

## **CHAPTER: I**

# **INTRODUCTION**

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## 1. Introduction

### 1.1. Background

Health is both means and end of development. Healthy and educated population can contribute to the productivity, economic growth and development in a better way. On the other hand, decreased health status reduces labour productivity resulting in poverty which further leads to more health care needs (Patrick et al, 1988). In the present day economy, investment in health and education is of greater importance from the point of view of human capital approach of New Growth Theory. This theory gave importance to human capital to explain the way towards long run growth with increasing returns to scale. Although, in the initial period emphasis was given on education as the source of human capital formation, in the ground breaking analysis of Mankiw, Romer, and Weil (1992), health and nutrition have also been given equal importance. Mahbub ul Haq, the distinguished economist, who has introduced the *United Nations Development Programme (UNDP)'s Human Development index*, gives much importance on health as a goal of development. Any development should put people at centre of its concern. Purpose of development is to develop all human choices not just income (Haq, 2004). India, over the last two decades, has enjoyed accelerated economic growth, but has performed poorly in human development indicators and health outcomes. Various health status indicators, specially, regarding child health and reproductive health, remain unacceptably low compared with countries in the South and East Asian region that have similar income levels and rates of economic growth. According to *Human Development Report 2004*, the infant mortality rate (IMR) in India is 58 per thousand, while in China it is 20 and in Sri Lanka it is 17.

Equity and quality considerations are vastly neglected in India. The health gap between rich and poor, urban and rural, male and female, different social strata, more educated and less educated are quite large. For example, in 1998-99, the below five mortality rate was 46 for the richest quintile whereas 141 for the poorest quintile. In 2001-05, the IMR is 50% higher in rural areas than in urban areas. According to *National Family Health Survey 3(NFHS-3)*, children whose mothers have no education are more than twice as likely to die before their first birthday as compared to the children whose mothers have completed at least 10 years of school. Ministry of Health and Family Welfare of India, in its Annual Report to the People on Health (2010) has acknowledged about the persistent inequality in regard of health between rural and urban areas, between genders and among different social groups in India. For example, children from SCs and STs are at greater risk of dying than other children. Same is the condition for a girl child in India. 79 girls per thousand births die before their fifth birth day as against 70 male babies. Anemia, which is very common among all the states, prevails basically among children and women. The prevalence of anemia among children of 6-36 months has increased from 74 percent in NFHS-2 to 79 percent in NFHS-3 due to sharp increase in anemia among children in rural areas, among children of women with no education, among scheduled caste and scheduled tribe and household with lower wealth quintile. Immunization coverage also fails to attain the targets. In both NFHS - 1 and NFHS - 2, rural MMR (Maternal Mortality Ratio) is much higher than the urban MMR, majority of which are preventable through proper knowledge and sufficient access to health care. A study points to the importance of economic factors, social status, and tradition in the construction of women health (Sagar 2001). Again, acute respiratory infection (ARI), fever, diarrhea are common health problem among children in rural areas. So, even after more than thirty years of *Alma Ata declaration* on health care, our health system is grossly short of defined objective of '*health for all by 2000*'.

Rural-urban divide in health care infrastructure and manpower (both public and private) is also substantial. According to Varatharanjan et al (2004), more than 94

percent of the doctors and 68.5 percent of hospitals are located in urban areas where only 27.8 percent people live here. An urban doctor serves 2000 people, whereas, a rural doctor serves 20,000 people. Similarly, an urban bed serves 455 people, whereas, rural bed serves 10,000 people. In 1991, “of all hospitals and beds in the country only 32 per cent and 20 per cent respectively were in rural areas” (Kumar, 2003). This gap in infrastructure and manpower, especially at the primary health care level, has negative impact on the rural health.

The paradigm shift in the health care system from the universal access to a more market oriented system during 1990's through *structural adjustment programme* led to this decreased access to health care and thereby, decreased health status of the people of India (Baru, 2001). The Indian health care system became an inverse pyramid with very little primary care as foundation and ever-ballooning secondary and tertiary sector medical sector through a doctor centric and urban model which largely privatized, unregulated and western oriented. On the other hand, by the late 1960's, China was busy in making its very own widely based pyramidal health care system- from '*bare foot doctors*' to provincial hospitals which is the cause of the success story of the Chinese health system till today (Morley et al, 1983; Beaglahole and Bonita, 1997).

In India, out of pocket expenditure on health care is the second important cause of rural indebtedness after dowry (Benarji, 2001). Studies conducted by the National Council of Applied Economics Research, National Institute of Public Finance and Policy and National Samples Survey Organisation (60<sup>th</sup> round) reveal that about 23% persons do not access care in India only because of their inability to afford it and about 40% slide below the poverty line after single hospitalisation. The *1993 World Development Report (WDR)* of the World Bank has referred health as a basic human right and can contribute towards alleviating poverty and argued for the necessity of providing cost effective health services to the poor. The National Rural Health Mission (NRHM) of India, the largest public health care programme of world, is the

outcome of such realization. It seeks to provide universal access to health care, which is affordable, equitable, and of good quality particularly for the rural people. Based on the poor health indicators, 18 states<sup>1</sup> including Assam were selected from the country with special focus to improve the health outcomes especially in rural areas through improved access to a decentralized public health system under the National Rural Health Mission (NRHM) programme in 2005. Huge amount of investment has been done under this programme in the form of improved infrastructure for health delivery, established institutional standards and trained health care staff to improve the health status of the people.

But, health status of the people does not simply depend upon supply of health care; rather it depends on utilization of health care to a greater extent. *60<sup>th</sup> round of the National Sample Survey (NSS)* has identified poor health outcome in India is the result of lower utilization of health care services. The study has identified the factors which prevent utilization of health care facilities in rural areas are non-availability of health care facilities (12% of the respondents), financial constraints (by 28% of the household), considering the ailments to be not serious (by 32% of the household), long waiting time, lack of faith etc. Again, number of reported morbidity and utilization of health care is lowest among STs, followed by SCs and other backward classes and highest among the people of general category both in rural as well as urban areas. If access to health center is difficult, the opportunity cost in the form of transportation and man days lost can also become critical. It affects all economic classes in rural areas. Another important point is that in poorer quintiles of wealth groups financial condition dominates the decision of health care utilization where as in higher wealth quintile, perceived health condition is the major reason for not seeking health care. Besides, the survey has proved that in rural areas demand for health care increases significantly with the educational level of the household. The survey also shows that demand for health care has a non-linear relation with demographic factors principally age groups. New born babies and children need and receive greater health care; but during productive years of life, perception of the

gravity of illness and thereby demand for health care is low. The average medical expenditure for non-hospitalized treatment per ailing for a female, immunization of girl child etc. have shown much discrepancy. A large proportion of ailments, according to all the three NSSO survey (i.e., in 42nd, 52<sup>nd</sup> and 60th round) were treated from private sources which lead to a high economic burden on the households.

## **1.2 Statement of the Problem**

The health scenario in rural Assam is not at all satisfactory. In Assam, 85.9 percent of the population lives in rural area whereas in case of Goalpara district also 85.66 percent of its total population lives in rural areas (2011 census). In the state, in 1999-2000, 36% people were living below poverty line. The per capita state domestic product is Rs.7643 in 2006-07. In 2005, the IMR of Assam is 66 per thousand whereas national figure is 58 per thousand. In 2012, as per the report of Bulletin of Rural Health Statistics, there were 25 district hospitals, 13 sub divisional hospitals, 109 Community Health Centres (CHCs), 975 Primary Health Centers (PHC) and 4604 sub-centers in the state. The Economic Survey of Assam (2006) estimated the bed strength as 7083 that is 25 per lakh population. According to NFHS-3 (Assam), 69.1% of household utilize public health facilities and 30.7% household uses private health care in rural Assam. Of them, only in 1.2% households, at least one member is entitled with health insurance or other such type of coverage.

Goalpara district has a population of 10, 08,183 out of them 8, 70, 121 in rural Goalpara (Census 2011). Among them, 32,886 are SCs and 2, 19,871 are the STs (Census 2011). In the district, there are 151 sub centers, 41PHCs and 2 CHCs as in 2012 as per the report of Bulletin of Rural Health Statistics. Again, there are five nursing homes and one civil hospital in urban area. In 2006-07, total number of doctors (allopathic) in rural Goalpara is 49 as against 30 nurses and 203 ANMs. IMR, in the district is 58 against 64 in state level. Sex ratio of the district is 946 against 959 in case of Assam (Annual Health Survey, 2010). But, in regard of district wise

performance in regard of health care utilization in the form of safe and institutional delivery, immunization etc. the district is much below than state and national averages (Dutta and Bawari, 2007).

The proposed study will examine whether the access to health care facilities are sufficient to fulfill the needs of the people of rural Goalpara and how it along with differential in income, educational attainment, perception regarding health status, age, caste, gender influence the health care utilization behavior of those people.

### **1.3. Review of Literature**

The basis of any empirical analysis has to be built on comprehensive review of existing relevant literature in the area of research. This would enable theoretical and practical answer to the queries raised by the research problem. An account of the literature studied in the context of the present study is given below in groups with thematic similarities

#### **1.3.a. Health Scenario in India**

India's health scenario is not at all satisfactory. Mishra (2005) evaluates the health scenario of Indian states and come to the conclusion that there is a strong negative correlation between infant mortality rate and morbidity prevalence in 1995-96 at interstate level indicating the point that falling mortality not only increases longevity but also morbidity prevalence. India, now-a-days, has been facing dual burden of communicable and non-communicable diseases. In case of poorer states, communicable and preventable diseases are more prominent, whereas non-communicable diseases are basically prevalent in demographically and economically well off states. So, diseases and disability wise specification of health provision should be done in states or even in districts/blocks with emphasis on seasonal and sub-groups (age, caste, gender, income) which will improve access and utilization of

health care. Puruhit (2010) shows the inter-district variation in health outcomes like life expectancy at birth, infant mortality rates in a middle income state, namely Karnataka. Using a general stochastic frontier model, disparities among the districts have been shown as the outcome of various health sector inputs like infrastructure, manpower and material inputs. Notably, those explanatory variables have a positive impact on health outcomes. It, also, concluded the urgency to increase the public health expenditure as well as to reduce poverty, income and gender disparity in order to improve the health scenario of the poorer districts of Karnataka. Rural India is lagged behind the urban areas of the country in regard of various health indicators. While discussing about the poor health outcome in rural India, Sankar and Kuthuria (2004) and Yadav et al (2009) discuss how the rural areas in India are lagging behind the urban areas in regard of IMR,MMR etc. due to lack of health infrastructure. While, Yadav et al (2009) focus on low financial rewards as another factor that have discouraged the professional and efficient health workers to provide services in rural areas. This further enhances the poor health outcome in rural areas.

### **1.3.b. Access to Health Care**

Generally, access to health care deals with physical availability of health care. While defining about access to health care in terms of accessibility, Tancer et al (2006) and Bake et al (2008) argue that accessibility concerns the ability and willingness of the population of a given area to bridge the gap between home and location of a health facility in rural areas. Accessibility is determined in part by geographic barriers, including distance, transportation cost and travel time. Rural people faces dual problem in regard of access to health care. Pandey (2004) studies the access to health care facilities in the three recently formed states Chattisgarh, Jharkhand and Uttaranchal in terms of distance from the health care facilities and those who provided health care. The study shows that lower access to health care in the hilly terrain of Uttaranchal has a negative impact on health care utilization. Again, rural people faces dual problem in regard of access to health care. Benerjee et al (2004)



conducted a survey in rural Udaypur district of Rajasthan focusing on the relation between access to health care and health status of the rural people. The study has reflected about poor access to health care in terms public health care system in rural Rajasthan. Availability of untrained private sector as well as high absenteeism is also some of the characteristics of such areas.

But, in reality, access to health care does not mean simply spatial availability of health care rather it is a broader concept. It comprises lots of other components like available number and types of health care units, infrastructure and manpower in the existing health care units. According to Hongvivitana (1984), access to health care comprises of five different components: availability, accessibility, acceptability, contact and effectiveness. Availability includes the provision of manpower and facilities; accessibility means geographic availability; acceptability means perceived value of obtaining care; contact and effectiveness are to mean the process and outcomes of health use respectively. If all those components have been taken in to account lots of regional disparities can be observed in India. Again, for socio economically backward section of people regional disparity in access to health care creates more trouble. Dilip (2005) and Baru et al (2010) have studied how inequities in the access to health care have been rising across states, between rural-urban, among different economic class, castes in India. Baru et al (2010) study access to health care in terms of availability, accessibility and affordability on the basis of all the three rounds of NFHS by comparing the all India averages with Kerala and Uttar Pradesh, the best and the worst performing state in regard of health status respectively. Besides, gender is another important dimension. For a rural women who is sick it is more difficult to have health care when access to health care is difficult (Dilip, 2005). This study is based on NSSO 52<sup>nd</sup> round data. Berman et al (1989) focuses on the impact of rising income inequality on the access to basic health care which resulted in higher rates of mortality and morbidity among rural poor. In the same article, much emphasis has been given on the public sector health services to overcome the problem as private services generally respond to market forces and

marginalized those with limited purchasing power. As being rural as well as poor, rural people face more problems. In the words of Fuchs (1974) the problems of access to health care fall into two main categories, which may be labeled as “special” and “general”. The special problems of access are those faced by particular groups in society ---the poor, the ghetto dwellers, and the rural population. The general problem of access is one that is felt even by individuals and families who have enough income or insurance to pay for care and are not disadvantaged by reason of location or race. For them the problem is simply to get kind of care when they need it.

### **1.3. c. Utilization: The Interaction between Demand for and Supply of Health Care**

Utilization of health care happens in terms of the interaction between demand and supply of health care; however they do not necessarily happen on equal terms (Feldstein, 1965; Lee and Mills, 1983 and Mooney, 1986). Giving importance to demand side of health care, Mooney (1986) said that having equal access to health care meaning two individuals face the same costs of using the health care facility (e.g., as a proxy it might be that they live in the same distance from the facility) may not use it equally as their demand for health care may be different. So, there may be some mismatch between demand for and supply of health care which results in poor health outcome.

While discussing about the differentiating characteristics of demand for health care, Arrow (1963) explains that the most distinguishing characteristics of an individual's *demand for medical services are that it is not steady in origin as, for example food or clothing, but irregular and unpredictable*. Medical services, apart from preventive services, afford satisfaction only in the event of illness, a departure from the normal state of affairs. In this regard, Mooney et al (1988), McPake et al (2002) say that demand for health care is a derived demand from the demand for health. Though consumption of health care is often unpleasant, people demand it for the sake of good health. Again, it is income elastic as well as is induced by supply of it. According to

Grossman (1972), there are two types of demand for health: *consumption demand* and *investment demand*. Health may be viewed either as a fundamental commodity giving direct utility, in the consumption model, or as with *inter alia*, time to produce money earnings. This gives more emphasis on investment demand for health. So, by increasing ones health stock, the individual lowers the amount of time lost through ill health, which can be devoted for the production of market and non-market activities. This investment demand results demand for health care which is a *derived demand*. Demand for health care will increase as long as the price elasticity of the demand for health capital is less than one. Higher the wages, higher will be the demand for health as well as health care, subject to the available time constraint for health care. Again the educational attainment improves the health status of the people and thereby reduces the demand for health care. While explaining the role of individuals perceived health status on demand for health care, Lee(1983) opines that individual should first realize whether his actual health status is or likely to be, less than his desired health status-presently or in future. This felt need will help him to take the decision if he seeks health care or not and if yes, what will be the mode of organization. Methods of payment used, cost incurred, distance and travel time, means of transport, administrative barriers between health workers and patients, confidence in or fear of, sophisticated technology and knowhow and attitude of illness, roots in the culture of the community are the factors which convert the felt needs into demand for health care. Discussing income as an important determinant of demand for health care, Srinivasan and Mohanty (2008) have proved the impact of household economic conditions on the healthcare utilization behavior in regard of Reproductive Child Health programme during NFHS-1 to NFHS-3. This is true even after controlling for the availability of health services in different areas by the way of logit analysis. Here, author has introduced a new proxy of household economic condition in terms of Household Deprivation Score (HDS). The study suggests that increasing the funding for public health services can not by itself improve the utilization of such services or improve health outcomes beyond a limit. There is a need to initiate developmental programmes aimed at more rapid reduction of

deprivation in basic amenities at the household level that are closely linked with health care utilization. Cutler (1994), in his paper, describes the relation between demand for health care and high costs, inefficient production and lack of security. Poor people, when they need health care, are not able to go to private health care on one hand. On the other hand, they are often reluctant to go to the public sector as this sector is inefficient in quality. Gertler et al (1988), Mwabu(1993) have analyzed the effects of various determinants of health care demand, such as user fee, income, quality of health care and distance to the health care provider, opportunity cost of time etc on the demand for public health care based on the data from World Bank's Living Standard Measurement Surveys. Gertler et al (1988), develops a discrete choice model that allows for the quantification of the effects of price and non-price variables on a person's decision of whether or not to obtain medical care, and if so, from which provider. The empirical work is based on recent data from a Peruvian health survey. Mwabu(1993), Ellis and Mwabu (2004), Gupta and Dasgupta (2002) etc. have added to those literature where demographic factors like age, sex were also considered. Those studies examined the welfare aspect of user charge imposed public health care system in developing countries particularly among the poor.

If individuals have different access (supply) with same demands or same access (supply) with different demand, they will have different utilization. Reyes-Gibby et al (2005) classify access to health care in to two parts potential access (probability that services will be obtained) and realized. Among the factors to be highly associated with utilization of health care are a usual person or place to go to when sick or needing health advice and higher level of education. Berman et al (1989) have used two sets of logit regression models to predict the health care utilization behavior for curative care in rural Indonesia as a function of income, relative distance, age, perceived severity of illness etc. In the first model, due difficulty in quantifying the distance data, three dummy variables are used for the four sample villages having different combinations of distance and access characteristics with respect to three different category of providers, namely, community level of treatment, private

provider and public provider. Results show that income effect for both public and private sector are statistically significant; but the case is not same for community health services. Severity has a negative impact on the utilization of community health services whereas it is positive in case of public and private health services. The second model shows how the relative distance between health center and sub center (i.e., HC/ SC in kilometers), income level, age structure, severity of health problem etc. determines people's preference between health center and sub center. Estimate shows that the relative distance affects only lower income groups but not the higher income groups. Another interesting outcome of the study is that perceived severity decides whether people will choose public or private health care but insignificant results on the probability of use health center or sub center. Jones et al (2007) discuss about various economic models which can be used in analyzing about the health care utilization as a dependent variable in terms of a count variable (non-negative integer valued count  $y = 0, 1, 2, \dots$ ) such as the number of visits to a physician, number of hospital stays or number of drug prescriptions. The explanatory variables are age in years, a dummy variable for sex (male), and the logarithm of household income where, household income is deflated by consumer price indices and a dummy variable that equals one if the self assessed health status is bad or very bad. The various models used here are Poisson model, Negative Binomial model, Zero Inflated models etc. which shows health care utilization positively relates with age, income and poor health status and a negative effect on being male. Each model has own strengths and weaknesses. Mazumder and Upadhyay (2004) has used *the model of Feldstein* to show the impact of availability and accessibility of health care, family characteristics, social structure, quality of care, education on health care utilization by fitting the same log linear model as used by Feldstein. A high R square value indicates that nearly all variations in utilization of services have been explained by the independent variables. Here, the impact of educational attainment is negative where as the remaining have a positive influence. By giving immense importance to social stratification, Roy et al (2004) has assessed the inequalities in regard of utilization of health care with a special focus on caste and tribe to see whether these

inequalities are attributed to social stratification or different economic as well as educational conditions of the people. This is attempted by employing a logistic regression model. The independent variables are caste, age, education and economic status, place of residence. Mishra et al (1993) have also done a same type of study with reference to a tribal block of Madhya Pradesh. The study shows a positive and non linear relation between income groups and percentage of treated cases which is statistically significant and also there is a positive relation between physical access of health care and its utilization. While discussing about the gender differential at household level as a crucial factor in determining the utilization of health care of a woman in rural areas, Mathur (2008) and Kundu (2010) shows how a rural poor women is lagging behind in regard of health care utilization as she is vulnerable from three not mutually exclusive angles that is from inequality in physical, economic as well as social accessibility. So, gender disparity along with rural-urban disparity has an adverse impact on health care utilization by a rural woman. Again, gender along with age, caste, education, exposure to media and work participation are closely associated with health care utilization to great extend, according to Mathur (2008).

#### **1.3. d. Utilization of health care and the economics of the Household:**

Healthcare utilization, in the absence of any insurance coverage creates burden on the household's economic conditions. . Dror (2006) has highlighted that most Indian have to pay the vast majority of their healthcare costs out-of-pocket. This burden is particularly high for those who suffer from both poverty and illness. Without any insurance coverage, those people suffer severely. Krishnan (1999) classifies the burden of health care in two groups: the direct burden in the form of the direct cost of treatment and indirect burden is the amount of income to be foregone due inability to attend the work. This burden is higher among lower socio-economic groups. Based on NSSO 52<sup>nd</sup> round data, Dilip (2005) argues that although borrowing and selling of assets is widely prevalent in all economic classes, the amount borrowed is higher

among lower socio-economic groups Not only in case of private sector health care services, 40 per cent of those seeking in- patient treatment in the public sector

services in rural areas also fall in debt-trap due to out-of-pocket expenditure which further leads to high level of morbidity as well as low rate of health care utilization. While making a comparative analysis about the impact of health care utilization in both rural and urban India, Berman et al (2010) explains the impoverishing effect of health care expenditure as highest among the middle income quintile in rural areas rather than the lowest quintile in India. In rural areas, the higher income quintile is affected more through the impoverishing effects than in urban areas. Again, for all expenditure groups, outpatient care accounts for a significantly larger share of the impoverishing effect both rural and urban areas, because, it involves smaller, but more frequent payments. These outcomes raise the importance of health insurance in India, which till now is not well-targeted and well-designed. Again, inter-state variation of impoverishing effect shows that those states having low level of consumption expenditure with higher education and propensity to use health care experience have more impoverishment effect. To show the difference in regard of burden of health care both in urban and rural India, Baru et al (2010) has used a formula, where he computes the burden of health expenditure for the consumption size class  $i$ , as  $b_i = x_i / c_i$ , where,  $x_i$  is the average health related expenditure during the period of reference (15days for non hospitalization and 365 days for hospitalized cases) per indisposed person.  $c_i$  is the average over all consumption expenditure per household during the corresponding period. Based on the analysis, Baru et al find that the burden of direct health expenditure across consumption classes shows a clear gradient. While the poorer sections carry a greater burden of it, others are also not free. Total health related expenditure as a percentage of household consumption expenditure for outpatient care in rural areas is highest, at around 30% for the poorest consumption size class, whereas, in case of inpatient treatment, it is 28% in India.

### **1.3. e. Institutional support**

Government or institutional support is essential for overcoming the burden of out-of-pocket expenditure in health care. In this regard, Arrow (1963) argues that the market for health care is characterized by information asymmetries on part of providers and customers and both positive and negative externalities. For example, in case of communicable diseases, an individual who fails to be immunized not only risks his own health but also does others lives. Risk and uncertainty related to health market also lead to market failure in health care. Hence, loss of welfare below that is obtainable from existing resources and technology; failure to reach the Pareto optimality. So, Arrow, here, proposes the view that government and other non-market institutions should act as the agency which substitute for the market failure. According to Tobin (1970), the concept of '*specific egalitarianism*' meaning certain specific goods – such as health and the other basic necessities of life should be distributed less unequally than people's ability to pay for them. In other words, it should be distributed less unequally than the market would distribute them given an unequal distribution of income. In this regard, WHO has also focused the importance of the role to be played by government and non profit organizations. WHO (1988) explains the Alma -Ata declaration as the quest for equity in health expressed in term of its goal of Health for All (HFA) by the year 2000AD. According to the report, primary health care is the key to achieving HFA and should have universal coverage of the population, with care to be provided according to the need. No one should be left out, no matter how poor or remote. If all cannot be served, those most in need should have priority. Here is the 'all' in health for all. For this, there is need for urgent action by all governments, all health and development workers, and the world community to protect and promote the health of all the people. According to Sen and Dreze (1995) illness is one of the most widespread causes of human deprivation and economic insecurity in India. It affects not only the actual patient and those depends



on them for their subsistence, but also other members of the society, in so far as the threat of diseases arising from wide spread morbidity reduces the quality of life. Further, private provision in the domain of health care is not satisfactory. So, a well developed system of public health is an essential contribution for the fulfillment of social security objectives. If we consider both private as well as public health spending, it is evident that India has been spending a very large proportion of its GDP on health care; outcomes are not satisfactory. This mismatch between resources and achievements are due to poor functioning of the public health system especially in rural areas. So, efficient public health care system is the way for relieving people from social insecurity and deprivation. Rivera and Currais (2005) identify the importance of investing in health not only as a social and moral obligation rather as an effective means of stimulating economic growth in a country. While explaining the importance of public health care, they opine that a large proportion of the people who are unwell and seek health care are to be provided by public sector. Generally, the percentage of population dependent on public health care increase as income diminishes, that is, poorer households rely more on public services.

#### **1.4 Objectives**

In view of the broad aim of the study as reported in section 1.1 and the issues related to the access to and utilization of health care and the literature review done in 1.3, the specific objectives of the study were formulated as the following.

1.To examine the health status (in terms of IMR, MMR, under five mortality rate and the type of disease burden etc.) of the people of rural Assam in comparison to urban counterparts and inter district level .

2.To examine the supply side of rural health care in Goalpara in comparison to all India level, interstate level and inter district level in the light of latest norms of National Rural Health Mission.

3. To study the impact of economic condition of the household to which the patient belongs in his/her choice regarding utilization of health care in rural Goalpara.
4. To examine whether distance to particular kind of health care facility, road condition and location of the patients residence have any impact on people's choice regarding utilization of health care in rural Goalpara.
5. To assess the impact of educational attainment, age and self assessed health status on the choice regarding health care utilization behavior of the people of rural Goalpara .
6. To study about health care utilization behavior between gender groups and among different social groups of rural Goalpara.
7. To examine the economic consequences of the out-of-pocket expenditure for health care utilization on the households of rural Goalpara

Principal research questions under lying in this study are

1. Whether the existing health care facilities in rural Goalpara are adequate to support the health care needs of the people?
2. Whether economic and non-economic factors have any influence on people's choice regarding utilization of health care in rural Goalpara?

### **1.5 Methodology**

The main terms used in this thesis and the methodology used for the purpose of the analysis are explained below:

### **1.5.1 Definitions**

For the purpose of this study, the terms 'health', 'health care', 'access to health care', 'utilization of health care' need to be defined

#### **1.5.1. a. Health**

According to World Health Organization, "health means a complete state of physical, mental and social wellbeing and not just merely the absence of disease or illness." According to Acheson et al (1966), this definition considers nearly all of us to be sick. So, there is a need of a more precise definition of health. In economics, health has been considered as durable goods which provide services. The flow of services provided from health capital is consumed continuously over life time (Grossman, 1972, 1973). Each person is assumed to be endowed with a given stock of health at the beginning of a period such as a year. This stock of health depreciates with age and may be augmented by investment in medical services. According to Schutlz (2005), there may be four different types of health indicators as (1) self reported health status; (2) morbidity rates; (3) physical functional limitations; and (4) nutritional and physical growth outcomes. But, all the four types of indicators have certain limitations as they leads to some subjective results based on socio economic condition, age group, regional disparities etc of the sample paients. Still, various studies conducted in India by National sample Survey Organization (NSSO), National Family Health Survey (NFHS) etc have assumed self reported health status as a measuring rode of people's health. So, this study also considers self reported health status as a parameter of measuring people's health

#### **1.5.1. b. Health Care**

Health care is about cure, care and prevention. Health care refers to those resources society uses in an attempt to cure them or to care for people in ill health (Dolan et al

2002). In addition to curing and caring for people who have already become ill, health care includes some activities that seek to prevent people becoming ill in the first place. Hence, cure is concerned with improvement in health that patient. When a person's life is in danger, or when they suffer from illness from illness, a 'cure' might (1) fully restore that patient's health (for example, rescue operations); (2) improve their health though not completely (for example, cataract operations); (3) limit the extent to which health deteriorates (for example, pain relief for the terminally ill). On the other hand, prevention includes those resources whose main purpose is to reduce the probability of illness or premature death. So, it is the subset of all the resources that impact upon health. Health care may be of three types: primary, secondary and tertiary. But, our study has basically dealt with primary health care.

#### **1.5.3.c. Primary Health Care**

Primary health care is distinguished from short term consultative care (secondary care) and long term disease management (tertiary care) by several characteristics. Primary care deals with more common and less well defined problems. Patients have direct access to an appropriate care, which continues over time for a variety problem and includes needs for preventive services (Starfield, 1998). Compared with other sectors, primary care is less intensive of both labour and capital and is less hierarchical in organization. They generally located relatively closer to the milieu of the patient. According to World Health Organization (1978), *"it is the first level of contact of individuals, the family and the community with national health system, bringing health care as close as possible to where people live and work and constitute first element of a continuing health process."* It addresses the most common problems in the community by providing preventive, curative and rehabilitative services to maximize health and well being. But our study has dealt with preventive and curative care only. In our country, especially in case of rural areas primary health care is provided by the sub center (SCs), primary health centers

(PHCs) and community health center (CHCs). So, our study has confine to the preventive and curative care provided by SCs, PHCs and CHCs.

#### **1.5.1. d Access to Health Care**

*Access to health care* comprises of five components: *availability, affordability, accessibility, acceptability and accommodation* (Butsch, 2007). Availability means total number of physical and human capital per unit of populations. Affordability means purchasing power whereas accessibility means spatial availability of health infrastructure, acceptability means attitude towards the existing health care services and accommodation means various kinds of health care organizations that are available. This study has given special focus in availability and accessibility of rural health care. Here, availability measured mainly in terms of number of population served by each Sub Centre (SC), each Primary Health Center (PHC) and Community Health Centre and internal infrastructure and manpower of those health care institutes. Accessibility is measured in terms of spatial availability of health care infrastructure in rural areas in terms of distance in kilometers from the respective study village. It is the supply side of health care.

#### **1.5.1. e. Utilization of Health Care:**

Utilization of health care is a function of both demand and supply of health care. According to *positive version of egalitarianism*, equality in health care distribution is not just a matter of equalizing health care opportunities in the form of access to health care but also of equalizing the utilization of this possibility (Schneider- Bunner, 1998). This study tries to find the impact of income class, relative distance between public and private health services, age group, educational attainment, perceived health status (as serious and not serious), caste stratification (as SC, ST and others), gender (male and female) as the factors which determines the health care utilization behavior of the people.

### **1.5.2 Data Source:**

Information regarding various aspects of the study is collected from different sources.

Secondary data have been collected from different reports of National Family Health Survey (NFHS) 1, 2 and 3, District Level Health Services(DLHS) 3, National Sample Survey Organization (NSSO) 52<sup>nd</sup> and 60<sup>th</sup> rounds, sample registration system, 11<sup>th</sup> five year plan document, Bulletin of Rural Health Statistics, different reports of National Rural Health Mission(NRHM), Annual Health Survey Assam 2010, statistical hand book of Assam to compare our health status as well as access to health care service in global as well as regional perspective. Further, we have consulted different books, journals, research articles, newspapers relevant to our study.

The secondary data collected and analyzed is not sufficient to fulfill the research questions and objectives related to utilization of health care in this study. In case of health care utilization behavior of the people of rural Goalpara, there is no such secondary data. So, primary data at Rural Goalpara level has been collected in that respect. Methodology adopted for collecting primary data has been explained in chapter IV.

### **1.5.3 Method of Analysis**

Regarding the comparative health status of the people of Assam, trends of the ratios of health indicators, bar diagram etc are shown on the basis of secondary data. The secondary data are also analyzed in terms of percentages, simple average etc for a simple picture about the availability and accessibility of the existing health care system. First research question has been answered mainly on the basis of secondary data.

In case of primary data too, a simple analysis in terms of percentage is carried out in chapter four. It gives the profile of the sample in terms of various economic and non economic parameters. For a deeper insight in regard of the second research question, primary data has been used. For the verification of the second research question that is to examine the factors influencing the health care utilization behavior of the people of rural Goalpara, logistic regression model has been used for in-patient treatment whereas multinomial logit model has been carried out in case of out-patient health care .

### **1.5 Layout of the Dissertation:**

The dissertation of this study has seven chapters in total, including the present one as follows:

1. Introduction
2. Health Status and Health Care in Rural Assam
3. Access to Health Care in Rural Goalpara: A Comparative Study
4. Socio-economic Profile of the Sample and Choice of Health Care Service
5. Factors Influencing Health Care Utilization Behavior of the People of Rural Goalpara: an Econometric Analysis
6. Utilization of Health Care and the Economics of the Household
7. Summary of the Findings and Conclusion

The first chapter is an introductory one. In this chapter, background of the study, statement of the problem, literature review, objectives, research questions, methodology, lay out of the dissertation, likely contribution of the study and limitation of the study are discussed.

Second chapter discussed about various health policies introduced in our country as well as our state to improve the health scenario and their impact on rural Assam in the

comparison to all India, major Indian states. There have a global comparison also. It also tries to find out the cause of the present health scenario in rural Assam as well as rural Goalpara.

Third chapter have discussed about the access to health care in rural Assam as well as Rural Goalpara with special focus on availability and accessibility of health care to answer the first research question. Availability of health care, particularly provision of manpower and infrastructure are also discussed. Accessibility concept tries to give some idea about spatial availability of health care. Actually, this chapter tries to find the answer of the first research question.

Fourth, fifth and sixth chapter are based on field survey carried out in this work. Chapter four justifies the need for the field study, discusses the methodology used selecting the sample and also presents a profile of the sample in terms of various economic and non economic parameters. In the rest part of the chapter four, analysis has been done to find out an answer to the second research question in terms of simple percentage. For deeper insight, in the fifth chapter, econometric analysis about the utilization of health care has been done. Here, the influence of economic and non economic factors on health care utilization is sought to be assessed using logistic regression model in case of in-patient health care utilization whereas in case of out-patient treatment by multinomial logit regression model. Sixth chapter discusses about direct burden arises from the expenditure occurred due to health care utilization for both in-patient treatment and out-patient treatment in terms of ratio of health care expenditure and Monthly Per Capita Consumption Expenditure (MPCE).

Chapter seventh, the concluding chapter, summarizes the findings of the study. Based on those findings, conclusions are drawn and a few policy suggestions are also presented in this chapter.



### **1.7. Likely contribution of the proposed study**

This study shall likely help in the policy formulation in regard of health care system as it has analyzed the exiting rural health care system in Assam as well as Goalpara district and examined whether the existing rural health care system is successful in winning the faith of the people of different socio economic background.

### **1.8 Limitation of the Study:**

This study has given more importance on public health care system as in rural Assam only. Functions of health care include four components, preventive, promotive, curative and rehabilitative care. But in this study, preventive and curative health care in rural Goalpara will be focused. Again, our study will basically confine to allopathic system of treatment because in the whole Assam, there are only seven hospitals which deal with other system of treatment i.e., AYUSH during the inception of 11<sup>th</sup> five year plan.

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**Notes:**

<sup>1</sup> Arunachal Pradesh, Assam, Bihar, Chattisgarh, Himachal Pradesh, Jharkhand, Jammu and Kashmir, Manipur, Mizoram, Meghalaya, Madhya Pradesh, Nagaland, Orissa, Rajasthan, Sikkim, Tripura, Uttaranchal and Uttar Pradesh