufacture and sale of pharmaceuticals, hospital construction and ancillary services, and finally, the provision of medical services, and it has led to significant growth in the number of the private clinical establishments across India (Sunil Kumar Maheswari and Ramesh Bhatt, 2004)[95].

On an average about 3/4th of outpatients, and 1/3rd of in-patients has been seeking health care from private health care providers, and about 75 per cent of the aggregate health expenditure in India has been allocated for the health care treatment in the private sector. The private health care sector of India is flooded by the 80 per cent of the doctors in India, and the private out-of-pocket health care expenditures have increased at 12.5 per cent per annum (Healthcare, 2009)[21]. In India, private out-of-pocket health care expenditures are high and growing at significantly high rate in the recent past (Ramesh Bhatt and Nishant Jain, 2006)[89].

Moreover, this high private health expenditure have been the issue of concern as most of these expenditures were out-of-pocket which were heightened by the small segment coverage of the total population by the insurance sector. This was also reflected in the trend of increase in per capital income by every 1 per cent which led the private health expenditure to rise by 1.95 per cent, signifying the private healthcare expenditure growth rate of 11.3 per cent since the year 1960 and 18 per cent per annum for the period 1990's (Ramesh Bhatt and Nishant Jain, 2004)[88].

Abel- Smith has undertaken the foremost major comparative study of health expenditure in 1960s at national level for the countries, viz., Sri Lanka and Chile**.** However, numerous studies emphasizing on the particular country were sponsored by WHO and World Bank during 1970s and 1980s (Charu C. Garg, 2001)[40].

Himanshu Shekhar Rout (2010)[33] had presented a micro-level study about the influence of socio-economic characteristics in terms of income and education on household health expenditures as well as to encourage improved approaches. It was argued that the health is not assured by higher health care spending but it routes out from the by the better health but it needs well-organized use of resources.

M. Guruswamy, Sumit Mujumdar and Papiya Mujumdar (2008)[16] had examined the levels, trends and patterns of public health expenditure, the inter-relationship between the speed of economical development from the context of rise in GDP and public health expenditure at the State and well as National level.

They had made an attempt to explore the alternative health care financing options, during 1995 to 2006 in India with the broad objective to examine the features of the tools of the public health care financing and its noteworthy notable variations. It was found that the public expenditure on health as a proportion of GDP had remained stagnant and revenue expenditure has accounted for the larger share. As compared to the richer States, the relatively poor States were spending more on health both in terms of the per capita and as a proportion of GSDP. It was also found that inspite of rising private out-of-pocket expenditure, the State health expenditure did not increased in accordance with the general trend of the economic affluence.

The share of the health and family welfare to the total expenditure on social services and development sector by the Central Government remained approximately only at 2 per cent during the period 2008-2009 to 2011-2012. However, it was 1.81 per cent and 1.99 per cent for the year 2012-2013 and 2013-2014 respectively. While, the total expenditure on health services by General Government was found to be increasing throughout the period 2008-2009 to 2013-2014. The percentage of total expenditure on health to GDP remained approximately at 1 per cent in the period 2008-2009 to 2013-2014. The percentage of the expenditure on health to the total expenditure and the percentage of health as a percentage to the social services expenditure remained approximately at 4.5 per cent and 19 per cent throughout the period 2008-2009 to 2013-2014. In the year 2013-2014, there was an increase in outlay for the health sector by 7.44 per cent in comparison to the year 2012-2013 to Rs. 32,745 Crores (The Economic Survey 2013-2014)[18]..

Thus, although health care spending, in absolute terms is increasing but in relative terms is not very impressive as compared to that spent on recreation, entertainment, transport and communication. The exposure of Indian consumers to the global health standards too have resulted into the increased expectations of the similar services by them. The great Indian middle class with increasing buying power are the real impetus to the burgeoning health market. Over 150 Million Indians have annual incomes of more than US $ 1,000, and many earn as much as US $ 20,000 a year (http://www.mbauniverse.com; Accessed on 28/08/09)[96].

At least 50 Million Indians can afford to buy allopathic medicines, which is only 20 per cent smaller than the market of U.K. As per the study of N. Devdasan, 2004, about 33 per cent of the budget is allocated for the richest, constituting 20 per cent of the India's population while the poorest get only 10 per cent. Not surprisingly, hospitalization for the poorest quintile is only about 5 per 1000 population whereas for the richest quintal is about 35 per 1000. Thus, people in rural areas are left with the only two alternatives, either to spend their valuable earnings going to the private health sector or to quietly sit at home and die (N. Devadasan and Sunil Nandraj, 2006)[97]..

Moreover, outpatient care accounts for 61 per cent of private healthcare spending, of which maximum is on acute infections like Fever, Diarrhea and Gastrointestinal Disease. In-patient spends accounts of about 85 per cent which comprises of Cancer, Heart Diseases, Accidents, Acute Infections and Injuries. Of the expected Rs. 1,56,000 Crores, private healthcare spending in the year 2012, inpatient spending raised to47per cent, driven by rise in diseases, especially cancer and cardiovascular disease. The private sector provided 60 per cent of all outpatient care in India and as much as 40 per cent of all in-patient care. It is being estimated that nearly 70 per cent of all hospitals and 40 per cent of hospital beds in India are in the private sector. As per the National Sample Survey data, the annual hospitalization cost by a person is much more in private hospitals than in Government hospitals. In rural areas, the average hospitalization cost is Rs. 7,408 as compared to Rs. 3,238 in the government hospitals which is Rs. 11,553 in private hospital in urban areas and Rs. 3,877 in Government hospitals in urban areas, respectively (http://igovernment.in; Accessed on 07/05/09)[98]. A large majority of the economically vulnerable population and even a sizeable section of the middle class are susceptible to catastrophic health spending, particularly, if an earning member of the family is afflicted with serious hospitalization (ECS Private Limited, 2008)[99].

The current health care system both ideologically and technologically focuses disproportionately on disease maintenance, spending of about 70 to 80 per cent of healthcare costs spent on therapy or treatment while only 20 to 30 per cent on diagnosis which demands for the exemplar shift. Considering the evolution of the healthcare systems worldwide, it can be inferred that curative approach had been emphasized, rather than adopting a preventive one, leading to the boosting healthcare costs. In order to establish the basic health support infrastructure, the traditional approach of viewing the access to health care and health care financing has to be widened which would also encourage healthy lifestyle of the population of India. The rise in literacy rate, the higher levels of income, and an increased awareness through the deep penetration of media has constituted the greater attention thus, being paid to health and health care services. Moreover, the 1 Billion population of India can be insured under the health insurance through segmented approach. The private health insurance may also focus on targeting the needs of the diverse segments of the economy rather than focusing on only those who cannot afford private health care or poor people in urban as well as rural areas, accompanied by the public private partnership, (PPP) approach as well as the assistance from the Government in the form of subsidy. Moreover, due to extensive price controls, drug prices are hardly the cutting edge challenge in healthcare, which accounts for on an average 15 per cent of the cost of treatment ((NASSCOM, 2009)[100]).

On the other side, lack of primary healthcare centre or high level of absenteeism at the health care centre, has resulted in undue pressure on big hospitals that have paved way to the costly, profit-driven private sector to burgeon, consequently, emergence of the situation where a considerable share of household expenditure is on healthcare.

1.3.7: The Health Care Infrastructure in India:

The health care infrastructure in India has been facing daunting challenge in meeting the health goals due to the complexities emerging from the changing disease pattern. In order to improve the Health Care Index of India, the Commerce, Health Ministry as well as the Planning Commission have recognized the priority of awarding an infrastructure status to the health care sector of India (Ramesh Bhatt and Sunil Kumar Maheswari, 2004)[56]. It includes Buildings, Equipment, Ambulances, etc. To state in more specific terms, Indian health infrastructure is divided into a three-tier structure of primary, secondary and tertiary levels (http://www.ficci.com; Accessed on 12/07/10)[67]. The enormous expected growth in the healthcare industry of India is due to various factors, viz., rising income levels, changing demographics and illness profiles with a shift from chronic to lifestyle diseases, consequently, is likely to result in considerable infrastructure challenges and opportunities (Global Infrastructure: Trend Monitor Indian Healthcare Edition: Outlook, 2009-2013)[76].

As per the recommendations of the World Health Organization (WHO) recommendations, at least one bed should be made available to every 600 people. In India, this ratio is of 1 bed for 1,120 people compared to the global average of 3.0 and the highest average of 18.3 in Switzerland (Khomba Singh and Pramugdha Mamgain, 2009)[101].

India was ranked 136 out of 187 countries in the Human Development Index in the 2013 Global Human Development Report. The absolute value of Human Development Index had increased from 0.547 in the year 2011 to 0.554 in the year 2013, which indicates the increment of 1.28 per cent (Socio-Economic Review, Gujarat, 2013-2014)[38].

Also, India lags behind against the world average of about four beds per 1,000 people, with just about 1.6 Million hospital beds. Even increasing this to 2.5 beds per Million by the year 2025, the minimum additional investment of about 2.15 Million beds will demand additional minimum cost of Rs. 550,000 Crores, at a modest of Rs. 25 lakh per bed. India will need another 1.5 Million doctors and another 3 Million Nurses, in order to reach even halfway mark of the world norms (Arvind Singhal, 2007)[19].

Thus, the healthcare industry, in spite of being the fastest growing-expanding industry and the 3rd largest employer in India, there exist immense shortfall of qualified healthcare professionals in India at various levels (http://www.harneedi.com; Accessed on 02/04/13)[102].

There exists the gap of around of 64.1 Lakhs allied healthcare area, Viz., 2.36 Lakhs Medical Technologists, 1.98 Lakhs Surgical and Intervention Technology-related Professionals, 1.28 Lakhs Ophthalmology, 61,670 Medical Laboratory Professionals and over 19,217 Radiography and Imaging Professionals in the healthcare industry of India. Thus, it can be said the this shortage of about half a Million of medical doctors, and a Million Nurses will result into the huge salary hike demands which will further result into the bulged patient care costs (ibid).

As per "Booming Hospital Services Market in India" Report, for Indian healthcare industry to reach the average of 3 beds per 1000 population globally, the collective shortfall of about 2.8 Million hospital beds need to be covered by Indian healthcare sector by the year 2014. Apart from this, there will be requirement of additional 1.75 Million Beds in India by the end of the year 2025 to meet the proportion of two beds per 1000 population, and an additional 0.7 Million Doctors to meet a doctor population proportion of 1:1000 by the year 2025. This demands huge inflow of the investments from the private sector comprising of about 80per cent contribution to the total healthcare market. However, about 70 per cent of the healthcare infrastructure is concentrated in the major 20 cities of India, while, the healthcare accessibility to the remaining population demands the innovations not only in healthcare products but also in health care delivery (http://www.oifc.in; Accessed on 02/04/12)[68].

As per the estimates of KPMG, expenditure on healthcare infrastructure in India was estimated to reach US $14.2 Billion by the year 2013 of which Maharashtra was expected to spend US$ 7 Billion; Rajasthan and West Bengal cumulatively US$ 5 Billion; Uttar Pradesh, Andhra Pradesh and Tamil Nadu spent US$ 4 Billion. These collectively will account for more than 50 per cent of the total healthcare infrastructure spending in India. Cumulatively, per head spend on healthcare infrastructure during the years 2009 to 2013 was projected to be over US $ 250 for Andaman & Nicobar and Manipur, while for States like Bihar, Uttar Pradesh, Chhattisgarh and Jharkhand, it was expected to be less than US$ 50 (KPMG, 2009)[103].

The healthcare infrastructure across the various States of India was estimated to rise to US $ 14.2 Billion recording an average of about 5.8 per cent per annum between the fiscal 2009 and 2013. Of the total States of India, about 32 States were considered of which 06 States viz., Maharashtra; Rajasthan; West Bengal; Uttar Pradesh; Tamil Nadu and Andhra Pradesh were expected to comprise approximately about 50 per cent of the expenditures during the period 2009-2013. Among the larger States, expenditure in healthcare was expected to grow the fastest in Kerala, Rajasthan, and West Bengal respectively (Global Infrastructure: Trend Monitor Indian Healthcare Edition: Outlook, 2009-2013)[76] (Report of the National Commission on Macroeconomics and Health, 2005)[22].

India had recorded rapid economic growth being the second largest than that of the China from the year 2003 to the start of the global economic slowdown in the year 2008. Thus, for India, with a population of over a Billion, the coordination and strategic choices concerned with the health care infrastructure expenditures are of vital importance, and especially challenging in the complex migration patterns witnessed within the emerging economies comprised in the form of the policies for the Indian healthcare infrastructure market (Global Infrastructure: Trend Monitor Indian Healthcare Edition: Outlook, 2009-2013)[76].

However, inspite of the gigantic health infrastructure, trained health care personnel, and extensively diversified public and private sector hospitals and health centres at different levels in India, the number of the Sub-Centres (SCs), Primary Health Centres (PHCs), and, Community Health Centres (CHs), Dispensaries and Hospitals, Nursing personnel as well as Doctors is in insufficient (http://nrhm.gujarat.gov.in; Accessed on 30/09/14)[51].

Moreover, the current global financial crisis has given impetus to the priority of the sustained investments in the health sector of India particularly by strengthening the public health systems (http://www.thaindian.com/newsportal; Accessed on 23/12/10)[104].

The health care infrastructure market of India as well as worldwide is also related to the innovations in the health care market led by the Information Technology (IT) and for delivering healthcare services, it has to answer the challenges raised by these forces which raise the need of a befitting model in the new era. India's healthcare system is developing rapidly and continues to expand its coverage, services and expenditure in the public as well as private sectors. This is creating a large market for hospital information systems and other healthcare-related IT solutions (Healthcare Industry in India, 2013)[70].

The trend of corporatization of hospitals has popularized various innovative financing models. IT innovations such as, Computer-Based Patient Records, Hub and Spoke Model, Hospital Information Systems, Smart Cards, Biometrics, Computer-Based Decision Support Tools, Hand-Held Devices and concepts like Tele-Medicine, Tele-Radiology, Tele-Pathology, and, other new means of distributing health information to consumers have the potential of improving health care delivery over and above its applications in hospitals from registration and billing perspective. Undoubtedly, the recession proof healthcare sector will be impelled by rise in the internet usage for the purpose of data warehousing and customer portals by health care providers. The modernized IT based healthcare systems demands about 14 per cent of the total investment in administrative set-up, specifically for Billing, Transcription and Remote Diagnostics. India, undeniably, has the potential to emerge as the global innovation hub (http://economictimes.indiatimes.com/News; Accessed on 28/08/09)[105].

The potentials in the health care sector of India owes to improvement in the health care underlined by the advancements in the medical science, bio-medical engineering, telecommunication and innovative application of technologies. Moreover, the demand for Telemedicine in India has been driven by the rural population of India with average per capita income has resulted into the increased demand for Telemedicine in India (http://www.oifc.in; Accessed on 02/04/12)[68].

The increase computerization of health care data in combination with the emerging new telecommunications application and technologies have created immense opportunities for the provision of the health care and has been serving as an especially efficient solution to the shortage of the medical staff. Thus, while, the health care informatics has been contributing to efficient health care, the potential negative effects of technical and sociological aspects of this medium shall not be ignored from the technical, sociological, legal and regulatory perspectives, as well as the concern for possibility of the replacement of the human affection and care by the operations of the machines. Thus, implementation and applications of the various innovative, technological, and IT enabled processes have been encouraging the Government of India towards the establishment of the e-Health Governance. E- Health Governance has been defined as how people relate to change, change in Governments health policies as much as how they relate to each other on the health issues which has the potential to bring the new concepts of health relationship between beneficiaries in terms of needs as well as responsibilities in consideration of the five different entities, viz., Government; Citizens; Health Workers; Business Worlds; Public/Private, and, Institutions respectively. This would also enable the beneficiaries to communicate with the Government, participate in the Governments' health policy making and communicate each other on the various health issues through e-Health Governance (Atal Khandelwal, 2006)[106].

Thus, it would provide an opportunity to people to participate in the Government decision-making process related to the health which would reflect the true health needs and welfare by utilizing e-Health Government as a tool. E-Health Governance refers to the ability to obtain Government health services through non-traditional electronic means enabling access to requirement health information and to completion of Government health transaction on an Anywhere, Anytime basis and in conformance with equal access requirement. Atal Khandelwal (2006)[106] had represented a framework for the e-Health Governance applications based on the model which emphasized on the development and implementations of the various e-health strategies. Several innovations in the healthcare services industry in India have offered patients a new experience of healthcare apart from making hospitals a one stop location for peoples' health care needs.

The Amrita Institute of Medical Sciences' Initiatives, Arvind Eye hospitals' Internet kiosks in remote rural areas, and Apollo Hospitals have been covering the entire range of healthcare services from Primary, Secondary and Tertiary Care to Diagnostic Services and Pharmacies are some of the highlights of the innovations in the health care sector of India (http://www.icmrindia.org; Accessed on 28/08/09)[107].

India, undoubtedly can achieve the status of being the role model for other countries of the world by creating the IT-based health delivery system (http://www.newkerala.com; Accessed on 12/07/10)[108]. The digital transmission related to healthcare is expected to assure various health care delivery benefits to the rural population of about 700 Million. The private as well as the public players have joined the race of implementing the delivery of the healthcare through Telemedicine to fasten the diagnostics and treatment of a variety of diseases (Razib Ahmed, 2007)[6].

The IT companies have emerged to offer range of IT-enabled medical services amongst, Tele-medicine software has been gaining popularity. Such Tele-treatment software launched by the IT companies are the comprehensive application meant for storing, forwarding, and real-time access of medical information for Anyone, Anytime, Anyplace, on Any IT network, thereby offering saving in time, cost, as well as potentially life-saving remote medical services. Even Tele-medicine Vans are also being offered by the medical services providing companies which are complete independent units equipped with V-Sat for Internet Connectivity, Air-Conditioning Unit, Video Conferencing, Essential Medical Equipments, and Patient Bed. These fully equipped vans can also serve the dual purpose of providing publicity, information and education for rural areas.

Vehicle/ Ambulance Tracking System is another IT-based ancillary health care services which is based on GPS, GSM and GPRS Technology which enables any hospital or a fleet owner using this system to find out at any time the location, and its speed and other parameters, viz., fuel level and two-way communication, apart from the unhindered contact between the hospital/ fleet owner and the Ambulance Van/vehicle (Information Technology for Health Sector, 2009)[109].

The Apollo has set up a 50-bed Tele-Medicine center in a village in the Andhra Pradesh, named Aragnoda, and in the similar format of digital connections as one of the facilities. It has also networked dozens of remote rural hospitals. The Government of India has also made important commitments to Tele-Medicine by reducing import tariffs on infrastructure equipment. Moreover, the changes in the regulatory and patent law are expected to drive the capital investment from the Indian pharmaceutical industry towards exploring newer avenues of drug development, in addition to the strong support from the Government as well as the availability of surplus skilled technical workers at lower costs (Razib Ahmed, 2007)[6].

Moreover, the IT companies have also innovated into the development of the Total Information Technology Support to Super Specialty Hospitals, Nursing Homes, Down Town Hospitals, Primary Health Centers, Remote Rural Clinics as well as, the companies engaged in Medical Tourism, commonly known as Hospital Management Information System (HMIS) which embraces all areas of the hospital management. Another, such IT-enabled health care service is in the form of the Medical-Tour Software package, which is a comprehensive Web Based Product that meets all requirements for medical tourism covering patient, local doctor of the patient, and the super-specialist from initial enquiry to post treatment stage for Medical Processes as well as for Tourism requirements. Moreover, these companies have also developed Communication Group in order to provide complete assistance in selection of Optimum Telecommunication Solution followed by its procurement, installation and maintenance apart from provision of the of the 'State of the Art Web-Site Development and Web-Site Hosting' and 'Assessment of the Computer Hardware requirement and Procurement of Computer Hardware' (Information Technology for Health Sector, 2009)[109].

Although, Indian IT companies have acclimatized themselves to remote medical diagnostics, drug research and clinical trials, the health care sector of India is awaiting yet for the off-boundary stroke in terms of IT applications holistically. It is also an opportunity for SMEs to step in as technology users as well as technology providers in the health care sector which is the running coin in the health care market of the India. The healthcare has always been a late technology adopter. Added to this is the inability of the small and medium hospitals in India to invest in IT. According to William Chin (Vice-President, Discovery Research & Clinical Investigation, Eli Lilly) pharmaceutical industry is under siege with flood of patent expiries, higher safety hurdles and pricing pressure. As the sector is facing the problem of managing the huge data at its disposal, India's IT strengths can play a vital role. But, unfortunately, while the need for innovation is increasing, the cost of pharmaceutical R&D too is rising dramatically. The average cost to bring a new drug to market can be as high as US $ 1.7 Billion, with costly clinical trials significantly adding to the financial burden. Instead of recreating current medicines, Indian pharmaceutical companies must innovate and provide new and better treatments. An innovator strategy depends on foreign R&D investment and Indian pharmaceutical companies are not yet equipped to take charge of the investments for the innovations to that extent and to encourage foreign investments. India also needs to enrich its platform of domestic innovation by protecting Intellectual Property Rights (IPR) (Rajat Sahani, 2008)[110].

A review of the literature on the healthcare infrastructure is further given as follows.

The performance of the public sector has been far from satisfactory as the delivery of services have been hampered by several policy and management constraints.

Dilip Mavalankar, K. V. Ramani and Shaw Jane (2003)[111] had particular concerns for non-availability of staff; weak referral system; recurrent funding shortfalls, lack of accountability for quality of care, poor logistics management of supply of medicines and drugs.

Sunil Maheswari, Ramesh Bhatt and Somesh Saha (2005)[112] had attempted to analyze the human resource practices in the States of Madhya Pradesh and Maharashtra. They had also offered the inferences on the committed efforts of the health care authorities. They found that there was the absence of the sharing of the strong emotional bond between the district health officials and the department which affected their willingness to take initiatives. In order to improve this sharing the authors suggested the approach of consulting the senior doctors in decision making pertaining to the manning of the healthcare personnel.

They had also suggested investigation of the advancements of the manifold growth and vocational progress of the health care personnel and experts. They had advocated the inevitability of the intensive health personnel and experts' socialization which will smooth the progress of effectual execution of the reforms in parallel to the advancements of the casual modes of communication as well as lead generating among various healthcare providers.

K. V. Ramani, Dileep Mavalankar, Amit Patel, Sweta Mehandiratta, Rohini Bhardwaj and Diptesh Joshi (2006)[113] had undertaken a study in the city of Ahmedabad of Gujarat State to observe the social and economic outline, public health standing and the search behaviour for health care. They had suggested the approach of PPP model for the decentralized and integrated network primary health care center in the Ahmedabad Municipal Corporation. Thus, they have guided the authorities of Ahmedabad Municipal Corporation in identifying the sites of developing urban health centers which assist in providing primary health care facilities to the people residing in slum areas.

Ramesh Bhatt, Dileep Mavalankar, Sunil Maheswari and Somen Saha (2007)[114] had commented on the inadequacy of the fundamental primary health services, chiefly Reproductive Health Services in mainly the urban regions due to the pitiable infrastructural conditions in the health sector which has been further imposing undue financial burden on the poor as they have to depend on the private service or when not affordable makes the tertiary health care facilities cost intensive.

Thus, certainly, the epidemiological changeover and shift in the health care requirements have imposed substantial stress on the accomplishment of the health care objectives as determined by the health care system in India. Moreover, the non-communicable diseases adds fuel to the situation, consequently the burden on the health care systems intensifies which further emerges the inevitability of improving the health care facilities, ending up in the incomparable swelling of the private clinics across India (Ramesh Bhatt and Nishant Jain, 2004)[88].

Undoubtedly, India has developed an extensive network of healthcare infrastructure that envisages the availability and accessibility of publicly funded healthcare to all irrespective of their ability to pay.

However, it has been observed that the public healthcare system has lagged behind the term of its ability to meet the challenge of fulfilling the health needs of the large segment of population due to the expansion in size and shortfall in budgetary support. To meet this challenge partially, private healthcare sector has grown in size and scope.

Consequently, the present health care system is characterized by having providers belonging to ownership of both public and private providers practicing in different systems of medicine. Moreover, having been witnessed the noteworthy advancements in the offering of the curative primary as well as modernized secondary care by the private health providers, the Government at the State level have undertaken varied initiatives to investigate into the application of PPP model in offering curative and tertiary care along with the facility of medical services to the population isolated areas too. However, development of the process and institutional mechanisms for the same imposes the heavy burden of search and examination of comprehensive information, which becomes critical due to the deficiency of befitting mechanism for the same. The various other factors complicating the information analysis and its mechanisms are viz., methods of distribution of information, lack of suitable system to integrate the wide range of the interest-groups, process clarity, significant institutional development work, uneven criteria of medical care in both public and private sector, vulnerability of Government in handling the health care programmes, and bridging of the structural interruptions and creation of potentialities for opportunities for education and growth jointly (Ramesh Bhatt and Sunil Kumar Maheswari, 2004)[56].

But, the objectives of establishing public health care units are not being realized and the little efforts announced in this context are being construed as a total wastage of public money. The public health care sector have earned the distinction of being nightmarish for patients and are being described as the loss-making units (Hardip Chahal, R.D. Sharma and Mahesh Gupta, 2004)[115].

According to Amit Patel, K.V. Ramani, Dileep V. Mavalankar, Anurag Agarwal, Shilpa Maiya, Beena Nayak (2007)[116], the role played by the private health sector had been remarkable in the up-coming countries like India, from the context of providing the health care, which can be systematized by adopting the PPP model at large in the health care sector of India.

The authors had discussed that despite of an overall improvement of the health care infrastructure the parallel advancements in the medical care were lacking. They had brought to the notice the absence of the participation of the non-medical professionals, viz., sociologists and economists in the health sector, and that about the concern of the medical community for the non-medical components, immigration and serving of the urban rich by the vast overproduced doctors at the public expenses accompanied equally by the mismatch between the drug requirement and production (N.H. Antia, 2001)[117]. The State health care expenditure and health care infrastructure are parallel to each other, which further influences the status of health (Premilla D'Cruz and Shalini Bharat, 2001)[36].

The health care infrastructure established by the business groups has been among the important components of the private health care sector, and the author had examined the revival strategy of such corporate set by the corporate (Sunil Kumar Maheswari and Ramesh Bhatt, 2004)[95].

The hospitals have been amongst key elements of the health care delivery infrastructure system. Ramesh Bhatt (2006)[118] had examined the economic status of the private sector hospitals by analyzing the financial statements of selected 128 hospitals in India on the basis of the empirically relevant dimensions determining the financial health of hospitals.

S. Theobald, H. Elsey and R. Tolhurst (2002)[119] had explored some of the opportunities and challenges of the sector-wide approaches (SWAps) which had been an approach to aid and development, particularly in more developed country by exploring the gender mainstreaming aspects from the context of health. The author had discussed the emerging challenges in the SWAps process particularly the association between Government and donors, the participation of district and civil society in the SWAps process and the implementation of the biomedical approach in the health sector in different countries.

1.3.8: The Health Care Infrastructure in Gujarat:

The Blueprint for Infrastructure in Gujarat 2020 is an integrated plan for the Gujarat State's infrastructure development with the objective to form Gujarat as amongst the worldwide to make it a globally desired residential and commercial location enriched by the speedy, uniform, integrated, and continuous growth impelled by driven by the vigorous social, industrial as well as physical infrastructural development. It envisaged an outlay of Rs. 11,80,912 Crores among the 19 infrastructural sectors. The sector wise detailed allocation of the investment to health sectors is Rs. 16, 117 Crores, to be invested in the phased manner, of about Rs. 3,385 Crores, Rs. 7,666 Crores and Rs. 5,066 Crores in the year 2012, 2017 and 2020 respectively(ibid).

The health care infrastructural development in the State of Gujarat has complex of primary care, secondary and tertiary care, ESIS, and private as well as not-for-profit sector, and is heading in terms of health care infrastructural development at numerous levels (K.V. Ramani and Dileep V. Mavalankar, 2007)[49].

The number of CHCs, PHCs and Sub-Centres in the Gujarat State had grown to 318, 1158 and 7274 respectively at the end of December, 2013. The State is enriched by 8 Major Hospitals with Educational Institutions, 24 District Level Hospitals, 30 Sub-district level Hospitals, 6 Class- II Hospitals, 4 Mental Hospitals, 2 Government Dental Hospitals, 1 Ophthalmology Hospital at the end of December 2013 (Socio-Economic Review, Gujarat, 2012-2013 and 2013-2014)[37, 38].

Ramesh Bhatt, Bharat BhushanVerma and Elan Reuben (2001)[120] had focused on analyzing the hospital efficiency of district-level Government hospitals and Grant-in-Aid hospitals in Gujarat to provide an overview of the general state of the health care services provided by hospitals in the State of Gujarat in terms of their technical and allocative efficiency. It had also initiated with the another toll-free number 104 in order to offer Tele-Medical services in instance varying from minor to critical health care crisis.

K.V. Ramani and Dileep V. Mavalankar (2007)[49] had described the design, development and implementation of a PPP for managing urban health services in Ahmedabad city of Gujarat State and had highlighted the public health infrastructure in comparison to its large population base as moderate. Moreover, as Gujarat has been considered as the richer State, the heightened expectations of the people from the advanced districts has been further imposing soaring managerial challenges to the authorities of the public health sectors in comparison to the under-developed States in India.

1.4: CONCLUDING REMARKS:

The term health indeed has been evolved to be viewed in the holistic manner including the dynamic wellness of an individual physically, socially, mentally, and spiritually. From time to time, various experts and the authorities have contributed to the understanding of this term and raised it gradually. Thus, the health can not only be determined in terms of the frequency of the individual's health status in terms of the occurrences of diseases or illnesses, but, it also involves overall fitness of an individual. Moreover, the various factors Viz., age, gender, income, routine activities, disease frequency, etc., too are often used by the experts in determining the health and health status of an individual. The concept of health and its maintenance thereby has also been emphasized by the World Health Organizations which has integrated the countries of the world in its huge mission of comprehensive health related goals and objectives termed as the Millennium Development Goals thereby has involved the countries of the world to make contribution in achieving the set goals, uplifting and improving the health status of the countries.

The differentiating gap among the developed countries, developing countries and the underdeveloped countries have clearly witnessed even from the context of India's overall regulations and promotional aspects announced from time to time.

The underdeveloped countries as usual are found more affected by the high birth rate, high infant mortality rate and maternal mortality rate due to scarce infrastructural resources, and large number of citizens are found to be affected by the illnesses and diseases emerging from such scarce and polluted basic infrastructure and the shortage of resources. However, it has been found that the developed countries have been made considerable allocation in large portion of India's GDP to the health sector, and health planning services in comparison to that of the developing country, and in contradiction to the underdeveloped countries.

Moreover, the low level of education, resultant into low level of the per capita income, and high unemployment and underemployment, has further added to the shortages of available resources for availing the health care services in India. Many times, even the lethargic attitude of the Government of certain developing countries have been found as one of the major cause for the underestimation of the capability of the installed infrastructure of India.

It has resulted into the wide gap between qualities and price of that the health services offered by the public sector units in India, generally availed by the poor people, and that the services offered by the private health sector units, generally availed by the higher middle income groups or the high income groups. Those availing the health services from the public health care units are left in the most miserable condition, due to the inadequate resources, hostile attitude of the service providers, are left to the mercy of god and their fortune, in spite of the, so called, mere on- paper records of the accomplished objectives and the goals of the authorities under various schemes launched by the Government.

Moreover, it has been found that the constitutional structure of India has although divided the role of the authorities and their functions, they are just usedas the tool of playing blame game by the authorities actually. The pseudo rise in the budget to the health sector of the country has been not found adequate to meet the health care needs of the citizens of the country and to reach the set state of the health at the global level, which has been lower in comparison to the many other developing countries too.

Undoubtedly, the Government of India has initiated the up-gradation of the its infrastructural state by adopting the model of the PPP and assignment of variety of projects, such as, launching of the hospitals, training the personnel, importing the health care facilities, making use of the country's strength in the area of the information technology, which assures the future development of this sector of India, and has thus, also attracted the foreign players both on the demand side as well as on the supply side of the sector.

However, due to the limited announcements of the healthcare costs reimbursements of the citizens of the country by the Government of India, in general, and that by the State Government, in particular, there has been another upcoming untapped health care issue of the rising private expenditure, that is, private out-of-pocket expenditure. Moreover, the overall change in the life style patterns of the people in India has added to the complexities faced by the health care system of the countries. The dire need of the system providing a shield-like mechanism for all the classes of the people in the country has been sought by citizens of India. In other words, the marketing of the health care services as well as the mechanism to hedge the risk in the provision of the health care services, as well as in availing the health care services, and thereby meeting the needs of the health care seekers has been targeted by the health care providers and the health care marketers.

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